

MEMBER OF THE A. B. C.

# PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

## FORTY-EIGHTH YEAR

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# WORLD-WIDE SHORTAGE OF PAPER

**Pulp and Paper Mills of the United States and Canada  
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**Lack of Raw Material, Difficulty in Getting Coal, Labor Troubles, Poor Railroad Service and Severe Winter Important Factors in Causing Dearth of Supplies—Scarcity Is Especially Noticeable in News Print and Prices in Consequence Go to Record Levels for Spot Supplies—Numerous New Mills Are Being Erected but Increased Production from These Will Not Be Likely to Remedy Situation Soon.**

The world-wide shortage of practically all varieties of paper has been greatly emphasized during the past year. The dearth of supplies in this country was due largely to the lack of raw material and the inability of pulp and paper mill machinery to supply the enormous demands of consumers. Difficulty in getting coal, labor troubles, poor railroad service and inconveniences caused by the severity of the winter also all helped to increase the shortage in all lines of paper throughout this country and Canada.

The shortage of paper became specially noticeable toward the summer months of 1919 when heavy advertising campaigns were started in the periodicals and dailies, and the demand for space seemed almost insatiable in November and December when Christmas advertising was at its height. All lines of business flourished, stimulating an increased consumption in every grade of paper.

Book, fine and coarse paper, tissue, and paper board shared in the increasing demand and with this influx of orders came the request from the mills for more and more raw material. With this growing request the price of pulp and rag and paper stock started to appreciate and as the prices here increased, the advances were naturally reflected in the finished product.

The pulp and paper mills are at the present time being operated to their maximum capacity and while it is expected that the more favorable conditions of operation afforded by the spring and summer will bring some relief to the situation, supplies of most varieties of paper are likely to continue inadequate to meet the needs of consumers for some time to come. An unusual large number of new pulp and paper mills have been projected recently and numerous going mills are being expanded, but the increased production from these sources cannot be depended upon to relieve the situation materially in the very near future.

## News Print Extremely Scarce

News print during the past year was one of the most talked of commodities in the paper market. Retail merchandising throughout the country flourished, and publishers were besieged for advertising space by merchants who could afford more money for publicity than ever before.

With the encouragement of increased business, publishers decided to pay higher prices for their paper and accept more advertising. At about this time spot news had disappeared and publishers demanded that mills deliver the maximum tonnage called for in their contracts. A news print shortage was imminent. Contract news remained at 3.75, which, it will be remembered, was the fixed price set by the Federal Trade Commission, while transient sold around 5.25. Jobbers' supplies were very low. By the middle of October news print was practically

out of the market, and the shifting of advertising in part, from the periodicals to the daily publications, quite naturally caused higher quotations in the spot field.

On the heels of these higher quotations some paper plants turned their machines to the manufacture of news print, but coincidentally with this turning of machinery from other varieties of paper to news print the volume of advertising continued to increase and caused publishers to seek more paper. The additional machines on news print therefore did not relieve the situation very much.

During the month of December spot news reached 9 cents. A very slight let-up was evidenced just before the holidays and prices in news print dropped down to a more conservative level.

In January of the present year advertisements welled up publications until publishers fought in the open market with bids up to 9.50 the pound for spot news. Within a month bids for news print had reached 12 and 12.50 and on several occasions quotations of 13.50 and 14 cents and higher were heard of. Shipments are improving, however, and while present prices are very nearly prohibitive, it is hoped that there will be an improvement before long.

## Fine Paper in Heavy Demand

The year 1919 started with heavy buying in the fine paper market at the low prices then predominating. Nearly half a year's supply had been stocked up by the paper merchants, when an easing off of this trading in March resulted in a marked slump in quotations. The market remained comparatively quiet until June, when again orders began to besiege the paper makers. The outlook was for a bullish market, and once more mills produced to their capacity.

Europe's paper mills were crippled, and during the summer American plants were being looked to as a source of seemingly inexhaustible supply. But this rush on domestic mills could not continue without a consequent trade congestion, the first signs of which became evident during the late summer.

During August and September production costs soared, and this, together with the tremendously increased demand, gave way to fresh price advances. Quotations for all grades rose. Coal, too, became scarce, and a curtailment in production to some extent was noticed in the fine paper field.

In January of 1920 several mills felt the necessity of raising their prices an additional 20 per cent. The unsettled condition of the market permitted of no fixed contract price, and "subject to prevailing price at time of shipment" then became, and still is, the general practice with most mills.

At the present time demand continues strong in this market and spot material is scarce, being bought for the most part in a



PICTURE TAKEN AT THE FORTY-THIRD ANNUAL BANQUET OF THE AMERICAN PAPER AND PULP



ASSOCIATION, THURSDAY EVENING, APRIL 15, 1920, AT THE WALDORF-ASTORIA, NEW YORK.

bidding market. While the situation is admittedly abnormal there have been no evidences of speculation nor of unnecessary price inflation, and judging from the general consumption, mills are promised a good business for some time to come.

#### Tissue Shows Great Strength

The first three months of 1919 witnessed a small demand in all grades of tissue, and prices were at an extremely low level. Toward the end of March orders filtered in slowly, consumers believing that rock bottom had been reached. The market then began to rise and mills were reported as losing money on contracts made earlier at the lower quotations.

This demand increased steadily and exporting was fairly active up to January 1, 1920, when quotations showed an increase of approximately 50 per cent. over the preceding March. Since the first of this year the demand has increased to undreamed of volume and prices have soared, so that now, tissue mills are booked for two and three months in advance, with no fixed prices on future shipments.

The severe weather this past winter, with ice jams on waterways and blizzards with their accompanying freight embargoes and railroad traffic congestion, tied up most of the sold stock and caused a most acute shortage. Raw material, too, was very scarce this winter and early spring.

For several months past export trade has been unusually brisk, South America and the Orient ordering large tonnage from domestic mills, while European demand is fairly active. Retail business throughout the country is good, and much tissue is being used by the wholesale shipper and retail merchant for the packing of merchandise. The prospects are for a continuance of the present demand for some time to come.

#### Many Price Changes in Board

The past year in the board market witnessed many price changes, and has ended with a trade boom, brought about by the heavy demand on American board mills from both domestic and foreign consumers.

In February, 1919, prices were low and remained so until June, when advancing production costs raised the board market to a higher level and competition among the consumers led to bidding with the resulting radical price changes. Quotations doubled by January, 1920. Fibre container board, being required by the government and express companies for shipping purposes experienced a boom, and several mills now under course of construction will manufacture this product exclusively. Dealers generally agree that the past year has been a highly successful one for their business, and they can see no reason why it should not continue so well into the future.

In the expectation of a prolongation of the present heavy demand for board numerous new mills are being built, and it is hoped that this will create an even balance between supply and demand in the board market.

#### High Prices for Mechanical Pulp

The ground wood market in the early spring of 1919 was exceedingly dull. Large quantities were on hand due to the mild winter of 1918-1919, and the prevailing price was \$28@30 the ton. The market continued almost lifeless and consumers showed but little interest in it. Mills were reported as having more ground wood on hand than they actually required, and were trying to dispose of this surplus in the market. Grinding operations were carried on through the months that usually found the streams frozen. Domestic consumers were more than well taken care of by their contracts, and found it unnecessary to purchase mechanical pulp in greater quantities than their contracts called for. Canadian grinding mills, however, last spring ex-

ported great quantities of ground wood which lent a strong undertone to the market, and was presumably the only reason why prices did not fall.

About the middle of April, 1919, several news print mills came into the open market to increase their contract supplies, but without having any marked effect on stock accumulations at the grinding mills. Prices were not affected and quotations remained at the March level.

In May, 1919, the shutting down of several plants by the strikes tended to make demand somewhat lighter, but the grinders' shipments to England lent considerable strength to the market as before. Still there was no change in price. The ground wood situation steadily improved, and by the end of June production was on a par with consumption and little stock was being stored up as a surplus. Canadian grinders continued to send large shipments abroad, and this was again a strong factor in the domestic market.

It was in September of last year that ground wood took its most radical jump, reaching a range of \$33@40 the ton, with most dealers practically sold out. October witnessed an acute shortage, with sales at \$45. Some pulp which had been stored for two and three years was sold in November for \$45@50, so great was the dearth in this field, due to the enormous demand. In December quotations again rose to \$52@60.

Last winter's ice on the water ways of the Northern pulp mills tied up operations completely and in January and February of 1920, \$65 the ton was registered, at which level wood pulp remained until March 1, when the general bidding in the market started this commodity on an upward climb. Up to the first of this month the market price was \$80@85 per ton, with some emergency spot sales running higher.

Snows are melting in the north, and if this thaw is gradual all is expected to go well with the mechanical pulp market in the near future. On the other hand floods caused by sudden thawing will delay mill operations, and in this event the scarcity may be expected to continue throughout the summer.

#### Chemical Pulp Prices Appreciate

The market for all grades of chemical pulp a year ago was weak. Most of the paper mills were either completely or partly shut down, and the demand for chemical fibres was not active. The cost of production had not decreased to any extent after the signing of the armistice, and most manufacturers refused to cut their prices. Domestic bleached sulphite sold as low as 5.50, and news sulphite was selling at 3 cents. All grades were inactive.

During April, 1919, paper mills again resumed operations on a large scale and dealers were more optimistic for the future, while chemical pulp stocks were moving in better volume.

In May activity increased and foreign pulp stocks at the docks became depleted. As the paper market grew more active, the demand for chemical pulp increased and trading in this field improved steadily. By June paper mills were ordering pulp for future delivery, and in July several of the large pulp mills decided to book orders no further ahead than August 1, 1919.

The chemical pulp market started to gain strength late in July and continued to expand, with the result that in August quotations advanced on several grades of both domestic and foreign supplies. At this time kraft and sulphite were being bought in large quantities, and mills manufacturing these grades were sold out for months in advance. Contracts for bleached sulphite were made at 5.75@6.50, and sales in bleached sulphite for immediate delivery were reported at 6.25. With the exception of kraft, which at one time fell as a result of a large shipment from England at \$5 a ton lower than the domestic product, prices advanced in all grades during the month of September,

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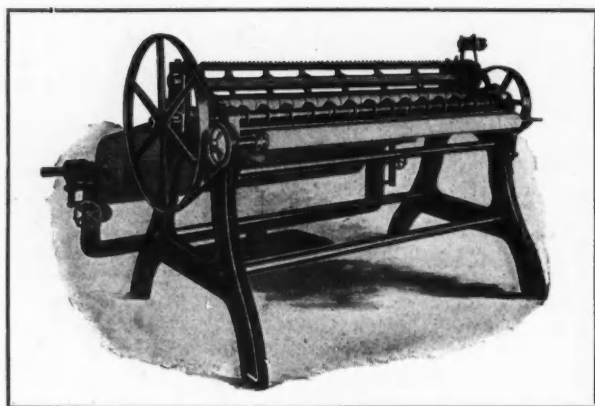
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WEDNESDAY EVENING, APRIL 14, 1920, AT THE WALDORF-ASTORIA, NEW YORK.

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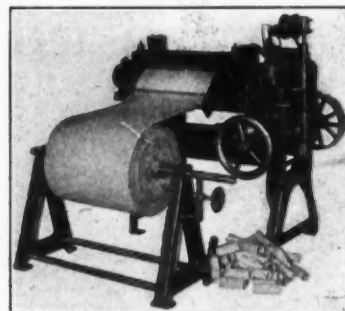
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due to the endeavor of dealers to secure pulp in order to fill their contracts.

Chemical pulp remained at a sane level throughout the winter, but paper mills bid prices up. Nearly all chemical pulp mills were under contract by the middle of March, 1920, for the next six months of the current year, and just now prices are the highest in the history of the business, with foreign quotations too high for consideration by most portions of the domestic paper mills.\*

#### Eventful Year in Paper Stock

Early 1919 is memorable for the low prices of waste material in all grades. Paper mills did not buy on the falling market in spite of the fact that good business lay ahead. When heavy advertising for the summer months was finally begun and the hue and cry for more paper was heard from the country's publishers, paper mills came into the market for their waste stock.

Previous to this time prices were down to the 1914 level, but the influx of orders from the paper mills soon changed things, with the result that higher quotations were heard throughout the market. The demand for all grades of fine

paper soon became enormous and with the demand came the need for paper stock, which caught the waste market at a time when little surplus was accumulated, and the result was a boom throughout the trade, with the start of an advance in prices which continues today.

Foreign packers last summer, seemingly making use of the advantageous rates of exchange, offered large quantities of rags which were grabbed up by domestic paper mills to alleviate their

acute shortage, and with this overseas market competition domestic rags hesitated in their price climb and then stopped. Still this stoppage was only due to a market scare, and just as soon as the foreign shipments were consumed the demand renewed and quotations went up to undreamed-of levels, and even now the advance continues. The wild market would not permit a maintenance of sane levels and advances of close to 100 per cent. were common.

Just how much longer this condition will exist is hard to say, but with the exorbitant prices which are being asked for mechanical and chemical pulp, it is the general belief that present conditions will continue for some time.



SNOW NEAR A CANADIAN PAPER MILL LAST WINTER

## URGES SAVING OF ALL WASTE PAPER

In referring to his recent appeal for the conservation of waste, Secretary of Commerce Alexander has made the following statement, urging the saving of all waste paper:

"Following my appeal of last week to save waste and turn it back into the channels of trade, I wish to call attention to the importance of saving all waste paper.

"Attention has been called quite a number of times lately to the vital shortage in paper, and if the general public could realize how a shortage of paper affects its daily life I feel sure that a saving and utilization of all waste paper would be made.

"Many of the better grades of waste paper are used as pure substitutes for ground wood pulp and are used in making all kinds of book, bond, ledger and writing papers. If this kind of waste were not used to some extent, there would exist an even greater shortage of wood pulp from which most of our printing papers and news print paper is made. The waste paper used in the above list consists of old magazines, periodicals, books and all kinds of printed matter in general. Every pound of this waste that is saved and marketed prevents the use of original wood pulp made direct from our trees.

"The largest tonnage of waste paper is called 'common mixed,' and consists of any and every sort and scrap of paper, such as newspapers, waste from the offices, stores, public buildings and

the homes. The chief use of this kind of waste is for paper boxes, roofing and building boards, paper shipping containers (which carry up to one hundred pounds of freight or express) and wrapping paper. More than two million tons of ordinary waste paper are used for boxes and shipping containers alone. The public is so accustomed to having its goods in paper boxes that it would be dumbfounded to find their use seriously curtailed and this is what will happen if we do not look more toward the utilization of waste. The use of waste papers for this purpose prevents the consumption of over one billion feet of lumber annually and is increasing daily.

"In addition to the saving of trees in the making of paperboard, there is another very great saving of lumber through the use of paper 'shipping cases' which are used instead of wood boxes. Reports show that it would require more than half a billion feet of lumber annually to replace the 'paper' shipping cases now used by almost every manufacturer in the United States.

"The Department of Commerce still has on hand a limited number of two publications on Waste Reclamation which it will be glad to send to interested persons. These publications will show what one large city has done to develop a citywide system of waste reclamation for the home, store and factory, and the other will give some pointers on how to organize and operate the service."

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## An Unusual Year in News Print

**Spot Supplies Are at the Highest Price Level in the History of the Industry—Prices Which Were Started at \$6.50 a Hundred Last Fall Have Been Forced Up Until \$12.00 a Hundred Is Regarded as Commonplace and a Sale of 100 Tons at \$18.00 Has Been Reported—Standard Contract Price of \$5.00 Per Hundred Will Prevail Until July 1 at Least—Outlook Not Encouraging.**

Written by Col. W. E. Haskell, Vice-Pres., International Paper Co.

A year ago the news print situation seemed easy. Publishers and other consumers were lulled to a false sense of security by surface indications which were misleading.

Stocks at the mills in the hands of manufacturers had increased from 34,118 tons in January to 43,759 tons in March. The spot news print market was easy, and for the time being, monthly statistics showed production greater than shipments. Paper was being offered freely and street corner optimists were predicting the end of stringency and a softer market.

### Could See No Hope of Relief

But those who could see beneath the surface could see no hope of relief. They saw that stocks in the hands of publishers which in January aggregated 233,257 tons were being used. The war restrictions being removed, local competition resulted in larger papers. Publishers no longer felt the necessity of maintaining such large reserves and utilized their stocks in storage before they had deteriorated. For this reason they drew less freely on the manufacturers, and mill stocks increased to their maximum of 43,759 tons in March.

By June the future began to look alarming to close students of the general situation. Publishers' inroads on their reserve supplies had reduced the total to 180,412 tons, a decrease of 53,000 tons; mill stocks were down to 38,515 tons and steadily decreasing; exports had tripled in tonnage over 1918 and an unprecedented volume of general and local advertising was forcing larger newspapers and greatly increasing the consumption of news. Although production reports for the first half of the year showed an increase of some 6 per cent. over the previous year and most mills were turning out a tonnage well in excess of their normal capacities, the growing demand and the indicated greater demand for the latter part of the year spelled a runaway market in the fall to those able to read and interpret the signs of the times.

The mid-summer lull encouraged the optimists in spite of broadsides of advertising in the newspapers, aggregating nearly 50 per cent. more than usual for that season.

### Situation Grew Worse

By September the fears of the careful students of market conditions were fully realized, and the situation grew worse as the season advanced.

Consumers entered the market to buy spot paper for immediate requirements or later protection, regardless of cost. Most of the large producers were overcommitted and had no surplus tonnage to satisfy the demand.

Mill stocks of all reporting manufacturers had dwindled to 19,285 tons by December, while the reserve stocks of publishers for the same month showed a decrease to 162,954 tons.

In November the shortage had become so acute that an extraordinary convention of the American Newspaper Publishers Association was called to consider the news print situation and

to devise methods of economy and conservation. A general reduction in consumption of 10 per cent. was urged and agreed to.

This plan of economy has been faithfully observed by some and disregarded by others, but, on the whole, with no apparent relief to the general situation or any discouragement to the soaring tendency of the spot market or the profiteers who are making the most of the opportunity to wring extortionate profits from the exigent necessities of the publishers, large and small.

### An Unparalleled Spot Market

The spot market which began in the early fall of 1919, and, which, at this writing is at the highest level yet reached, is unparalleled in the history of the industry and phenomenal. It is supplied by a few conscienceless manufacturers producing fairly large tonnages, but, principally by many small wrapping paper, wall paper and specialty mills, usually controlled as to production by profiteering brokers or jobbers, and diverted to the manufacture of a nondescript approximation of standard news by the lure of the high prices obtaining. These prices which were startling at \$6.50 a hundred last fall, have been forced up until today a price of \$12.00 a hundred is regarded as commonplace and a sale of 100 tons at \$18.00 has been reported.

The demand for this high-priced spot commodity comes from improvident or unfortunate publishers who failed or were unable to protect their needs with contracts, and also from large publishers with low contracts who are increasing their reserve stocks by picking up substantial spot offerings at fancy prices, satisfied with the comparatively low average thus obtained for their entire supply.

### \$4.50 Standard Price for First Quarter

While the profiteers are enjoying their field day, the reputable manufacturers are content to supply their regular contract customers at the standard price of \$4.50 a hundred for the first quarter of 1920 and to treat all customers alike who buy in carload lots.

The actual suffering of many small publishers has naturally been brought to the attention of Congress and twenty-one different bills have been introduced, as different in purpose as in the degrees of intelligence manifested in their preparation, and all equally futile with one exception. That exception is the Underwood Joint Resolution looking to the removal of existing export restrictions on the Crown Land pulpwood of Canada and the supply of an adequate quantity of raw material for American news print mills. That measure strikes at the heart of the problem, for it aims at greater production.

American mills produced 1,375,000 tons of news print in 1919. We imported 614,000 tons from Canada.

The small specialty mills diverted to news print temporarily by the high spot market produced possibly 150,000 tons more. And yet the demand was for considerably more than the total of the above enormous production.



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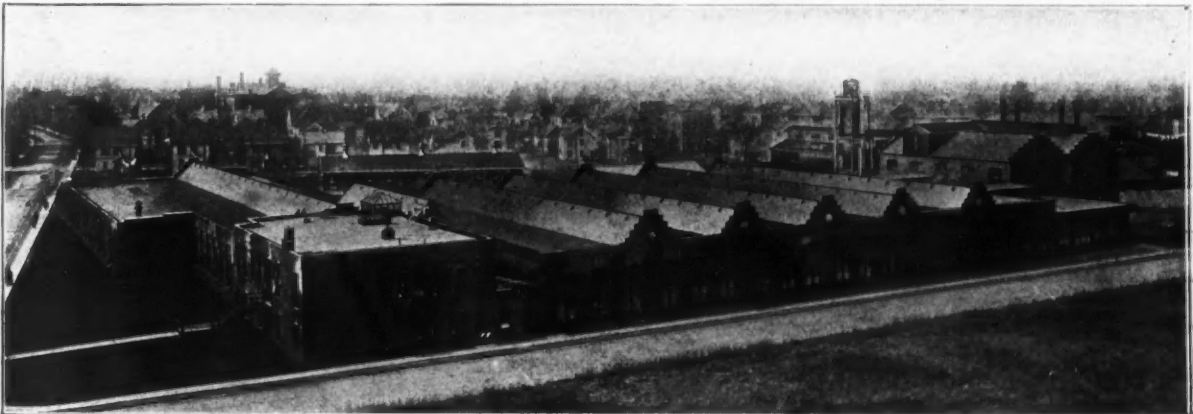
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#### American Production Diminishing

The production of American mills is diminishing, although 9 per cent. greater in 1919 than in 1918. It was 1,432,000 in 1912 compared with 1,375,000 in 1919.

And American production is decreasing solely on account of the vanishing supply of raw material.

Canadian production in the meantime is increasing.

New machines have been, and will be, installed, in both countries, which by 1922 should increase the total production by some 1,300 tons a day, or, about 390,000 tons a year. While this looks like relief in a couple of years, it must be remembered that consumption has increased an average of 6 per cent. a year for the last fifteen years, and if the same rate continues, it will mean a

demand at the end of 1922 for 393,000 tons greater than at the beginning of 1920.

The increased production in both countries for the current calendar year is so inconsiderable that it will be hardly an appreciable factor in the situation.

The present indications are that, unless a serious financial disturbance should develop to curtail industry and advertising, the existing acute condition will continue and grow even worse by next October.

The standard contract price of \$5.00 a hundred for the second quarter pegs the contract market until July 1. What the standard price for the rest of the year may be only the table of mounting manufacturing costs can tell.

## MANISTIQUE PULP & PAPER CO. BUILDS NEW MILL

The Manistique Pulp and Paper Company of Manistique, Mich., has just completed the construction of its paper mill, adjacent to its pulp mill in that territory, at a cost of approximately \$800,000, and with a capacity of 60 tons of paper per day.

The new paper mill is equipped with one 166-inch high-speed Pusey & Jones Fourdrinier, and its buildings are so arranged that the size of the plant can easily be doubled. The mill is of concrete and steel construction, is two stories in height, and consists of a beater room, machine room, finishing room and boiler house with sufficient excess boiler capacity to generate enough electricity fully to run the paper mill in case of extremely low water conditions in the hydraulic power equipment, which is also a part of the plant.

The beater room on the main floor contains a battery of five ground wood thickeners, manufactured by the Improved Paper Machine Company, Nashua, N. H., four 2,000-pound Horne beating engines with reinforced concrete tubs, and two motor-driven Horne Jordan engines. The beater basement contains the usual ground wood Deckered stuff and Jordan stuff chests of reinforced concrete, besides the customary stock and water pumps and beater shafting.

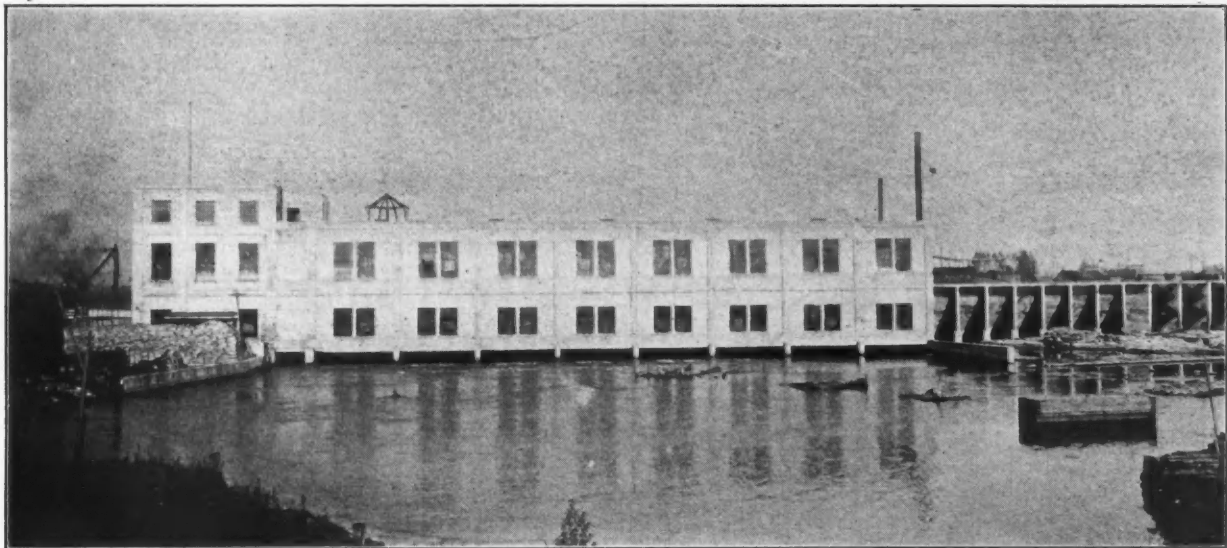
The paper machine room has the customary drives for the paper machine in the basement, and a novel feature will be a direct coupled reduction gear, Westinghouse non-condensing

steam turbine, instead of the usual steam engine or electric motor for driving the variable line.

The incoming coal will be discharged direct from the cars to a coal storage, reinforced concrete bunker, from which the coal will be fed by hand to the stoker hoppers. The wood refuse will be conveyed from the pulp mill drum barker, then to a bark press, both manufactured by the American Barking Drum Company. From the bark press this waste wood, together with as much as can be gathered from the surrounding saw mills, will be discharged into an incline conveyor, which in turn will discharge into a distributing conveyor over the extension furnaces.

The electric generators, switch board and motors were furnished by the General Electric Company, and the power and lighting covering was supplied and installed by the Sterling Electric Company of Minneapolis. The piping, fittings and valves were furnished and installed by the M. W. Kellogg Company of 90 West Street, New York.

The entire plant will be protected against fire with the customary inside sprinkler system and elevated water tank adjoining the boiler house, and will have two steam fire pumps, each capable of throwing four streams. George F. Hardy, of New York, was the consulting engineer in this work, Captain H. L. Watson resident engineer, and Edward Sheahan was in charge of the construction work and will also assume charge of the mill's operations.



NEW NEWS PRINT MILL OF THE MANISTIQUE PULP & PAPER CO., MANISTIQUE, MICH. ONLY NEWS PRINT MILL BUILT IN THE UNITED STATES LAST YEAR

## Fine Paper Market Has Active Year

**First Six Months of 1919 Should Be Characterized as a Liquidating Period and the Last Six Months as a Period of Severe Reaction—January, 1920, Found Fine Paper Prices at the Highest Point, with Mills Further Behind on Orders and the Demand Greater Than at Any Time Within the Memory of Any One Now in the Paper Business—Outlook Is Encouraging for Continued Activity.**

**Written Especially for the Annual Number of the Paper Trade Journal by S. L. Willson, Vice-Pres., and P. A. Harris, Manager, Fine Writing Department, Graham Paper Co., St. Louis**

In the fine paper market the first six months of 1919 should be characterized as a liquidating period; the last six months as a period of severe reaction.

The signing of the armistice, terminating war activities, immediately raised the question whether or not there would be a recession in prices.

Opinion seemed about equally divided. There was every reason to believe that general business would continue good and result in a strong demand for paper. This view was supported by history—past wars having been followed by a strong demand and firm prices. The manufacturers as a class took this view of the situation.

The belief of the paper merchants and consumers was that prices would recede, and this view was supported by the fact that the high prices had resulted from war conditions and war demands, and those causes having been partially removed, that a recession in prices was inevitable.

This view was also supported by the fact that after important public events buyers become conservative and wait for developments, especially do they thus act when sound reasons exist for expecting radical changes.

### All Factories Buy Heavily

The abnormal war conditions—with the ever increasing demand and advancing prices, coupled with the difficulty in securing deliveries, prompted merchants and consumers to buy "Until it hurt." This was not confined to merchants alone—the stock room of the printer, and even the consumer (the general merchants, business and professional men) had in many cases a six months' supply of printed stationery on hand. Fine papers reach every artery of trade, and its consumption, as a general rule, may be used as a barometer of business. With the market overstocked and with anticipated declines, a policy of stock reduction was generally put into effect.

During the war period printers who had never before stocked papers formed the habit; those who were accustomed to carry stocks, increased the quantities, and paper merchants had nearly double their normal stocks at the beginning of the year. There were therefore abnormally large stocks on hand in the three paper distributing and consuming fields, i. e., the paper merchants; the printer; and the consumer. This "stocking up" might be called protective speculation, which stopped after the armistice and resulted in protective liquidation. This began with the consumer; thereby the printer's business became dull; and following through, it also affected the paper merchant and the manufacturer.

### Better Grades Remain Firm

This liquidating period lasted until about June 1, when each of the groups began reordering in volume. The general business of the country had remained good. Buyers became satisfied that no further recessions in prices would take place, and in

a short time the mills were again running full, with orders received in excess of their productive capacity.

During the time of liquidation the prices of the better grades remained firm, or at war-time level until late in March, 1919, when a few mills reduced their prices on intermediate grades slightly, but this did not have any material effect, unless perhaps to retard buying for a short period. The higher grades were less inclined to fluctuate, and their use seemed to be increasing. The prices on the lower grades gradually receded until in April and May, when sulphite grades were again selling at very low prices.

The past year activities in the paper market demonstrated the business axiom that "A reduction in prices does not create business," neither does it result in better conditions or better returns for the printer, merchant or manufacturer. High prices are no deterrent to sales. What made the paper business good beginning in June was the disposal and consumption of the domestic surplus stocks and recognition of the condition that the world-wide demand for paper must be supplied by this country.

### Reaction Becomes Acute

In late June the reaction became so acute, as it became apparent that deliveries would be slow, the paper merchants, printers and consumers again swamped the mills with orders. The latter part of the year found the mills overwhelmed with them, while during the early period the business was hardly sufficient to keep their working organizations together.

During the liquidating period mill production was at a low ebb with consequential increased costs and other factors such as higher wages, impending coal strike and advance in the cost of raw materials, justified a general advance which took place soon after the new demand appeared. This began with the lower grades such as railroad manila in June, and the higher grades in August. The factors referred to, stimulated buying, particularly the impending coal strike. Fine papers had not been designated as an essential commodity like news print, and coal destined for a paper mill not making news print could be, and was, in some instances, commandeered.

### Record High Prices

In January, 1920, some of the manufacturers of the higher grades felt the necessity of making a further advance of practically 20 per cent., which proved to be the largest since the beginning of the war; others were forced to follow to some extent by the effect of such a radical advance upon the raw material market, and now we find the paper market at its highest point, with mills further behind on orders and the demand greater than at any time within the memory of any one now in the paper business.

It is a known fact that wars, no matter how devastating, are followed by balloon prices. It is also known that inflated prices like real balloons, will eventually come down. How far the drop, and when, would be questions that should be referred for answer to some one better posted or more willing to guess.



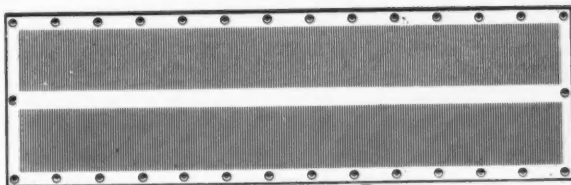
# WILLIAM A. HARDY & SONS CO.

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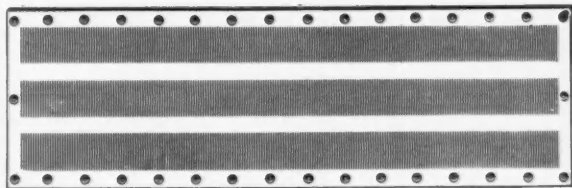
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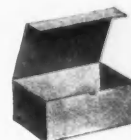
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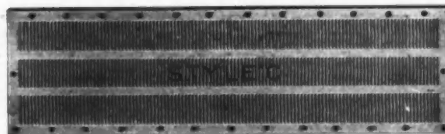
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The past year has strengthened the desire for some system that will act as a governor to eradicate the feast and famine conditions with which the paper industry must contend, since the waves of advances and depressions are apt to be pronounced. The building up or maintenance of merchants stocks during dull seasons, especially on an abnormally high market, would be a menace, rather than a stabilizer, as the existence of such stock and the necessity for its ultimate liquidation might depress rather than strengthen the market, unless placed upon a consignment basis, in which case the manufacturer alone assumes the risk of depreciation; therefore, the plan is not co-operative during a dull period in business.

The manufacturer and distributor are necessary to each other, but without that binding tie of common financial interests their viewpoints and ambitions will often be found at variance.

The outlook for fine papers to be in active demand and firm in prices is better now than during many years past, but no conservative business prospect is without some thoughts of uncer-

tainty; if the thought of uncertainty does not develop timidity, then business will remain good.

Business fear is born of *reckless* conservatism;

Business courage is the child of hope.

Market conditions harmonize with the thoughts of the multitude and our contribution to the general welfare should at least be optimism. The evils of pessimism, emanating from the thoughts of wild speculation, stock market disasters, labor unrest, extravagant buying, etc., can all be eliminated by a display of productive energy, economy and prudence.

This country is alive with industrial opportunities. The full employment of its energies can only result in satisfactory business, which will continue if the financial situation can be cleared up to permit the exportation of our commodities. While some content speculation in general commodities has been indulged in, there is no evidence of it in the paper industry, and it seems to be on a sound basis and the prospects for the future are very bright.

## ABITIBI POWER & PAPER CO. MAKES IMPROVEMENTS

The Abitibi Power and Paper Company, Limited, is now actively engaged in the completion of its new construction, deferred in 1917, and every effort will be made to have the new equipment in operation by the first of January, 1921.

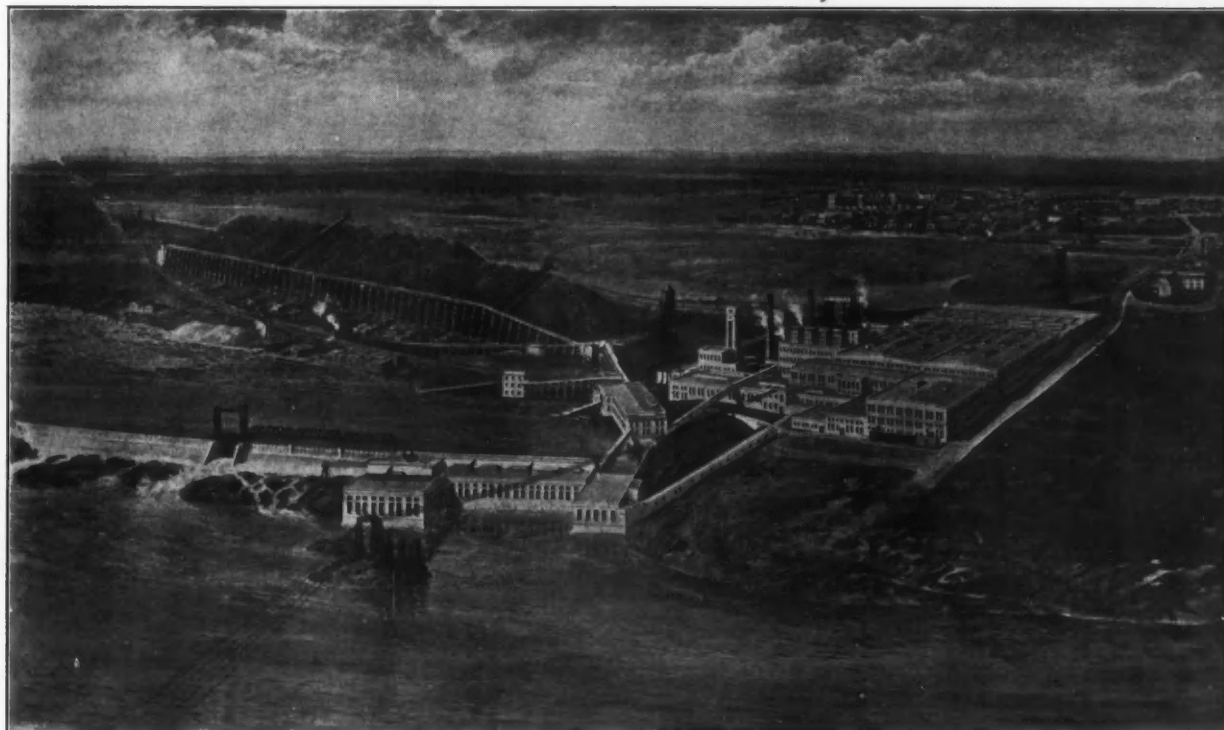
Three additional machines for the manufacture of news print are being installed. Two of these are being supplied by Chas. Walmsley & Co., England, and are each 232" wide, making three full rolls. Shipments on these machines began last fall, and all the dryers are now at the mill.

The other machine is being supplied by Pusey & Jones and is 158" wide. This machine will be electrically driven for high speed operation.

A cylinder machine, to trim 120", for wrapping paper is also under contract with Pusey & Jones, and will be installed immediately following completion of the news print additions.

The sulphite pulp department was extended in 1917 to provide the required chemical pulp for the paper production to be added this year, and the ground wood department was also extended at the same time to the extent of 100 tons surplus per day. A further increase in the ground wood department will be made this year by the installation of 12 motor-driven grinders.

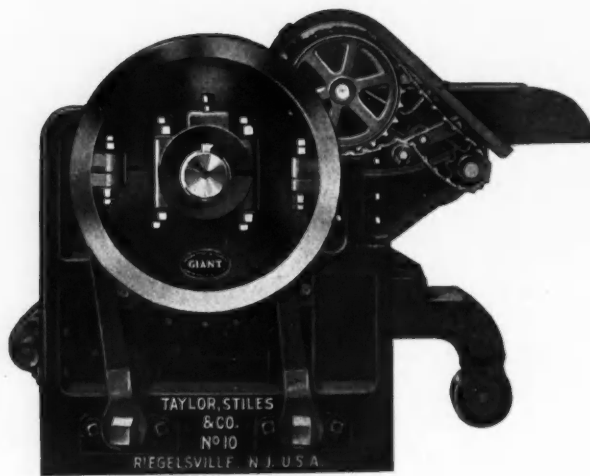
To provide electric power for the increased production in all departments, a new hydro-electric development is being made on the Abitibi river above Iroquois Falls.



MILL AS EXTENDED OF ABITIBI POWER & PAPER CO., IROQUOIS FALLS, ONT.



# RAG CUTTERS



**PULP SHREDDERS - ROPE CHOPPERS**

**Rag Cutter Knives**

**Roll Bars**

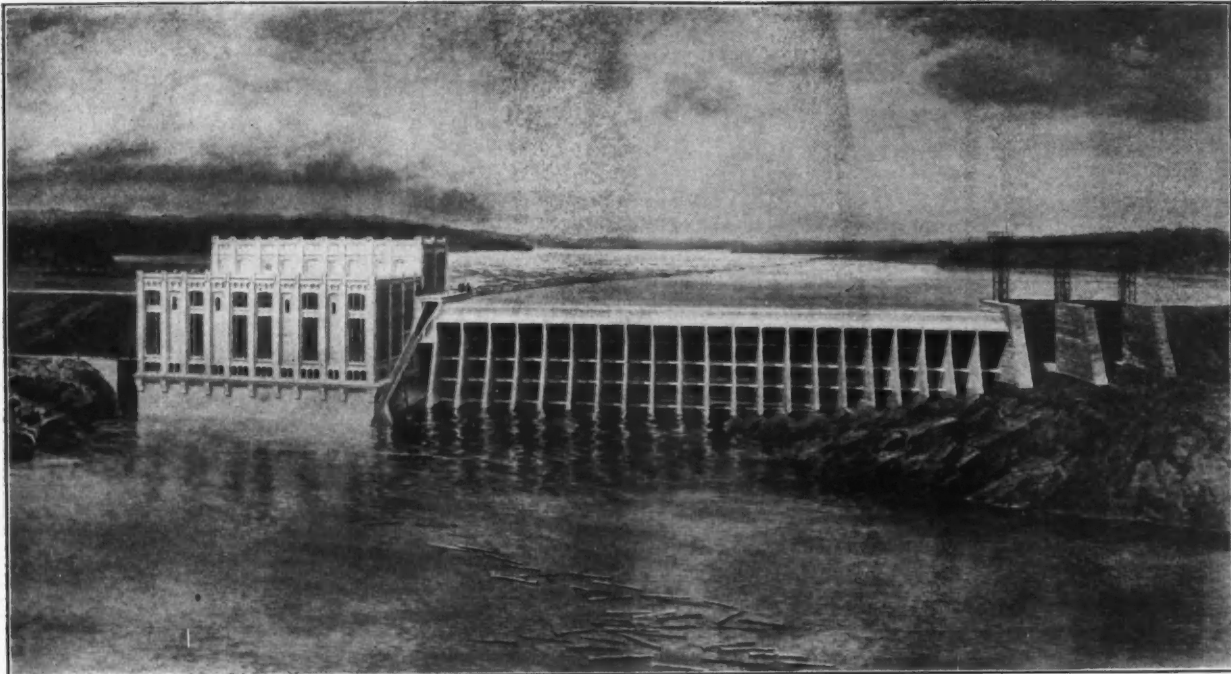
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NEW HYDRO-ELECTRO POWER PLANT OF THE ABITIBI POWER & PAPER CO., TWIN FALLS, ONT.

This power station will have a total capacity of 24,000 H. P., all of which will be transmitted to Iroquois Falls over a pole line  $4\frac{1}{4}$  miles long.

On completion of the new mill, additions at Iroquois Falls and

the new power development at Twin Falls, the total capacity of the paper mill will be 450 tons daily of news print.

The entire plant was designed and constructed under the supervision of Geo. F. Hardy, New York.

## WASHINGTON PULP & PAPER CORP. BUILDS AT PORT ANGELES

The Washington Pulp and Paper Corporation is erecting a modern paper mill at Port Angeles, Wash., which is to be in operation about August 1, 1920. James Whalen, of Port Arthur, Ont., who has, also, paper manufacturing interests in British Columbia, organized the company in 1917, with an authorized capital stock of \$4,000,000. A paper machine was purchased, but the construction of the plant was deferred until after the war.

In December, 1919, the National Paper Products Company, of San Francisco, purchased a controlling interest in the company and made arrangements to rush the construction of the plant. The present officers of the Washington Pulp and Paper Corporation are as follows: M. R. Higgins, president; E. M. Mills, vice-president; J. D. Zellerbach, secretary, and M. M. Cohn, treasurer.

The carrying out of this enterprise is a part of the big program of expansion of the National Paper Products Company, which is, practically, owned by the Zellerbach Paper Company. The supply of news print from this plant will strengthen the position of these interests in the domestic and export fields.

V. D. Simon, a paper mill engineer of Chicago, prepared the plans for the plant, which embody the latest ideas in such installations. Kuppler Brothers, of Port Angeles, have the general construction contract in hand. The buildings will be constructed of steel and concrete, principally, and will be large enough for a two-machine plant.

The principal buildings in course of construction are: the machine room, covering a ground space of about 80 x 300 feet; ground wood building, machine shop, power house and boiler room.

The paper machine, which is being installed, is a 55-ton ma-

chine, to trim 164 inches. It will operate on straight news. The engines, boilers and auxiliary machinery have been ordered from Dick & Co. and various other manufacturers.

The 87-acre manufacturing site fronting on Port Angeles Harbor is laid out so as to provide ample space for the operation of the initial installation and to allow for future extensions. A spur track from the Chicago, Milwaukee & St. Paul railroad leads to a large fresh-water logpond where the spruce logs will be dumped from the cars. The plant is so designed that the pulp-wood will pass right along in sequence from one building to another during the various stages of manufacture into paper. When finished the rolls of paper will be run out to the railroad loading platform or to the wharf for shipment to the domestic or foreign markets. A pier 400 feet in length extends out to the wharf, which has 200 feet of frontage, with a depth of forty feet of water.

The large sawmill of the Puget Sound Mill and Timber Company, which adjoins the paper mill site, will be able to furnish a supply of refuse as fuel for the power plant. An abundant supply of spruce logs for pulp-wood can be secured from the immense holdings of private owners and the Government, located all the way from forty to one hundred miles from the plant and accessible by rail.

The main office of the Washington Pulp and Paper Corporation is at 534 Battery street, San Francisco. E. M. Mills, the general manager, has his headquarters at 1034 Henry Building, Seattle, Wash.

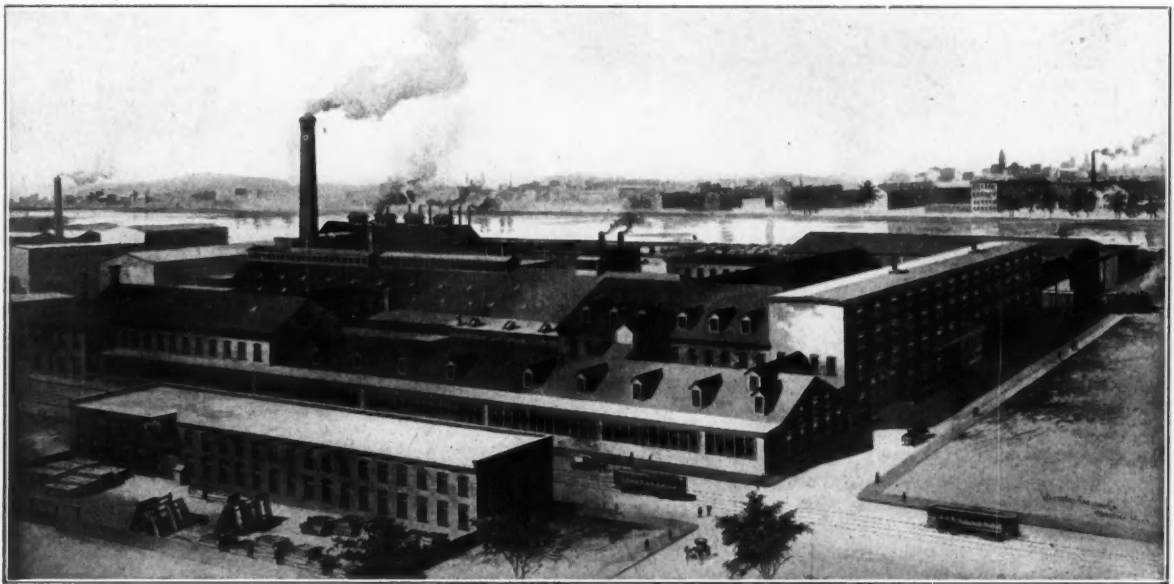
Mr. Mills was formerly vice-president of the Peabody, Houghtaling Company, of Chicago.

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MAKERS OF

**Improved Machinery**  
For Wood Pulp and Paper Mills



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Calenders for Paper Mills, Glazed Paper and Cardboard Manufacturers

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**COTTON, PAPER and CHILLED IRON ROLLS**

Wood Barkers, Wood Chippers, Wood Pulp Grinders, Rag and Paper Dusters, Rag Cutters, Hydraulic Pumps and Presses

Washing and Beating Engines, with Tubs of Wood or Iron

Improved Beaters of Umpherston Type

Gearing, Shafting and Mill Work of every description

Hercules Turbine Wheels, both Vertical and Horizontal

**WE ALSO MAKE SPECIAL MACHINERY TO ORDER**

## Box Board Industry Has Unusual Year

**Competitive Conditions Following the Armistice Carried Prices to Their Lowest Level in Three Years—Irregular Operation of Mills, However, Carried Prices from Approximately \$30.00 Per Ton in June to the Highest Prices for Paper Box Board That Have Ever Been Recorded—Big Demand Caused by Substitution of Fibre Containers for Wooden Box—Many New Machines Under Construction.**

Written Especially for the Annual Number of the Paper Trade Journal by Ellsworth D. Gosling, President, Gosling & Farr, Inc., New York

The year 1919, and the current year up to the present writing have presented the most extraordinary conditions in the paper box board industry in the history of the last decade.

### Competitive Situation After Armistice

January of 1919 being but a short period from the time of the signing of the armistice of the Great War, found the box board industry in a similar waiting state with that of all other mercantile lines in the United States, with the consequence that fresh business, being unequal to the ability to produce, precipitated a competitive situation beginning in the month of February which carried prices to their lowest level in three years, substantially reaching the prevailing cost of production at that time.

This condition continued until June, 1919, when the first serious labor trouble showed its effect upon one or two of the leading and largest manufacturers of board in the country, compelling them to shut down their plants.

The combined efforts of the consumers to negotiate or force lower prices by withholding business found them with very short stocks, against steadily improving business conditions, the consequence of which was that the moment these leading manufacturers were unable to make deliveries, and to protect themselves against future contingencies, the consumers proceeded to bid for supplies.

### Irregular Operations Cause Loss

The irregular operations of manufacturing plants due to labor difficulties, and coal problems, with inefficient transportation facilities, caused a steady loss of tonnage, and a market which started from a cost basis of approximately \$30.00 per ton, f.o.b. mill in June, carried itself by steady climbing to about \$60.00 and \$65.00 in late December and early January, 1920.

### Highest Prices Ever Known

In previous years there has been a slack period between mid-December and early January, but this past year has been an exception to this rule, and buyers anticipating an easement of conditions were disappointed, with the result that the extraordinary weather conditions beginning in January preventing the steady arrival of raw material caused considerable loss of production at the mills, and started fresh bidding on the part of the consumers of board to the extent that at the time of this issue, the highest prices ever known for paper box board, under modern manufacturing conditions, have been recorded.

### Substitute for Wooden Box

There is one particularly outstanding feature of the box board enterprise which has unquestionably revolutionized the distributing of this product, and that is, through the consumption of the heavy tonnage created by the development of the fibre container business, which is a substitute for the lumber or wooden box, and where manufacturers of box board formerly depended almost solely for distribution of their product upon the set-up, folding, and corrugated box consumers, the fibre container substituted for

the wooden box, has become a successful accomplishment, and is today the largest consuming feature of common box board and raw material that exists.

There are new machines under construction whose product of several hundred tons a day will be readily absorbed, and the purchase and control by one of the principal Eastern paper goods manufacturers of three large prominent Eastern box board mills, will tend to lessen somewhat the competition heretofore existing on certain grades of material.

### Most Profitable Period in History of Industry

The export feature today is substantially a superfluous adjunct to the box board business for as a whole, American manufacturers are unable to satisfy the demands of their domestic consumers.

Briefly, the period up to the present time from a year ago January will probably appear in the history of box board production as one of the most profitable and successful from a manufacturing standpoint of any year in the industry.

## CONSTANTINE BOARD MILL RECONSTRUCTED

The reconstructed mill of the Constantine Board and Paper Company of Constantine, Mich., has been operating now for practically twelve months and is turning out board to the satisfaction of the management.

The original mill was completely destroyed by a fire late in 1918, the damage being close to \$200,000. The officers decided immediately to rebuild and the contract was awarded to O. F. Miller, of Kalamazoo.

By May the mill was ready for regular operation and the machine was started.

One stock house is 75 by 135 feet in dimensions, one story; the other being one story and basement, 75 by 65 feet in size. The beater room is 65 feet square and is equipped with a battery of beaters from the Dilts Machine Works.

The machine room is 50 by 180 feet in size, with a concrete floor at the wet end. The machine, 108 inches in width, is of the four cylinder type and has been completely rebuilt. All dryers were repaired and reinstalled while the Downington Manufacturing Company built a new wet end for the machine. A Moore & White rewinder was also made part of the machine equipment.

Additional structures include a shipping room, 20 by 30 feet; boiler room, 50 by 65 feet; engine room, 15 by 40 feet; machine shop, 50 by 50 feet. In all buildings the roofs are supported by steel trusses, which replace the old type wooden beamed roofs. It is stated that the work of reconstruction cost over \$250,000 and that over a half million brick, 200,000 feet of lumber and 450 squares of roofing were required. Fifty to sixty hands are employed regularly and the mill is turning out 60,000 pounds of board every 24 hours.

*The Life of the Smelting Furnace is in the Lining*

## LABORATORY TESTS

*Checked by Plant Experience*

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# ALBERENE STONE

(A close grained Soapstone of fine quality)

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## ALBERENE STONE COMPANY

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If you are interested, write to us

## Tissue Paper Experiences Prosperous Year

After the Slump Following the Armistice in November, 1918, Demand Gradually Increases Until Now the Majority of the Mills Are Sold from Sixty to Ninety Days Ahead and Prices in Many Instances Are Even Higher Than the War Prices of 1916—Some Mills Book Orders Only at Prices Prevailing When Shipped—No Signs of Any Price Depreciation.

Written Especially for the Annual Number of the Paper Trade Journal by S. W. Dunning

The slump following the armistice in November, 1918, which overtook practically all business, the paper trade being no exception, continued with increased vigor during the early months of 1919. January, February and March saw almost a complete cessation of tissue paper manufacturing, most of the mills making the wrapping grades being closed down, as buying had almost entirely ceased in November and December, 1918, the exceptions being those mills which were booked ahead for sixty to ninety days more or less. In March and April, 1919, conditions reached their lowest level and some few mills began booking orders at extremely low figures, compared with previous prices, in order to avoid a shut-down and some business was forced in this manner. This tended to weaken an already tottering market.

### Proved to Be Bad Policy

The policy of attempting to keep machines running on this basis was questionable and proved later to be bad, as the market changed, prices advanced and orders increased and several mills found they had on their books considerable tonnage at prices from one third to one half lower than could have been later obtained. These transactions showed not only a resultant loss, based on the market, but as conditions improved and orders increased, the frequent shipping of this low priced tonnage kept the market in an unsettled state, as it related to the entire tissue trade, for some months. Other mills, most of them in fact, after cleaning up their booked orders and running a few cars for stock closed down for two or three months, using this time for making repairs, etc., and shipping small orders received from stock made up, but refusing to negotiate with the trade for business at the low prices offered, on account of the continued high overhead charges and feeling that the market would surely turn sooner or later in their favor. For the first three months of the year, when the demand was very slight, the situation resolved itself practically into a waiting game between the jobbers and the mills, each feeling that sooner or later the other would break away. Stocks on hand being good the jobbers bought and traded between themselves, and they were able to continue along for some time on this basis without ordering from the mills but naturally stocks on hand gradually dwindled and in March and April inquiries began to develop and orders to materialize and the mills gradually resumed, at prices that were about thirty per cent lower than the prevailing prices in the fall of 1918.

### Fight to Break Market

It was questionable during March and April whether prices would advance or recede; the jobbers made a strong fight to break the market and in some instances did succeed by pitting the quotations of one mill against another in placing orders at low prices, but most of the mills were firm and as the volume of business increased the market became stronger and prices advanced slowly but steadily until by January 1, 1920, they were at least fifty per cent higher than in March, 1919, and now, in March,

1920, have reached practically the war prices of 1916, and in many instances even higher prices are quoted than during that period. This condition is reflected in both No. 1 and No. 2 grades.

At the present time the majority of the mills are booked up for sixty to ninety days, some even further, and this is not surprising as most mills are offered more business than they can possibly turn out in months to come, but generally speaking the mills have been moving cautiously and refusing to book too far ahead at stated prices, on account of the uncertainty of the price of supplies, raw materials and fuel, some mills have even booked orders for future delivery to be billed at the prevailing prices when shipped. This is fair to both mill and jobber and even more than fair to the jobber, as orders placed in this manner generally carry the privilege of cancellation, providing the price is not satisfactory to the buyer.

### Troubles Experienced by Mills

Although prices have been and are high and orders plentiful, the mills have had their troubles caused by the extremely severe winter in many sections. Some water-power mills ran little over half time in December on account of anchor ice, before the severe weather set in and again in January and February considerable time was lost because of the lack of power caused by extremely low temperature. The severe snow storms during February and March, 1920, have greatly hampered many mills, as freight traffic became so congested that embargoes were placed by the railroads and many mills found themselves short of both fuel and raw material and some were obliged to shut down entirely, while others found themselves blocked up with an accumulation of three or four weeks' production in their warehouses which they could not ship.

The demand still continues good and sufficient orders are offered to more than absorb all the product manufactured, and there seems no immediate prospect of lower prices, although with open weather and more power the situation will probably ease up as it relates to raw material, which is at present abnormally high and scarce.

### Export Business

Conditions surrounding export business must also be considered in their relation to prices, as a large tonnage has been absorbed by this trade during the last three or four years. This relates to all grades from the cheaper papers used for fruit wrappers to the higher grades of No. 1 White and colors and it is only natural that as conditions become more normal throughout the world, this tonnage will become distributed, leaving a larger portion for home consumption. But, to counter-balance this situation, which many predict will lower prices, must be considered the very large increase in the use of waxed tissues for wrapping manufactured goods, such as food products, candy, etc. The demand for paper for this purpose at the present time is so heavy that many manufacturers of waxed papers are finding it very

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difficult to obtain sufficient paper for their requirements and there seems to be an ever-increasing demand which absorbs everything in sight which can be used for the purpose and this condition certainly does not augur for lower prices, in the near future at least.

#### No Price Depression in Sight

Any prophecy as to what the future holds in store would be futile. Still, it is difficult to see why anything short of a panic could take place within reasonable time that would cause any great depression at present in prices. For while it may be that at the present time there is a certain amount of inflation and excess profit in prevailing prices, still, these prices are mainly based on the abnormal conditions prevailing and governing production and many of these conditions are abnormal only in comparison with the conditions previously existing, that is, before the War, as there are certain positive facts governing or entering into costs today that will undoubtedly prevail for some years to come. That there is a shortage of labor, none can deny, and based on supply and demand the price of labor will be high just as long, at least, as the shortage exists. This problem does not confront the

mills only, it extends to the mines and woods where is produced both fuel and raw material.

Transportation charges on both raw materials and the finished products are higher than formerly and will continue to advance and all supplies manufactured from wool, brass, copper and iron will undoubtedly maintain a high level for several years.

Although as previously stated, the time will naturally come when export requirements will be shared by other countries, still the fact remains that at present there is no other country in the world that is in a position to produce the volume of goods produced here and under existing conditions this position will undoubtedly be maintained for some time and as long as great quantities of white and colored tissues of various grades continue to be exported to the four corners of the world, there is little doubt but that the manufacturers in this country will be able to obtain a fair and equitable price for their goods, in fact there is no reason why earned, in the future as in the past, by the universal law of supply they should consent to accept less, although prices will be governed and demand.

## LINCOLN PAPER MILLS ORGANIZED AT ELKHART

The Lincoln Paper Mills with a capital of \$500,000, was formed last fall to absorb the Wheat Paper Company and the Elkhart Paper Company and has taken over the properties of both concerns at Elkhart, Ind. The transfers were made about January 1.

The new concern continues the operation of the Wheat Paper Company and its mill is in fine condition, having undergone extensive repairs and a general overhauling. Super calendered and machine finished book and bond and writing papers are produced. The output is 60,000 every 24 hours.

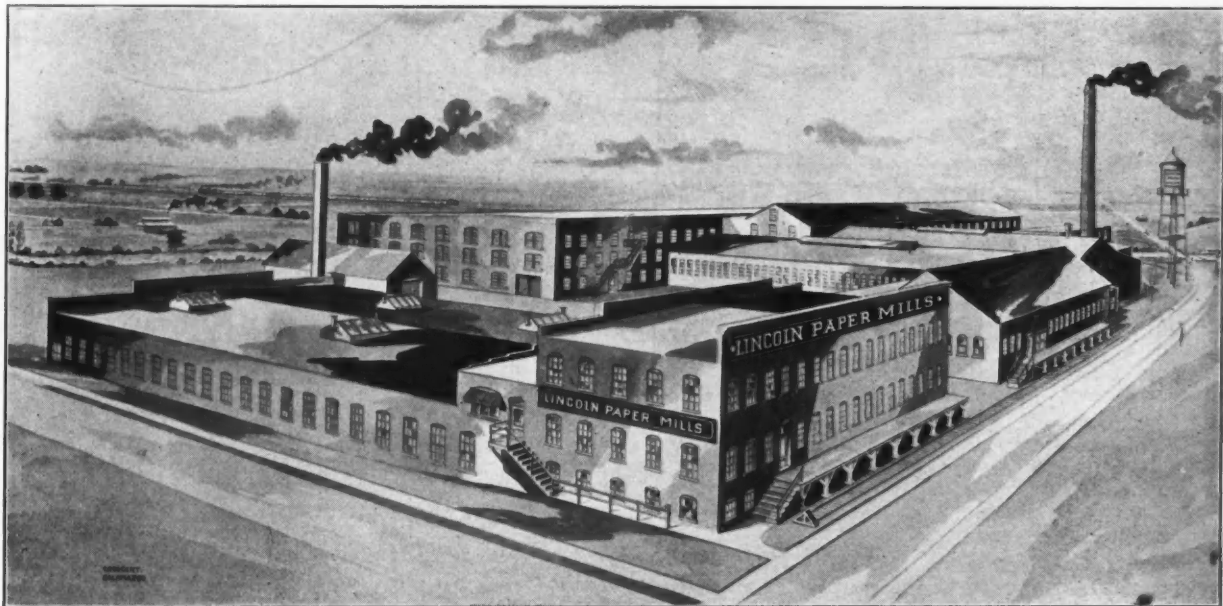
The mill is equipped with three Fourdriniers. One is 78 inches wide, the second, 86 inches wide and the third 100 inches wide. The mill is also equipped for rewinding adding machine and counter rolls. There are six 1,200 pound beaters, eight washing engines, three Jordans and two rotaries. In the boiler house are four 300 horse power Wickes boilers, while the power plant contains a 1,700 horse power Allis-Chalmers turbine and two 300 horse power auxiliary engines.

Edward B. Zeigler and H. A. Bardeen, both of Elkhart, are respectively president, and treasurer and manager of the company. The board of directors includes the above, and Cyrus E. Frye, of Elkhart and A. B. Connable, H. B. Hoyt, B. Hopper, W. E. Kidder, H. L. Vanderhorst, S. B. Monroe and G. A. Gilman, all of Kalamazoo, Mich.

#### WASHINGTON MAY GET PULP MILL

A press dispatch from Hoquiam, Wash., says:

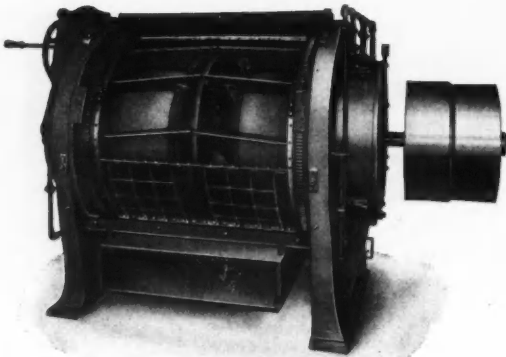
Possibility of establishment of a wood pulp plant on Grays Harbor is indicated in a letter a New England lumber operator has written to the Hoquiam Commercial Club. The letter asks for particulars concerning available sites, transportation facilities, taxes and labor conditions on Grays Harbor. Interested with the lumber operator is a pulp mill owner, who is considering possibilities of the Northwestern timber districts as a desirable location for building a wood pulp mill.



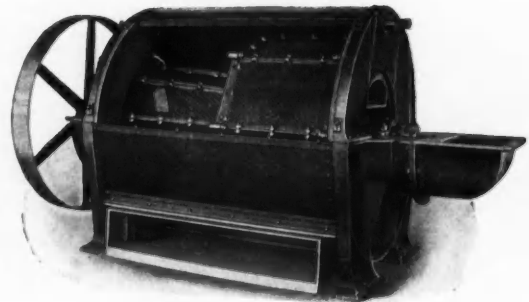
LINCOLN PAPER MILLS, ELKHART, IND.



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"IMPCO" PULP SCREEN



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*Standard of the World*

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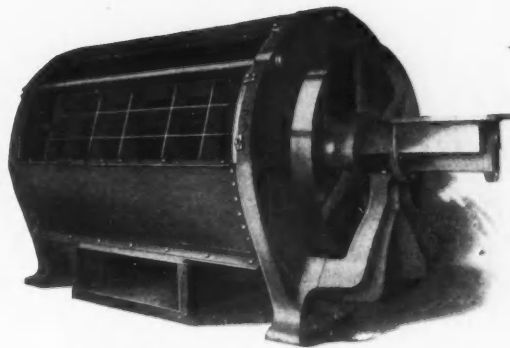
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## Year Shows Big Increases in Pulp Prices

**Improvement in Market Expected During Early Months of 1919 Did Not Occur Due to the Fact That So Many Paper Machines Were Idle—Real Improvement, However, Was in Evidence in September and Has Continued Ever Since—Scandinavian Mills Appear to Be Pretty Well Sold Up to European Customers at Higher Prices Than Apparently Could Have Been Obtained Here.**

Written for the Annual Number of the Paper Trade Journal by O. F. Swanson, Manager of Sales, Pulp & Paper Trading Co.

The general opinion at the closing of the year 1918 seemed to be that the pulp market should greatly improve during the first quarter of the year. This, however, was not the case and the market was weak for the first half of the year due to the fact that a number of paper machines were closed down for lack of orders. This greatly reduced the consumption of pulp and resulted in a corresponding reduction in prices.

### Prices at the Beginning of the Year

At the beginning of the year imported bleached sulphite was selling as high as 10½ cents per pound, imported strong unbleached sulphite at 6 cents per pound, and kraft pulp at 5¼ cents per pound.

During the first half of 1919 domestic bleached sulphite was selling at 6 cents per pound f. o. b. mill, domestic strong unbleached sulphite at \$95.00 the ton f. o. b. mill and domestic kraft pulp at \$92.50 the ton f. o. b. mill. Ground wood was selling all the way from \$26.50 to \$35.00 f. o. b. mill during this period.

Prices gradually went down during the spring and summer. Bleached sulphite occasionally sold as low as 5 cents per pound at the mill during the latter part of June, easy bleaching domestic sulphite at \$90.00 delivered, and prices on kraft pulp sunk as low as \$70.00 ex-dock. Domestic kraft pulp during the market's dull-est period sold as low as \$70.00 delivered. A few sales of imported kraft pulp were made at \$70.00 delivered, but during July and August the market became somewhat firmer.

### Real Improvement About Mid September

The real improvement began about the middle of September, at which time the first tendency of an improvement in the market was noticed, which continued gradually for the balance of the year. Ground wood was selling at that time at \$27.00 at the mill, but by the end of the year prices went up as high as \$50.00.

With reference to the kraft market, while the paper mills were running full with plenty of orders and securing good prices for kraft paper, prices on kraft pulp remained low for a considerable length of time. This was due to importations of large tonnage of kraft pulp.

Due to the continued high cost of living paper mills found it necessary to meet conditions by important increases in wages of operatives with the result that wages today in all paper mills in the country are considerably higher than they were during war time.

### Demand Expanded in Winter of 1919-1920

During the winter of 1919-1920, November, December and January, nothing radical happened, except that the paper mills began to fill up with orders for paper which naturally created a greater demand for pulp, and prices kept advancing accordingly except in the kraft pulp market which was in a very unusual condition.

The paper mills had plenty of orders for kraft papers and prices remained low due to the fact that a large quantity of imported

kraft pulp came in unexpectedly. Because of this fact kraft pulp did not advance as fast as the rest of the pulp market. There was no real demand for kraft pulp of any kind until about the middle of February of this year, when the demand, due to the partial depletion of stocks on the docks began to expand. Since that time prices have been going up right along, and the demand for all grades of pulp is really in excess of the supply.

Recent advices from abroad state that a shortage of salt cake in the Scandinavian countries is imminent, and threatens to curtail to some extent the production of kraft pulp.

### Scandinavian Mills Well Sold

Regarding importations of further tonnage with the reopening of Baltic navigation, the present indications are that the mills in Scandinavian countries are practically sold up for the whole year, owing to the great demand for Scandinavian pulp in Europe at considerably higher prices than apparently it would have been possible to obtain in this market.

It has been reported that unbleached sulphite is selling as high as 8 cents per pound, f.o.b. Gothenburg, and bleached sulphite as high as 12 cents per pound. If the present situation in the paper market continues the prices for pulp, in spite of current high prices, will no doubt advance further.

### Continued High Prices Probable

From present indications it would appear that the high prices now prevailing may be looked upon as promising to continue for some time to come. It is reported on good authority that England, always a larger buyer of Scandinavian pulp, is now negotiating for large supplies in Norway and Sweden, for production and shipment during 1921, at prices prevailing today. This tends to inspire confidence in the Scandinavian manufacturer in the continuance of present conditions and a decline in prices is not to be expected for the immediate future.

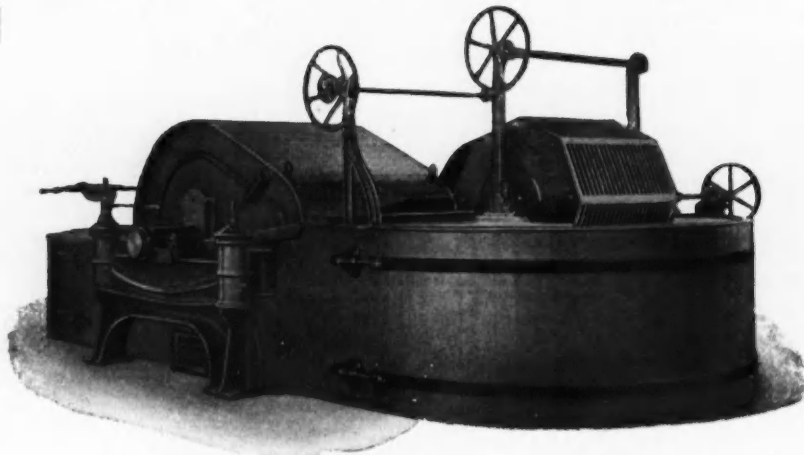
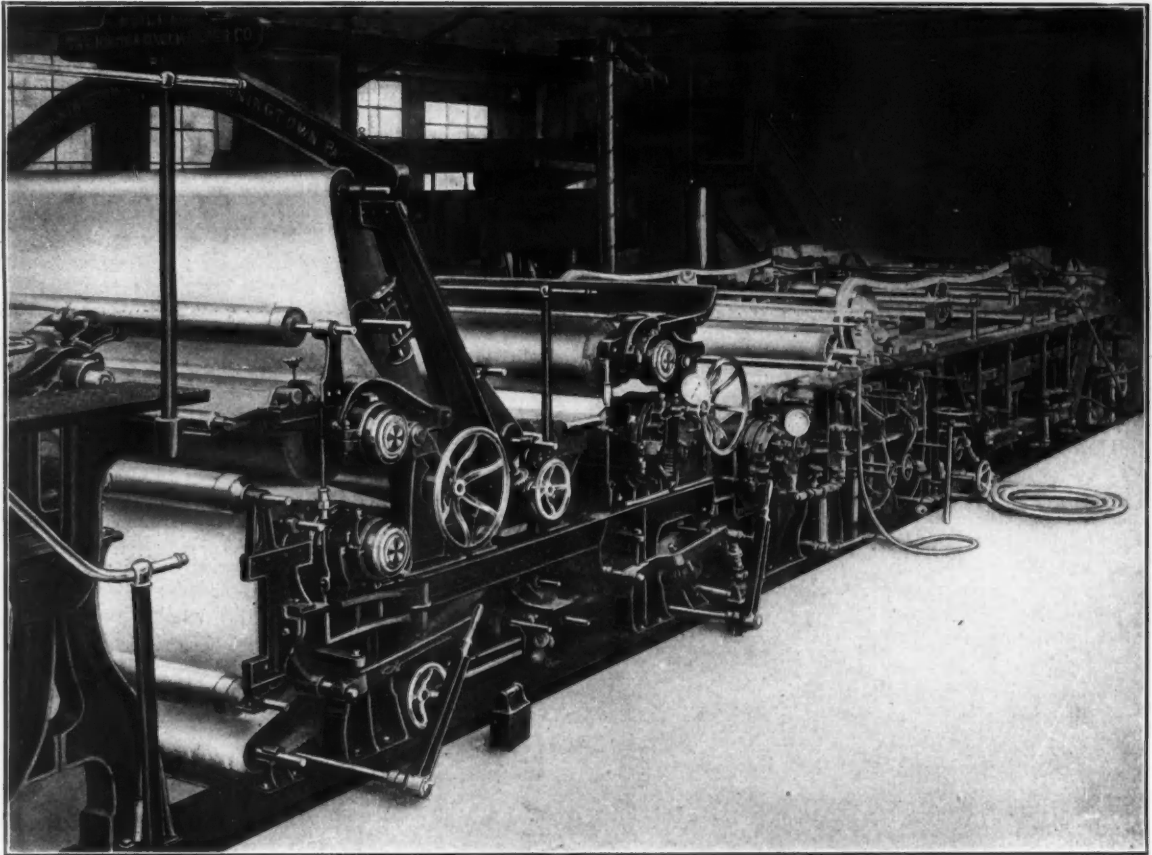
### HUNGARY HAS ONLY ONE PAPER MILL LEFT

Hungary has lost about two-thirds of her territory, including those parts where all her paper mills (all but one) were situated. The one paper mill surviving on Hungarian soil is the one at Diosgyor, established since 1778. It has been manufacturing writing paper, note paper and heavy paper for official documents, and some pasteboard.

The straw paper mill at Arad is now Rumanian, the one at Fiume-Susak will either become Italian, Jugo-Slavic or independent buffer, according to the outcome of the controversy between President Wilson and the Great Powers concerned. Hungary will probably remain a paper importing country, for its present territory is almost wholly plains, without mountains creating water power and without forests to furnish pulp. Eight millions of Hungarians will, therefore, continue to be dependent upon paper imports.

# DOWNINGTOWN MANU

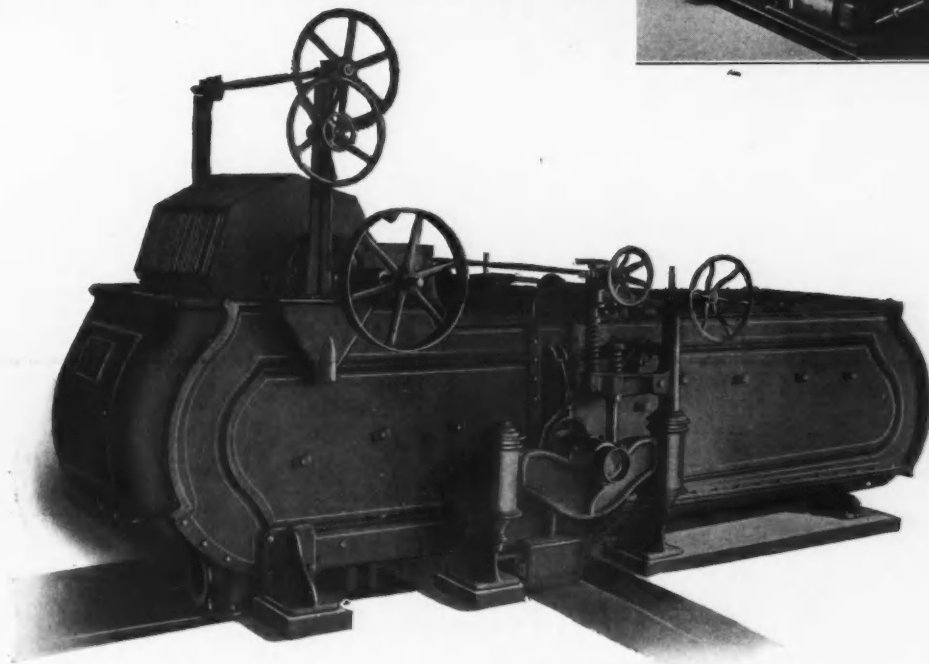
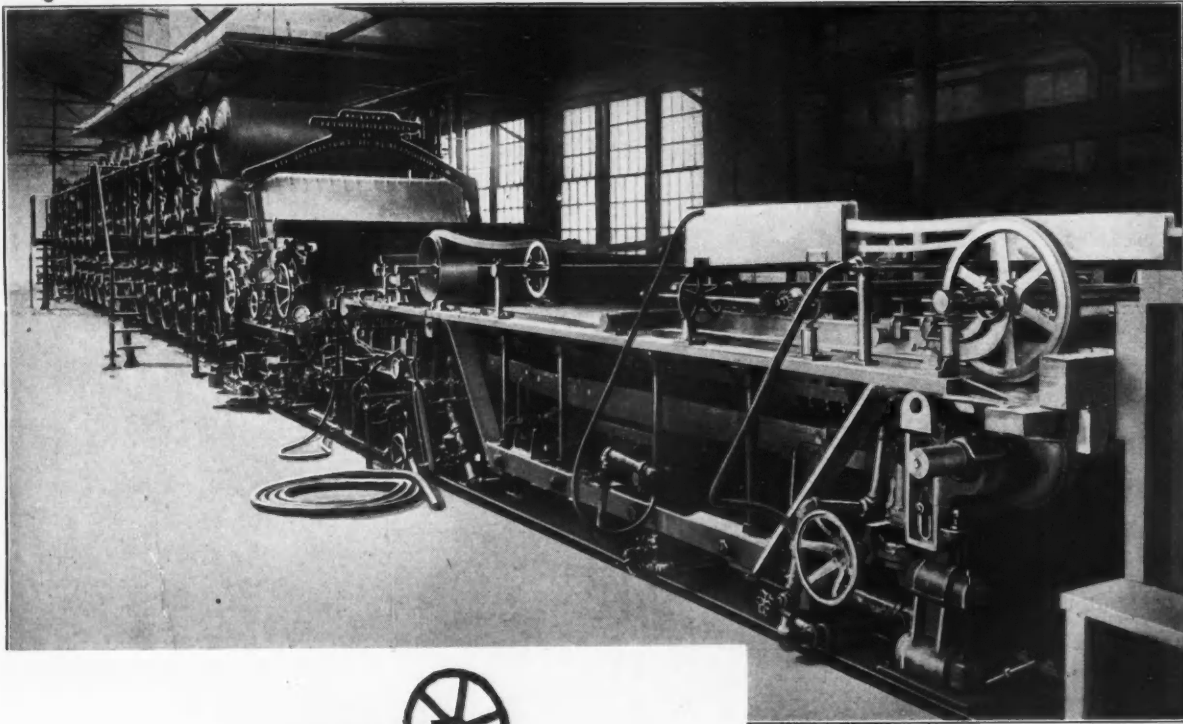
EAST DOWNINGTOWN,



WOOD AND IRON TUB BEATERS

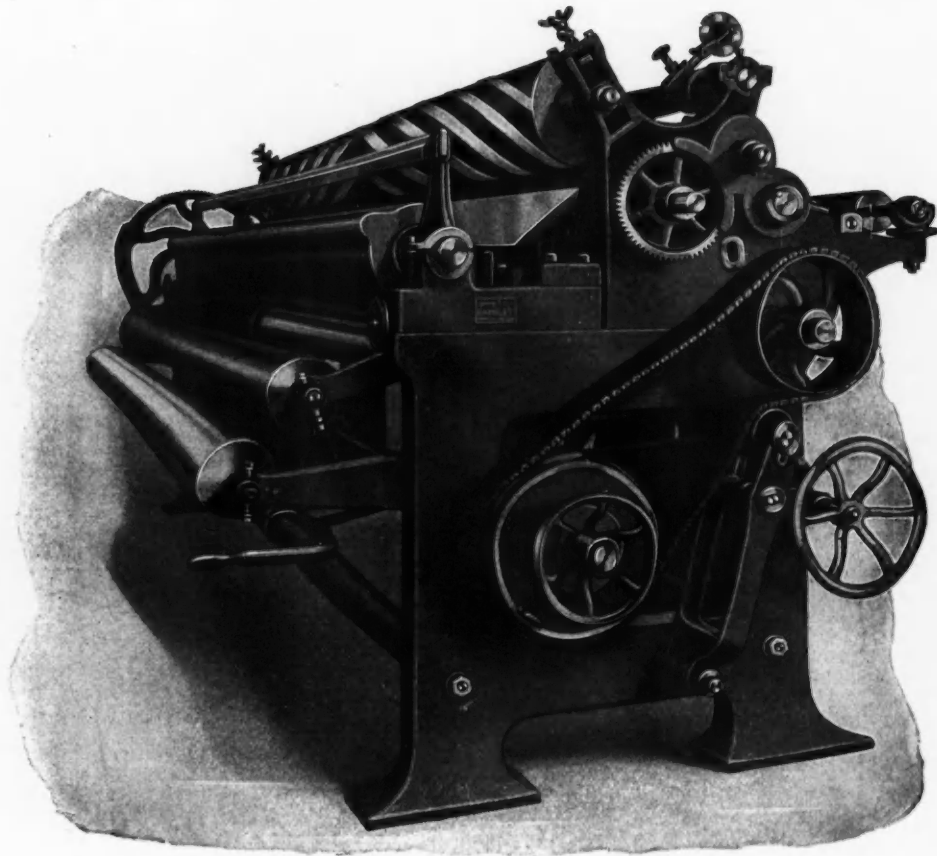
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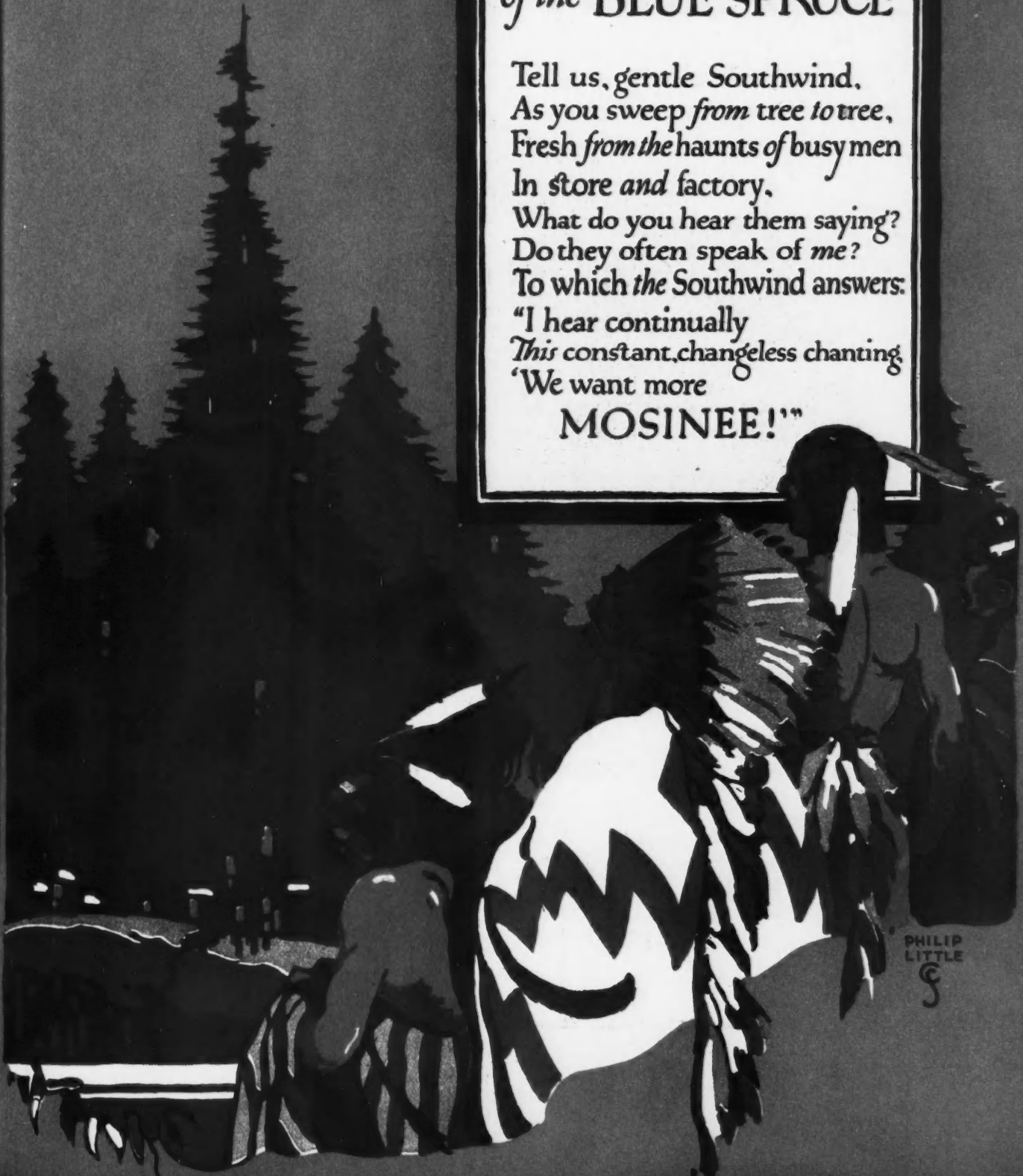
LAWRENCE, MASS.





*The* Song  
*of the* BLUE SPRUCE

Tell us, gentle Southwind,  
As you sweep *from tree to tree,*  
Fresh *from the haunts of busy men*  
In *store and factory,*  
What do you hear them saying?  
Do they often speak of *me?*  
To which *the Southwind answers:*  
"I hear continually  
*This constant, changeless chanting*  
"We want more  
**MOSINEE!"**"



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# MOSINEE

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## Paper Stock Market Has Unusual Year

At the Outset of the Year Prices of Raw Material Continued on the Downward Grade, Not Recovering from the Effects of the Armistice Until About May—Price Advances, However, Were Rapid Once the Improvement Was Under Way—Betterment Was First Experienced in Rag Stocks but Soon Extended Also to the Waste Paper Group—Prices for Quarterly Periods.

Written Especially for the Annual Number of the Paper Trade Journal by Walter R. Hicks, of Daniel M. Hicks, Inc.

The sun has set upon another year. Again the old hoary bearded parent of time hath gathered unto himself another twelve month and again the editor of this highly esteemed chronical of the trade hath poked his proboscis through the epidermis of my more or less sanctum sanctorum with a summons to appear in this column on the doings in the market of 1919. Like the doctor who was called in to operate on a three hundred and fifty pound victim, said when he gazed upon the patient, "I don't know whether to blast or excavate," I, too, voice myself in similar language when it comes to the market, for it is a toss-up between a steam shovel and a dynamite stick. It would require a diagnostician and a statistician to sight and record all the symptoms as they developed.

### Situation Not Easily Covered

It would be easier to cover a prize fight or a Mexican revolution, than it is to cover the manoeuvres and engagements of last year, in the commodities to which we devote our time and energy baptizing it with the honest sweat of our brows, namely, "Lowly Paper Stock."

I am reminded of a story I heard about an Irish sergeant, a typical son of Erin, who had a recruit out in the late war, for target practice. He ordered his man up to the one hundred yard line, issued his commands, "Ready, aim, fire." The smoke cleared away and the recruit hadn't even hit the target. He was then brought in to the seventy-five yard line, and fifty yard line, with like result. The sergeant in sheer desperation took him to the twenty-five yard line, and still the target remained unblemished. He then threw up his hands and said to the rookie, "For the love of Moike, fix yer bayonet and see if you can stab it."

The situation regarding the market of last year resolves itself to a like conclusion; if we can't hit it, we will fix our bayonets and make a stab at it.

### How It All Happened

Now that we have figured our income tax and our excess profits tax, let us sit back and see how it all happened. It has been a year of peace treaties, prosperity and prohibition. Labor kicked over the traces, but the tide of dissatisfaction was dammed, physically and profanely, and the mills again hummed to capacity and the demand for finished paper soon exceeded production.

On the other hand, at the outset of the year, prices of raw material continued on the downward grade, not recovering from the effects of the armistice until about May. Although the mills had good business in sight, they were reluctant to buy on a falling



WALTER R. HICKS

market, with the result that about that time they found stocks low and the time had arrived for them to come into the market. This condition was general and grades that had fallen off in value almost to prewar figures, began to feel the pull of a sudden demand, with the result of a sharp advance in practically all grades.

The roofing mills, the biggest factor in tonnage, were the first to enter upon the scene, then came the book mills, the writing mills, and lastly the board mills, and the stock as affected in order by these consumers, felt the upheaval of prices.

Roofing rags went from one and a half cents in early May to three cents per pound in about a month's time. Book shavings climbed from around three cents per pound to around four and one-half cents in about the same time. Thirds and blues and white bags showed a proportional advance and white shirts in a short time went from ten cents to sixteen cents. The box-board items such as mixed papers and

news, held fire, but later soared in value, mixed papers going to ninety and hovered there over the balance of the year, while news that was at one time as low as fifty cents, reached one and a quarter by the end of the year.

### Big Increase in Paper Demand

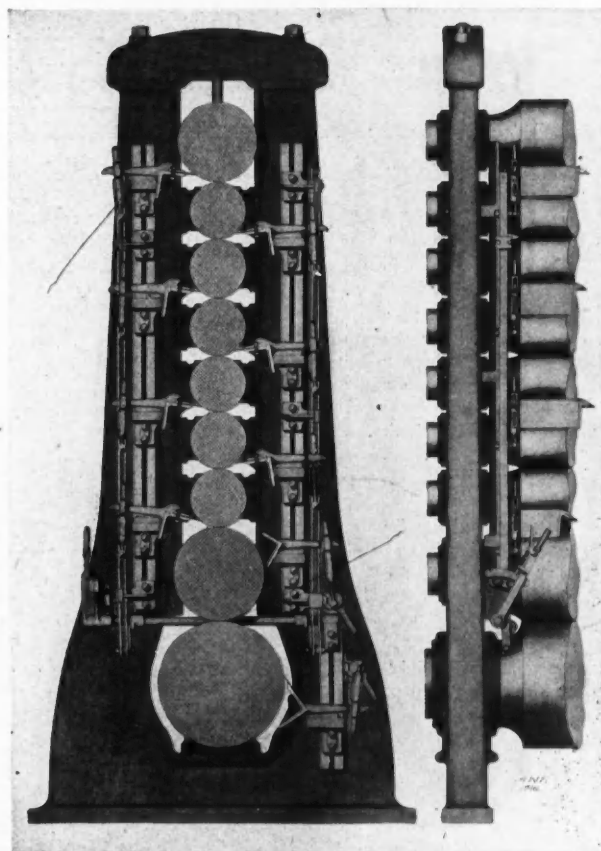
This economic progression may be explained in this manner: The American people amassed more money during the war than it was ever their privilege to earn in the history of the country, and this is particularly true of last year, when the full effect of good business came with great force. Homes were needed, new plants were built, old ones enlarged and construction work of every description started in and hence the produce of the roofing mills was the first to feel the demand. The public was a buying unit and advertising met with quick response. Manufacturers, realizing this, floated extensive advertising campaigns, and concerns not in the habit of using this medium for getting business, launched into the advertising field and every periodical in the country felt the result of this call for space, and enlarged its size. The book mills were called on for more and more paper, and they thereby shared in like manner with the roofing manufacturers. Advertising resulted in inquiries, replies, orders, invoices, and book entries and the writing mills fell in line. The material thus ordered had to be wrapped and packed in containers and the wrapping and box board mills joined the grand procession. Mills of every class were soon sold far ahead.

This may well be called the Paper Age. The utility of paper substitutes is beyond the experimental stage, and their use has

# Greater Efficiency



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## WARREN IMPROVED CALENDER DOCTORS WITH FLEXIBLE BLADES, UNIVERSAL ADJUSTMENT AND CONTROL

Patented in United States, Canada, Great Britain, France, Germany, and Other European Countries

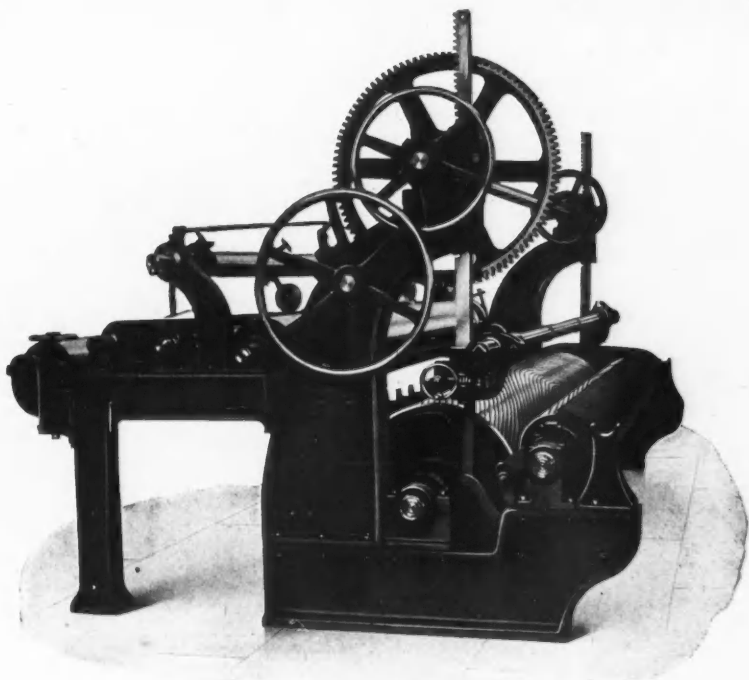
The Doctors can be operated into or off working position by limited rocking motion controlled by hand lever which locks all Doctors by latching into adjustable quadrant. The pressure applied on Doctors is evenly distributed over every inch of every Doctor by means of universal connection with adjustable quadrant and hand lever, the Doctors being properly balanced so as to assure easy operation. The flexible blades conform to the rolls giving perfect doctoring effect with minimum pressure. Doctors may be operated on continuously without scoring or injuring the polished surface of the rolls. Individual Doctors may be unlatched and rocked away from the rolls for cleaning purposes without universal control of other doctors. Doctors are constructed of steel, light and strong, and may be fitted to any type of paper machine calender.

Over 300 stacks like the above fully equipped and operating successfully on all grades of paper in the United States

Sherbrooke Machinery Co., Limited, Sherbrooke, Quebec, Canada  
Licensed Manufacturers for the Dominion of Canada

# Ticonderoga Ma Ticonderoga

# cy in Paper Making



Above illustration shows a 154" face Winder

## Improved WARREN Patent Double Drum WINDER with Slitter Attachment

### OTHER SPECIALTIES MANUFACTURED

Patent Chilled Cast Iron Burrs for dressing Pulp Stones.

Patent Ball Valve Hydrant Stock Circulating System used in furnishing any number of Beaters with liquid stock. Stock kept in constant motion, either supplying Beaters or circulating back to storage chest.

Cylinder and Vat for the purpose of thickening stock to uniform consistency.

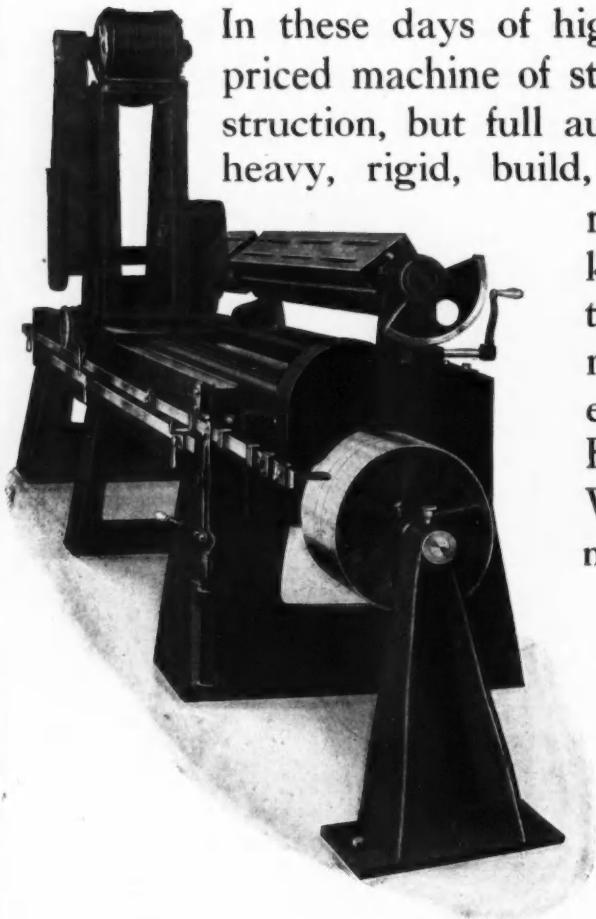
Portable Hydraulic Press for general service in paper mills, such as removing couplings, engine cranks, pulleys.

**Bulletin Describing Any of the Above Specialties Will Be  
Mailed on Request**

**Chine Works  
New York.**

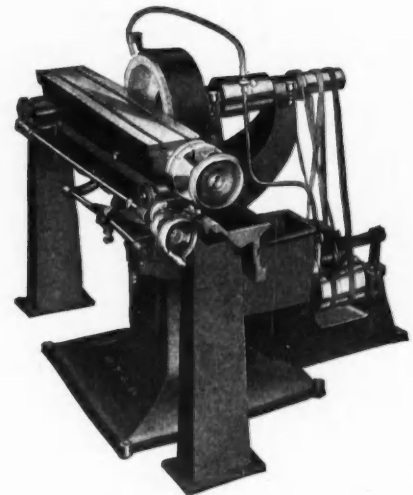


# Better Knife Grinding at Minimum Expense



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Stationary Knife Bar—Traveling Grinding Wheel

In these days of high costs, a comparatively low priced machine of strictest accuracy, of simple construction, but full automatic in every respect, and of heavy, rigid, build, insuring long service,—offers real economy in keeping all knives from 6-inch to 190-inch, up to highest cutting efficiency. We make all types of grinders for every variety of service in fitting Knives, Saws, Shear blades, etc. Write for catalog and recommendations on your requirements



Full Automatic Knife Grinder, Stationary  
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**MACHINERY COMPANY  
OF AMERICA**

**BIG RAPIDS, MICHIGAN**

**U. S. A.**

**Branch: Seattle, Wash.**



become established. Paper shingles, wall board, floor covering and roofing felt are here to stay. Waterproof, glassing paper, paper towels and napkins, fibre barrels, cases, care wheels, gears, etc., paper pie plates, butter plates and egg boxes, imitation wicker furniture, carpet strings and burlap are things of every-day life and are all the products of our paper industry.

**Domestic and Foreign Rags Advance**

So much for the demand for manufactured paper. This great influx of business meant consumption of raw material, and we will turn our attention again to the supplies.

As already pointed out, the low level of prices was reached in the late spring. Domestic collections fell off as a result. Labor was high and almost unprocureable, and values did not leave margin enough to make grading and packing an object. There was just enough business to take care of what rags were being produced. The mills, consequently, soon drained the supply of available rags. About this time, foreign rags were offered freely, at attractive quotations, due to the low rates of exchange. Holland, France, Belgium and Great Britain dumped large tonnages of rags into this country. Holland leading with accumulations that piled up since the start of the war, due to the embargo placed by the British on all Dutch shipments. France was next in importance, England and Belgium following. August and September saw thousands of bales arriving daily. The advance in domestic rags was halter temporarily. These shipments were mostly against orders and were quickly consumed. The demand kept up with what we might dramatically call ever increasing fury,

and prices of all stock, both domestic and foreign, started on a climb that carried over into this year and broke all records. The absence of white rags and high grade new cuttings was significant among the imported rags. This explains the unusual advance in domestic repacked No. 1 whites, from six cents per pound to fourteen and a half, and shirt cuttings from nine to twenty cents per pound, with washables going from seven and a half to twelve.

Waste paper was the last group to advance, and received little relief from the other side. New high levels were established in practically all grades, due in a measure to the high cost of wood pulp and ground wood, mixed papers reaching \$1.60, old newspapers two cents per pound. Hard white, however, has not yet quite reached the high mark of 1917, when this grade soared to seven cents per pound.

The demand for new and old rags by shredding and shoddy mills was slack over last year, but this year these mills entered the market and consumed a good tonnage. This trade effected mostly the better grades of old bags and the lower grades of new cuttings, with the exception of the higher class shoddy mills that came in for a quantity of hosiery clips.

**Quarterly Range of Prices**

Following is given a range of prices taken quarterly from March 1 of last year, which will serve to show the fluctuations of the market up to March 1 of this year. Only the more important grades are taken, as all other grades act more or less in sympathy. All the prices referred to in the above article as well as in the schedule below are on basis of f.o.b. New York:

	March, 1919.	June, 1919.	September, 1919.	December, 1919.	March, 1920.
New shirt cuttings, White No. 1.....	9 @ 10	11 @ 12	15.75 @ 16.25	14.75 @ 16	19 @ 20
Whites No. 1, repacked.....	5.75 @ 6.50	6 @ 7.60	7.50 @ 8	8 @ 9	8 @ 9
Thirds and blues, repacked.....	3.25 @ 3.75	3.25 @ 4.25	4.50 @ 5	4.50 @ 3	4.50 @ 5
Roofing stock, No. 2.....	1.30 @ 1.80	1.65 @ 2.05	2.75 @ 3	3 @ 3.25	3 @ 3.25
Soft white shavings, No. 1.....	3 @ 3.50	4 @ 4.50	4.50 @ 5	4.75 @ 5.25	4.75 @ 5.25
Solid flat stock.....	2.25 @ 2.50	2.50 @ 2.75	2.25 @ 2.50	2.40 @ 2.50	3.50 @ 3.60
Mixed paper, No. 1.....	.35 @ .45	.40 @ .50	.50 @ .60	.90 @ 1	1.50 @ 1.60

**A PAPER CATASTROPHE IN EASTERN EUROPE**

Many newspapers are giving up the ghost, not only in Germany but also in all Central and Eastern Europe. The German government, in order to ameliorate the crash, is making frantic efforts to get wood pulp by clearing the state forests of Austria, giving food in payment to starving Austrians. While the pulp shortage is serious, the worst feature of the menacing situation is the lack of coal. Recently 16 large paper mills were forced to close down, having no coal to run the machinery. Besides, the owners were not satisfied with the price fixed by the government. In their case suspension of work was sort of a strike, which they won, as the government was forced to grant an increase in price. The price for news print paper fixed for January was ten times the price paid before the war. On February 1 another increase took place, raising the price to eleven times the peace figure. This lasted only to the 15th of the month, when the government had to add another increase of 17.50 marks per 100 kilograms. Paper manufacturers convinced the government that they simply could not produce under the previous scale.

**Export Embargo on Paper**

At the same time the export embargo on paper and paper products was made more comprehensive and strict by the German government. Business circulars and postage stamps are about the only paper "goods" permitted to leave German soil. The separate states of Germany are combing their forests for wood to supply the pulp mills.

**Meeting at Weimar**

German publishers held a meeting at Weimar recently to consider ways and means to meet the situation. The conference decided to ask the government not to spare any efforts in provid-

ing wood to pulp mills. The traditional German attitude, to rely upon some sort of official authority, prevailed, while the hustlers in the newspaper business are obtaining paper at fabulous prices, law or no law. Staid old newspapers, after having made their appearance for 100 and more years, are facing death. Scores of them are holding out on the thinnest of credit only. A crash is bound to come and many journals will cease to exist.

**CROWN WILLAMETTE MAKES ADDITION**

Good progress is being made by the Crown Willamette Paper Company at West Linn, opposite Oregon City, Ore., on the construction of an additional machine room, to be known as Mill "K." It occupies a portion of the site of the old Crown mill, south of Mill "D." It is of steel and concrete construction and will be as complete as a structure of that sort can be made. The building will be ready by the time the new machine arrives and it is hoped to have the new unit in operation by August 1. The Bagley & Sewall Company is building the 186-inch machine, which will have capacity of about 80 tons of news a day.

Additional wood-grinding machinery will be installed to provide for the increased paper-making capacity of the company's large plant. The sulphite mill capacity is already sufficient. The company should be able to turn out nearly 300 tons of paper a day when all of the improvements are completed. The numerous buildings of the plant now cover a large area of ground on the west bank of the Willamette river, alongside the canal and locks, which enable river steamers to pass around the falls, 42 feet in height. A large amount of water power is utilized and considerable electric power, also, is obtained from hydroelectric plants.



**T**HE Independent Stamp on a cutting die is a small thing to look for, but a great thing to find. It insures, first of all, quality; second, careful and experienced workmanship; third, and by no means the least, it means intelligent selection of steel, without which no die, wherever or however made, can give uniformly good results.

## **INDEPENDENT DIE CO., Inc.**

2640 La Salle Street

St. Louis, Mo.

## Michigan Paper-Making Industry Expands

Returns for 1919 Show That Wonderful Development Has Taken Place Throughout the State—Ten New Corporations with an Aggregate Capital of \$6,350,000 Have Either Been Formed or Have Filed Articles—Twelve Companies Have Either Increased Their Capital Stock or Have Taken Steps to Do So, Indicating a Gross Increase of \$19,825,000 in Capital Stock.

Written Especially for the Annual Number of The Paper Trade Journal by Howard P. Hall

The growth of paper-making in Michigan has kept pace with the wonderful industrial development throughout the state since the signing of the armistice. Incomplete returns are at hand for 1919 and the showing is most gratifying. Ten new corporations with an aggregate capital of \$6,350,000 have either been organized or have filed articles. Twelve companies previously established have either increased their capital or taken steps to do so. The gross increase of \$19,825,000 is possible when all legal steps have been carried out by the twelve companies involved.

The Kalamazoo Valley district continues to dominate the state as chief paper-making center. Four new companies with an aggregate capital of \$550,000 are announced in this territory, while nine other concerns have taken steps to increase their capital a total of \$18,580,000.

Monroe is coming rapidly to the front and now ranks first in Michigan and America as well as in the manufacture of container, box and binder board. Three new companies have been formed in Monroe with a gross capital of \$3,600,000, while two other concerns have increased their stock outstanding by \$1,095,000. Monroe holds the same position of prominence in the manufacture of board that Kalamazoo enjoys in the production of book and coated papers.

A report by corporations from the state is as follows:

### Growth in Kalamazoo Valley

Glendale Pulp and Paper Company (new), \$250,000.  
 Western Papermakers Chemical Company, \$100,000 to \$200,000.  
 Standard Paper Company, \$180,000 to \$360,000.  
 Southerland Paper Company, \$200,000 to \$500,000.  
 Western Board and Paper Company, \$150,000 to \$250,000.  
 King Paper Company, \$1,100,000 to \$2,200,000.  
 Bryant Paper Company (authorized), \$5,000,000 to \$6,000,000.  
 Monarch Paper Company (authorized), \$750,000 to \$1,500,000.  
 Kalamazoo Loose Leaf Binder Company (authorized), \$500,000 to \$1,500,000.  
 Kalamazoo Trading Company, \$30,000 to \$50,000.  
 Van Gorder Company (new), \$50,000.  
 MacSimBar Paper Company, \$400,000 to \$800,000, then to \$1,200,000.  
 Herrbold-Keelan Company (authorized), \$200,000.  
 Eddy Paper Company, \$750,000 to \$1,750,000, then authorized to \$12,000,000 common and \$3,000,000 preferred.  
 Total capital in new concerns, \$550,000.  
 Increases in capital, effected and authorized, \$18,580,000.

### Increases in State

Monroe Paper Products Company (new), \$1,000,000.  
 Monroe Binder Board Company, \$1,000,000 to \$2,000,000.  
 River Raisin Chemical Company (new), \$100,000.  
 Monroe Corrugated Boxboard Company, \$5,000 to \$100,000.  
 Monroe Fibre & Board Company (articles filed), \$2,500,000.  
 Northern Michigan Pulp Company, Petoskey, \$100,000 to \$250,000.

Escanaba Paper Company, Escanaba (new), \$1,000,000, then increased to \$1,650,000.

Universal Pulp and Paper Company, St. Joseph (new), \$50,000.

Hoskins-Morainville Company, Menominee (new), \$500,000.

### Many Important Improvements

Despite the high wages demanded by the building trades, the scarcity of building material and the difficulty in securing machinery and equipment of any kind, the paper concerns in the Kalamazoo Valley district made many important improvements and additions during the past twelve months and are contemplating many more enlargements for the immediate future.

As has been the custom since the establishment of the industry here, all plants are maintained at a high state of efficiency, thus insuring a maximum production at a minimum of cost. Mills in the Kalamazoo district are generally recognized as models of their kind.

During the past twelve months the mills and allied industries in this territory have authorized the expenditure of over \$2,000,000 for new buildings, machinery and other improvements. Much of this work has been completed; some is now in progress and other items are contemplated and assured for the immediate future.

### A Survey of the Field

A hurried survey of the field shows the following items:

Bryant Paper Company: New water power system for driving the well pumps, with mill race broadened, deepened and enclosed in concrete walls. New office building to cost \$100,000 authorized.

Monarch Paper Company: Storage warehouse erected; beater and rotary rooms entirely rebuilt; finishing room enlarged. Company contemplates erection of finishing room for coating department.

King Paper Company: Completion of well system and pumping stations; entire mill re-roofed; concrete floors in beater rooms and much equipment added.

Kalamazoo Paper Company: Color room for River View coating division rebuilt; new stock house for mill No. 1; new office building erected, which combines social center quarters for female employees; installation of a battery of five 500 horse power Wickes boilers.

Western Board and Paper Company: Erection of three story warehouse with 40,000 square feet of floor space; power plant equipped with automatic stokers; addition of electric coal conveyor and concrete coal bunkers, latter being 28 by 60 feet in dimensions.

Rex Paper Company: Coating division of six coaters connected up and placed in operation. The coaters were purchased at time mill was built.

# ORR

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Kalamazoo Vegetable Parchment Company: New parchmentizing plant erected; large amount of new machinery added to parchment and paper mills; fifteen cottages erected for employees.

Glendale Pulp and Paper Company: New plant in course of erection at cost of nearly \$200,000, machinery included.

Sutherland Paper Company: New finishing room, 102 by 60 feet; office building, 40 by 50 feet; storage warehouse of brick and concrete to replace wooden structure.

Standard Paper Company: Erecting administration building and carton plant, 125 by 400 feet in dimensions, one and two stories high; power plant capacity increased by new 600 horse power Corliss engine and 300 horse power turbine driven generator.

Kalamazoo Stationery Company: Concrete and brick addition, 35,000 square feet of floor space.

Kalamazoo Loose Leaf Binder Company: Drawing plans for

erection of addition that will more than double capacity of present plant.

D. Graff & Son, paper stock dealers: Kalamazoo plant enlarged by addition, giving 68,000 feet more floor space. Can handle 75,000 tons of stock annually.

Oscar Gumbinsky & Bros., paper stock dealers: New office and warehouse erected.

Kalamazoo Trading Company: New warehouse opened for handling stock.

Birmingham and Proesser: Office building and sales warehouse contemplated.

Van Gorder Company: Capacity of plant more than doubled for manufacture of tablets, stationery, etc.

The Paper Trading Company: Offices and sales quarters fitted up.

## FORT HOWARD PAPER CO. STARTS AT GREEN BAY, WIS.

The Fort Howard Paper Company which recently started operations at Green Bay, Wis., has a paper machine trimming 127 inches, making crepe toilet paper of all grades, paper napkins and paper towels.

The daily production is around 500 cases. The tonnage of paper turned out is from 12 to 14 tons per day. The main building is 240 x 64 and is located on a 7 acre plot of ground directly on Fox River.

started in the paper business with the Nashua River Paper Company when 14 years of age. He was also connected for a short time with the Parsons Trading Company, New York, and the Canada Paper Company, Windsor Mills, Canada, and was for about eight years general superintendent of the Northern Paper Mills at Green Bay.

The sales manager is Emil J. Hansen, who has had a great many years of experience along these lines.



Electric and steam power is used. Electricity is furnished by hydro-electric power company serving Green Bay territory.

The company has just started on a building three stories high and 100 feet square to provide additional room for the converting of its production. Ludolf M. Hansen Company of Green Bay has the contract for this building.

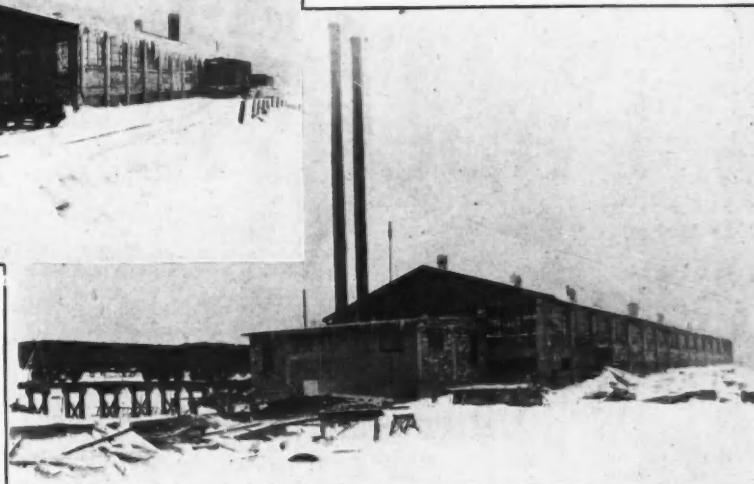
The company has also placed an order with the Mills Machine Company of Lawrence, Mass., for delivery in June, a duplicate in size of its present paper machine. After the second machine is in operation the company will turn out about 25 tons daily. When cut up into toilet paper and paper napkins this will mean an output of about 1,000 cases per day.

The officers of the company are Samuel H. Cady, president; Ludolf M. Hansen, vice-president; A. E. Cofrin, secretary, treasurer and general manager; E. W. Lawton; H. G. Barkhausen; Joseph Bellin; C. I. Smith. The above, with the following, form the board of directors:

A. E. Cofrin, who is the general manager of the company,

### SEAWEED PULP FOR PAPER

A company has been formed in Japan with a capital of yen 2,000,000 to manufacture pulp from seaweed, according to the *World's Paper Trade Review*. Its prospectus states that the quantity of pulp annually consumed in the country as ma-



FORT HOWARD PAPER CO., GREEN BAY, WIS.

terial for making paper is nearly 300,000 tons, including what is produced in Japan and importations.

Paper mulberry (mitsumata), hemp, rice straw, etc., are used in Japan as material for paper. Of late, however, wood pulp represents 70 or 80 per cent. of the total quantity of material used. Wood pulp is actively produced in the Hokkaido and Karafuto; but as the wood, when felled, is not restored to its old condition until several dozen years have elapsed, it is considered by this company that the wood available for the making of pulp will get more scarce as time goes on.

J. L. McEWAN  
Vice President and  
General Manager

ARTHUR McEWAN  
President and Treasurer

R. W. McEWAN  
Secretary and  
Asst. Treasurer

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## Developments in Quebec and Maritime Provinces

**Pulp and Paper Industry of Eastern Canada Has Experienced One of the Most Prosperous Periods in Its History in the Past Year—Number of New Mills Have Already Been Established, Others Will Be Established During the Summer and Many of the Present Mills Have Either Been Expanded or Are Under Process of Extension—Abitibi Co. Is Installing Two of the Largest News Print Machines.**

Written Especially for the Annual Number of the Paper Trade Journal by C. L. Sibley

Since the last annual meeting of the American Pulp and Paper Association, the pulp and paper industry in Eastern Canada has had the most prosperous period in all its history. The industry has figured largely in the public eye because of the unfortunate controversy between the news print manufacturers and the publishers—a phase of the situation which is dealt with in another article in this issue.

Apart from this controversy, the progress of the industry has been of a character to give unbounded satisfaction to those engaged in it. The securities of the various paper companies have been more popular than any other security on the Montreal Stock Exchange, and have bounded up in value at a rate to surprise all expectations. This has been the result of record-breaking demands from the United States accompanied by record breaking prices. Furthermore, the exchange situation, which has been such a handicap to commerce between Canada and the United States, has been somewhat of a boon to the pulp and paper industry owing to the premium on American money. The premiums received on American funds in payment of pulp and paper have been large enough in the cases of some companies to pay the whole of the dividends on the stock, and leave the ordinary earnings as pure "velvet."

Because of this, prosperity has had the effect of wide-spreading expansion in the industry. Many schemes for the establishment of new pulp and paper mills are being projected.

### Abitibi's Development

One of the most striking individual developments has been that of the Abitibi Power and Paper Company, whose headquarters are in Montreal, and whose plant is at Iroquois Falls, Ontario. The present output of the Abitibi Company is 70,000 tons of news print paper per annum. The capacity of the plant is now being increased by 75,000 tons per annum. The first unit of 25,000 tons will be producing news print in September of this year, and the units for the production of the remaining 50,000 tons will be in operation by February next, when the company will have a total production of 145,000 tons of news print per annum. In addition to this a wrapping-paper machine is being installed with a capacity of 10,000 tons per annum, so that the company's total production by February of next year will be 155,000 tons of paper per annum, equal to over 500 tons per day. The company's power development which has a capacity of 28,000 horse-power is to be increased to 53,000 horse-power. The machinery which has been installed is the largest news print machinery in the world. The machines have a width of two hundred and thirty-two inches, and they are being built by the Chas. Walmsley Company of Bury, England.

### New Paper Town Founded

The largest development this year is the scheme launched by Price Brothers & Co., Ltd., of Quebec for the establishment of a new center of news print manufacture. This well-known firm already has great pulp, paper and lumber establishments at Jon-

quierre and Kenogami, Que., which two mills contribute 260 tons per day to Canada's output. The company is installing a new machine in its Kenogami mill to bring its output to over 300 tons per day.

In addition to this an entirely new mill is to be erected on the Saguenay River with a capacity of 400 to 500 tons per day so that the total output will be from 750 to 800 tons per day.

The site for the new industrial center is three miles east of the city of Chicoutimi and the new town is to be called Saguenay. It will be situated on tide water with ample depth of water for large vessels to tie up at the wharves.

The town and mill will be along the route of the famous "Saguenay Trip," which is taken by large numbers of tourists each year. It is expected that the new town will have from 7,000 to 10,000 population.

The plans for constructing the new paper mill are already under way. The company has ample water power which is now being developed.

An order for six news machines of 160 inch width has been placed with Charles Walmsley & Co., Ltd., of Bury, England. The machines will be designed to operate at 1,000 feet per minute, and will be driven electrically.

It is an interesting coincidence that this enterprise, the largest ever undertaken by the company, should come during the year in which the firm and family of Price have celebrated their centenary in Canada.

Plans for the entire project are being prepared by George F. Hardy, consulting engineer, New York.

### Laurentide Doubling in Capacity

Another big development is the decision of the Laurentide Company to increase its production in news print to 360 tons per day by the installment of two new machines of a combined capacity of 110 tons per day. Incidentally, this decision of the Laurentide Company has resulted in the establishment of a new industry in Canada, the manufacture of paper-making machinery. The negotiations between the Laurentide Company and the Dominion Bridge Company, of Montreal, the builders of the famous Quebec Bridge, resulted in the Laurentide Company placing with the Dominion Bridge Company an order for the building of the two news print machines. These machines will cost in the neighborhood of \$1,000,000, and will be the first of their kind to be manufactured in Canada. Another interesting development in connection with the company's expansion is that the *New York Times* has entered into a contract with the Laurentide Company for the whole of the output of the two machines for the next five years at current market prices. This is the largest order contract for news print ever entered into in Canada. It represents about 40,000 tons of news print per annum, or some 2,000,000 tons of news print in five years. At the prices now prevailing on all large contracts, namely \$90 per ton, this

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total contract calls for payment of \$18,000,000. In order to carry out this expansion, the company has been re-organized under the name of Laurentide, Limited, with an authorized capital of \$35,000,000.

#### International Paper Co. in Canada

Of all the new paper-making enterprises in Canada, that of the International Paper Company, in founding a great pulp and paper mill at Three Rivers, is one which has excited the most comment. Some time ago, Mr. Dodge, the president of the company, predicted that no more news print mills would be built in the United States, and indicated that his company would lead the way in gradually transferring all the news print plants to the Canadian side of the border. This prediction he has proceeded to make good, for the company now has under construction at Three Rivers, Quebec, the first unit of a news print mill which entails an expenditure of \$7,000,000. The first unit consists of a sulphite mill which will have a capacity of 200 tons of sulphite per day. The company has made a contract with the Shawinigan Water and Power Company of Shawinigan Falls, Que., to supply its new pulp and paper plants at Three Rivers with power practically in perpetuity. At the start, 20,000 horse-power will be supplied to the plants, which by the way, are to employ 1,500 hands at the start. The company's plant will consist of a chain of 18 individual buildings. As the company has immense tracts of valuable lands of pulp in the water shed of the St. Maurice River, there will be no difficulty about raw material for the immense enterprise.

#### Wayagamack's Big Extension

The Wayagamack Pulp and Paper Company, which concentrates on the manufacturing of kraft paper, has branched out considerably during the past year. The company has purchased additional timber limits from the Breakey interests and from the Portneuf Pulp and Lumber Company of Albany, N. Y. The limits comprise 484 square miles and are said to be among the best along the lower St. Lawrence. These purchases bring the total holdings of the Wayagamack Company to over 2,000 square miles, which is far in excess of the requirements of their mills, and it is now said that the company has the largest limits of any paper company in Canada with the single exception of Price Brothers & Co. Owing to the remarkable development of the company's export trade, the directors decided a short time ago, to enlarge the plant. Four new machines have been ordered and are now under construction.

#### Riordon Co. Founds New Industrial Centre

The Riordon Pulp and Paper Company, of Montreal, the largest manufacturer of sulphite pulp for export in Canada, has put into execution during the year its long-planned project for the establishment of a new industrial centre in the Lake Temiskaming country for the manufacture of sulphite pulp. The company has built a plant for the production of bleached sulphite pulp at the rate of 125 tons a day, and this plant came into operation early in the new year. The plant is operated under a subsidiary company, known as the Kipawa Fibre Company. The company has established a model town around its plant, and has obtained a city charter for the same from the Quebec Legislature. In applying for the charter, the company stated that it had built a plant at a cost of \$10,000,000 and that an additional \$20,000,000 would be spent there. The present population of the town is about 2,000 people, but it is expected that within a few years it will grow to 10,000. The company plans to add another unit so that the eventual production will be at the rate of 250 tons per day.

#### Hawkesbury Mills Expanded

The Riordon Company has also expanded the plant of its Hawkesbury mills by an extra 25 tons per day of bleached sulphite pulp. The production of the Riordon company from its

various mills is now more than 400 tons of bleached pulp per day.

#### The Howard Smith Plants

Consequent on extensive additions, the Howard Smith Pulp and Paper Mills, Limited, has been reorganized under the same name, but with a new charter, authorizing a capital of \$7,000,000. This reorganization followed upon the purchase of the plant of the Toronto Paper Company. This company had a paper mill at Cornwall, mainly used for the manufacture of a medium grade of writing paper. The head office of the Toronto Paper Company has been moved from Toronto to Montreal. The firm is now operating three divisions of plants for the manufacture of bond, ledger, and other high grade paper. These plants are situated at Beauharnois, Crabtree Mills, and Cornwall. The company has installed new machinery during the year, and is keeping well abreast of the requirements of the domestic market.

#### The North American Co.

In June last, the North American Pulp and Paper Corporation was reorganized. Under this plan, a new company, named the Saguenay Pulp and Paper Company, was incorporated, and this company issued \$5,600,000 6½ per cent serial bonds secured by stocks and bonds of the Chicoutimi Pulp and Paper Company, Roberval-Saguenay Railway Company, Saguenay Light and Power Company, and Chicoutimi Port Company. By the sale of these bonds, each of the companies mentioned was placed in a sound financial position, practically free from debt, except in regard to bond issues. The various companies have been doing well since reorganization, and the Chicoutimi Pulp and Paper Company now claims to be the largest producer of wood-pulp in the world. Further improvements have been put into effect in the sulphite plant at Chandler, where the output has been increased to an average of over 112 tons per day.

#### Brompton Paper Co. Adds Machines

The Brompton Pulp and Paper Company, whose plants are situated at Bromptonville, Que., and East Angus, Que., has been strengthened by the fact that, following a thorough examination of the company's mills and pulpwood limits, a strong English-Canadian financial group has acquired a financial interest in the stock of the company. This has not resulted in any change in the executive, but there are progressive developments. The company has during the year, put in additional news print machines.

#### Many Other Developments

There have been numerous other developments in the industry, both in regard to the establishment of new mills and the expansion of existing ones. In fact, there is hardly a single plant which has not been enlarged or improved during the year.

The Donnacona Pulp and Paper Company at Donnacona, Que., has foreshadowed extension developments by a new issue of \$1,750,000, 6 per cent first mortgage sinking fund bonds. This issue was all bought up privately.

The Bathurst Lumber Company of Bathurst, N. B., has taken steps to increase the power capacity for its mills by developing the Grand Falls on the Nepisiquit River, where two additional units of 4,500 horse-power each are to be installed, with provision for a third. The power will be transmitted to Bathurst, some nineteen miles away.

Clarke Brothers, Limited, have constructed a new pulp plant near the mouth of the Bear River in Nova Scotia, for the production of sulphate pulp and lumber.

A company known as the Howard Pulp and Paper Company, capitalized at \$1,500,000, has been formed to establish a pulp and paper plant on the St. Francis River, near Sherbrooke, Quebec.

A project is now under way for a new sulphite pulp mill at Richmond, Bonaventure County, Que., the construction engineer

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being Arthur Sande, of Hamilton, Ontario. It is understood that this mill will have a capacity of 200 tons per day.

The MacLeod Pulp and Paper Company, at Liverpool, N. S., has been acquired by American interests. The company has two mills on the Mersey River, two miles above Liverpool. The mills have a capacity together of fifty tons a day of dry pulp. It is understood that the interests in the deal have taken over large tracts of forest lands in the southern part of Nova Scotia. The purchasers plan to enlarge and extend the operations on a very substantial scale.

The Valleyfield Coated Paper Mills, Limited, of Valleyfield, Que., which were recently granted a federal charter with a capital stock of \$300,000, and have taken over the plant and business of the National Paper Company, Valleyfield, intend doubling the capacity of the mill, which turns out coated papers. The present output is about ten tons a day.

La Reine Lumber Company, Limited, of Quebec City, has been incorporated to manufacture and deal in lumber, timber, pulp and wood products, and to take over as a going concern the manufacturing business of Wolford Laliberte & Frere, St. Remi, Que. The capital stock is \$49,000.

The Saguenay Lumber Company, with a capital of \$100,000, has been incorporated by letters patent issued to Henry E. Price, A. J. Price, G. H. Thompson, J. M. Price, and L. DeG. Belley. They will operate in the counties of Chicoutimi, Saguenay, and Lake St. John, province of Quebec.

The M. J. O'Brien interests are stated to be going ahead seriously with their plans for the installation of a large pulp and paper mill in the vicinity of the Des Quinze water-power, near the north end of Lake Temiskaming. The M. J. O'Brien Corporation has a capitalization of \$20,000,000, and controls not only the Des Quinze water power, of which no less than 100,000 horse-power can be developed, but the O'Brien Silver Mine at Cobalt and the Miller-Lake O'Brien silver mine at Gowganda. In connection with this product, the Canadian Pacific Railway is reported to be considering the advisability of extending the Kipawa branch to the northward, to terminate near the north end of Lake Temiskaming. The distance would necessitate the construction of 65 miles of line and tap the district to be served by the Des Quinze water power.

Another announcement of considerable interest is that the Belgo-Canadian Pulp and Paper Company of Shawinigan Falls, Que., which now has a capacity of 380,000 pounds of news print per day, is about to add a new mill for the production of 100 tons of ground wood-pulp and 100 tons of news print per day.

#### Water Power Development

The most important development in connection with the water powers of Eastern Canada during the past year, was conveyed in the announcement made in November last, by Sir Herbert Holt, president of the Montreal Light, Heat and Power Company, that the plant of the Shawinigan Water and Power Company on the St. Maurice River, would in the immediate future have its generating capacity increased from 330,000 horse-power to 600,000 horse-power, owing to the flow of the river being regulated by the great new storage basin at the Gouin dam, at the head waters of the St. Maurice River. This company supplies some of the most important pulp and paper mills in the province and among the largest of its recent contracts is an agreement with the International Paper Company for the supply of paper to the pulp and paper mill which that company was building at Three Rivers in perpetuity.

#### Important New Law in Nova Scotia

An important new law governing the water powers in Nova Scotia has been brought into effect during the year. This act gives a commission a certain authority over the water powers of the province and is intended to enable the people of Nova

Scotia to get cheaper power for manufacturing and any other purposes. The commission named is as follows: Hon. E. H. Armstrong, of Halifax, Commissioner of Public Works and Mines, Frank C. Whitman, of Annapolis Royal; Robert H. McKay, of New Glasgow. Hon. E. H. Armstrong will be chairman of the commission.

#### The Embargo on Pulp Wood Export

There has been much discussion during the year on the question of the embargo on the export of pulpwood, and particularly upon the Underwood resolution introduced at Washington with a view to bringing pressure to Canada to lift the embargo on the export of pulpwood from Crown lands in the various forest provinces of the Dominion, but more especially in the province of Quebec. As has been indicated in this paper there is not the slightest reason to believe that the province will ever be induced to lift this embargo. As far as Quebec province is concerned, the development of the pulp and paper industry has come to be one of the chief sources of prosperity and to allow the raw pulpwood to be exported to the United States wholesale would be regarded now as a calamity to be avoided at any cost. The belief is growing that the real purpose of the Underwood resolution was not the expectation of inducing Canada to lift the embargo on the export of pulpwood from Crown lands, but to forestall any proposal for the extension of this embargo to all pulpwood. There are large areas of private lands from which pulpwood is still exported to the United States, including the whole of the Island of Anticosti, from which every summer there is a regular service of steamers carrying pulpwood to American points.

#### May Extend Embargo

At the annual dinner of the Canadian Pulp and Paper Association, at Montreal, at the end of January, Sir Lomer Gouin, premier of the provinces stated that it was the intention of the Government to extend the embargo so as to give full protection of supplies to the pulp and paper mills established in the provinces. This statement of the Premier's has been interpreted in various ways. Some have thought that it meant that the Government would put a partial embargo on pulpwood cut up on private lands, whether in timber limits held by large companies or by farmers in clearing their land. Others have thought that the intention was to prohibit the export of unmanufactured pulpwood to other provinces in Canada. Some color has been lent to this latter view by the fact that at the recent session of the Legislature at Quebec, several members urged the Government to stop the exportation to other provinces or put a royalty or duty on all the pulpwood thus exported. The Hon. H. Meissier, Minister of Crown lands, stated the matter was an important one and required careful study, and a survey of the situation. The Government would institute such an inquiry and take action if necessary.

Whatever may be the interpretation of the Premier's hint, it is plain that the intention of the Government is to tighten up the embargo rather than to lessen it.

#### Special Mission to England

One of the interesting developments of the year was the action of the Canadian Pulp and Paper Association in its sending its secretary, A. L. Dawe, to England on a special mission to stir up interest in Canadian pulp and paper, with a view to a large development of the export of pulp and paper to England. Prior to the war, Canada sent a comparatively small quantity of pulp and paper to England but when the Scandinavian supplies were cut off from Great Britain, Canada was appealed to, and managed to send over a considerable quantity. The pulp and paper exported to England in 1914 amounted to \$1,672,834 and this rose to between four and five million dollars worth per annum at the end of the war. Mr. Dawe had a very favorable reception in England and shortly after his arrival, sent back word to Montreal

to the effect that he had sold all of the year's available surplus of Canadian pulp and paper, chiefly news print, pulp, kraft, and writing paper. He reported, however, that it was a matter of considerable uncertainty as to whether Canada would be able to hold the British market as keen competition is foreshadowed by the action of the British Government in removing import restrictions. In the absence of these restrictions, Mr. Dawe said, German pulp and paper products would be admitted at prices which, because of the low exchange rate, would be very difficult to meet. On his return Mr. Dawe presented a detailed report which was summarized at the time in the PAPER TRADE JOURNAL telling of the opportunities and conditions in the British market.

#### Montreal a Great Pulp and Paper Centre

That Montreal is the greatest centre of the pulp and paper industry in the world is a claim now made on its behalf. If a continuous series of important conventions in connection with the industry form a basis of this claim, then it is substantiated, for probably there is no other city in the world where so many meetings connected with the industry have been held during the year as in Montreal. These meetings included the annual convention of the Forestry Association of Canada; the annual convention of the Lumbermen's Association; the annual convention of several forest protective associations; the annual convention of the News Print Service Bureau; the annual convention of the Paper Box Manufacturers; the annual convention of the Canadian Pulp and Paper Association, and innumerable other meetings connected with lumber, pulp and paper industries. In addition to that, numerous meetings of private interests and of pulp and paper companies have been held in Montreal, while it is to this city that many publications in the United States look for prices and supplies.

## NEW STEVENS POINT DIV. OF CONSOLIDATED PAPER CO.

The accompanying illustration represents the Stevens Point Division of the Consolidated Water Power and Paper Company, formerly known as the Oneida mill at Stevens Point, Wis.

The plant was completed and commenced producing paper March, 1919. Two machines, both running on tissue and light

#### Trade Mark for Canadian Paper

Early in the year the Canadian Pulp and Paper Association held a contest for designs for a trade mark to be used in the labelling and identifying of pulp and paper products made by its members, a prize of \$100 being offered for the best suggestion. Over one hundred and fifty designs were submitted and the prize was awarded to Harold McEvers, of the department of architecture of the McGill University of Montreal.

#### New Paper Machinery Industries

There has been considerable development in the manufacture of paper-making machinery and mill supplies in Canada, products which were formerly bought almost wholly in England and the United States. The most notable instances are a contract awarded to the Dominion Bridge Company of Montreal for the construction of two large paper-making machines for the Laurentide Company and an arrangement by which the Ingersoll-Rand Company is now manufacturing the screens and other supply paper-making equipment formerly supplied to Canadian mills by the Bird Machine Company of East Walpole, Mass.

#### CANADIAN NEWS PRINT FOR SOUTH AFRICA

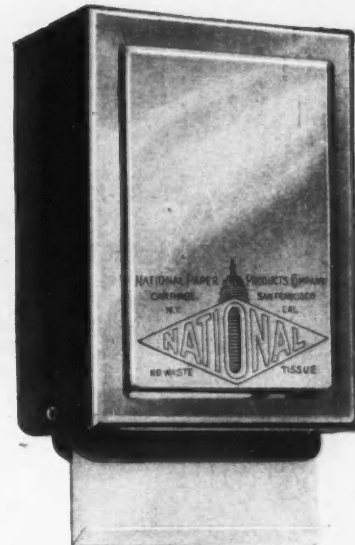
W. H. Smith, the representative of the Canadian Export Paper Company in Cape Town, South Africa, is in Montreal this week, arranging with the head office for larger shipments of news print to South Africa. Mr. Smith stated that South Africa could buy much more news print than Canada was at present able to supply, as none of the papers were getting sufficient for their purposes. They formerly got supplies from Scandinavia, but now have to look to other countries and particularly to Canada. He stated that he had made arrangements to get a larger supply from Canadian mills.

weight wrapper, are in steady operation. One is a Yankee and the other a cylinder machine. Space is reserved for a third machine of the Yankee or M. G. type. This to be installed during the coming summer. Adjacent to this plant is a new up-to-date power house equipped with 6-1000 horse-power generators.



STEVENS POINT DIV. CONSOLIDATED WATER POWER & PAPER CO., STEVENS POINT, WIS.

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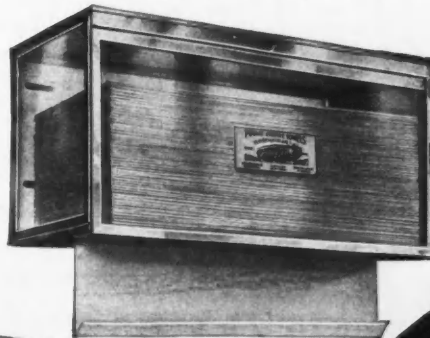


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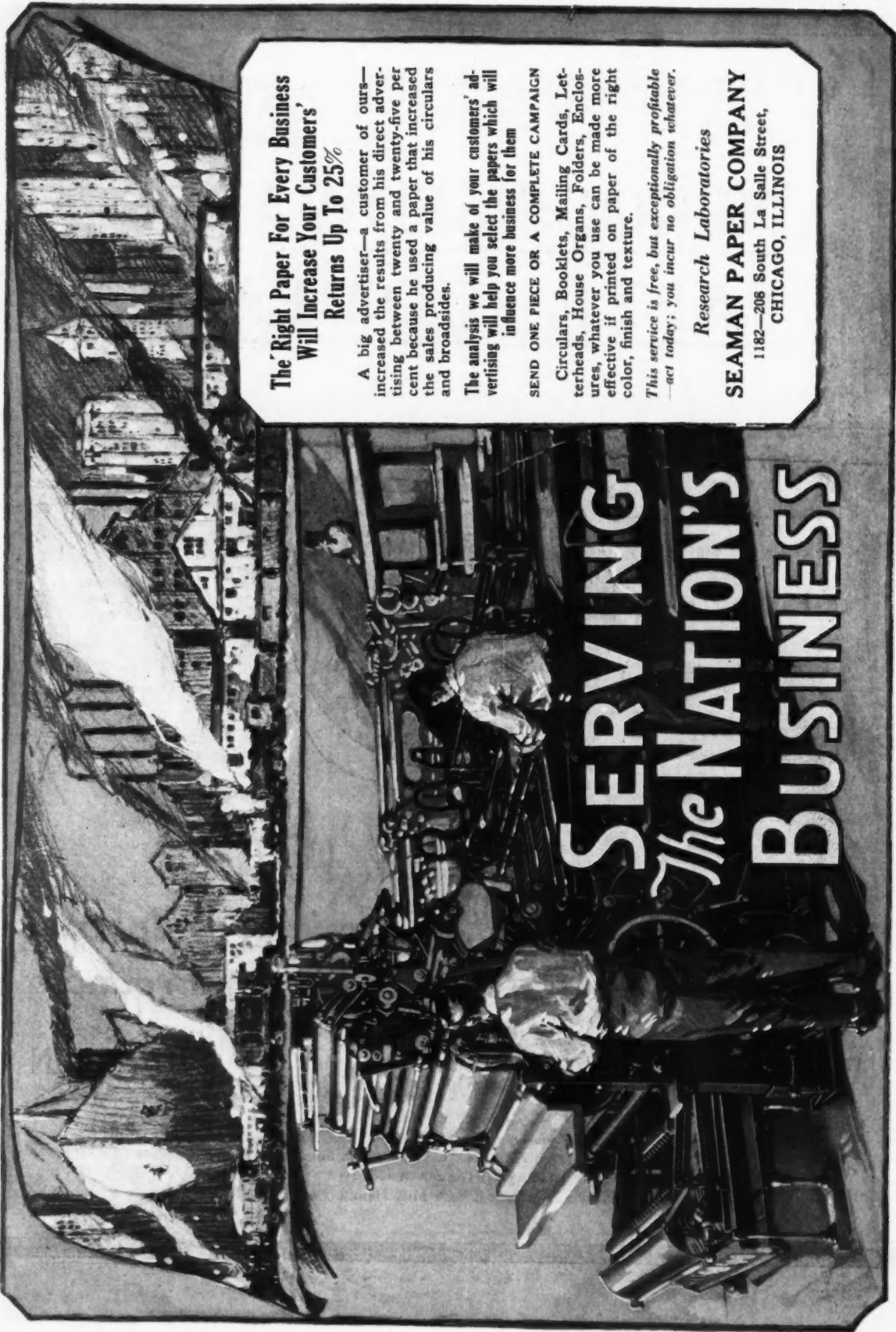
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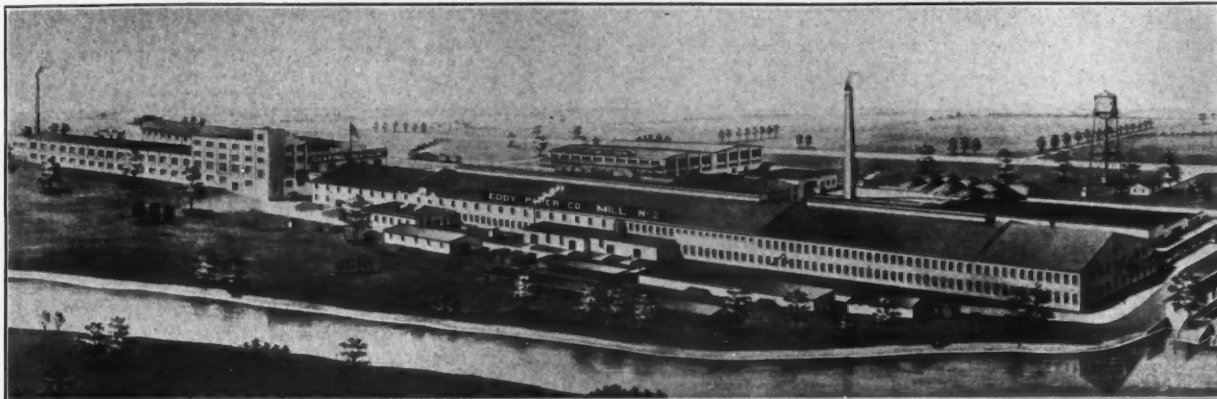
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EDDY PAPER CO., WHITE PIGEON, MICH. IMMEDIATE FOREGROUND MILL NO. 2. AT LEFT COATING DIVISION, WHILE BEYOND BOARD MILL IS THE CARTON PLANT.

## EDDY PAPER CO. ERECTS LARGE MILL AT WHITE PIGEON

When completed mill No. 3, now in course of erection for the Eddy Paper Company at Three Rivers, Mich., will be one of the largest, if not the largest, plant in America devoted to the manufacture of box board and container board.

H. L. Vanderhorst, contractor, has a large force of men on the job and the structure is rising rapidly. The great box factory is practically completed and is ready for the installation of the equipment.

The first unit of the paper mill will be in operation by next fall. An order has been placed for four cylinder machines, all to be installed as rapidly as possible, together with the auxiliary machinery.

The management has so far suppressed all details regarding the equipment of the paper mill and any features of general interest that are to be embodied therein.

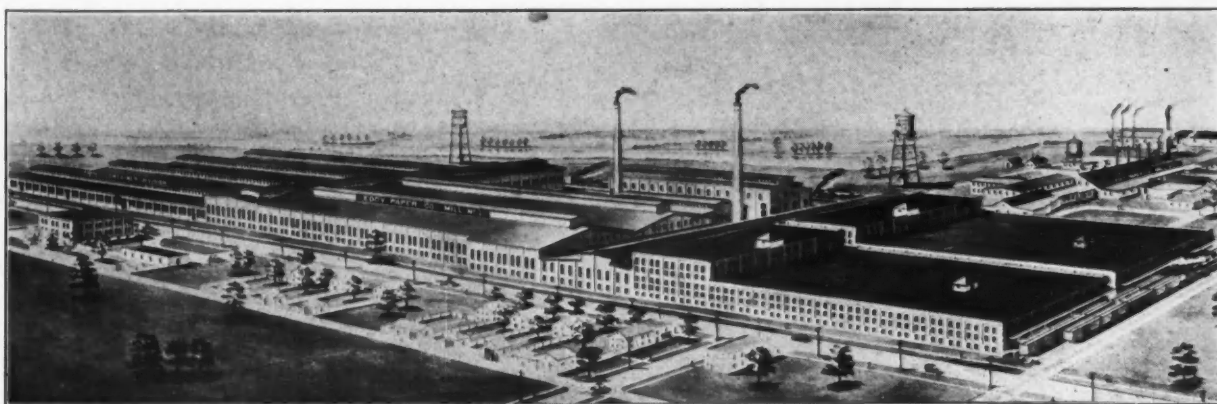
Work on the power plant is progressing in step with the new mill. This structure will be 57 feet wide and 191 feet long. The single story will rise to a height of 40 feet and is capped by a monitor roof to insure perfect ventilation.

Ultimately the boiler house will be equipped with twelve 300 horse power vertical water tube boilers, product of Wickes Brothers, Saginaw. Murphy stokers and Green fuel economizers

will be regular equipment. The ashes will be disposed of through the basement, dropping into a hopper and thence into cars that run below the fire boxes.

Ample provision is being made for fuel supply and for the efficient and economical handling of coal. All these details have been worked out by Billingham & Cobb, who are general architects and engineers for the entire plant. There is an overhead steel suspension bunker, supported by steel trusses. This bunker is parabolic in shape, 142 feet long, nine feet deep and 16 feet wide across the top. It will carry 600 to 700 tons of coal at one time and is fed by a 15 ton locomotive crane, operating on a 60-foot boom. The outside coal storage is of concrete, 100 by 250 feet in dimensions and 12 feet deep. This pit will house 10,000 tons of coal.

In addition to the erection of this new board mill, the Eddy Paper Company has enlarged its facilities at White Pigeon by the absorption of the White Pigeon Coated Paper Company and the White Pigeon Box Company. These two concerns immediately adjoin the Eddy Paper Company's No. 2 mill. The White Pigeon Box plant is to be increased by the erection of an addition, 50 by 240 feet in diameter, which will provide additional facilities that are much needed.

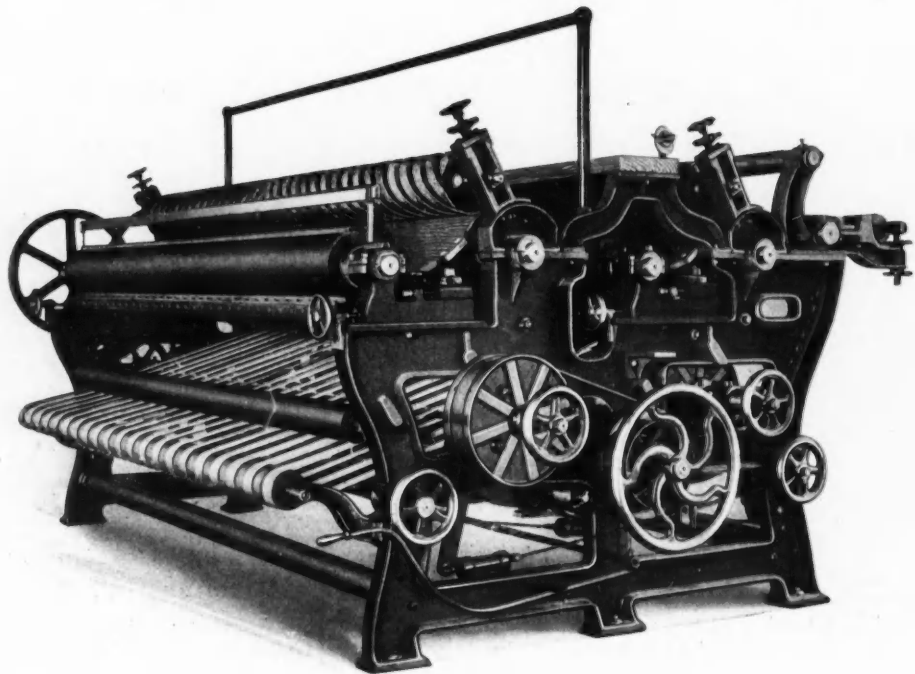


EDDY PAPER CO., THREE RIVERS, MICH. MILL NO. 3 NOW BUILDING, IN FOREGROUND. MILL NO. 1 IN UPPER RIGHT HAND CORNER.

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## Alarming View of Forest-Exhaustion in Canada

**“Annual Growth” Declared to Be a Myth—Natural Agencies Already Destroy More Trees Than Grow in Canada—Cutting Making Appalling Inroads on Reserves—Crop Take 60 to 250 Years to Grow and Sells for Less Per Acre Than Potatoes—Pulp Wood Famine Already Declared to Be Within Sight—Governments Thoroughly Aroused—Managing Forests Cannot Be Left to Private Efforts.**

Written Especially for the Annual Number of the Paper Trade Journal by C. L. Sibley.

A really startling development in connection with the news print industry in Canada during the past twelve months has been the discovery, or the alleged discovery, that there is no such thing as net annual growth to replace, or partly replace, the timber that is cut. The experts declare that the annual growth is already more than offset by the natural forces of destruction in the form of insects, fire and wind storms. Therefore every cord of wood which is cut represents a permanent depletion of the timber reserves which not the most earnest efforts at reforestation can ever replace. If this is true, then the exhaustion of the Canadian forests is already within sight, and will take place within the lifetime of the present generation.

This is certainly a most alarming view, and it is one that is arousing the utmost concern in Canada. How startling it is may perhaps be better illustrated by giving a few figures. A rough calculation by Clyde Leavitt, chief forester of the Commission of Conservation, gives what he regards a liberal estimate of pulp wood in Canada as follows:

	Cords.
Quebec .....	300,000,000
Ontario .....	200,000,000
New Brunswick .....	33,000,000
Nova Scotia .....	30,000,000
British Columbia .....	255,000,000
Total .....	818,000,000

### Pulpwood Elsewhere

In addition to this there is, of course, a considerable quantity of pulp wood in the northern portion of the prairie provinces, but considering that much of this is difficult of access, and considering also that the figures above given for the other provinces also contain much pulp wood more or less remote, from means of transportation, the amount of the available pulp wood may be roughly considered to represent around 818,000,000 cords. How long this will last is of course problematical. The present rate of consumption only affords the roughest guide because the rate of consumption is multiplying every year. As an instance it may be mentioned that a five-year period in the St. Maurice Valley shows an increase in the rate of consumption of 200 per cent. or at the rate of 40 per cent. per year, with the rate increasing in proportion every year. Perhaps the best idea of how near the exhaustion of the pulpwood supplies of Canada is may be gained from the following comparison. The amount of wood of all kinds consumed in the United States every year amounts to 244,000,000 cords, which by the way, means a pile four feet wide and four feet high, 369,000 miles long, or long enough to reach 123 times across this continent, or 15 times around the globe. If the consumption of pulp wood in Canada were at the rate of the total consumption of wood of all kinds in the United States, the whole of the present available pulp wood in Canada would be exhausted in less than four years.

The latest calculations show that in the United States more than 5,500,000 cords of wood are used annually for pulp alone. The vastness of this appalling inroad upon available pulp wood supplies can better be understood by stating that it represents a solid pile of four feet wide, 12 feet high, reaching clear across the continent, or a pile four feet high, 9,000 miles long. Canada is now producing a total of 800,000 tons of paper per annum, which is very nearly half the consumption of the publications of the United States and so great are the developments under way for a greater manufacture of news print that the Dominion will very soon be producing much more than half. In addition to the present unlimited demand by the United States, which is forcing unprecedented production in Canada, there are overseas markets awaiting development and Canada is pursuing a most active policy in catering to these markets. It looks, therefore, as though it cannot be long before the production of news print in Canada will equal the present production in the United States. If the production reaches that figure it would seem that the available pulp wood supplies, if used exclusively for the manufacture of news print, would last about 150 years. But it must also be remembered that huge inroads are being made on the forests for lumber for many other purposes besides pulp wood and that vast supplies of what might technically be described as pulp wood are being used for lumber purposes generally, so the experts declare. There is an appalling annual loss from natural destructive agencies, compared with which the net annual growth is a mere flea-bite. Some idea of these losses is given by Frank J. D. Barnjum, of Annapolis Royal, N. S. Mr. Barnjum, who was for many years in the lumber business in Maine, recently acquired the ground wood mill of the McLeod Pulp Company, at Annapolis Royal, N. S., and has been very active in arousing public opinion in Canada on this subject. Mr. Barnjum recently issued a series of pamphlets in which he made the following statement:

“When I attempt to estimate the wastage caused by the spruce burworm, I am somewhat staggered. The most conservative figure I have heard for Maine is that 25 per cent., with a high figure of 60 per cent. of all the fir growth in the State has been killed, with considerable spruce destruction as well, and New Brunswick's loss runs up to 75 per cent. and Quebec's up to 40 per cent. And when we realize that this is at least the third attack within the past century that we have had by this one pest, we can form some slight idea of what the wastage from this source must be.

“In British Columbia 665,000,000 feet of timber have been burned, and this amount very nearly equals the total stand of saw timber remaining in Canada today.

“In Maine, in the gale of 1883, a billion feet of soft wood were blown down, in addition to a very large amount of hard wood in the two countries of Oxford and Franklin alone. And the loss in the whole state was incalculable. I know of one township, which I afterwards bought, where one-third of the entire stand of timber was destroyed in this same gale.

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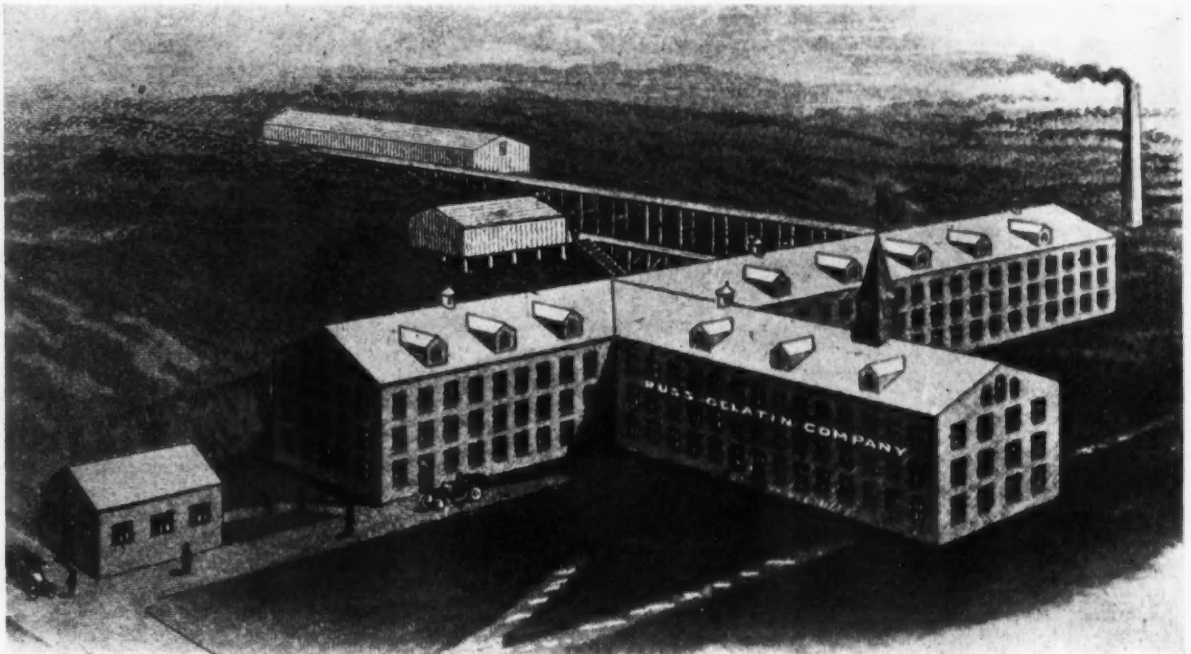
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"I have in mind a windfall in Wisconsin, between Prentice Junction and Ladysmith, that covers a strip five miles wide and 50 miles long, where the timber was laid as flat as if traversed by a steamroller. All of this timber, the result of more than 200 years' accretion, was destroyed in an hour. I cannot help thinking of an experience of my own in my earlier days, in this connection. I had been planting 10,000 trees per year for two or three years, when a fire came in on an adjoining lot and burned up more trees in two hours than I had planted in the three years, which discouraged any more planting by me at that time.

"But the final and most convincing figures of all are contained in the valuable report by the committee of the Society of American Foresters, which was recently published, which says:

"That of all the total forest area in the United States of 500,000,000 acres:

"One hundred million acres and more are so devastated as to be almost wholly non-productive;

"Over 250,000,000 acres have been cut over and more or less damaged by fire, but are producing new timber, usually in small amounts;

"One hundred and fifty million acres are in standing timber where growth merely balances decay, with no net increase in wood production from year to year. On a large part of this area the virgin timber is of poor quality and very inaccessible."

In Canada the Canadian Forestry Association states, one-half of the forested area has been burned over within the past 100 years. That this enormous wastage by fire is still with us is in evidence by the loss of 1,000,000,000 feet of timber in Montana and the 540,000 acres destroyed in Alberta, which are only two of the larger burns of last summer. The bugs are also still with us; and the wind, as one of my own countrymen says, "She blow all de time."

#### Destruction by Spruce Budworm

This statement may be supplemented by a report made to the Government by Professor S. A. Graham, of the University of Minnesota, and Professor H. E. Tothill, of the Dominion Entomological Bureau. After a trip of 125 miles through the Crown Timber Lands of the Province of New Brunswick this year, they reported that half of the balsam fir in that province had been destroyed by the Spruce Budworm this year.

#### "Annual Growth" a Myth

Of course the question of making the forests permanently productive rests upon the other question of the annual growth and whether that annual growth can be made to offset not only the destruction of natural forces, but also the cutting. On this question opinions vary. Dr. C. D. Howe, of the University of Toronto, who as a member of the Commission Survey of Forest Regeneration, has been making studies in the forests of Quebec on this question and in a report to the Government says:

"The studies of the past summer corroborate the results of the previous summer, namely that the young balsam and spruce under cover of the hardwoods grow very slowly. For example, the average 4-inch balsam was found to be 55 years old, the average 8-inch tree, 70 years old and it was 80 years old at 10 inches in diameter breast-high. This deduction is based on the analysis of some 300 trees. The spruce grows even more slowly. At 4 inches in diameter, breast-high, the average tree was found to be 80 years old, at 8 inches in diameter, 120 years old, and at 12 inches in diameter, 165 years old. Thus to supply the raw material for one ton of pulp, it would require eight balsam trees of 75 years' growth or eight spruce trees of 130 years' growth, or 600 and 1,040 years, respectively, of tree growth.

Other reports show that the growth of some sections of Quebec is only about 30 board feet per acre, and put together would just about make one six-inch tree per acre per year. Thus if only one average tree per acre is blown down, and that possibly is a low

estimate of the damage done by the wind, the whole year's growth is destroyed.

#### Great Cost of Replanting

Touching upon this point and upon the work of attempted reforestation by planting young trees, Mr. Barnjum points out the great cost of growing this crop. He says, "When the public begins to realize that this timber which is being cut today as if it were an annual crop, has been growing from 75 to 250 years, and the only way it can be reproduced is by re-planting—planting with the present high cost of labor amounts to a matter of \$12 to \$15 per acre, to which must be added the cost of the land, which is from \$3 to \$10 per acre—something will be done. This brings the cost per acre of these plantations of tiny little seedlings from \$15 to \$25, with an annual charge for interest, taxes and fire protection for at least a matter of 50 to 75 years before another crop can be harvested.

#### Loss from Other Enemies

"In addition to this there is a possible loss from fire and the spruce budworm, and other enemies; for it must be borne in mind that fire is always with us, and the budworm returns in cycles of from 20 to 35 years, and further, that each recurrence, as the lands become harder cut, increases in violence.

"As soon as the above facts are absorbed, as they are beginning to be quite rapidly at the present time, timberlands will be selling on a much higher scale than they are today, and my prediction is that the biggest rise in timberland values that has ever been known will take place within three years.

"There is not a commodity in the world that is selling so much below its real value as an acre of timberland today. Think of a crop that has been 50 to 250 years growing, and that under most favorable conditions will take from 50 to 75 years to reproduce with all the attendant risks, and an actual cost of \$75.00 to \$125.00, selling today at \$10 to \$15 per acre for land and all, while an annual crop of cereals or potatoes brings from \$15 to \$100 or even more per acre above cost of planting and harvesting, and without the land."

#### Sir Lomer Gouin More Optimistic

It is interesting to note that there are influential authorities who do not take such a pessimistic view of the situation as some of the experts. For instance, in a statement at the annual meeting of the Canadian Pulp and Paper Association in January last, Sir Lomer Gouin, Premier of the Province of Quebec, said:

"We have been told many, many times about the immensity of our pulp wood forests. It is true that we have a large supply of pulp wood, but we must not forget that such a supply is not inexhaustible. Some years ago you were more exacting than you are now in the requirements of your timber. I remember the days when you would accept only a small percentage of balsam and when you would accept only regular spruce logs for paper-making. You have managed so that now you accept all the balsam that is offered to you, and you make good use of the burned and charred trees which you find in the forests with profit to your mills, and with great profit also to the forests, which you are making more productive by cleaning them out.

"I do not despair. I am sure that a day will come when you will devise means to use the hard woods of our forests, and if I may be allowed to speak after your experts, I would ask your permission to advise you to cut from your timber lands only what the timber lands produce yearly. I understand that this will make your lumbering expenditures larger, but do you not think that you can meet such expenditures which will make your limits produce more wood and give you a chance to return sooner to the field which you have exploited?

"But this is not enough. I do not think it is sufficient for you to reduce the volume of your cutting. The time is come, we are told, for you to think that you should restock your timber lands.

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This, I understand, means very large expenditures, and I am sure that when we give suggestions and advice we should be prepared to hear the limit-holders tell the government—who, after all, is the proprietor of the lands: 'Very well, we are prepared to restock, but that is your property, what are you prepared to do to restock it?' I will only say in answer to this that if you are prepared to do your share to restock your limits, I can assure you that the Government of the Province of Quebec is prepared to do its share, and it's a very large share.

"I have read and heard, as you have, pessimistic remarks about our forests. Let me tell you that while I preach economy of the lumbering operation, I have abundant faith in the future of our forests. We have, as you know, some four or five million acres of lands under license. We have, as a reserve, seventy-five million acres of land of virgin forests. Everybody knows that the province of Quebec is supplying more than half of the pulp wood supplied in Canada. We have the largest area of pulp wood forests left in the world, and this forest wealth, I am sure, if properly taken care of and if exploited with wisdom, and if efficiently managed, can be made to produce enormous quantities of timber for ever. We now cut about one billion feet of timber from our forty-five million acres of land, and I might tell you that with proper management we might cut four or even five times more than this quantity without endangering the future of our supply. This, gentlemen, is from the lands under license. This does not include in any way the seventy-five million acres of land which is still free and belongs to the Crown.

"I must confess that in regard to that new domain our knowledge is limited, and that is why we propose to make an inventory of that property; that is why we propose to establish forestry posts, one at Hamilton Bay, one at Ungava Bay, and one at James Bay, from which our foresters will go and make an inventory in reference to our resources. These posts, gentlemen, we propose to connect by wireless telegraph, and if necessary, with the introduction and use of aeroplanes to hasten the facilities of the work of our engineers. What we desire and what we wish is that we should not be taken by surprise and we want to be in a position to cope with the new demands which may come to us for timber limits, and for water powers."

#### Laurentide President's View

Another opinion which may be quoted is that of George Chahoon, who, as president of the Laurentide Company, is looked upon as an authority on these matters. He thinks that the forests could be made permanently productive and says:

"The ideal situation for which all foresters are striving is that of a sustained yield; that is, that a region shall be so lumbered that no more wood shall be removed in any one year than the amount which actually grows per annum. By such a system of management the forest becomes perpetually productive, and as long as it is not destroyed by fire it will be an unailing source of raw material. Under this system, mature trees may be cut over areas where the trees are of different ages and sizes, leaving the smaller trees to grow for a future crop, or a portion of the territory may be cut over entirely clean, and a new crop obtained by natural seeding, or by planting young trees which have been raised in a forest nursery.

"All of these systems have been thoroughly tried out in Europe and are in use separately and in combination wherever forestry is practised. Our Canadian forests have, in general, been handled under the first or selection system, not by any carefully thought out plan, but by a fortunate chance. Unfortunately, the system has been carried out, not as in Europe by taking the oldest and poorest trees and leaving the best and most vigorous for the future crop, but by taking out the best and largest trees and by leaving the feeble and decaying ones, or the young and stunted ones, which either never recover or take a very long time.

Studies have shown that on the pulpwood lands of Quebec, under the present system of cutting, it will in all probability take sixty years to produce a crop and that the amount which can be cut at the time will be only one-quarter of the amount which is being cut today, an amount too small to make profitable logging possible.

"If a proper system of cutting should be adopted, the present cut per acre would, under a selective system, be reduced and logging expenses increased, but each year would see a larger possible cut, until the land had reached a maximum yield three or four times as large as that at present produced. If, on the other hand, we should begin to cut our lands clean, we should more than double the present yield, but we should have to wait for forty or sixty years for another crop, depending on whether we left the restocking to nature or replanted the forest ourselves. The crop at the end of the period would then be nearly eight times that at present obtained per acre. Any system will, for the immediate future, increase the price of pulpwood, but as the forest increases in yield the cost will drop progressively until the full yield is reached and will then remain practically stationary. The problem has to be faced, and the longer we wait before beginning a sane and practical policy, the more it will cost. Everyone in the country is vitally interested in this problem, and the cost should not be saddled entirely on the manufacturers of pulp and paper, but should be borne in great part by the Provincial Governments, which are owners of the land. The price of wood is rising rapidly and will continue to rise until proper steps are taken to insure a permanent supply, and the cost will naturally fall on the consumer of the product. Newspaper publishers should be vitally interested in this question, as they are probably the largest consumers, and they should do their part by economizing in the use of paper and by educating the public and the voters, so that a sound policy can be adopted and the proper legislation passed to make it effective. All classes of the population are interested."

#### Government Taking Action

Meanwhile, the various pulp and paper companies, lumber companies, associations connected with the industry, the Provincial Government and the Federal Government are all alive to the situation and are co-operating both in case of fire protection and reforestation. The Federal Government is understood to be about to proceed through the Commission of Conservation with an accurate survey of all standing timber in Canada, showing the various kinds of lumber, the quality, location and accessibility, together with available means of transporting same to the nearest market, also a report of all cutting over lands which are suitable only for forest growth with the extent and location of same.

The Province of Quebec is carrying on a considerable work in reforestation. The Government nurseries at Berthierville which now furnishes 1,000,000 plants of trees per annum are planning to extend the plantation so as to be able to provide 20,000,000 plants or more per annum. This intensive production of plants will greatly diminish their cost and it is calculated that the nursery will be able to furnish plants at \$1.50 per thousand instead of \$5.00 per thousand as is now being demanded.

The larger companies are adopting scientific methods of reforestation. The largest scheme of this kind so far undertaken in Canada has been carried out by the Laurentide Company, which has planted 1,000,000 seedlings, mostly Norway spruce, with some white Scotch, and jack pine and balsam. The Riordon Company also planted 750,000 seedlings, mostly imported from forests in the United States, which in turn procured the seeds some three or four years ago in Northern Europe.

These companies hope soon to plant every year at least one tree for every one removed by them. Naturally such a large scheme of reforestation demanded the building up of a large organization, as well as the carrying out of experimental work, all of which



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involves a large outlay of capital. It goes without saying that such a task would not have been undertaken if the men who control the companies were not convinced that it was a good investment, and that by only such means could their deforested lands be made productive before their available supplies of timber were exhausted.

Forest culture presupposes long-term investments and consequently the necessity of a minimum outlay in land and preliminary expenses. For this reason it is generally considered to be an undertaking which governments can handle to better advantage than can private corporations or individuals. The Quebec companies, however, have acquired considerable areas of cheap land in fee simple. They have established their own nurseries and these will be gradually enlarged until they furnish sufficient seedlings to keep pace with the planting.

As practically no seed of Canadian trees is now obtainable, it is being imported from Europe, but in time it should be possible to obtain native seed. It is, for example, not yet definitely known how Norway spruce will grow under Canadian conditions. A vast amount of experimental work, requiring several years' time, will be necessary to decide this point. In order to avoid any delay, the companies are engaging in this experimental work in co-operation with the Commission of Conservation, co-incidentally with their planting.

#### Work of Abitibi Co.

H. G. Schanche, who has been appointed chief forester of the Abitibi Power and Paper Company, Iroquois Falls, Ont., has selected a site for a Forest Nursery, and the clearing and preparation of the same is now in progress. The output of the nursery will be made to satisfy the demands of the reforestation program of the Forestry Department. Mr. Schanche will leave shortly on an extended trip over the limits of the company in order to gain first hand knowledge following which a working plan will be drawn up for the surveying and mapping of the holdings. A regeneration survey on virgin and cut-over areas is at present being carried on within the limits of the company. The work is under the supervision of Dr. C. D. Howe, of Toronto, and is similar to the investigations of a like nature recently conducted by him on the limits of the Laurentide and Riordon companies.

#### Work of Bathurst Lumber Co.

The Bathurst Lumber Company in co-operation with the New Brunswick Forest Service is carrying on experimental cuttings on 500 acres of undersized spruce on the Nipisquit River. A portion of the area is being cut under the strip system. Strips from one chain wide to three chains wide are cut clean, with strips two chains wide between each uncut or lightly culled. A portion is being cut clean in more or less circular patches of various sizes, comprising one-quarter acre to two acres in extent. Other positions are being thinned by cutting to 10, 8 and 6-inch diameter limits respectively. The slash on one-half the area of each cutting system is to be burned and on the other half unburned. The Provincial Forest Service furnishes a forest engineer who, in co-operation with Mr. Lordon, of the Bathurst Lumber Company, will carry out the plans of the cutting.

#### Experiments in Scientific Cutting

The Laurentide Company in co-operation, with the Quebec Forest Service, will undertake similar experimental cutting in a stand of 300 acres mostly culled only for pine on Cache Lake, whose waters reach the St. Maurice River at Rapid Blanc. The area contains a peat bog, a merchantable black spruce swamp, balsam and spruce ridges, a merchantable stand arising from an old burn, and mature spruce and balsam in various degrees of mixture with hardwoods so that most of the types in which logging operations are being conducted in Quebec are represented on this comparatively small area. The Logging Department and the

Forestry Division of the Laurentide Company and the Provincial Forest Service will co-operate in carrying out details for the cutting, as an experiment. On both areas a careful record will be made of the cost of slash burning.

The Commission of Conservation at Ottawa has the task of measuring and recording the results on each experimental area. Sample acres will be laid off and the volume of wood fibre and rate of growth under the present and past conditions will be ascertained and will be used as the standard to measure the results of the various methods of cutting in terms of future growth. The investigations will include the effect of cutting to various diameter limits upon windfall, upon diameter increment, volume accretion, upon the growth of the young trees already established in the stands, and the reproduction of the commercial species after the cutting. The areas upon which the slash is burned and those upon which it is unburned will be used for a comparative study of the effects of these two conditions upon reproduction and, in co-operation with the Dominion Entomological Branch, upon prevalence of insect diseases. These areas (burned and unburned) will also be studied in a comparative way by an expert from the standpoint of breeding ground for the various heart rot diseases of spruce and balsam.

This work will be carried on during the logging operations and will doubtless occupy a small investigation party during the coming summer. After that it is planned to visit the areas periodically for a number of years to measure and record results. In this way only can accurate and useable data be obtained from the experimental cuttings.

Negotiations are on the way between the Fisheries Branch at Ottawa, the Provincial Forest Service of New Brunswick, and the Commission of Conservation to establish an experiment station on 240 acres belonging to the Mirimachi Fish Hatchery of South Esk, New Brunswick. The area is badly infested by spruce budworm, and a special study will be made of this disease on the area by the Dominion Entomological Branch. The area is being cruised and plans drawn up for regulated cutting.

It is being recognized in Canada, however, that the whole question of managing the forests for the good of the country cannot be left to private or co-operation effort. It is considered that since the forests actually belong to the Provincial Government it is their duty to guard them properly. The length of time necessary to raise a crop, and the low rate of interest which must be charged for capital require that such work and management must be undertaken by the only certain long-lived agency capable of such work, namely the Government.

#### HOW PAPER MAKERS' FELTS ARE MADE

To mark the fiftieth year since the founder, Francis Conkling plant at Rensselaer, N. Y., opposite Albany, was built, F. C. Huyck & Sons have just issued a handsomely printed and profusely illustrated book entitled "Two Related Industries," an account of paper making and of paper makers' felts as manufactured at the Kenwood mills, Rensselaer and Annprior, Ont.

The book shows numerous full page illustrations and gives descriptions of paper making from the earliest times down to the present. These include reproductions of some rare old prints, some scene of historical interest in connection with the industry and pictures of up-to-date paper making machinery.

The book, as indicated by the sub title also in a most interesting manner traces the history of the Huyck paper makers' felt business, showing numerous excellent half tones of the firm's original and present plants and various operations in connection with the manufacture of paper makers' felt.

The book is tastefully bound and will be certain to make a favorable impression on those among whom it is intended to circulate.



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## Big Forest Wealth of British Columbia

Although Started But a Comparatively Short Time Ago the Pulp Wood Paper Industry Has Already Attained Large Proportions—Figures Issued Recently by the Provincial Government Show That the Total Value of British Columbia Pulp Sold in 1919 Amounted to \$12,554,257 and the Output of News Print Amounted to 123,607 Tons—American Capital Is Increasingly Being Attracted.

Written Especially for the Annual Number of the Paper Trade Journal

Few industries on the Pacific Coast have had a more remarkable growth than the manufacture of pulp and paper. Ten years ago the industry did not exist here. The great value of coast spruce, hemlock and certain species of fir as a basis of the manufacture of pulp, news print, wrapping paper and cardboard boxes was not recognized.

### Industry Has Attained Large Proportions

Today the industry has attained very large proportions, but even yet is scarcely out of the stage of early development. Engaged in this industry today in British Columbia there are 2,872 employees, the payroll totalling \$3,383,000 per annum and representing a capital investment of over \$27,000,000. In 1917 Canada exported pulp and paper to the value of \$53,000,000, of which 14 per cent. came from British Columbia. In 1918 the total export reached a value of \$72,000,000, of which this province was responsible for \$10,517,250. For the year ending March 31, 1919, Canada's pulp and paper exports reached as high as \$99,250,000 and British Columbia's proportion of this total was in greater proportion to the total than in any previous year. In 1918 the Canadian export of news print alone amounted to \$34,000,000. Today British Columbia produces 685 tons of pulp and paper a day—where ten years ago there was not one single plant in operation.

Figures issued by the Provincial government recently show that the total value of British Columbia pulp sold in 1919 amounted to \$12,554,257 and the output of news print amounted to 123,607 tons. There are now six large plants which, when working at full capacity, have an annual output of 60,000 tons of wood pulp and 100,000 tons of chemical wood pulp, news print and wrapping paper.

### Must Seek Outside Capital

A country of great extent possessing enormous natural re-

sources, British Columbia has a population so small at present that large amounts of capital have to be sought outside its boundaries, to the great mutual benefit of the investors and the province itself. To investors in New York, Chicago and San Francisco is due largely the place now occupied by British Columbia pulp and paper products in the markets of the world.

During the long years of war this industry, in common with nearly all others, was much hampered by lack of ocean tonnage and general restriction of means of transportation. The supply of pulpwood in the eastern portion of the continent is rapidly becoming depleted while the rapid shrinking of the available supplies in the United States is compelling attention to be directed to the great resources of British Columbia.

It is estimated that there still exists in this province approximately 255,000,000 cords of spruce and hemlock suitable for the purpose, so that there is ample scope for development.

### Inexhaustible Quantities of Wood

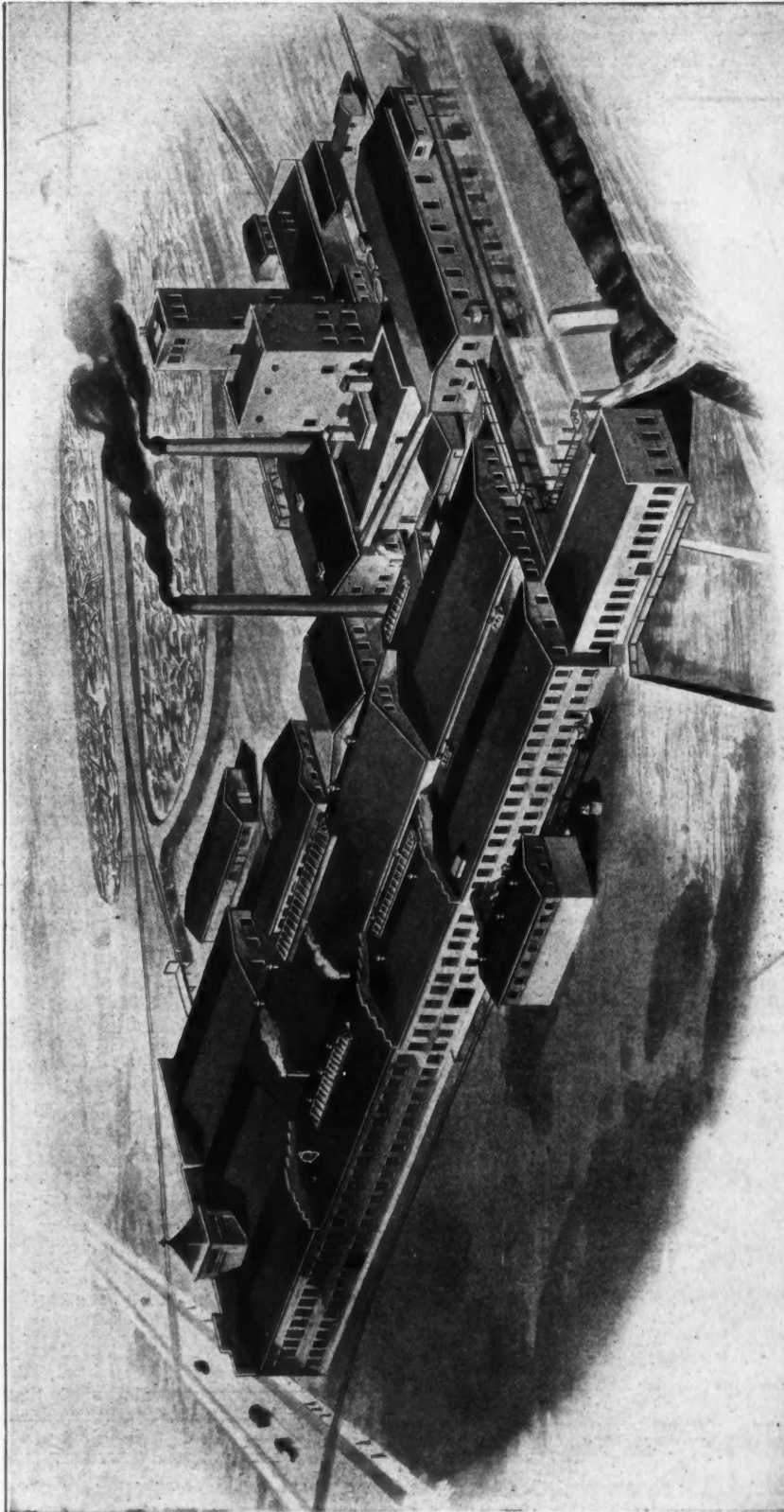
Scattered along the 7,000 miles of coast line of British Columbia are to be found almost inexhaustible quantities of suitable wood. There are great tracts of spruce and hemlock close to the water, giving the best of facilities for landing logs at the mills at very low cost. Douglas fir, too, is found suitable for manufacturing certain kinds of pulp products by chemical process. In the mild climate of the Pacific Coast logging and milling operations are carried on the year through, while constant open water facilitates shipping. Of water-power there are available many thousands of horse-power only awaiting development.

### Favorably Located to Markets

The products of the forests of British Columbia are in an extremely favorable position with regard to markets. While the home and United States markets are constantly increasing their demands, Australia, Japan, China, New Zealand, South America and Mexico also



ON TIMBER LIMITS OF WHALEN PULP AND PAPER MILLS, LTD., QUATSINO SOUND, VANCOUVER ISLAND.



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are ready to take large quantities when the industry is sufficiently developed to accommodate their wants. At present a very large part of the export pulp and paper goes to Australia, which is wholly dependent on the outside for its supplies. Japan offers a market which is constantly expanding. Practically the whole of the output of the mills of the big Whalen corporation is absorbed by Japan. Sir George Bury, president and managing director of this concern, returned recently from the Far East, having made contracts for as much as the firm could supply for many months ahead.

#### Exports to United States

It is of interest to observe that the export of paper of various kinds to the United States in 1918 was valued at \$3,786,441 compared with \$1,622,933 in 1917, while the pulp exports amounted to \$775,386. The demands of the local market are constantly increasing as the country is built up by increasing population. At present the annual value of the locally-absorbed product amounts to \$300,000, while news print in large quantities is supplied to Vancouver, Seattle, Calgary, Edmonton and other cities as far east as Winnipeg.

The government of British Columbia, which controls the forests of the province, is fully alive to the great future which lies before the industry. As long ago as 1901 the government adopted the policy of granting 21-year leases of pulpwood areas to bona fide investors. There is an annual rental under these leases of two cents per acre and a royalty of 25 cents per cord of pulpwood and in addition applicants must guarantee a satisfactory expenditure on plant.

#### Some Enterprising Concerns

The Whalen Pulp and Paper Mills, Limited, the largest concern of the kind operating in British Columbia, combines the interests of the former Colonial Pulp and Paper Company with

its mill at Port Alice on Quatsino Sound, Vancouver Island; the Empire Pulp Company, with a plant at Swanson Bay, and the British Columbia Sulphite Company with mills at Mill Creek. The combined output is approximately 180 tons of sulphite fibre, 50 tons of pulp, 500,000 feet of lumber and 1,100,000 shingles daily. The concern is capitalized at \$10,102,500 and its assets are valued at nearly \$15,000,000.

The Pacific Mills, Limited, which owns the great plant at Ocean Falls, is capitalized at \$9,500,000 divided into 9,500 shares. This company purchased the property from the trustee for the debenture holders of the original Falls company, the Fleischaker Brothers and W. P. Johnson of San Francisco being the financial backers.

The other two pulp concerns now operating are the Powell River Company, Limited, and the Beaver Cove Lumber and Pulp Company. The latter concern, whose financial backers are headed by W. H. White, a wealthy New York banker, started operations in the late summer and has an initial capacity of 40 tons of pulp a day.

#### Will Attract American Capital

Not long ago the former Canadian paper controller, R. A. Pringle, K. C., who recently resigned, stated that the pulpwood demands of the United States had reached the enormous total of 600,000 tons per day, and that the demand was increasing at the rate of ten per cent. annually. He said that it was estimated that the available supply of pulpwoods in the United States was not sufficient to last more than fifteen years at the most at the present rate of depletion.

From this he argued that American capital would be attracted more and more towards the great areas of pulpwoods existing in British Columbia.

It is worth while quoting here a recent statement of the Hon.



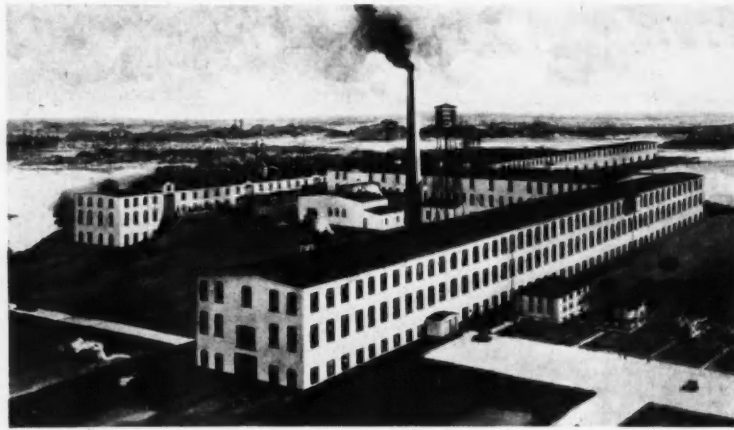
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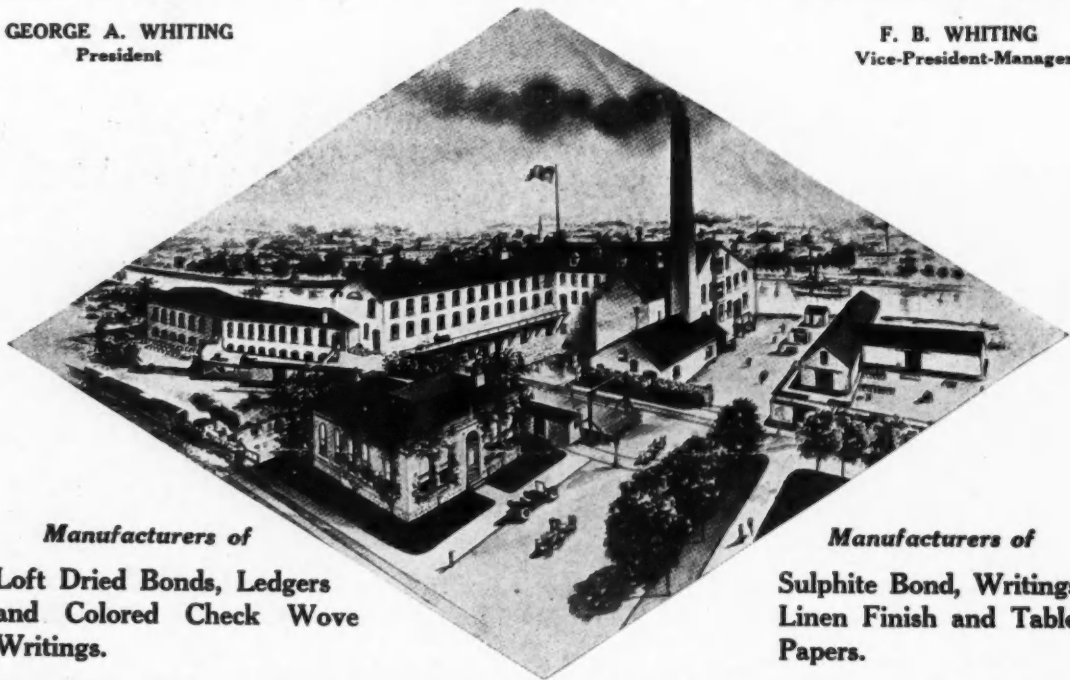
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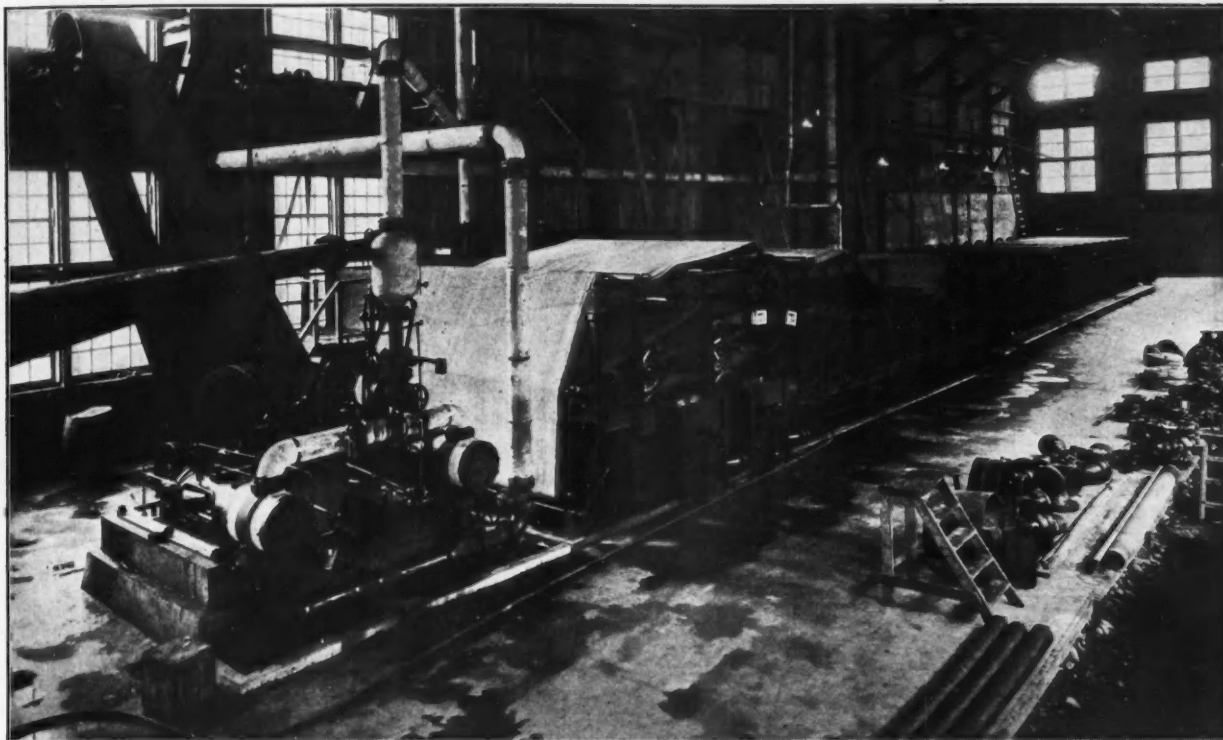
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**GEORGE A. WHITING PAPER CO., Menasha, Wis.**



DRYING ROOM, BEAVER COVE LUMBER &amp; PULP CO., BEAVER COVE, B. C.

T. D. Pattullo, British Columbia Minister of Lands, in whose department the pulp forests of the province are administered. He said:

"For pulp-producing purposes the spruce forests of British Columbia remain practically untouched, although the past five years have seen large quantities of this timber cut for aeroplane pur-

poses. The pulp and paper industry in British Columbia is still in its infancy, though there are at present between four and five thousand men employed in its various branches. Other companies will come as the vast resources of the provinces become more widely known and as the growing need for more pulp fields is felt.

## ABUSING THE FORESTS

The annual report of the Chief Forester at Washington is detailed and doleful, says the *New York Evening Post*. The rate of forest depletion is nearly three times the growth of timber serviceable for anything but firewood. The great Eastern centers of production are being exhausted, while the Southern mills have only from ten to fifteen years' supply of virgin timber. For three years preceding 1919 the average annual loss from forest fires was \$20,727,917. The average number of acres burned was 13,969,331. At that rate it will take only about forty years to convert our forests into ash heaps.

Neglect and abuse of our forests have been notorious since the days when Carl Schurz, as Secretary of the Interior under Hayes, toured the country in their interests. This has been due partly to the fact that everybody's business is nobody's business. We have also been misled by our wealth. About one-fourth of the United States or 550,000,000 acres, is in forests while our "forests primeval" covered an area of approximately 850,000,000 acres. But if the supply is great the demand is greater. We are using about 6,000,000 cords of wood annually in the manufacture of paper, one-sixth of which is imported, mostly from Canada. Thirty-three States have Forestry Departments and twenty-four cooperate with the Federal Government in fire protection. But the fires continue while afforestation lags. Millions are appropriated each year for the maintenance of the Forestry Service, yet the force is inadequate and becoming more so daily.

Chief Forester Graves suggests a widening of the Federal Board's authority. No one will doubt the wisdom of this, but it is only one step toward larger and better forests. A campaign such as that conducted by the *Pittsburgh Post* on the forestry needs of Pennsylvania cannot be too highly commended. It is the venerable question of educating the public to the point where people realize the value of a tree before it is cut.

It is not mere sentiment but a possible crisis that bespeaks a revival of the interest we had in our forests about 1905, the most favorable year since the establishment of the Bureau of Forestry in 1886.

### MICHIGAN PAPER FIRMS INCREASE STOCK

The Eddy Paper Company, of Three Rivers, Mich., and White Pigeon, Mich., and the Monarch Paper Company, of Kalamazoo, Mich., have both been granted permission by the Secretary of State to increase their capital stock. The former was authorized to expand to \$12,000,000 common and \$3,000,000 preferred.

The Eddy Paper Company will immediately declare a stock dividend, giving holders four shares of stock for each single share now held. It will also sell \$1,000,000 of preferred stock that will be convertible into common stock.

The Monarch Paper Company will advance from \$750,000 to \$1,500,000, selling the authorized increase at par, \$10 a share.

### EASTERN GROUP

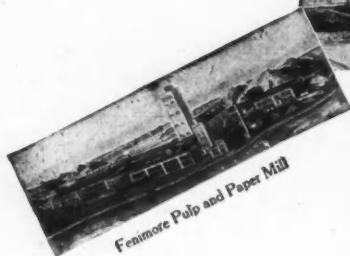
Hudson Falls, New York



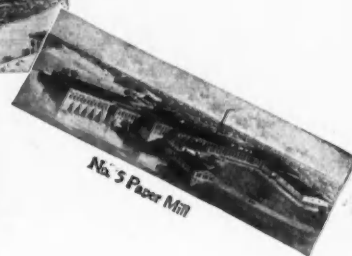
Bakers Falls Group



St. Maurice Pulp & Paper Mill, Cap de la Madeleine, Que., Can.



Fenimore Pulp and Paper Mill



No. 5 Paper Mill

It has apparently occasioned no surprise in the Industry that UNION Customers have been regularly in receipt of their normal supplies throughout the severest winter known in many years.

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PRINCIPAL OFFICES: WOOLWORTH BLDG., N. Y. CITY



Kaukauna Pulp and Paper Mill



Badger Bag Factory



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### WESTERN GROUP

## Growing Demand for South American Casein

**Before the World War America Was Practically Independent of the South American Casein Market and the Bulk of Its Production Went to Europe—With the Outbreak of the War, However, All This Was Changed—The Demand for South-American Casein Was Quickly Stimulated and Prices Began to Advance—Properly Equipped Plants Were Immediately Installed and Production Improved.**

Written Especially for the Annual Number of The Paper Trade Journal by Henry Atterbury, President of Atterbury Bros., Inc., New York, and International Casein Co., Buenos Aires, Argentina.

Prior to the outbreak of the European war, the American market was practically independent of the South American casein market and the bulk of its production went to Europe, the prices being governed by the competition of the domestic producers in our Western States and the French manufacturers who found themselves in the same position as our Western creameries, namely with a large over-production of milk during certain seasons which could only be handled at all by putting it into by-products such as condensed milk, milk powder, sugar of milk and casein. The South American product being manufactured at a large number of widely separated plants and under widely varying conditions was un-uniform in quality, irregular in strength and viscosity and sold therefore always at a discount as compared to either the French or the well known domestic qualities.

With the outbreak of the war, however, the situation changed almost over-night. The French production of milk was immediately requisitioned by the government for the use of the troops in the field, orders began to pour into America for additional supplies, condensed milk in cases for export went to unheard of prices and milk powder, sugar of milk and casein, gradually but none the less surely, followed suit.

### South American Markets Stimulated

The South American markets were quick to feel the result of this activity and "prime South American" began to be a household word among the paper coaters. South American casein which had sold as low as 5½ cents per pound in 1910-1920 began to come into its own. At first it was a harvest for the unscrupulous manufacturers, burnt, badly dried, moldy stock was shipped here as "prime" and eagerly bid for by incautious buyers with the result that when the flurry was over, many users found themselves loaded with poor stock for which they had paid fancy prices. The intelligent South American manufacturer had, however, seized the opportunity to invest his profits where they would do the most good, namely in new machinery and improved processes. The old "sun-dried" article where the curd was spread in the open air to be covered with the dust of the "pampas" by every wind which blew, to be deluged by every tropical thunder shower, parched and scorched by the noon-day sun, and finally ground, packed and shipped as "prime" was replaced by modern, continuous drying plants and daily and hourly tests to ensure uniformity.

When the writer first visited the Argentine in 1910, casein was made by the hydro-chloric, sulphuric and "natural soured" processes according to the various plants producing it, but as often as not these three qualities were shipped to the same mill for grinding and bagging and were ground and bagged together with the result that the American coating mill received a motley heterogeneous mixture requiring constant care in its use to produce a solution appropriate for blending well with satin-white or blanc fixe.

Immediately after the early war boom properly equipped plants

were installed and today the most modern casein plants are found in South America and the uniformity of the product compares most favorably with the best of the French or domestic manufacture, being in fact, preferred by many coaters to the domestic because most of the domestic curd being precipitated by the sulphuric or hydro-chloric process, does not combine readily into a smooth flowing solution where satin-white is used.

The big South American plants manufacture only by the self-soured process, i. e., the curd is precipitated by lactic acid germinated by the original fermentation of the curd and after thorough washing the curd is hydraulically pressed and shipped in a moist state to the central drying plant where it passes through the final stages of rotary drying and grinding. At the plants, chemists test each shipment as received from the creameries and as accurate an analysis of it is made as of wood pulp or other paper makers' materials. This ensures proper quality and in the well known South American brands there is no longer any chance of lack of uniformity.

### Imports Constantly Increasing

The imports from South America are constantly increasing to the United States and while proper official figures are not available from government sources, as the countries of origin are not, in many cases, correctly classified, competent judges estimate that we are now consuming four-fifths of the total South American production, and of this four-fifths, ninety per cent is handled under registered brands whereby the buyer and seller are equally protected.

To prophesy is always dangerous, but, due to the up-to-date methods now employed in the large South American plants so that the milk is conserved at the time of the spring flush when the flow is heaviest, there is undoubtedly a good-sized stock on hand in South America which will move forward to the American market gradually during the summer months and suffice for the heavy demands now being made for this material. Coupled with this present supply is the large domestic milk production now appearing all over this country which will have to be taken care of. Domestic condensed milk is a "drug on the market," powdered milk quotations are being cut from day to day, and this surplus curd, which is now flowing in a daily increasing stream, must be turned into caseine or lost and with caseine at present prices there is not much doubt that the domestic production will suffice to meet the demand during the next few months and until the South American "crop" which of course makes its appearance at the end of our season here, is in sight again.

The use of casein in other trades than for paper-coating is constantly increasing, but the total volume is still small compared to the tonnage absorbed by paper coaters, and with the South American production coming forward at the season when the domestic make is light, a well balanced orderly market should be seen in which the dairyman gets a reasonable profit and the coater obtains a constant and uniform supply of this prime raw material.

# Collins Manufacturing Co.

Samuel R. Whiting, Pres. and Treas.

*MILL*  
NORTH WILBRAHAM,  
MASS.

*MAIN OFFICE*  
208 Race St.,  
Holyoke, Mass.

## *Manufacturers of High Grade Loft Dried Papers*

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We carry in stock the following lines, which give a well selected range of grades and colors suitable for all the ordinary needs of the most exacting customer:

**Convertible Bond**  
**Equipment Bond**  
**General Bond**  
**Active Bond**

**Collins Linen Ledger**  
**Newport Ledger**  
**Yeoman Ledger**  
**Arkwright Ledger**

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We also manufacture the following lines on special orders:

**Index Bristols - Superfine and Fine Writings**  
**Papeteries - Weddings - Linen Finish Papers**

*Your inquiries are earnestly solicited and samples will be sent you on request*

## Readjustment Period in Clay Industry

**Industry Is Making Every Effort to Meet the Demand of Consumers—During the Past Four Years English Clays Have Been Very Difficult to Get Over and This Has Brought About a Very Greatly Increased Demand for Domestic Clays—While in 1908 Only About 25 Per Cent of the Total White Clay Consumed Was American Clay, It Is Estimated That in 1920 It Will Be 50 Per Cent.**

Written Especially for the Annual Number of the Paper Trade Journal by R. T. Vanderbilt, President of the R. T. Vanderbilt Co., Inc., New York.

The early part of the year 1919 was largely one of readjustment in the clay industry, as in the paper industry, and the second half of the year was likewise a period of striving for production to meet the consumption.

During the last four years of the war while English clay was difficult to get over, the American clays made marked progress in the paper trade. The quality of some grades has been improved and at least one new superior grade has been put on the market. Also the paper mills have learned more about handling the American clays and have found now that they can be used satisfactorily for certain kinds of coating work, as well as filling.

### Increased Demand for American Clays

These conditions have brought about a greatly increased demand for American clays and only the war handicaps in all manufacturing work have prevented a great increase in the production and use of them. Up to this time most of the paper clay has come from Georgia and South Carolina, and the output there has been as follows:

	Georgia	South Carolina	Virginia
1908.....	18,240	26,321	.....
1909.....	31,617	31,856	.....
1910.....	36,571	29,051	.....
1911.....	45,076	30,640	.....
1912.....	48,482	44,372	.....
1913.....	69,740	31,568	.....
1914.....	62,298	27,906	.....
1915.....	67,752	24,688	.....
1916.....	92,671	32,556	.....
1917.....	109,222	40,173	.....
1918.....	76,073	39,041	.....
1919 (estimated) .....	75,000	34,000	.....
1920 (estimated) .....	110,000	50,000	30,000

The 1920 production of paper clay in this country should be about 200,000 tons against less than 50,000 in 1908.

### Factors That Kept Down Production

During 1918 and 1919 both weather, coal, labor and shipping condition kept down production. The Southern mines have since been making especial efforts to improve the quality and color of their products and it is expected that this year the quality of these clays will be better than ever before and at the same time the production will be larger.

Last October production was started at a new mine in Virginia, where a white pulverized clay is being produced, better in color than the ordinary grades of English clay. It is being sold entirely to mills which have been using the imported clay and has been proven satisfactory in every respect for filling, and it is the first American clay which has been used regularly for coating book paper. This grade should be particularly interesting to the coat-

ing mills who can make a considerable saving through its use. It has proven so successful a quality that arrangements have already been made to double the production, giving the plant a capacity of 200 tons per day, and it is hoped that actual production during 1920 will be over 30,000 tons, and at a larger rate during the second half of the year.

For the past three years efforts have been made to produce clay at our mine in Connecticut, and we expect to start shipments from there this Summer. This clay will take low freight rates to most of the New England book mills and will be of especial interest to them. It is a washed clay, practically identical in quality to the English filling clays, and while the initial production will not be large, it will be subject to development and it is mentioned to show that progress is being made in meeting the paper requirements.

### Clay Imports Uncertain

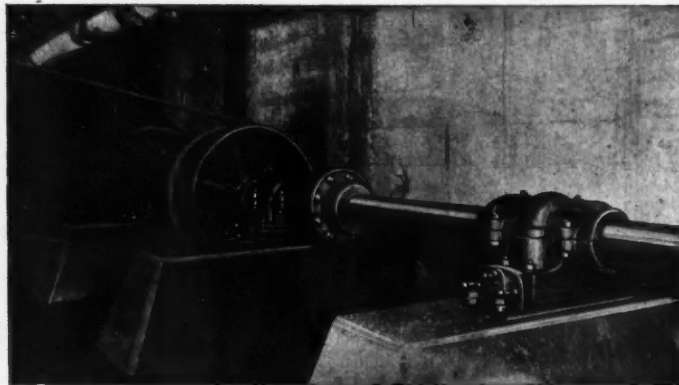
Practically all of the white clays imported come from the mines in Cornwall at the Southern end of England. Before the war they had a productive capacity of about 700,000 tons. Clay imports have been very uncertain during the war and were previously interrupted by strikes, etc., and some wide fluctuations will be noticed in the following schedule, although this does not show the fluctuations in imports from month to month:

1908 .....	176,895
1909 .....	246,381
1910 .....	257,902
1911 .....	255,107
1912 .....	278,276
1913 .....	268,666
1914 .....	328,038
1915 .....	209,132
1916 .....	253,707
1917 .....	241,029
1918 .....	168,100
1919 .....	225,000 (estimated)
1920 .....	300,000 do

These Government figures include white clays for pottery and other industries, as well as for the paper industry, but by far the largest part of these importations goes for filling and coating paper.

### Price of English Clays

During the war the wages of the English clay miners have risen from 16 shillings (\$4.00) per week to about \$13.00 or \$14.00 per week and the cost of their coal has increased correspondingly. Clay prices at the mines are about two or three times as much as they used to be and it can hardly be expected that those clays can be bought, for many years to come, at anything near the old prices.

**COMPLETE POWER TRANSMISSION EQUIPMENTS****HEAVY BEATER LINESHAFT**

Supported in

**HILL COLLAR OILING BEARINGS**

with

**WEDGE ADJUSTING BASEPLATES****A PERFECT TESTIMONIAL**

*"In all respects we have found whatsoever we have bought from The HILL CLUTCH CO. to be of highest grade of material and workmanship, and that their methods of handling their business from an engineering standpoint puts them in a class above most of their competitors."*

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**THE HILL CLUTCH CO.**

CLEVELAND, OHIO

New York Office: 50 Church Street



Ocean freights have also increased. The old Pre-War Steamship contract covered a rate of 9 shillings 6 pence and this rate was in effect for the first three years of the war. The contractors, however, were unable to furnish the full quota of steamers, and it was often necessary to charter outside at rates ranging from 30 to 50 shillings. After the armistice the rate went down to below 10 shillings but has been going up gradually since to the present figure of about 20 shillings, twice the pre-war rate, where it is expected to stay for some time.

This freight increase is, of course, more than offset by the saving in exchange, which amounts at present to over 25 per cent, applying to the cost of the clay and the freight, and making a very decided saving in the cost of English clay at the moment; although no one, of course, can foretell the course this exchange item will take.

There have been a number of amalgamations among the clay companies in England, where they have no Sherman law, and it is understood that at present practically all production and prices are fixed by a central organization known as Clays, Ltd. For the

past few years most of the production has been coming to this country but now some of their European trade is being resumed and they are looking forward to 1920 being a very prosperous year in the Cornwall mines.

#### Increase in Use of American White Clays

To show the increase in the use of American white clays, attention is called to the fact that while in 1908 only 25 per cent of the total consumption here was shipped by the domestic mines, in 1920 probably 50 per cent of the clays will be mined in America.

The American clay producers are expecting that the paper manufacturers will continue to use during normal conditions, the clays they have been supplying them during the war conditions, and they are ready to increase their production to meet any demands made upon them. Owing to the high price of pulp and paper stock there is every incentive for the paper manufacturers to use all the clay filler possible, and it is expected that the year 1920 will set up a new record both for American white clay production and consumption.

## CHILLICOTHE PAPER CO. BEGINS OPERATIONS

The Chillicothe Paper Company, of Chillicothe, Ohio, was organized June 21, 1919, and capitalized for \$600,000 with the following officers: Hector McVicker, president and general manager; George Litter, vice president; Lyle S. Evans, secretary; A. P. Story, treasurer and sales manager; E. F. Bearce, chief engineer.

#### Features of the Building

The mill buildings were completed recently, having been constructed by the Austin Company of Cleveland, Ohio. The main building is 470 feet long and 75 feet wide. One end consists of two stories and a basement, on the top floor of which is located the old paper plant which is equipped to recover fifteen tons of old paper stock per day, the material being cooked in two Downingtown cookers with a capacity of 2,000 pounds each. The first floor in this part of the building is the beater room where there has already been installed twelve 1,500 pound Noble & Wood beaters.

#### Main Part of the Building

The main part of the building consists of one floor and basement, in which is located the Fourdrinier paper machine which

was built by the Rice, Barton & Fales Machine and Iron Company, and which will use a wire 70 feet long and 138 inches wide, the machine will make a finished sheet of paper 126 inches wide. The machine will have thirty dryers, and will be built to run from 90 to 450 feet per minute.

#### Electrically Driven

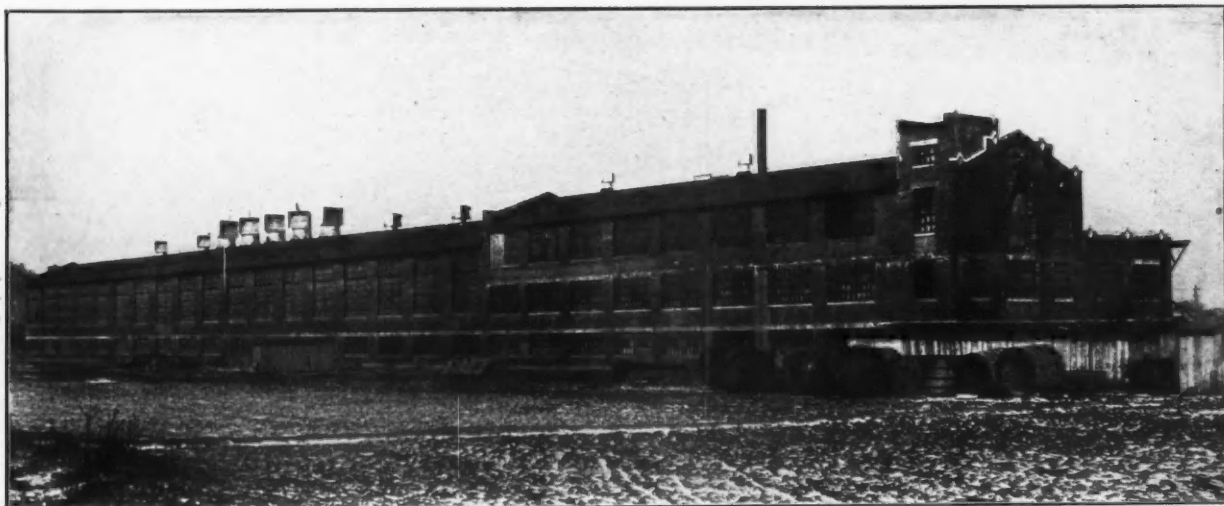
The mill will be electrically driven throughout, the variable speed part of the paper machine being driven by a Turbo Generator Unit. The equipment will include a stack of super calenders 131 inches wide, a duplex cutter of the same size, as well as the necessary rewinders to make roll paper.

#### Advantages of Locality

One of the main advantages of this locality for paper making exists in the abundance of pure water which is found at a depth of about 18 feet below the surface, and the water for the mill will be taken from an open concrete well 25 feet in diameter.

It is the company's intention to specialize on machine finish and super calender book papers, as well as catalogue and lithograph papers.

The mill will be in operation some time in April.



NEW PLANT OF THE CHILLICOTHE PAPER CO., CHILLICOTHE, OHIO

# CAMACHINE 18 HEAVY DUTY REWINDER

CAMACHINE-18

CAMERON MACHINE COMPANY  
BUILDERS  
BROOKLYN, NEW YORK  
U. S. A.

PATENTED IN U.S. AND FOREIGN COUNTRIES

**"CAMACHINE" 18 is a Heavy Duty rugged machine, especially designed for Paper and Board Mill requirements.**

"CAMACHINE" 18 produces Rewound Rolls of any diameter desired and any width from 6 inches up.

**SUMMARY OF IMPORTANT FEATURES**

1. "Cameron Principle" of Slitting,	5. Perfect Power Control,
2. New Automatic Roll Separators,	6. Massive strength,
3. Unlimited Speed—2000 feet per minute if required,	7. Fool-proof operation,
4. Wide range width and diameter rewind rolls,	8. Handles anything from Tissue to Board.

**CAMERON MACHINE COMPANY, *Builders***  
Plant and Show Room: Poplar St., Brooklyn, N. Y.

# CAMACHINE 8—MODEL 10

A Slitting and Rewinding Machine for Paper Mill Finishing Rooms, Paper Jobbers and Paper Converters.



“CAMACHINE” 8—MODEL 10 covers the requirements of the paper industry for producing rolls or coils of any width from 1" up to any diameter of 36" maximum. This machine is built in widths from 42" to 82".

### Summary of Important Features

1. “Cameron Principle” of Slitting, insuring perfect work and quick change of spacing.
2. Fool-proof construction and simple operation.
3. Universal range of work on any material from tissue to board.



## “Camachine” 6—Model 2A

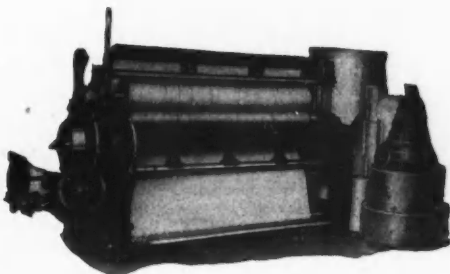
A Slitting and Rewinding Machine for Paper “Specialties.”

“CAMACHINE” 6—MODEL 2A covers the requirements of paper mills, paper jobbers and converters for rolls and coils of apparently small size ranging in width from 1/2" (with special cutters 3/8" width) to any diameter required up to 24".

### Summary of Important Features

“CAMACHINE” 6—MODEL 2A is designed for producing rolls and coils with perfect accuracy as to Slitting and Rewinding with special attention to:

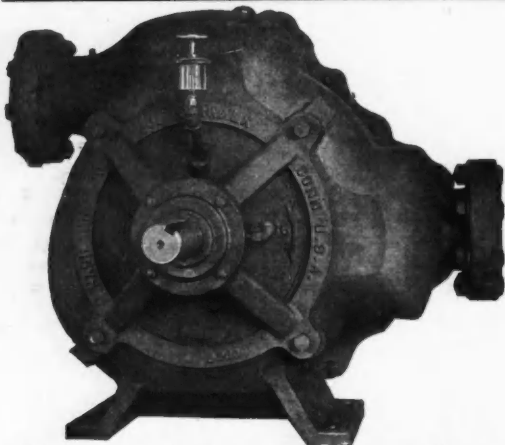
1. Clean cut even strip.
2. Firm accurate coils.
3. High speed and first-class quality of work.
4. Quick change of cutter spacing.
5. Simple Operation.



**CAMERON MACHINE COMPANY, Builders**

*Plant and Show Room: Poplar St., Brooklyn, N. Y.*

## NASH HYTOR VACUUM PUMPS, AIR COMPRESSORS AND JENNINGS HYTOR DRYER EXHAUST UNITS

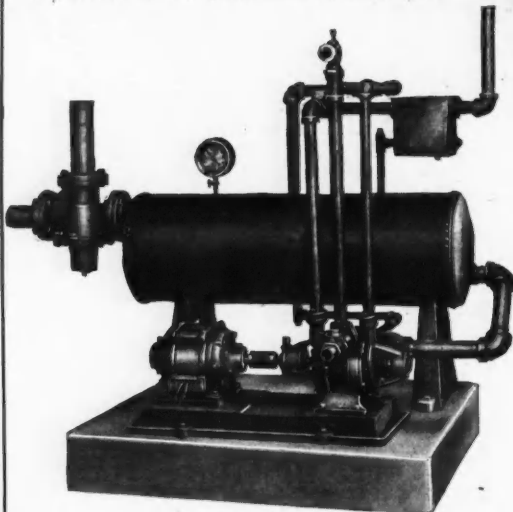


**The most simple Compressor & Vacuum Pump**

Our Repeat Orders are our best testimonials and many mills throughout the country are using this equipment with greatest satisfaction.

The Jennings Hytor Dryer Exhaust consists of two independent turbine units, an air pump and a water pump combined in one casing with the impeller of each mounted on the same shaft. One unit continually exhausts air and vapors from the heating system and the other removes the condensation as it accumulates and forces it directly into the boiler, or up to the hot well.

**THE BOILER PRESSURE IS AGAINST THE WATER ONLY.** The air and vapor representing approximately four-fifths of the Volume handled are delivered to the atmosphere without back pressure.



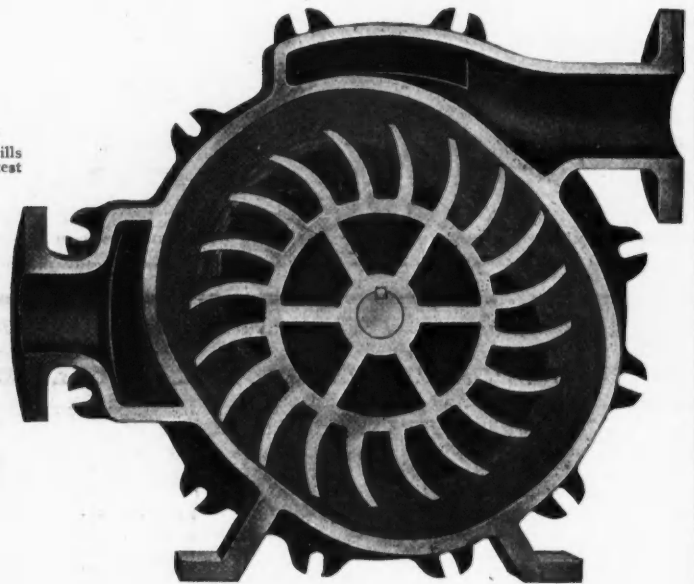
**Jennings Hytor Dryer Exhaust Unit**

### "Distinctive and Wonderfully Efficient"

Only three principal parts. Only one moving part, the rotor. Shaft is mounted on high grade annular ball bearings outside the casing. No valves, pistons, rods, crank shafts, loose vanes or gears. Compression is balanced, eliminating side thrust on the rotor.

#### NOTE THAT ROTOR RUNS IN CASING WITH LARGE CLEARANCE

These pumps are noted for their high efficiency and absolute reliability. The air is delivered entirely free from pulsation and therefore can be measured with a Venturi meter. Air is washed as well as compressed and can contain no oil or other impurities. Can be constructed of acid-resisting wheel. Upkeep cost practically nothing. Expert attendant not required. The Nash Hytor is used in connection with suction rolls and flat boxes on wires and felts of pulp and paper machines.



#### PRINCIPLE OF OPERATION

The water revolves with the rotor but follows the elliptical casing due to centrifugal force. Twice in a revolution the liquid alternately recedes from and reenters the rotor. The water acting as a piston compresses the gas.

**THE SAVING IN HORSE POWER AMOUNTS TO OVER 50%.** This equipment is very durable and requires less than half the power of any other vacuum heating pump of the same capacity; no rubbing surfaces; no gears, no loose moving or reciprocating parts. Unloads when not handling water; no internal lubrication; has large capacity; occupies minimum space; no internal lubrication.

The Jennings Hytor is used in pulp, paper mills, factories, etc., for handling returns from paper machine dryers and steam heating systems.

**REPRESENTATIVE PULP AND PAPER TRADE**  
**THOMAS SAVERY, Jr., 1718 Republic Building, CHICAGO, ILLINOIS**

Associate New England States: **MR. GILBERT H. GLEASON, 141 Milk Street, BOSTON, MASS.**

## Manufacture of Paper Pulp from Flax Straw

**How Western Canada Can Supplement Present Shortage of Paper Pulp—Has Been Demonstrated That Bleached and Unbleached Half Stuff Can Be Successfully Utilized in the Manufacture of Pulp for Conversion into High Grade Papers—Wide Margin of Profit Indicated Allows for a Good Return on Invested Capital Even with a Considerable Drop in the Selling Price.**

Written by G. Ommaney of the Department of Colonization and Development of the Canadian Pacific Railway Co.

The demand for high grade paper pulp has never been greater than it is to-day, current demand is in excess of the offered supply, and prices, higher than ever before, are decidedly on the up-trend. Meanwhile the paper industry is undergoing a boom, an increase of as much as one hundred per cent in the higher grades of paper manufacture in Canada being the actual experience of some Canadian manufacturers. On the American Continent the demand in these lines is not being met by the supply, and a great deal more business could be done by the paper manufacturers if the raw material were forthcoming.

Cotton rags are selling as high as fifteen cents a pound, and high quality material from which paper can be made comparable with cotton rag content paper should readily command as much as \$300 per ton. The United States daily consumes over 1,000 tons of high grade papers. Canada manufactures about 250,000 tons of high grade bleached pulp, a large proportion of which is exported to the United States. It takes somewhat over one and a half cords of pulpwood to make one ton of pulp, and the demands on our forests consume some 20,000 acres of pulp wood limits per year, in which connection it is interesting to note that it takes from fifty to one hundred years to grow a spruce tree suitable for pulp production. Timber limits are rapidly increasing in value, and with the rapid depletion of the forests lumbering operations must every year go further back from transportation lines.

### Of Direct Interest to Western Farmer

This situation is of direct interest to the Western farmer, because he is annually wasting about one million tons of raw material from which it has been proved that a paper pulp can be made convertible into a high grade paper comparing well with the linen rag product, for which price and demand are to-day higher than ever before. The material referred to is flax straw, at the present time burned and wasted wherever flax is grown for linseed, the straw crop therefore representing a dead loss to the farmer. In the 1919 issue of the Monthly Bulletin of Agricultural Statistics, published by the Dominion Government at Ottawa, we read: "Another question of

direct economic interest is the possibility of utilizing the linseed straw in Western Canada, which so far has been found useless, and is mostly burned. Any use that could be established for this by-product, which would increase even to a small extent the total money yield of the crop to the farmer would be a very important factor in extending the cultivation of flax throughout larger areas in Canada."

It can now be definitely stated that such a use for flax straw has been demonstrated in the manufacture of pulp (bleached and unbleached half stuff) for conversion into high grade papers. All

that is required is co-operation on the part of the farmers in the collection and delivery of straw, and interest of the necessary capital to organize a new industry which will revolutionize the flax-growing problem and at the same time stimulate the important paper industry of Canada with a supply of high quality pulp.

### No Question of Experiment

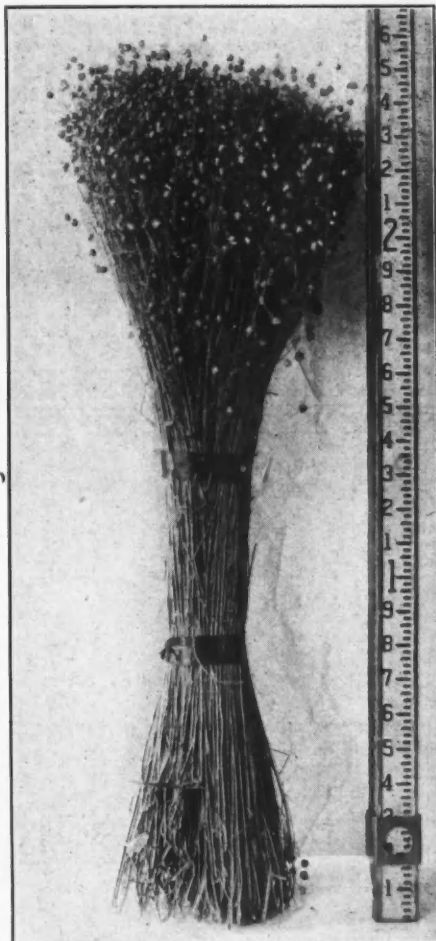
This is no question of experiment. That stage has been passed, and production on a semi-commercial scale has actually been accomplished. Over a ton of unbleached flax straw pulp has been manufactured, and then made into paper in two paper mills.

### Highly Commended

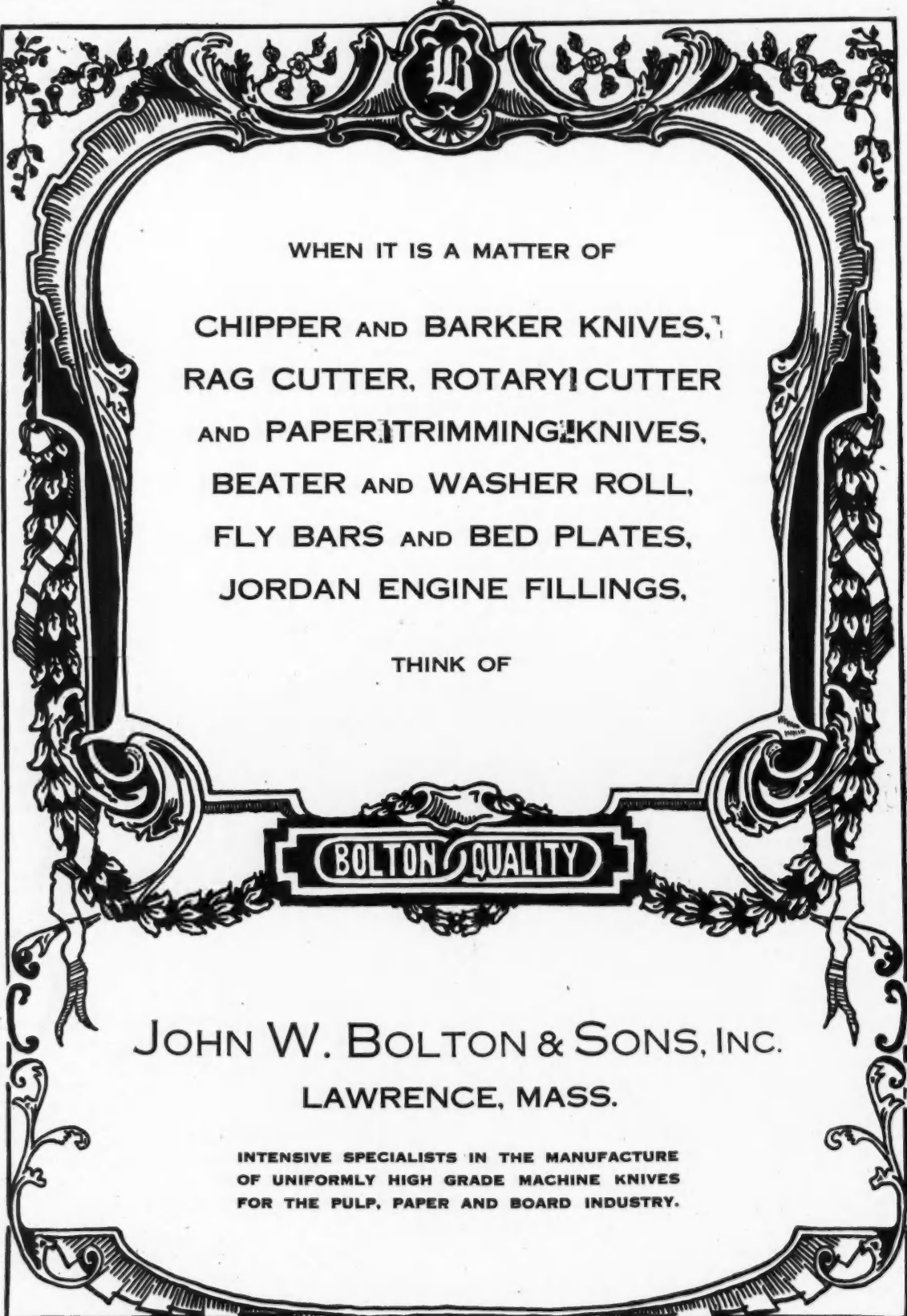
This was submitted to various large paper manufacturers for their opinion, and from them it received the highest commendation. It is thought that the following points cannot fail to be of interest to the Western flax grower and also to the paper manufacturer.

### Conditions Essential to Successful Manufacture

The conditions essential to the successful manufacture of flax pulp are:—(1) Sufficient quantity of flax straw. (2) Suitable mill locations. (3) Suitable markets. Dealing with each of these headings, it is obvious that the first is of primary importance, the available supply of the basic raw material straw, the possibilities of collecting that supply, and the price at which it can be collected, are factors on which depend the practical commercial possibilities of this development.



FLAX STRAW FOR PAPER MAKING



WHEN IT IS A MATTER OF

CHIPPER AND BARKER KNIVES,  
RAG CUTTER, ROTARY CUTTER  
AND PAPER TRIMMING KNIVES,  
BEATER AND WASHER ROLL,  
FLY BARS AND BED PLATES,  
JORDAN ENGINE FILLINGS,

THINK OF

**BOLTON QUALITY**

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

INTENSIVE SPECIALISTS IN THE MANUFACTURE  
OF UNIFORMLY HIGH GRADE MACHINE KNIVES  
FOR THE PULP, PAPER AND BOARD INDUSTRY.

Taking first the available supply, we find that there has been in the past an enormous increase in flax acreage in the West. In 1870, the total Canadian crop was 118,044 bushels. In 1903, this had increased to 884,000 bushels, and this increase continued up to the enormous crop of 25,978,000 bushels in 1912. The fall in prices in the next few years was reflected in diminished production, but recovery has been rapid, and in 1918 a crop of 5,776,000 bushels was harvested in the Prairie Provinces, the estimated crop for 1919 being 7,117,000 bushels, of which Saskatchewan is credited with nearly 4,600,000 bushels. The following table gives acreage and yields for the Prairie Provinces during the past ten years, taken from volumes of Census and Statistics published by the Department of Agriculture of the Dominion Government, Ottawa.

courage long, slender growth of straw with small tops. Special cultivation, harvesting methods and subsequent treatment of the straw must be resorted to.

The question of growing flax for fibre to replace the great shortage from which Europe is now suffering, though also a problem of the first importance to the Canadian West, is an entirely different problem from that now under consideration, viz.—utilization of the present supply of straw for paper pulp. With linseed flax, Canadian common seed is used sparsely sown to encourage plants to develop large tops; the flax is cut at a later stage of its growth, and threshed for its seed. The resulting straw is too short, broken and brittle for use in the textile trades, and has hitherto been piled alongside the thresher and burnt.

Year	Manitoba		Saskatchewan		Alberta		Total Acres
	Acres	Bu. per acre	Acres	Bu. per acre	Acres	Bu. per acre	
1910.....	34,684	5.09	396,230	7.68	14,300	4.48	445,214
1911.....	79,765	14.44	570,000	11.25	40,275	10.39	690,040
1912.....	100,000	12.49	1,463,400	12.94	111,400	12.83	1,674,800
1913.....	54,000	11.70	1,386,000	11.24	105,000	11.00	1,545,000
1914.....	40,000	8.44	958,000	6.40	80,000	7.67	1,078,000
1915.....	14,505	8.27	395,234	13.30	48,000	13.96	457,739
1916.....	15,684	13.38	542,034	12.35	95,063	13.79	652,781
1917.....	16,300	9.00	753,700	6.25	139,800	7.00	909,800
1918.....	107,961	10.00	840,957	5.00	95,920	5.00	1,044,838
1919.....	106,000	10.75	841,000	7.00	99,000	1.75	1,046,000

Crops such as those of 1918 and 1919 would each yield over 1,000,000 tons of straw, capable of producing over 100,000 tons of pulp. Canada to-day manufactures annually 250,000 tons of high-grade pulp, practically all for export to the U. S. A.

Practically all of this flax is grown for linseed. It is well known that flax cultivation for this purpose is an entirely different farming proposition from growing flax for fibre. For fibre flax a special seed must be selected, and the crop is closely sown to en-

It is this identical straw, just as it is to-day piled from the thresher, which can be utilized by the process now described. Emphasis is here laid on the fact that no new methods of flax cultivation are involved. The straw of flax grown to-day from Canadian seed, under Canadian climatic conditions is used, just as it is to-day accumulated by the Western farmer in the ordinary process of linseed flax cultivation. What is required is co-operative action on the part of the farmer.



FLAX STRAW, FLAX TOW, FLAX PULP AND THE FINISHED FLAX PAPER





## Kenwood Felts and Jackets

Heretofore you have been shown photographs of certain special machinery used in the manufacture of Kenwood Felts and Jackets. We now show you a group view of our employees.

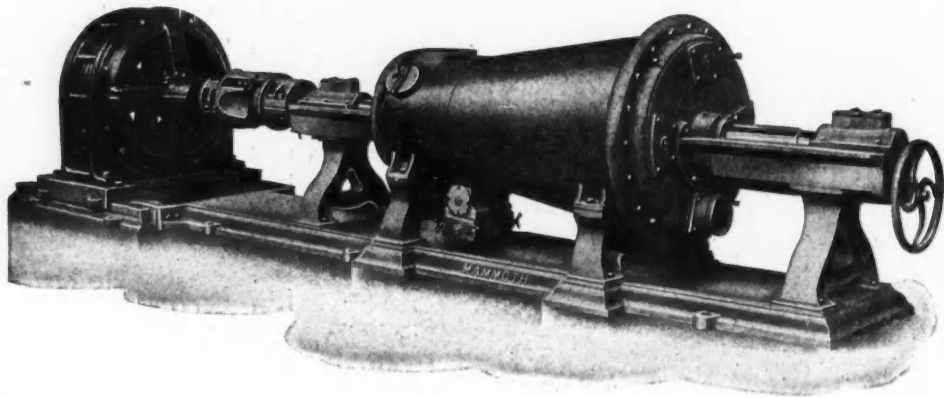
F. C. HUYCK & SONS  
ALBANY, N. Y.

When you need new Jordans you want the best your money can buy.

*Buy*

## Noble & Wood Jordans

They Are the Best



A Noble & Wood direct connected motor driven Jordan with Cast Steel Plug, Chrome Nickel Steel Plug Bars and One-Piece Shell Liner will give you service and efficiency that you never thought possible.

Our line of Jordans includes six sizes, belt or motor driven, in many combinations.

It will pay you to investigate.

**The Noble & Wood Machine Co.**

**Hoosick Falls, N. Y.**

A canvass of the principal flax growing farmers will probably be undertaken next season, to determine the possibilities in this regard. Clearly, the supply of straw and its cost are the basic factors which affect the whole commercial possibilities of the development. Saskatchewan has to-day about four times the combined flax acreage of the other provinces, but Manitoba is also interested, having over 100,000 acres, and an average yield per acre more than one-third greater than Saskatchewan. Manitoba can also offer strong claims to advantages in such matters as transportation facilities, labor, freight and cheap power. This leads to Item 2:—

#### Suitable Mill Locations

Figuring conservatively, it takes about nine tons of air-dried straw to produce one ton of flax pulp. This emphasizes what has been said as to the importance of initial cost of straw; it also clearly shows the impracticability of hauling straw any long distance to pulp mills.

The difficulty is met by the establishment of portable tow mills, where shive is stripped from the straw, and pressed into baled tow. Again, this arrangement adapts itself admirably to existing conditions of flax cultivation. Flax is essentially a migratory crop, and these tow mills can be of cheap portable construction, distributed throughout flax growing areas, and able to follow the movements of the flax centres of distribution. In some cases, the tow mills may be individually owned and operated by the farmer.

A tow mill would be the centre of collection of straw for a radius of about ten miles. In Manitoba it is thought that one and a half tons of straw should be obtained per acre, and taking an average yield of 11 bushels per acre, we find that a point shipping 33,000 bushels would be a centre for 4,500 tons of straw. Assuming now a pulp mill capacity of 20 tons a day, or say, 6,000 tons per annum, this would call each year for about 18,000 tons of tow, which in turn require 54,000 tons of straw, the reduction in process of manufacture of raw material to finished product being about in the ratio 3 to 1 to 0.32. Such a plant would therefore require to feed it some ten tow mills, each yielding 5,400 tons of straw per annum. In Manitoba, locations such as Winnipeg, Winkler, Rosenfeld, Marquette and Kaleida are flax shipping points suitable for mill locations, and farther west, Brandon, Melita, and numerous other locations, could be developed.

After threshing and freeze-up, the farmers would haul straw to the tow mills. This they should be able to do at a reasonable price per ton, as they would secure a market for what would otherwise be wasted, and employment for horses, help, and equipment which otherwise must be maintained in idleness or only partially employed.

#### The Establishment of Tow Mills

The establishment of these tow mills will also tend to stabilize labor, and encourage increased flax production. Flax is a crop that has special attractions for the farmer, in that it is (1) A late crop—(can be put in in a backward season). (2) Hardy against wireworm—(good on new breaking). (3) Less bulky than grain—(cheaper to transport to railroads). (4) A good crop for heavy soils.

The old tradition that soil is injured by flax, and that flax cannot be successful grown on the same soil several years in succession without the appearance of "Flaxwilt," has been exploded with the discovery that the disease originates in the seed, and has nothing to do with soil depletion. It has, in fact, been demonstrated that an average crop of flax uses less total plant food per acre than a crop of wheat or oats. The remedy for "Flaxwilt" appears to lie in the careful selection of seed.

#### Pulp Mill Locations

In Manitoba, with tow mill locations as indicated above, the

logical location for the pulp mill appears to be Winnipeg, the essential requirements of good water supply, cheap power, and good collecting and distributing channels being fully met at that point. Following development in other districts and provinces, such points as Saskatoon, Medicine Hat, Moose Jaw and Regina would undoubtedly become centres for pulp mills, the pros and cons of cost of materials, construction, labor, power, water-supply, transportation of raw materials and finished product, requiring careful consideration in each case.

#### Suitable Markets

As already stated, at no time has the demand for high grade paper pulp been greater than it is to-day. Flax fibre is very long and slender, resembling cotton fibre, the raw material having a length of from 7 to 55 inches, and an ultimate length after manufacture of 1.18 inches. Bleached pulp produced from it is comparable with pulp made from a fair grade of cotton rags. Rags to-day cost 15 cents a pound, and bleached flax pulp should sell at \$300 per ton. From it high-grade papers for writing, bond, deed, and fine correspondence, can be manufactured.

Assuming a conservatively high figure for initial cost of straw, and making no allowance for by-products such as seed, shives for cattle-feed, briquetted shives for fuel, all of which are recoverable from tow mills, and are marketable, it is thought that the cost of production to-day should not exceed \$200 per ton. The market exists, and it may be pointed out that expansion of that market may reasonably be expected to follow increase of population in the West, and the ultimate expansion of Canadian paper mills to meet the demands of that population.

#### Details of Plant, Processes, Etc.

A tow mill installation will consist of portable corrugated iron and steel buildings for boiler and engine houses, machinery building, and storage warehouse for tow. About 80 horse power is required to run mills, and enough short straw, weeds and refuse are available to supply all fuel. The tow required is three-run tow, 65 per cent fibre made in three-brake mill, and the machinery includes separator to recover seed from brakes, one self-feeder, three shakers and kickers, and one press. Tow mills would run nine to ten months of the year, and each would employ one foreman and about eight laborers. Straw can be stacked in the open, requiring about 750 cu. ft. of space per ton, but warehouse space must be provided for several days' output of tow, which occupies about 9 cu. ft. per ton.

#### Pulp Mills

Pulp mills would comprise the usual corrugated iron and steel buildings, and plant would occupy some 90,000 sq. feet of land, and would include in its machinery (a) 2 digestors, (b) washing machine (4 diffusers), (c) bleaching equipment (2 vats), 3 patent wet machines, (e) recovery system, comprising an evaporator, an incinerator and 2 milt furnaces, (f) a causticizing equipment, and (g) a sewage system to carry off liquor. The buildings required are one for main plant, one for recovery system, and one for power house. Such a plant would employ about 150 men, and pure water at the rate of 5,000 gallons per ton of pulp must be available.

The power consumption of the mill may be classified under four headings, viz., (a) cooking, (b) running machinery, (c) recovery system, and (d) heating system, and a 20 ton per day capacity will require about 1,000 horse power to operate. The raw materials entering into the manufacture are, lime (650 pounds per ton of pulp), salt cake (350 pounds per ton of pulp to replace 15 per cent loss on each cycle of operations), and bleaching powder (200 pounds).

In operating, 10 to 5 pounds of tow per cu. ft. of digester space may be obtained, depending on whether unbroken bales or loose tow can be used, the liquor ratio in the digester being about 4

# THE BIGGS BOILER WORKS

PLANT HYDRAULICALLY EQUIPPED

## *Builders of Spec* **ROTARY BLEAC**

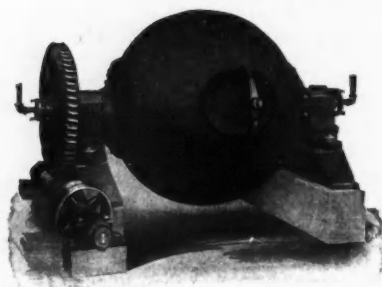


FIG. K.

Figure K Illustrates our Experimental Type Globe Rotary Bleaching Boiler with Welded Joints, and Worm Wheel Drive. This type is usually furnished in sizes from 3' to 5' diameters.

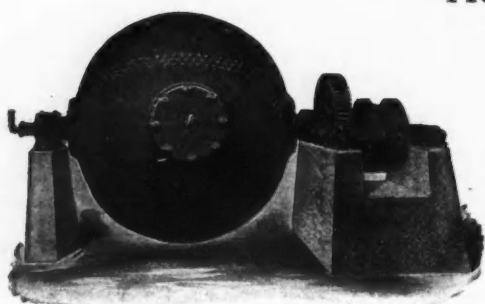


FIG. S.

Figures S and S-1 show one of our Globe Rotary Bleachers with Riveted Joints and Spur Gear Drive. We furnish this Rotary in 6', 8' and 10' diameter with either Worm or Spur Gear Drive. This type is commonly used for Special or Experimental Work, but is not too small for practical purposes.

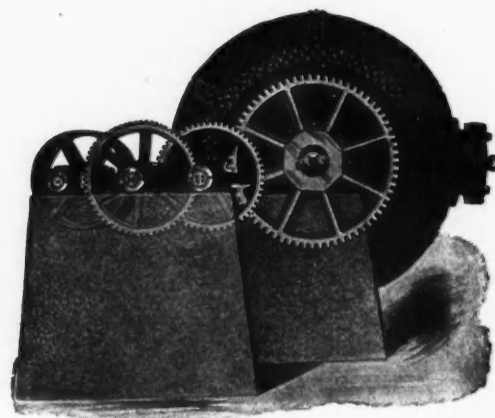


FIG. S-1.

Fig. B is the Baby. Furnished in such sizes as 6" dia. x 18" (or larger) long. Just the thing for your Laboratory. Complete equipment ready to operate.

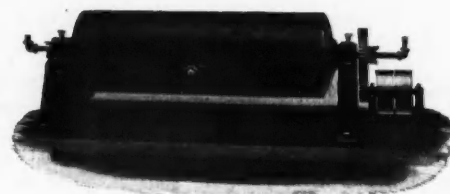


FIG. B.

**LIGHT AND HEAVY PLATE CONST  
PIPE. STEEL TANKS O**

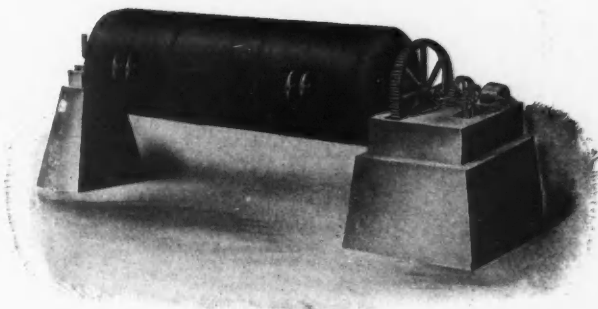
# COMPANY, Akron, Ohio, U.S.A.

ESTABLISHED 1887

## ial and Standard HING BOILERS

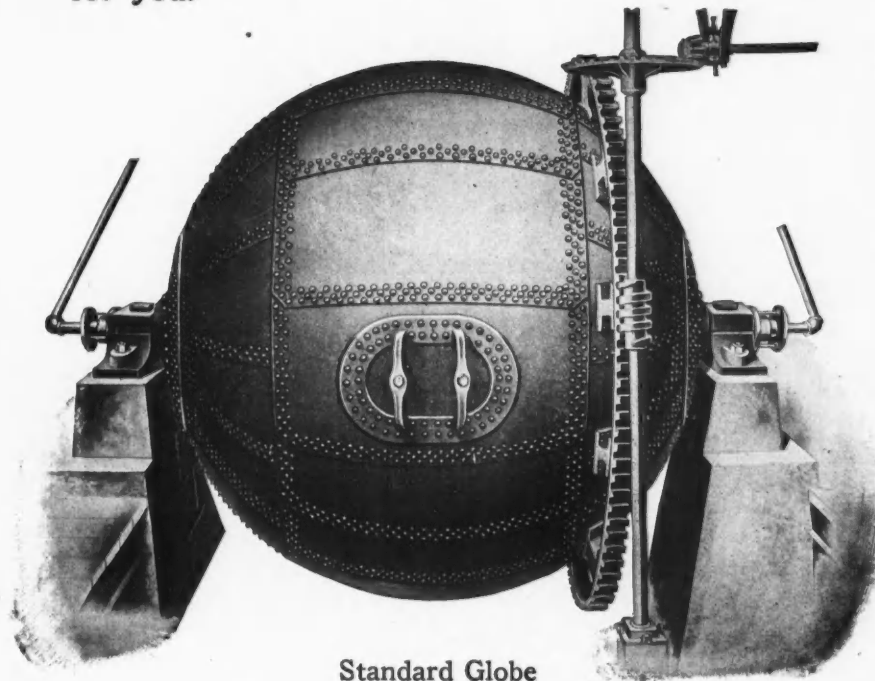
Our Cylinder Rotary Bleaching Boilers are furnished with Worm or Spur drive and in all sizes.

They are the acme of perfection in Rotary designing.



8' x 24' High Pressure Cylinder Rotary

Large Journals, Babbited Journal Boxes and Expansion bearings save power for you.



Standard Globe

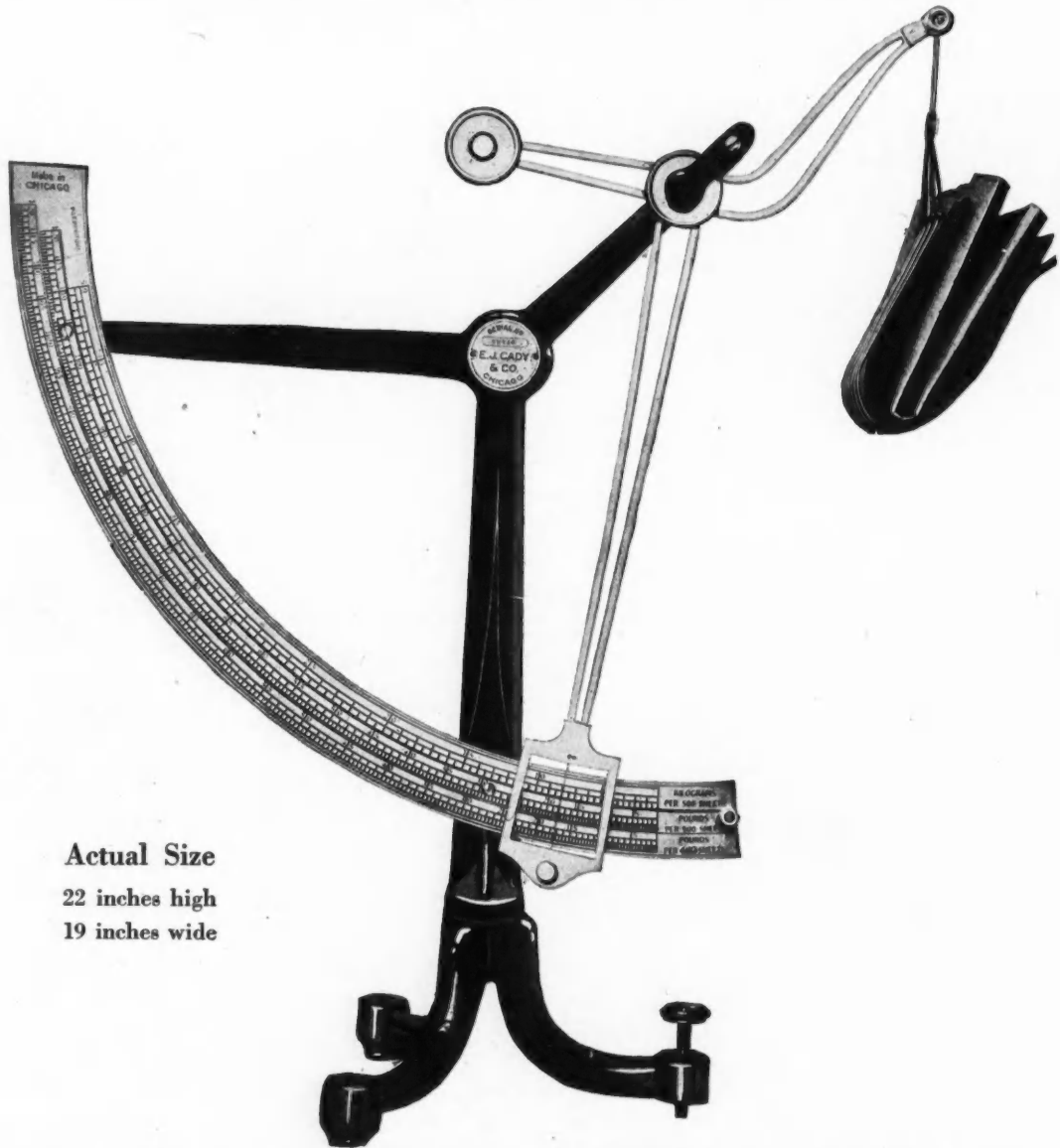
Our 11 ft. and 14 ft. dia. Globes with Worm and Segment Drive need no introduction. They are the Standard Rotary Bleaching Boiler of today.

Furnished in any type of drive, and for any pressure.

Let us figure on your Rotary Requirements.

### RUCTION. RIVETED STEEL WATER F EVERY DESCRIPTION

## AUTOMATIC PAPER SCALE



**Actual Size**  
22 inches high  
19 inches wide

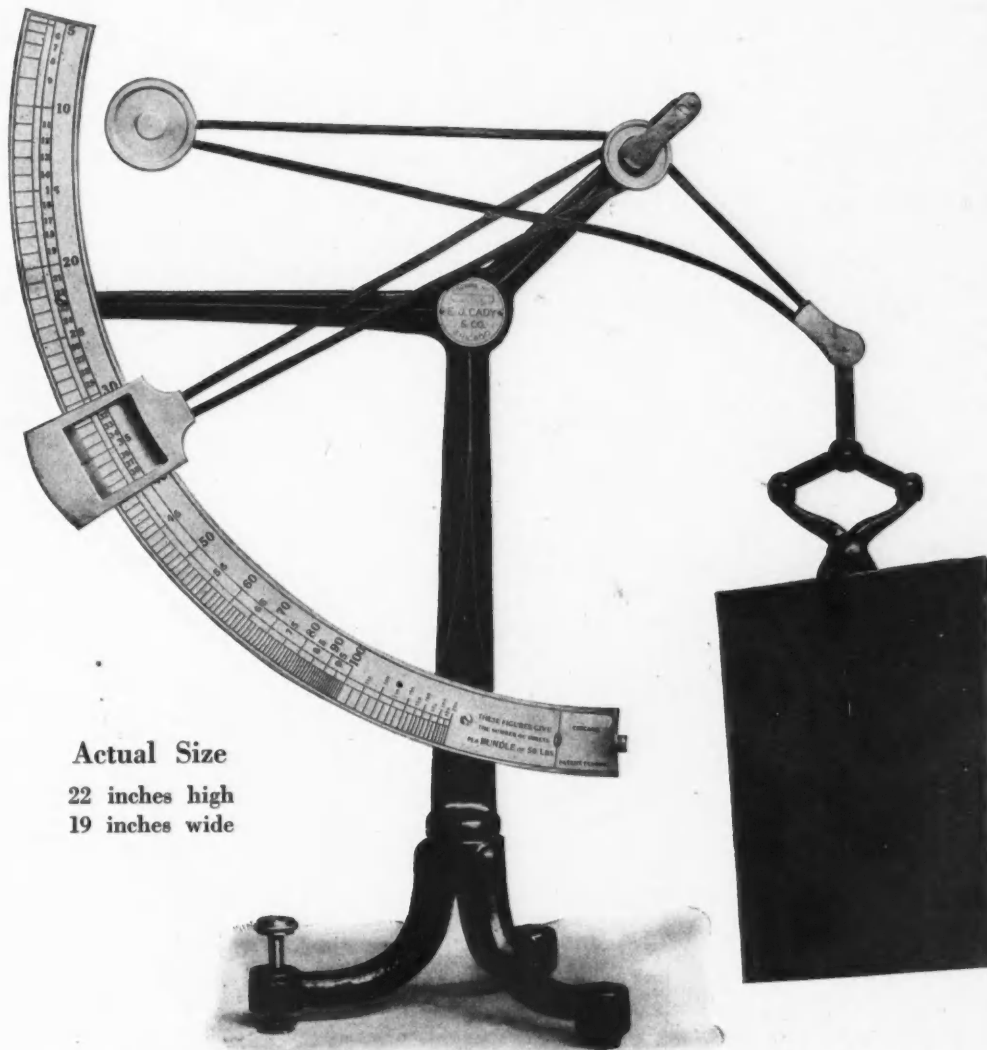
This scale automatically registers accurate weight of 480, 500 and 516 sheet count in pounds or 480 and 500 sheet count in pounds and 500 sheet count in kilograms. Finished in black enamel and brass.

**E. J. Cady & Company**

326 WEST MADISON STREET

CHICAGO, ILL.

# SHEET BOARD SCALE



**Actual Size**  
 22 inches high  
 19 inches wide

Automatically registering the number of sheets to a bundle of 50 lbs. of the size and thickness of the sheet placed in the clip.

This Scale equipped with a different dial will indicate the weight of 500 sheets of the size and thickness of the sheet placed in the clip commencing at 5 lbs. up to and including 1,000 lbs. Especially valuable to Manufacturers or Dealers in Tag Boards, Document Manilas, Bristol Cards, Card Middles, etc.

**E. J. Cady & Company**

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CHICAGO, ILL.

# AUTOMATIC MICROMETER CALIPERS



Made in U. S. A.  
Exact size 8 x 9 inches—  
Outside Measure. Size of  
Dial 6 inches diameter.

This Instrument is spaced to give readings in a thousandth of an inch. When requested we will change the dial, giving you one registering millimetres and hundredths.

Each Instrument is Correctly Adjusted before being shipped.

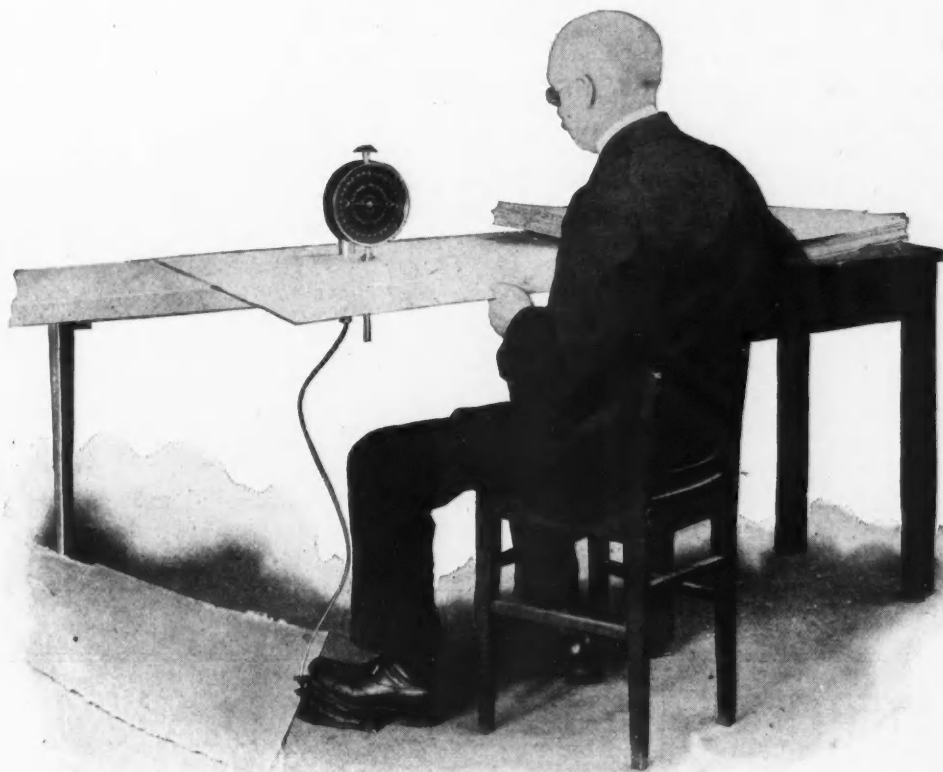
**E. J. Cady & Company**

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## TABLE MICROMETER



This Micrometer is used largely for calipering Binder Boards and other very heavy Boards. With this arrangement one operator can do more in one day than two men can do in a week by any other method. This is the only arrangement of a Micrometer that permits of calipering a full size sheet quickly and accurately as it permits of the sheet of Board being supported its full length. The plunger is raised and lowered by pedal—leaving both hands free to handle the sheet.

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**E. J. Cady & Company**

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# J. ANDERSEN & CO.

FREDERICK BERTUCH, Special Partner

21 EAST FORTIETH STREET  
NEW YORK CITY

IMPORTERS OF

## Chemical Pulps

BLEACHED AND UNBLEACHED

Agents for Kellner Partington Paper Pulp Co., Ltd., Sarpsborg, Norway; Forshaga, and Edsvalla, Sweden; Bergvik and Ala Nya Aktiebolag, Söderhamn, Sweden.

Export Agents for Texas Gulf Sulphur Company, Texas City, Texas.

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# THE PULP & PAPER TRADING CO.

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NEW YORK CITY

DEALERS IN DOMESTIC

## Chemical and Mechanical Pulps and Paper

AGENTS FOR

J. & J. Rogers Company, Ausable Forks, N. Y.; Canadian Kraft Limited, Three Rivers, Canada, Dealers in Wayagamack Kraft.

Proctor & Gamble Distributing Co., Cincinnati, Ohio. Bleached Cotton Hull Fibre Pulp. Mills at Augusta, Georgia.

EASTERN AGENTS FOR PULP FOR

Port Huron, Michigan Mitscherlich Sulphite  
Made by Port Huron Sulphite & Paper Co., Port Huron, Mich.

to 1, or 0.50 gallons of liquor per pound of flax tow. It must be remembered that the above are estimated figures, based on semi-commercial experiment, and may require revision as result of experience on large commercial scale.

#### Summary

In conclusion, the main features of this proposition for utilizing waste flax straw may be summarized as follows:

Flax straw as to-day grown and threshed for linseed throughout Western Canada is hauled from alongside the thresher to conveniently located tow mills (simple installations of semi-portable buildings), where 3 tons of straw are converted into 1 ton of baled tow at a cost (including all fixed charges, etc.) which will not exceed \$20 per tow ton, but which is largely dependent upon the price at which straw can be delivered to tow mill.

Marketable by-products of the tow mill are seed, shives for cattle feed, briquetted shives for fuel. The baled tow is transported to a pulp mill, located with due regard to the usual manufacturing conditions and special consideration of abundant water supply, and is there converted into bleached or unbleached pulp, using equipment which is standard throughout with one slight but fundamental modification, whereby the original difficulty of removing the woody portion of the straw from the fibre and obtaining a pulp clear of shive which still retains its strength is overcome. In the pulp mill, 3 to 3½ tons of baled tow make 1 ton of unbleached, or 0.93 tons of bleached pulp.

The bleached product is of so high a grade that it is second only to linen and best cotton paper making material, and from it good-colored, strong, writing and high grade papers can, and have been, manufactured, whilst unbleached pulp has a wide range of utility for the making of some writing papers, rope-papers, flour and cement bags, straw-board, etc. It has been very conservatively estimated that the total cost of manufacture of the bleached pulp will be from \$170.00 to \$200.00 per ton, and paper material comparable with it is to-day selling at \$300 per ton.

No conservative organization would invest capital in development of an industry which could only be shown profitable under the inflated market conditions of to-day, but the wide margin of profit here indicated allows for a good return on invested capital even with a considerable drop in selling price, and it is safe to assume that such a drop would be accompanied by a decrease in cost of production. Production cost will also tend to decrease as the flax grower—ensured of a profitable market for his straw—increases his production, as the flax crop becomes stabilized, and as methods of conserving and collecting the straw are improved.

The Canadian Pacific Railway Company, by whom this problem has been investigated, is prepared to give full particulars to any accredited organization interested in the commercial development of the process in Canada. Correspondence should be addressed to this department, C. P. R., Montreal.

## PLEASED WITH CANADIAN NEWS PRINT DECISION

Canadian news print manufacturers here are naturally pleased with the decision of the Supreme Court in Ottawa in the Price Brothers case, that news print paper is not a necessity of life within the meaning of that expression as used in the Combines and Fair Prices Act and that the powers exercised by the Board of Commerce as news print controller are without jurisdiction and inoperative in law. The announcement of this decision had an immediate effect upon the market prices of pulp and paper securities on the Montreal Stock Exchange, advances being registered all along the line.

The judgment applies exclusively to the one order directed against Price Brothers, to supply certain firms in Montreal with news print, and to do so at the fixed price of \$80 per ton. Nevertheless, the judgment clearly sets up that any order issued subsequent to December 20, 1919, purporting to take advantage of the War Measures Act to control the price and distribution of news print is invalid. That being so, the order made by the then paper controller, Mr. Pringle, on December 17, and not confirmed by the Governor-in-Council until December 30, is also invalid. This is the order under which the price of \$80 per ton was fixed, so that any news print manufacturer who wishes to take advantage of the judgment just rendered, apparently can make his customers pay the market price for news print right back to the time when the order was issued.

Of course there is a nice question as to whether the manufacturers are morally if not legally bound to keep this agreement, under which the \$80 price would remain in effect until July 1 next, and prices thereafter be controlled for an indefinite period by a condition of the agreement that from July 1, 1920, the lowest export price was to prevail in Canada.

At present the manufacturers appear to be inclined to take the ground that continued recognition of the agreement rests largely with the publishers themselves. If the publishers are inclined to recognize the situation as it stands and to adopt an amicable attitude towards the manufacturers, then possibly the agreement will continue to be recognized by those manufacturers who have been working under it up to the present time. On the other hand, if the publishers adopt an antagonistic attitude, the manufacturers

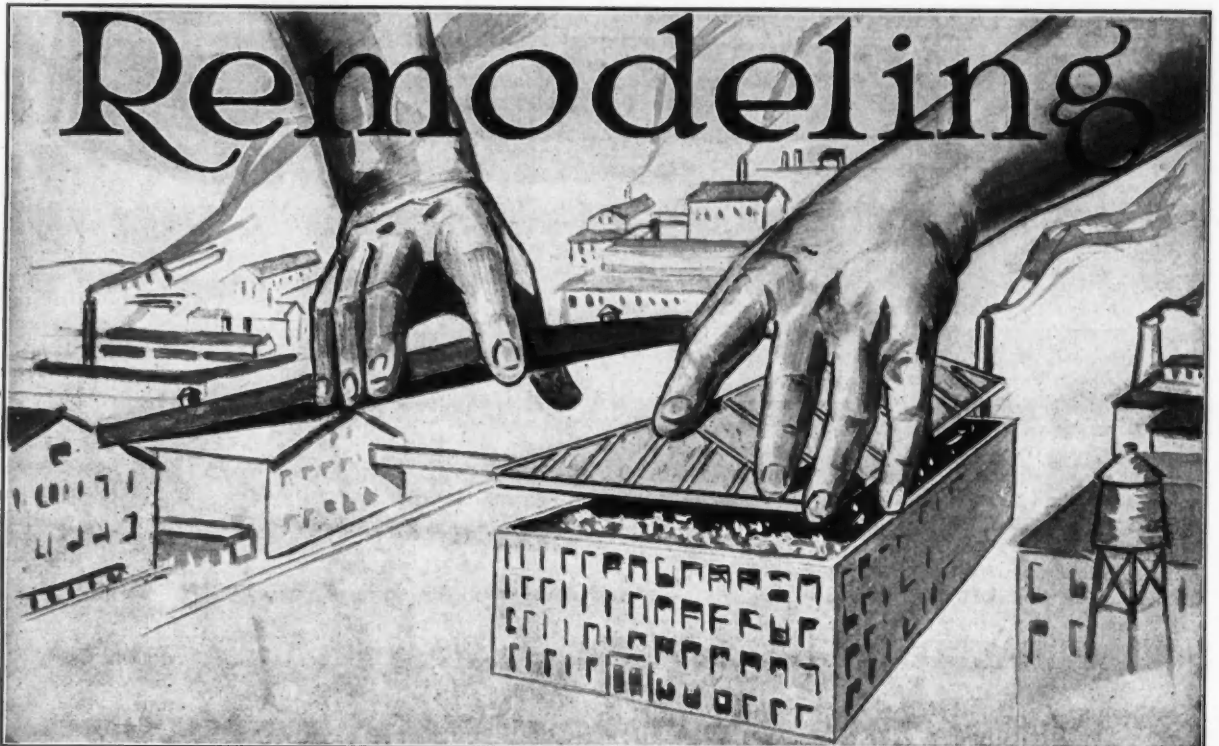
will undoubtedly fight them. There is some talk now to the effect that the publishers may seek to secure new legislation to make both distribution and prices a matter of Government control beyond any question of legality. It is clear that any movement of this kind would be regarded by the manufacturers as a *casus belli* and they would immediately take steps to get the full market value for their product.

Another matter of interest under the decision is that even if the order, regarding the price of \$80 is recognized, there is little likelihood that the clause to the effect that the lowest export price is to prevail after July 1, will be recognized. Under the ruling of the Superior Court, it is clearly impossible to project prices into the future under the War Measures Act and manufacturers hold that in any case, after July 1 they will be under no legal or moral necessity to supply paper in the domestic market at the lowest export price, or any other price. They hold that they will be in a position to take advantage of market prices if they desire to do so and will therefore hold themselves free to make individual contracts in the ordinary business way. It should be stated that the manufacturers are anxious to work with the publishers and to give them a square deal. But they do not propose to be coerced.

Up to the time of writing, Price Brothers & Co. were still supplying Montreal firms with news print and doing so to the satisfaction of the publishers, and had not given any intimation as to what their stand would be.

### NEW MILL FOR OTTAWA

It is intimated in pulp and paper and lumber circles that the Ottawa district is shortly to have another large pulp and paper mill, which is to be erected on the banks of the Gatineau River, near Chelsea, by the interests represented by the Royal Securities Corporation, Limited, Montreal, at a cost of approximately \$1,000,000. This corporation has floated some of the largest issues in connection with pulp and paper projects in Canada. It is stated that the corporation will now acquire the holdings of the Gilmour & Hughson Lumber Company in that district. Verification of the pending transaction is not available.



Those mill owners who desire to avail themselves of advanced ideas in improved factory lighting, ventilation, more advantageous placing of machinery, etc.—without interruption to the routine of their production—should call upon us.

Our ability to consummate extensive remodeling and rebuilding without the slightest pause in the output is known throughout the paper mill industry. We place the experience gained in 35 years of construction work at your disposal.

We point to the fact that 70% of all the factories in Holyoke have been built by us.

Our consulting department has been organized for your convenience. Let us discuss with you your production problems with a view to "speeding up" output all along the line.

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## Pulp and Paper Industry in Canada Prospers

**Demands So Overwhelming That Manufacturers Are Actually Embarrassed by Orders—Daily Output Nearly 3,000 Tons of News Print—Canada Will Soon Be Providing 2,000,000 Tons a Year—Huge New Pulp and Paper Projects Under Way—Leading Manufacturers Market All Their Product Through a Highly-Organized Export Company—Details of Canada's Exports.**

Written Especially for the Annual Number of the Paper Trade Journal by C. L. Sibley

The prosperity and expansion of the pulp and paper industry in Canada during the period which has elapsed since the last annual meeting of the American Pulp and Paper Association beats all records of every industry in Canada. The industry is so overwhelmed with orders and demands that the manufacturers find themselves embarrassed to the point of irritation by the personal visits, the letters, the telegrams and the cables which flood their offices every day offering new business. It is no longer a question of finding markets for their products; the question now is how to distribute the output so as to cause the least annoyance, and the least prejudice to future relations.

The United States market could easily take the whole of Canada's output of news print and much more, and the demands from over the border become more insistent every day. But although 75 per cent. of their products are exported to the United States the Canadian manufacturers naturally do not wish to tie themselves up to one market, to the exclusion of all others. They are therefore endeavoring to send enough to overseas markets to keep in touch connections which promise enormous development during the next few years. What they are able to send overseas, however, is only a tithe of what is being called for. Australia, New Zealand, South Africa and Great Britain are all appealing for larger supplies, and in some cases are prepared to pay any price to get them.

The same is true of pulp, especially of sulphite and sulphate pulp. A recent instance was given in the PAPER TRADE JOURNAL, where a representative of most of the paper mills in Spain was endeavoring, without much hope of success, of getting supplies of chemical pulp for the Spanish mills, even offering to send Spanish ships to Canada for this pulp.

Of course, this is an abnormal situation, brought about not only by increased consumption in Canada's nearest market, the United States, but by the failure of the former sources of supply, and notably of the Russian and Scandinavian sources. It is true that Scandinavia is beginning to get back into its stride again, but those who have studied the question declare that cost of production has increased so greatly that Scandinavia cannot lay down news print in the United States at much lower than double the price which Canadians are now filling contracts for, namely \$90 per ton. Another point that is to be considered besides the possibility of former sources becoming active once more is whether the present tremendous volume of advertising in American papers may not fall off, and consumption be lessened to former standards.

As in the case of the possible resumption of active competition from Scandinavia, there are experts who scout the idea of lessened consumption.

The great question in the industry here, therefore, is will this abnormal demand on Canadian sources of supply become a normal one, or is it only a temporary condition? Nobody can answer this question, and the general opinion seems to be that con-

ditions may change at any time almost overnight. "Nobody knows how long this is going to last," said one expert when questioned, and this sums up the general attitude.

While expansion is proceeding at an unprecedented rate, a considerable amount of caution is being exercised, and manufacturers are giving the whole situation the most careful attention before committing themselves to huge added charges. The present situation has come upon them so comparatively sudden and with such force, that they are not expanding to the extent that the demand would seem to call for. Nevertheless, the schemes now under way for increasing Canada's production of news print and pulp make a most imposing list.

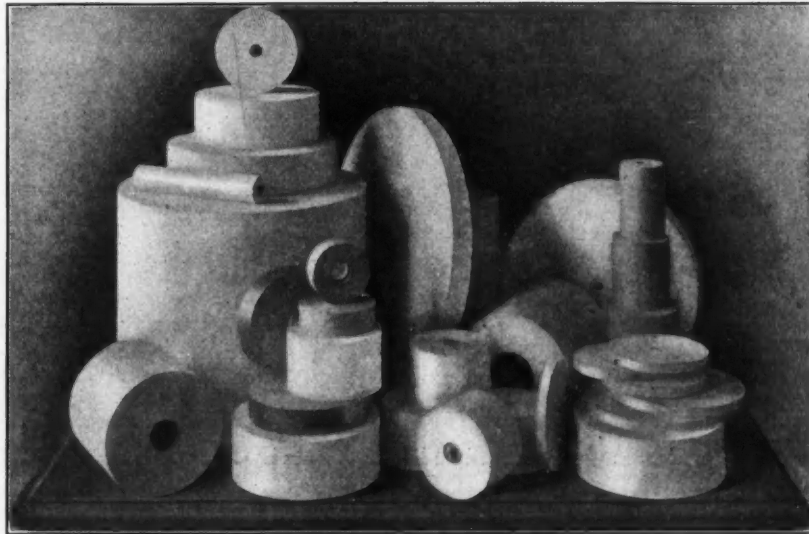
### Present and Projected Production

A compilation recently made by the Canadian Pulp & Paper Association showed the actual daily production of news print in Canada to be:

	Tons
Abitibi Power & Paper Co.....	240
Belgo-Canadian Pulp & Paper Co.....	200
J. R. Booth .....	150
Brompton Pulp & Paper Co.....	95
Canada Paper Co.....	35
Donnacona Paper Co.....	100
E. B. Eddy Co.....	50
Fort Frances Pulp & Paper Co.....	150
Laurentide Company, Ltd.....	225
News Pulp & Paper Co.....	30
Ontario Paper Co.....	225
Pacific Mills, Ltd.....	200
Powell River Company, Ltd.....	225
Price Bros. & Co.....	250
Spanish River Pulp & Paper Mills, Ltd.....	500
St. Maurice Paper Co.....	100
<b>Total .....</b>	<b>2,775</b>

Expansion now under way or already provided for by Price Bros., Abitibi, Spanish River and Laurentide will increase this output by an average of 300 tons a day or 90,000 tons a year, although this maximum increase will not be achieved before January, 1921, when, if the demand continues, Canada will be producing at the rate of well over 900,000 tons per annum. This does not take into account the projected new mills by the International Paper Company at Three Rivers, by Price Bros. & Co., at Saguenay, and by the Great Lakes Pulp and Pulp Co. at Port Arthur.

The mills which the International Paper Company is now building at Three Rivers will cost, when completed, some six million dollars. The new mills of Price Bros. & Co. will have a capacity of between four and five hundred tons of news print per day. The same company is erecting new machinery in its mill at



## SMALL PAPER ROLLS OF EVERY DESCRIPTION

### *We Make*

ADDING MACHINE ROLLS  
CASH REGISTER ROLLS  
TICKER TAPE  
CLOCK ROLLS  
BLASTING  
DIE WIPING  
TIRE WRAP  
BED WRAP  
BACKING PAPER

MAILING MACHINE ROLLS  
AUTOGRAPH ROLLS  
TIME CLOCK ROLLS  
RIBBON PAPER  
TELAUTOGRAPH  
CARPET TISSUE  
ROLLS FOR ANY MAKE OF  
AUTOMATIC REGISTERS

DOMESTIC OR EXPORT PACKING

## PAPER MANUFACTURERS CO., Inc.

*Paper of Every Description*

526-528 CHERRY STREET

PHILADELPHIA

Kenogami, which will bring present production up to 325 tons per day.

With regard to the Great Lakes Pulp and Paper Company, the arrangements have now been completed for the establishment of this company's pulp and paper industry at Port Arthur. The plant calls for an investment of five million dollars. The ground wood mill is to have a capacity of 30,000 tons per year. The sulphite mill 75,000 tons and the news print mill 35,000 tons.

Optimists in the industry predict that within ten years at the present rate of progress, Canada will be producing 2,000,000 tons of news print paper a year, which is equivalent to the total consumption of news print in the United States in 1918. The United States production of news print today averages about 3,200 tons daily.

**The Marketing of Canadian Paper**

The recent announcement by the management of the New York Times of a contract made with the Canadian Export and Paper Company for the whole of the output of the two new paper machines which the Laurentide Company is having built, has drawn attention to one of the most notable developments of the news-print industry in Canada. This is the organization of the leading companies, for export purposes, into what is known as the Canadian Export Paper Company, Limited. This company is the central sale organization for the whole output of paper (with the exception of the comparatively small amount used in Canada) of the Laurentide Company, Price Bros. & Co., Belgo-Canadian Pulp and Paper Company, Brompton Pulp and Paper Company, Provincial Paper Mills, Interlake Tissue Mills, and Howard Smith Paper Mills.

Between them these companies have a capitalization of \$52,280,278 and a daily production of 2,875 tons of paper and pulp.

This company is carrying out the work of marketing in a most aggressive and mighty efficient manner. At the new head office in Montreal, the official trade returns of practically every country in the world are received. Correspondence is exchanged with the government statistical offices of the various countries and detailed information of the paper and pulp trade throughout the world is thus obtained. These records are collected, converted into Canadian weights and currency, and issued, in the form of monthly, quarterly and annual reports, to the various departments concerned. In this manner, close track is kept of the world's markets, sources of supply and trade possibilities. Graphic diagrams are employed where possible to render this information available at a glance. This department also receives the periodicals dealing with all branches of the paper and pulp trade, advertising and printing in English, French, Norwegian, Swedish, and Spanish. From these periodicals are taken extracts dealing with the paper and pulp situation, prices in the various markets, trade opportunities and matters of interest generally. These reports are then sent out to the various departments of the company.

A paper testing department is maintained for the purpose of helping to maintain the standard of the products. This department is equipped with paper testers of various kinds, basis weight scales, etc. The different mills whose products are handled by the company send in samples of their production each day, and these are tested for quality, appearance, and character. Records are kept and sent out to the mills to enable them to compare their products with those of the other mills in the organization.

At the present time the company has its own representatives in the United States, Great Britain and Europe, Australia, New Zealand, South Africa, India, Siam, Java, China, Japan, South and Central America, Mexico, and Cuba. Through these representatives the company is already distributing approximately 1,000 tons of news print per day—and the business is really only just beginning.

**Exporting \$120,000,000 Worth Per Annum**

At the current rate of shipments and prices, the export of pulp and paper from Canada approximates \$120,000,000 per annum, and with the increase in price that is now foreshadowed, the value of the exports will be increased to well over \$130,000,000 per annum, to say nothing of what will be added by increased production now coming into effect every month.

Naturally there has been quite a boom in pulp and paper stocks, and that boom is still on. There is not a single exception to the fact that every pulp and paper issue listed in the Canadian market has made its best price on record during the past year. The prices prevailing during the year 1919, with the opening, the highest bid, and the close for the year, form a good reflection of the present standing of these securities. The figures are as follows:

1919	Opening	High	Low	Close
Abitibi .....	48	290	48	275
Abitibi pfd. ....	90¾	116	90¾	99
Brompton .....	71	87	55¼	86
Howard Smith .....	65	147	65	145
Howard Smith pfd. ....	79	99½	79	99
Laurentide .....	196	276	192	267
Price Bros. ....	155	260	155	260
Prov. Paper Mills .....	53	85	51	81
Prov. Paper Mills pfd. ....	87½	91½	87½	91
Riordon .....	117¼	191	117¼	190
Riordon pfd. ....	94	100	95	100
Spanish River .....	17¾	90½	17	87½
Spanish River pfd. ....	65	131	64	128¾
Wayagamack .....	54¾	90	46	85

Another consideration making for profit in the industry is that of exchange. While the Canadian dollar is at a discount in the United States, American dollars are at a corresponding premium in Canada. For months past the premium has ranged from 10 to 16 per cent. This means such a large added profit that some companies, notably the Riordon Pulp and Paper Company, are stated to be earning all their dividend requirements out of exchange alone, leaving the ordinary profits as pure "velvet."

**Details of Canada's Exports**

The detailed exports of pulp and paper from Canada during the last six fiscal years, as supplied by the Government, are worth putting on record here, as they form a valuable guide to the trend of the development in the industry. They are as follows:

Articles.	Fiscal Year Ended March 31.				
	1915.	1916.	1917.	1918.	1919.
Paper and manufactures of:					
Felt and roofing .....	\$85,066	\$148,288	\$251,656	\$337,341	\$310,778
United States .....	15,113	39,082	150,297	146,972	127,313
United Kingdom .....	22,725	63,216	55,196	28,297	95,717
Newfoundland .....	42,228	28,224	35,103	52,765	61,608
Other countries .....	5,000	17,766	11,060	109,307	26,140
Films for photographers' use and for moving pictures .....	31,244	18,280	50,569	142,079	1,302,886
United States .....	25,719	13,241	23,667	23,533	1,045,270
United Kingdom .....	1,415	4,534	25,841	28,477	130,953
Other countries .....	4,110	505	1,061	90,069	126,663
Paper board .....	(b)	(b)	1,214,963	1,826,118	3,037,279
United States .....	(b)	(b)	803,291	1,298,563	1,887,389
United Kingdom .....	(b)	(b)	367,440	359,544	873,331
Other countries .....	(b)	(b)	44,232	168,011	276,559
Printing .....	14,091,662	17,974,292	23,594,134	33,978,347	40,718,021
United States .....	12,126,982	15,839,780	20,973,548	30,741,564	36,031,358
United Kingdom .....	180,598	210,046	137,412	86,969	38,484
Australia .....	745,946	866,315	1,106,617	1,835,207	2,081,911
New Zealand .....	509,907	457,425	667,920	638,158	862,402
Other countries .....	528,229	600,726	708,637	676,449	1,703,866
Wall .....	53,916	54,050	98,372	113,695	360,567
United States .....	2,486	1,231	3,265	2,080	12,245
United Kingdom .....	.....	766	1,367	180	.....
Australia .....	10,049	7,822	22,586	26,918	122,519
Newfoundland .....	14,130	6,961	19,532	34,760	62,421
Other countries .....	27,251	37,270	51,622	49,757	163,382

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Fiscal Year Ended March 31.

Articles.	1915.	1916.	1917.	1918.	1919.
Wrapping	408,360	492,122	801,418	1,294,725	2,452,296
United States....	279,111	227,900	432,669	516,651	454,377
United Kingdom..	2,792	91,638	80,083	232,861	30,649
Australia .....		(a)		211,631	473,119
Other countries...	126,457	172,584	200,928	233,582	1,494,151
Other .....	d839,334	d1,352,518	112,103	173,025	983,968
United States....	d429,793	d767,297	42,422	62,518	108,583
United Kingdom..	d386,923	d542,154	18,893	2,665	2,676
Other countries....	d22,618	d43,067	50,788	107,842	872,709
Total paper and manufactures of .....	15,509,582	20,039,550	26,123,215	37,865,330	49,165,795
United States....	12,879,204	16,888,531	22,084,228	32,791,881	39,666,535
United Kingdom	594,453	912,354	1,038,818	738,993	1,171,810
Other countries.	2,035,925	2,238,665	3,000,169	4,334,456	8,327,450
Pulp wood .....	6,817,311	5,743,847	6,448,189	8,339,278	15,386,600
United States....	6,817,311	5,743,847	6,448,189	8,339,278	15,386,600
Wood pulp:					
Chemical .....	4,806,622	6,801,011	14,032,920	19,133,813	30,226,856
United States....	4,550,196	6,405,616	11,107,819	16,171,096	26,256,265
United Kingdom..	800	36,777	2,677,923	1,603,738	611,399
Japan .....		(a)	204,417	1,233,306	2,775,486
Other countries...	255,626	358,618	42,761	125,673	583,703
Mechanical .....	4,450,539	3,575,537	6,371,133	6,487,079	4,479,915
United States....	2,893,618	2,967,153	5,487,424	6,487,079	4,418,555
United Kingdom..	1,495,521	299,264	379,488		3,033
France .....		(a)	471,040		
Other countries...	70,400	309,120	33,181		58,327

a Included in "Other countries" under this head.  
 b Included in "Other paper, and manufactures of."  
 d Includes paper board.

The figures given above for "paper, and manufactures of," do not include books, pamphlets, maps, and other printed matter, photographs, or stationery. An important feature of the returns is the last amount of pulp wood exported; shipments have grown in the last three years from 982,671 cords to 1,597,042 cords.

**Quebec Province Leads All Others**

The Province of Quebec continues to lead all the other provinces in the pulp and paper industry. Some idea of the importance of the industry to the province may be gathered from the fact that capital to the amount of approximately \$100,000,000 is invested therein; that it gives employment to over 1,000 salaried employees and pays out nearly \$2,000,000 a year in salaries; that it employs over 10,000 wage-earners, exclusive of woodsmen, and pays out annually more than \$10,000,000 in wages; that it consumes over 1,000,000 cords of pulpwood, valued at more than \$10,000,000 every year; that it produces pulp and paper products to the value of upwards of \$75,000,000 annually, nearly all of which are sold in the foreign market. The Provincial Government derives approximately \$2,000,000 a year, or one-sixth of its annual revenue, from the Provincial Crown Lands, the greater part of which is attributable to the pulp and paper industry.

**FUTURE OF PULP AND PAPER INDUSTRIES**

While there will inevitably be a large development of the pulp and paper industry in the Rocky Mountain states and a great increase of existing developments in the Pacific Northwest, including particularly Oregon, Washington, and British Columbia, pulpwood supplies in Eastern Canada and the eastern states will always have the material advantage of higher value, owing to proximity to the great centres of population, with consequent saving in freight rates upon the manufactured products, says Clyde Leavitt in *Conservation*.

Authorities in Canada are already becoming alarmed at the increasing difficulty of securing, in the eastern provinces, adequate supplies of pulpwood readily accessible to existing developments. Already, in too many cases, pulpwood placed in the water for driving does not reach the mill until the second year after cutting. This adds to the cost of transportation and to loss by sinkage en route, and is inevitably reflected in higher prices to the consumer.

**Government Ships Helping Industry**

Considerable help in the matter of building up the overseas markets for the industry is now being afforded by the Canadian Government mercantile marine. The Government is establishing regular lines to Australasia, South Africa, and other countries, and is giving all the space required to pulp and paper. The Government has \$47,000,000 invested in thirteen shipyards, and has 57 ships contracted for. More than 20 are already in commission.

**The Manufacture of By-Products**

Much attention is now being devoted to the manufacture of by-products, by which it is hoped ultimately to increase the profits of the industry enormously. Some companies are already doing well from by-products, notably the Brown Corporation at La Tuque, Que. So far, however, the possibilities in this direction have hardly been touched. One of the most important problems that appears to be solved is the making of alcohol out of the enormous quantities of sulphite liquor which now runs to waste.

**Waste Sulphite Liquor**

The Canadian Council for Scientific and Industrial Research recently presented a report to the Government stating that waste sulphite liquor, now discharged into rivers, poisoning all fish and other life therein, contains one-half per cent of fermentable sugar, from which, in the liquor of the pulp mills of Norway and Sweden, more than 1,000,000 gallons of ethyl alcohol are produced annually. It has been estimated by Professor R. F. Rutton that the sulphite liquor on the St. Maurice river, in Quebec, would, if utilized for this purpose, produce annually 640,000 gallons of alcohol, of 95 per cent strength, and at a cost of under 35 cents per gallon, while the liquor of all the pulp mills of Canada would produce at least 5,000,000 gallons annually, that is, enough to supply the needs of Canada for the next 20 years. The cost might be reduced by extracting the resinous and other non-sugar constituents. The enormous quantities of wood waste might also be utilized for the production of alcohol. A bill embodying regulations for the encouragement of the manufacture of such alcohol is now before Parliament. These regulations, if adopted, will allow the sale of such alcohol duty free, delivered and transported without restrictions.

**Paper Pulp from Flax Straw**

Another matter that is receiving a good deal of attention is the possibility of manufacturing paper pulp from flax straw, now considered useless. It is estimated that over 1,000,000 tons of flax straw, capable of producing over 100,000 tons of pulp, is now burned every year on the Canadian prairies.

Great areas of the most accessible pulpwood lands have been so denuded by wasteful methods of logging and by fire, that they are now in an absolute or relative condition of unproductiveness. This is exactly the reason why the pulpwood supplies of the eastern states are so near exhaustion that many mills are largely dependent upon imports from privately owned timber lands in Canada. This heavy exportation from private lands in Canada of course correspondingly decreases the supplies that would otherwise be available for manufacture in Canadian mills.

It is obviously of the greatest importance to Eastern Canada that its great pulp and paper industries shall be permanent, rather than transitory, as is proving to be the case in the eastern states. To accomplish this end, however, it is necessary to make fully effective the view point that the forest is a crop, which can, with proper care, be produced time after time upon the same land. This means the practice of forestry.

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## Bills and Resolutions Regarding Paper

From the Beginning of the Second Session of the Sixty-Sixth Congress There Had Been Introduced Having to Do With the Paper Industry Three Bills and One Joint Resolution in the Senate and Ten Bills and Three Resolutions in the House, Making a Total of Seventeen Bills and Resolutions—Among the Most Interesting of These Is the Joint Resolution of Senator Underwood.

Written Especially for the Annual Number of The Paper Trade Journal by L. M. Lamm

It has been the policy of the PAPER TRADE JOURNAL for some time to print in full all bills introduced in Congress which relate to the paper industry so that the industry may always be kept thoroughly informed as to what is "in the air." However it will be of special interest to the trade to read the following compilation which consists of the bills, resolutions, etc., introduced in both houses of Congress from the beginning of the Second Session of the Sixty-sixth Congress (the present one) which convened on December 1, 1919, up to March 1, 1920. This consists of three bills introduced in the Senate, and one joint resolution introduced in the same body, also ten bills introduced in the House and three resolutions in that body, or a total of seventeen bills and resolutions.

### Underwood Resolution Acted On

No action has been taken on any of the following bills or resolutions except the joint resolution introduced by Senator Underwood of Alabama which has been passed by the Senate. It should be borne in mind, however, that there are other bills on the same subjects, pending in both Houses which were introduced in the First Session of this Congress and which are not "out-lawed." The bills and resolutions referred to above are as follows:

#### Senator Capper's Bill

Senator Capper, of Kansas, introduced the following bill on December 8, 1919: "to limit the size of newspapers and periodicals" which was referred to the Committee on Post Offices and Post Roads.

That until July 1, 1920, no newspaper or periodical shall be carried in the United States mails at the rates provided for second-class postage which shall exceed in size the limitations herein set forth, and from and after the passage of this Act the Postmaster General shall refuse the second-class rate of postage to any daily newspaper printed with a greater number than twenty-four pages; to any Sunday newspaper printed with a greater number than thirty-six pages; to any periodical published weekly or bi-weekly of a greater number than seventy-five pages to any monthly periodical printed with a greater number than one hundred pages.

#### Senator Jones' Bill

Senator Jones, of New Mexico, introduced the following bill on December 12, 1919: "To increase the postal rates on certain classes of second-class matter," which was referred to the same committee.

That the postal rate on newspapers or other periodicals published daily which contain more than twenty-four pages, or twelve single sheets, exceeding twenty-five inches in length and nineteen inches in width, at any one issue, shall be five times the rate now provided by law.

That this Act shall take effect and be in full force and effect

from and after five days succeeding the date of its passage and approval.

#### Senator Poindexter's Bill

Senator Poindexter, of Washington, introduced the following bill on December 12, 1919: "Authorizing the Secretary of Agriculture to make a survey of pulpwoods on the public domain and to prepare a plan for the reforestation of pulpwood lands, and appropriating the sum of \$1,000,000 for these purposes," which was referred to the Committee on Agriculture and Forestry.

That the Secretary of Agriculture is hereby authorized and directed to cause a survey to be made of the classes and kinds of timber existing on the public domain, including the national forests and Indian and other reservations, and on private lands intermingled with or in proximity to the public domain, that are suitable for conversion into wood pulp for the manufacture of news print and other forms of paper. The purpose of this survey shall be to determine the location, quantity, quality, and character of the pulpwoods on the public domain and adjacent private lands and, in so far as possible, to determine their availability and the most practicable means for their use for the manufacture of wood pulp.

That the Secretary of Agriculture shall cause to be prepared and submitted to Congress a report upon the present conditions in the United States with respect to the current consumption and production of pulpwoods, together with such a plan as he deems most practicable for assuring a sufficient supply of pulpwood in the future by the reforestation of lands suitable for the production of pulpwood, including such lands in private ownership, or otherwise.

That the sum of \$1,000,000 is hereby appropriated, from any money in the Treasury of the United States not otherwise appropriated, for carrying out the purposes of this Act, to be available until expended.

#### Senator Underwood's Resolution

Senator Underwood, of Alabama, introduced the following joint resolution which was passed by the Senate:

Authorizing the appointment of a commission to confer with the Dominion Government or the Provincial Governments of Quebec, Ontario, and New Brunswick as to certain restrictive orders in council of the said Provinces relative to the exportation of pulpwood therefrom to the United States.

*Whereas*, News print and other printing papers are commodities of universal use and are indispensable in the educational process of modern civilization, and the paramount importance of a sufficient production of such news print and other paper to supply the needs of the people of the United States is a self-evident proposition; and

*Whereas*, Practically the whole content of news print and other printing paper is composed of mechanical and chemical products of pulp wood, the supply of which in the eastern part of the United States is being rapidly exhausted by the growing demand

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and the price of which is being advanced to unprecedented levels; and

*Whereas*, the existing scarcity of pulpwood and its threatened total exhaustion in the United States has become a matter of such grave concern to the paper industry, the users and manufacturers of forest products, the Federal Government, and the general public that the Forest Service, the lumber and pulp and paper associations, and the forestry authorities of the country are now formulating a broad and comprehensive national forest conservation and reforestation plan for early adoption; and

*Whereas*, the lieutenant governors of certain of the Provinces of Canada, in council, did issue orders prohibiting the exportation of pulpwood cut from Crown lands, the chief source of supply of pulpwood, unless manufactured into lumber, pulp, or paper, thereby tending to create a monopoly beyond our borders in the manufacture of paper, to the great detriment of the people of the United States: Now, therefore, be it

*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled*, That the President of the United States be, and he is hereby, requested to appoint a commission of five persons and, by appropriate authority, to confer on this commission the power, on behalf of the Administration and the Congress, to negotiate with said Dominion Government, or with said Provincial Governments, in respect to the cancellation of said restrictive orders in council, and as well any other restrictions on the exportation of pulp wood and news print and other printing paper composed of mechanical and chemical products of pulp and pulp wood, from the Dominion of Canada to the United States.

That in the event the cancellation of said restrictive orders in council can not be agreed to by mutual arrangement of the Governments of the United States of America and the Dominion of Canada, that said commission shall investigate, consider, and report to the Congress what action in its opinion should be taken by the Congress that will aid in securing the cancellation of said restrictive orders in council, or their modification so that they may not continue to militate against the interests of the people of the United States.

That for the necessary expenses of said commission the sum of \$50,000 be, and it is hereby, appropriated from the moneys in the Treasury of the United States not otherwise appropriated.

#### **Representative Anthony's Bill**

Representative Anthony, of Kansas, introduced the following bill on December 8, 1919: "To limit the size of newspapers and periodicals," which was referred to the Committee on Post Offices and Post Roads.

That until July 1, 1920, no newspaper or periodical shall be carried in the United States mails at the rates provided for second-class postage, which shall exceed in size the limitations herein set forth, and from and after the passage of this Act the Postmaster General shall refuse the second-class rate of postage to any daily newspaper printed with a greater number than twenty-four pages; to any Sunday newspaper printed with a greater number than thirty-six pages; to any periodical published weekly or bi-weekly of a greater number than seventy-five pages; to any monthly periodical printed with a greater number than one hundred pages.

#### **Representative Hoch's Bill**

Representative Hoch, of Kansas, introduced the following bill on December 17, 1919: "To prescribe certain conditions upon which newspapers and periodicals shall be entitled to the privilege of the second-class postage rate," which was referred to the same committee.

That until July 1, 1920, no newspaper or periodical shall be carried in the mails at the rates provided for second-class postage unless the publisher or publishers of such newspaper or periodical shall have filed with the postmaster at the post office where

such newspaper or periodical is deposited for transmission in the mails, a pledge, in writing, that there will not be used in the publication of such newspaper or periodical during the period within which this Act shall be in force, an aggregate amount of news print paper in excess of that used in the publication of such newspaper or periodical during the corresponding period of the preceding year: *Provided*, That any such excess due solely to an increase in circulation of such newspaper or periodical shall not be considered a violation of such pledge: *Provided further*, That in lieu of such pledge the publisher or publishers of any newspaper or periodical not published during the corresponding period of the preceding year shall file a pledge, in writing, that every reasonable effort will be made to conserve news print paper in the publication of such newspaper or periodical.

That within thirty days subsequent to July 1, 1920, every publisher or publishers who shall have filed a pledge as provided in section 1 of this Act shall file with the Postmaster General a sworn statement showing the aggregate amounts of news print paper used by such newspaper or periodical during the period within which this Act shall have been in force and during the corresponding period of the preceding year.

That in case any statement filed under the provisions of section 2 of this Act shall disclose a violation of the pledge theretofore made under the provisions of section 1 of this Act, the third-class postage rate shall be held to apply to the newspaper or periodical in question and the publisher or publishers thereof shall be held liable for the difference between that which would have been due at the third-class postage rate and that which was paid at the second-class postage rate during the period in which this Act shall have been in force. In case any publisher or publishers, subject to the provisions of this Act, shall fail to file the statement provided for in section 2 of this Act, he shall be held liable in such amount as would have been due at the third-class postage rate in addition to any amounts already paid upon the newspaper or periodical in question at the second-class postage rate during the period in which this Act shall have been in force.

That the Postmaster General is authorized and directed to prescribe such rules and regulations as may be necessary and proper for carrying into effect the provisions of this Act.

#### **Representative Christopherson's Bill**

Representative Christopherson, of South Dakota, introduced the following bill on January 5: "To give the Federal Trade Commission power and authority to allocate and distribute the available supply of print paper," which was referred to the Committee on Interstate and Foreign Commerce.

That for the period of one year after the passage of this Act, or for such further time as the President of the United States may deem necessary, the Federal Trade Commission is hereby authorized and directed to take control of the entire supply of print paper, including that manufactured here and that imported, for the purpose of distributing and allocating the same so that publishers may receive a fair and just proportion of the supply, it being the intent hereof to grant to the Federal Trade Commission the power and authority to alleviate the present shortage in the supply of print paper by distribution and allocation.

That all contracts made for the purchase and sale of print paper and hereby abrogated and suspended during the operation of this Act.

#### **Representative Ferris' Bill**

Representative Ferris, of Oklahoma, introduced the following bill on January 5: "To prohibit the export of print paper from the United States," which was referred to the Committee on Interstate and Foreign Commerce.

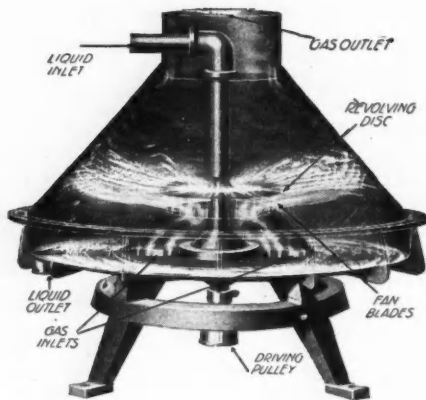
That for a period of one year from and after the passage of this Act it shall be unlawful for any person, firm, or corporation to export any print paper from the United States.



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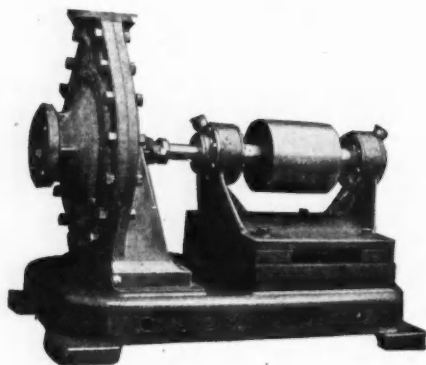
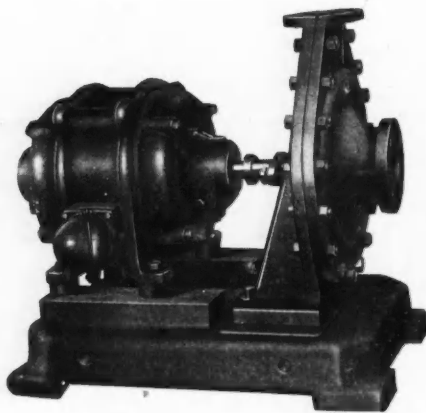
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That the Secretary of the Treasury is hereby authorized and directed to make all necessary regulations for the purpose of carrying out the provisions of this Act.

That any person who shall violate any of the provisions of this Act or any regulations made in pursuance thereof shall, upon conviction, be fined not more than \$10,000, or, if a natural person, imprisoned for not more than ten years, or both; and the officer, director, or agent of any corporation who knowingly participates in such violation shall be punished by like fine or imprisonment, or both.

#### Representative Christopherson's Bill

Representative Christopherson, of South Dakota, also introduced a bill on January 19, 1920, "to give the Secretary of Commerce power and authority to allocate and distribute the available supply of print paper," which was referred to the same committee.

That for the duration of the war, and the period of one year after the proclamation of peace by the President of the United States, the Secretary of Commerce is hereby authorized and directed to take control of the entire supply of print paper, including that manufactured here and that imported, for the purpose of distributing and allocating the same so that publishers may receive a fair and just proportion of the supply, it being the intent hereof to grant to the Secretary of Commerce the power and authority to alleviate the present shortage in the supply of print paper by distribution and allocation.

That all contracts made for the purchase and sale of print paper are hereby abrogated and suspended during the operation of this Act.

#### Representative Connally's Bill

Representative Connally, of Texas, introduced the following bill on January 31, 1920: "To repeal tariff duties on printing paper, wood pulp, and rag pulp," which was referred to the Committee on Ways and Means.

That on and after the day following the passage of this Act, the articles mentioned in the following paragraphs shall, when imported into the United States or into any of its possessions (except the Philippine Islands and the Islands of Guam and Tutuila) be exempt from duty:

1. Printing paper (other than paper commercially known as handmade or machine-handmade paper, japan paper, and imitation japan paper by whatever name known), unsized, sized, or glued, suitable for the printing of books and newspapers, but not for covers or bindings.
2. Mechanically ground wood pulp, chemical wood pulp, unbleached or bleached, and rag pulp.

#### Representative Hull's Bill

Representative Hull, of Tennessee, on February 3, 1920, introduced the following bill to amend the revenue Act of September 8, 1916, relative to printing papers, etc., which was referred to the Committee on Ways and Means.

That section 600 of the Act approved September 8, 1916, entitled "An Act to increase the revenue, and for other purposes," be amended so as to read as follows:

Printing paper (other than paper commercially known as handmade or machine handmade, japan paper, and imitation japan paper by whatever name known), unsized, sized, or glued, suitable for the printing of books and newspapers, but not for covers or bindings, not specially provided for in this section, valued above 8 cents per pound, 12 per centum ad valorem: *Provided, however,* That if any country, dependency, Province, or other subdivision of government shall impose any export duty, export license fee, or other charge of any kind whatsoever (whether in the form of additional charge or license fee or otherwise) upon printing paper, wood pulp, or wood for use in the manufacture of wood pulp, there shall be imposed upon printing paper, values above 8 cents per pound, when imported either directly or in-

directly from such country, dependency, Province, or other subdivision of government, an additional duty equal to the amount of the highest export duty or other export charge imposed by such country, dependency, Province, or other subdivision of government, upon either printing paper or upon an amount of wood pulp or wood for use in the manufacture of wood pulp necessary to manufacture such printing paper.

"Printing paper (other than paper commercially known as handmade or machine handmade paper, japan paper, and imitation japan paper by whatever name known), unsized, sized, or glued, suitable for printing of books and newspapers, but not for covers or bindings, not specially provided for in this section, valued at not above 8 cents per pound, decalcomania paper not printed."

That this Act shall expire by limitation at the end of two years from the date of its passage, and section 600 of the Act approved September 8, 1916, entitled "An Act to increase the revenue, and for other purposes," shall again become operative in its stead.

#### Representative Fuller's Bills

Representative Fuller, of Illinois, introduced a bill on February 16, 1920, "limiting the number of pages of newspapers," etc., which was referred to the Committee on Post Offices and Post Roads.

That no daily, weekly, or semiweekly newspaper or periodical containing more than sixteen pages, and no Sunday newspaper or periodical containing more than forty-eight pages, and no quarterly, monthly, or semimonthly magazine or periodical containing more than one hundred pages, shall be entitled to transmission in the mails as second-class matter or at the rates provided for second-class matter.

On the same day Mr. Fuller also introduced a bill "to prohibit the export of wood pulp and print paper for the period of one year," which was referred to the Committee on Interstate and Foreign Commerce.

That for the period of one year after the approval of this Act it shall be unlawful to permit the export from the United States of any wood pulp or print paper.

#### Representative Blanton's Bill

Representative Blanton, of Texas, introduced a bill "to meet the present print paper emergency" on February 18, 1920, which was referred to the Committee on Post Offices and Post Roads.

That the Postmaster General of the United States be, and he is hereby, directed to establish and put into force and effect rules and regulations whereby newspapers hereafter entitled to transmission through the mails shall be limited in number of pages as follows: (a) Daily editions, weekly editions, and semiweekly editions shall not contain more than sixteen pages; (b) Sunday and special editions shall not contain more than thirty-two pages.

That such regulations shall be rescinded by the Postmaster General as soon as, in his judgment, the print paper emergency is over.

That such regulations shall be put into effect by the Postmaster General on the tenth day after the passage of this measure.

#### Representative Ricketts' Resolution

Representative Ricketts, of Ohio, introduced a resolution on December 3, 1919, for the appointment of a committee to investigate the print paper industry.

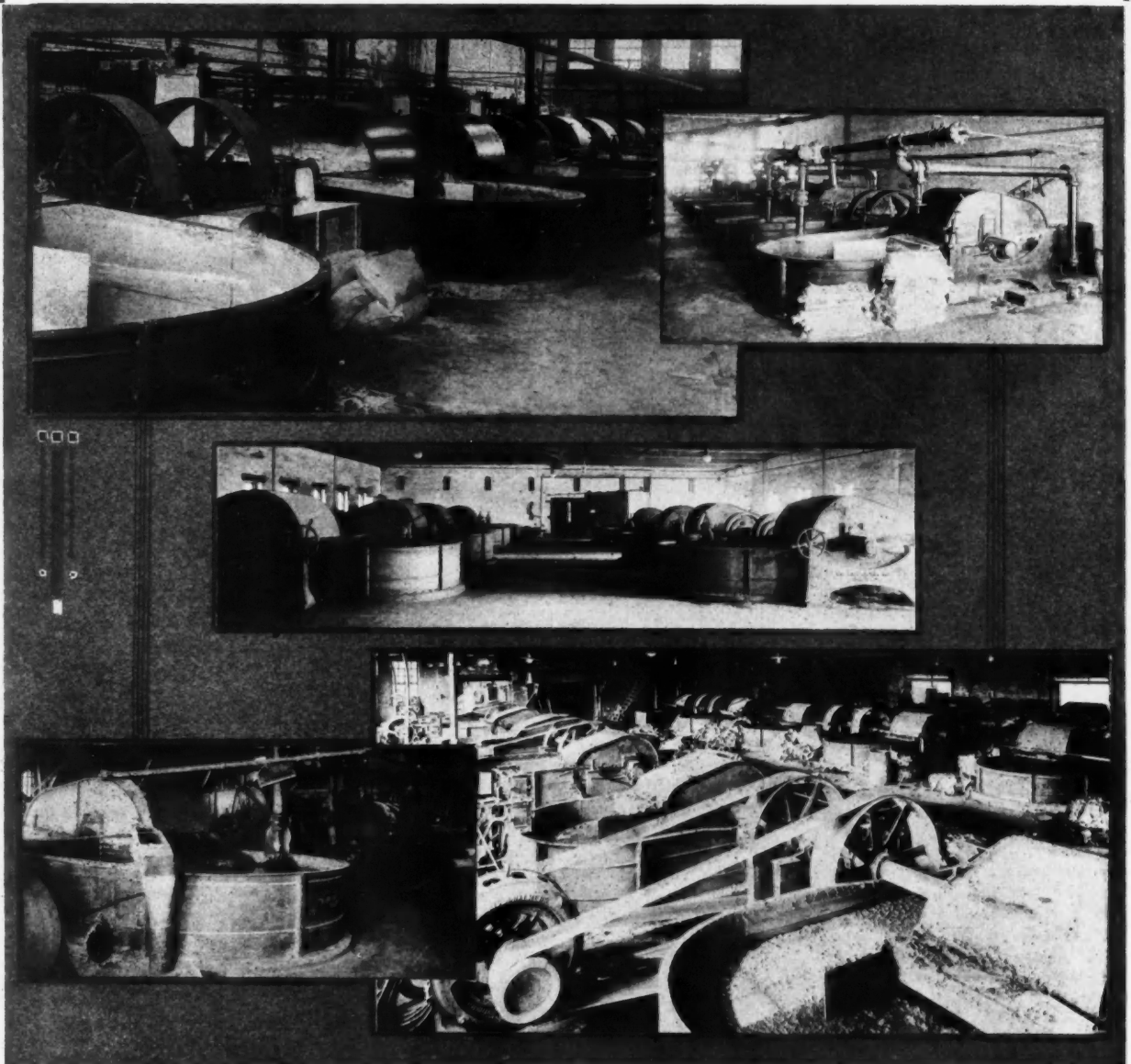
*Resolved,* That the Speaker of the House of Representatives be, and he is hereby, directed to appoint from the membership of the House a select committee of five members of the Sixty-sixth Congress, which said committee is hereby authorized and directed to fully investigate each and every matter touching the high cost of print paper to publishers throughout the United States, and to especially investigate and determine—

First. The quantity of print paper on hand in the paper mills, factories, in storage, and in transit.

## ESPECIALLY IN THESE TIMES

when you have no extra mechanics to tie up on repair work and you need every pound of product your mill can turn out, you should install Beating Engines that will do your work and not require repairs.

DO AS HUNDREDS OF OTHERS ARE DOING, use the Dilts Bandless Beater Rolls with Dilts Special Alloy Fly Bars, and get three or four times the service out of them.



Many of the new plants have contracted for Dilts equipment: such as the Eddy Paper Company, Boehme & Rauch, National Folding Box Company, McEwan Brothers, Monroe Binder Board Company, National Paper Products Company (California unit), Carthage Board & Paper Company, Monroe Paper Products Company, Philip Carey Company, Draycott Mills, Inc., Cropper & Company (London), Australian Paper Mills, Ltd., A. P. W. Paper Company—but this single page won't take anything like the whole list. Write us.

**DILTS MACHINE WORKS, Inc. Fulton, N. Y., U. S. A.**  
**SPECIALISTS IN BEATING ENGINES**



Second. Whether such print paper is being controlled by monopoly, paper trust, or conspiracy.

Third. The relationship, if any, between the metropolitan publishers and the pulp and paper industry.

Fourth. What portion, if any, of the stock of the pulp and paper industry of the United States is controlled by foreign capital, and the number of foreign stockholders and amount of stock held by each.

Fifth. The reason for the apparent discrimination in the sale and price of print paper to the metropolitan publishers and to publishers of daily and weekly papers in county seats and local communities.

Sixth. Such other facts and information as will enable Congress to determine the exact status of the pulp and paper industry in the United States.

In addition to the powers herein conferred, said committee is hereby authorized to send for persons and papers, to administer oaths and affirmations, to take testimony, to sit during the sessions of the House, and during any recess which may occur during its sessions, and may meet at such places as said committee may deem advisable.

*Resolved further*, That said select committee shall report to the House at the earliest possible date, in one or more reports, as it may deem advisable, the result of its investigations, with such recommendations as it may care to make.

*Resolved further*, That the Speaker of the House is hereby authorized to issue subpoenas to witnesses upon the request of said committee during any recess of Congress during the sessions.

*Resolved further*, That the Sergeant at Arms of the House be directed to serve all subpoenas and other process put into his hands by said committee.

#### Representative Steenerson's Resolution

Representative Steenerson, of Minnesota, introduced a resolution on December 18, 1919, which was referred to the Committee on Printing.

*Resolved*, That the Secretary of State, the Secretary of the Treasury, the Secretary of War, the Attorney General, the Postmaster General, the Secretary of the Navy, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, and the Secretary of Labor, each be, and he is hereby, directed to furnish the House with the following information, to wit:

First. Statistics giving the amount of print paper used in his department, and whether or not a reduction of 10 per centum of the present rate of consumption can be effected without injury to the public service; and

Second. Whether the large amount of printed matter now sent out to daily and weekly newspapers, which they do not ask for and do not use, could not be discontinued without injury to the public interest.

On the following day Mr. Steenerson introduced another resolution which was referred to the Committee on Post Offices and Roads.

*Resolved*, That the Postmaster General be, and he is hereby, directed to compile and furnish to the House of Representatives on a date not later than February 10, 1920, the following information: The daily weight of each edition of each newspaper enjoying the second-class mailing privilege mailed at first and second class post offices from December 18, 1919, to February 1, 1920, and thereafter from month to month like data for the period from February 1, 1920, to June 19, 1920, and also like data for the period from June 30, 1919, to December 19, 1919.

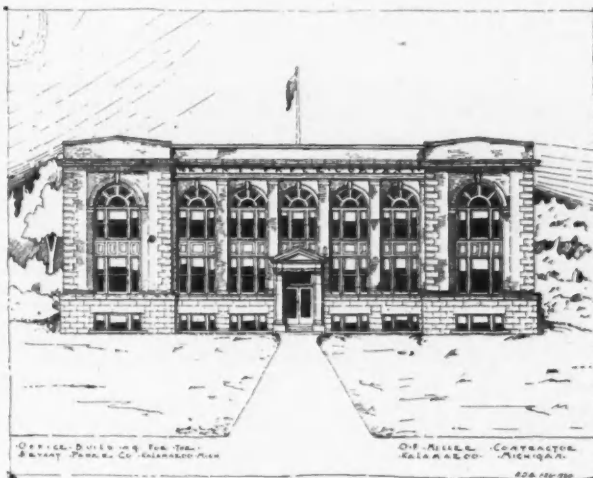
## NEW OFFICE BUILDING FOR BRYANT PAPER CO.

Ground has been broken for the new office structure for the Bryant Paper Company at Kalamazoo, Mich., and when completed it promises to be the finest building of its type in Kalamazoo.

The site is one block east of the Bryant division and is a commanding one. It is over three acres in extent and provides ample room for elaborate landscape gardening effects, one of the hobbies of Frank H. Milham, president of the company.

The building will face on Alcott street with a frontage of 90 feet and a depth of 60 feet. It will be three stories high and in construction will be strictly fireproof, the material being stone, brick, reinforced concrete and steel. The exterior will have a stone foundation to the sill of the main floor, with brick and stone above that. The building rises to a height of 35 feet in front and 41 feet in the rear, the discrepancy being due to the slope of the ground.

The English type basement will house the general employment office, superintendent's office, laboratory and other departments. On the main floor will be the general counting room, also



NEW OFFICE BUILDING OF BRYANT PAPER CO.

private offices for President Milham, his assistant, Felix Pagenstecher; secretary-treasurer, C. A. Fox; purchasing agent, James Wright, and other department heads. Elaborate panelled woodwork is provided for on this floor, panelled and beamed ceilings being used in both Mr. Milham's and Mr. Pagenstecher's offices. The interior finish will be in harmony with the general good taste and richness of design.

Quite the most unique feature of the structure will be the large assembly and welfare hall on the top floor. This unfolds another hobby of President Milham's as it provides not only a meeting place for the mill stockholders, but will also be used as a welfare hall for the employees. It will be quite large enough for dances, lectures, concerts and motion picture entertainments, and will be used regularly for future social gatherings conducted by the mill workers.

O. F. Miller has the contract for erecting this building, and the plans were prepared by his own engineering department. The structure will cost in excess of \$100,000.

# CLAY

Ask Us To Send  
Samples of Our  
Quality Clays

English and American

*THE John W*  
**HIGMAN**  
*COMPANY, INC.*

29 Broadway New York

## Work of Paper Section, Bureau of Standards

Section Has Recently Moved Into Much Larger Quarters and Is Almost Completely Installed There—Paper Making Equipment Has Been Completely Installed—With the Exception of the Coating Machine Has Been Running for Past Three Months—Study of the Testing of Paper Is One of the Most Important Investigations Being Carried on by the Section.

Written Especially for the Annual Number of the Paper Trade Journal by F. A. Curtis, in Charge Paper Section, Bureau of Standards.

The paper laboratory of the Bureau of Standards at Washington is interested in the study of the characteristics of paper which affects the uniform quality of that material. These characteristics are investigated by physical tests, by chemical methods and with the aid of the microscope. For these purposes, a complete laboratory is equipped and has as part of it an experimental paper mill, where tests can be made as a means of studying the factors that influence the uniformity of the finished paper.

### Description of Laboratory

The Paper Section has recently moved to much larger quarters in a new building, and is almost completely installed there. The physical tests are made in a room where constant temperature, and relative humidity are maintained, in order that all samples of paper tested may be exposed to the same conditions. A complete chemical laboratory is part of the equipment of the Paper Section, and it is there possible to make all the necessary chemical tests on paper and paper-making material. For the study of paper and paper-making materials by means of the microscope, the necessary apparatus is available and includes a complete photomicrographical equipment, with dark room and protection room. The experimental paper mill includes a twenty-nine inch combination cylinder and Fourdrinier paper machine, beaters, rotary boiler, rag cutter, coating machine and the necessary accessories for the manufacture of paper. It is thus possible to study the uniformity of raw material, the factors influencing uniformity in the manufacturing process, and the qualities of the finished product which determines its uniformity.

### Paper Testing Methods

In studying the uniform production of any material, the development and standardization of the methods used in testing that material is of prime importance. This is obvious, since it would be of little use to keep the raw material and the manufacturing processes uniform, if there were not standard methods of testing the finished product. For this reason, the study of the testing of paper is one of the most important investigations being carried on by the Paper Section. Methods in common use are being studied to determine whether they may be made more reliable and accurate. New methods of testing are being investigated in order that more of the qualities of paper may be expressed numerically. Until recently, little attention had been paid to a tearing test. At the present time, various methods of making a tearing test are being tried, and it is expected to soon



F. A. CURTIS

have data available showing a comparison of three methods of making this test. The method of testing the sizing quality of paper by the usual methods is not satisfactory, and work is being done to develop further an electrical method for this purpose. The rate of penetration of water through paper is measured by the resistance to an electrical current. The results so obtained when plotted as a curve will give an indication of the sizing quality.

### Microscopical Work

The use of the microscope as a means of studying paper-making fibres is becoming more and more common and valuable. A large amount of work has been done by this method, but such data is scattered. It is planned by the Paper Section, to collect data on this subject, obtain authentic samples of various fibres and to make up microphotographs of these fibres. This information will be of considerable value to any one making use of the microscope. In order to estimate correctly the amount of

the various types of fibres found in paper, it is necessary to have on hand for comparison standard samples of mixtures of fibres to which to refer. A new complete series of mixtures is now being prepared which will replace the ones now on hand. This series will be a long one, including rag fibre, sulphite, and soda wood pulp, ground wood, jute and sulphate pulp. The combinations of these pulps will be those commonly found in commercial papers.

### The Deterioration of Paper

The Paper Section has on hand a large number of samples of various kinds of paper which have been received for test since March, 1909. It was thought that these samples offered an opportunity to study the deterioration of paper in storage, and for that reason tests have been begun to determine the loss in bursting strength of these papers. Preliminary tests on about one hundred and fifty samples show that the all-rag papers deteriorate about 12 per cent in bursting strength, while mixtures of wood and rag on all-wood papers deteriorate about 24 per cent. These tests were made on the samples originally tested in March, 1909, and the deterioration is the result of ten and a half years' storage. Further tests will be made on samples from three months of each alternate year, beginning 1909, and it is hoped to determine the rate of deterioration of the grades of paper tested.

### Paper Making

The paper-making equipment has been entirely installed, with the exception of the coating machine, in the new building, and

## A Generation Ago

A popular conundrum was

“What is the difference between a tricycle and a bicycle?”

And the answer was:

“You try a tricycle and buy a bicycle.”

This does not apply to

### “APPLETON WIRES”

Because almost without exception to *try* is to *buy*.

We now number among our regular customers the mills to whom we sold the first wires we made 24 years ago.

The reason is no conundrum:

*“Appleton Wires Are Good Wires”*

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## APPLETON WIRE WORKS

APPLETON, WIS., U. S. A.

has been running for three months. Runs are now being made on paper-making material received from Siam, and after making the paper it is planned to inform the Siamese Legation as to what further apparatus is necessary to use these fibres commercially in Siam. This work is the continuation of assistance given last year in reference to plans for a paper mill in Siam.

Additional equipment is being purchased, such as a rag cutter, and a three-hundred-pound beater, and it is planned to study more in detail the factors that influence the production of paper, both in the beater and on the machine.

#### Substitute for Jute Burlap for Sand Bags

At the request of the War Department, an investigation was undertaken to determine whether a substitute could be obtained for jute burlap when used for sand bags in military work. It was thought that cotton or paper bags might be sufficiently strong and cheap to warrant their consideration in time of emergency. Laboratory tests were made on a large number of samples of paper, cotton fabric, and burlap, and from the data collected four samples of paper and one each of cotton fabric and burlap were decided upon for further tests. Samples were then exposed to the weather, and these are being tested at stated intervals to determine the effect of rain and sunshine. Bags made from these six materials are being tested as to their strength when dropped from a height of 46 inches by means of a trap in a platform. The data so collected will be an indication of the value of the bags when handled. In addition, a jolting machine is being installed which will shake or jolt the bags filled with dirt or sand.

This method will test the tying of the bag, the strength of the seam and the strength of the material. It is probable that, on completion of the laboratory tests, service conditions will be reproduced in the field and the behavior of the bags studied.

#### Future Plans

The Bureau of Standards has adopted a new program in order to obtain a more direct contact with American manufacturing concerns. Under the plan which has been worked out, a manufacturing company may send to the Bureau of Standards, for as much as a year, one of its own technical men. That company shall, of course, pay the man's salary and cost of the base material he uses, but no charge is to be made for the use of the laboratories, apparatus, scientific equipment of the bureau, or for the assistance and direction to be rendered by the bureau staff. Younger men of technical education with degree may be sent for training, or experienced men may be sent to work out a research problem, using the specialized equipment of the bureau. It will be necessary that work taken up under this plan should be that which will be of assistance to the industry in general, and along the lines of investigation. The number of men who may do such work in any particular section of the bureau, is limited to the facilities of that section. The Paper Section is admirably adapted for cooperation in this work, and it is thought that the laboratory apparatus and experimental paper-making equipment could be of considerable value to manufacturing concerns wishing either to train men or to undertake special research which the special equipment of the Paper Section would make possible.

## INCOME QUESTIONNAIRE FOR PULP AND PAPER INDUSTRY

The commissioners of Internal Revenue of the Treasury Department has just sent out the following letter to income tax payers of the pulp and paper industry in connection with the "special forest industries questionnaire" for the pulp and paper industry:

In its administration of the income tax law this Bureau has encountered numerous difficult and technical tax problems peculiar to the pulp and paper industry and other industries chiefly concerned with the utilization of natural resources.

For the purpose of solving these problems with justice to the taxpayers of these industries, there has been organized within the Income Tax Unit of this Bureau a Subdivision of Natural Resources with a staff of valuation engineers. A special group in the Timber Section of this Subdivision investigates the question of depletion of timber and other valuation problems of forest product industries, including pulp and paper manufacturing. This valuation work has been organized in line with advice and suggestions of representatives of your industry.

A copy of Form T-P "Special Forest Industries: Questionnaire for the Pulp and Paper Industries" is attached. You are requested to fill in this form fully and accurately and return same before the expiration of the date stamped thereon. This questionnaire was prepared with the assistance of the Income Tax Questionnaire Committee of the paper industry, and the information called for therein is essential to the correct and full consideration of your income tax returns and your claims for deduction of depletion or depreciation.

In this connection, Mr. F. H. Macpherson, Chairman of the Income Tax Questionnaire Committee of the Paper Industry, officially states:

"The Committee . . . has . . . become profoundly impressed with the necessity for, and the importance of, the furnishing, by the taxpayer, of the information called for in the proposed Questionnaire, to the end that the Bureau of Internal Revenue may be enabled to administer the Income Tax

Law in such manner as will insure both the Government and the taxpayer full protection against injustice or discrimination.

"After most painstaking study and analysis of the objects to be gained through the sending out of this Questionnaire, the Committee is of the opinion that, in its present form, every question, every table, and every column has a definite and practical use either for the determining of values or auditing of returns.

"The Committee further urges that the greatest care should be taken by the taxpayer in the filling out of the tables and replying to the questions asked for. The work must be done thoroughly, and not perfunctorily, else the taxpayer may not receive the full benefit to which he might otherwise be entitled."

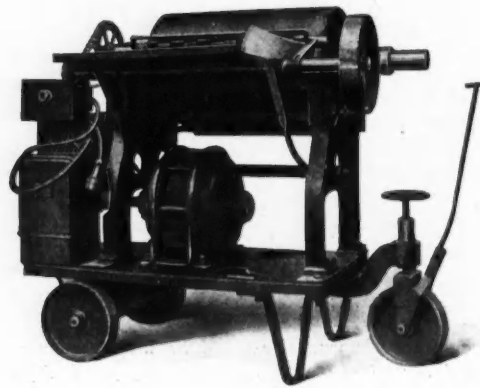
It is the mutual desire of this Bureau and the Questionnaire Committee of the Pulp and Paper Industry to afford you every possible assistance in filling out this Form. To this end, it is suggested that Valuation Engineer Henry E. Surface of the Income Tax Unit of the Bureau of Internal Revenue, Washington, D. C., spend several days before these questionnaires are due at convenient points in the field for personal conferences with pulp and paper manufacturers. A number of open meetings at suitable points and dates attended by both Bureau and Committee representatives may also be arranged. Notification of the time and place of these meetings will be sent out as soon as arrangements are completed.

#### PRINT PAPER BILL REPORTED OUT

The Senate Committee on Finance has favorably reported out without amendment the House bill which provides for the raising of the rate on imports of print paper from 5 cents to 8 cents before it becomes dutiable. The bill has gone to the Senate Calendar and it is practically a foregone conclusion that it will be passed without any opposition.



# PULP SHREDDERS



PORTABLE OR STATIONARY

RAG CUTTERS - ROPE CHOPPERS

Rag Cutter Knives

Roll Bars

Bed Plates

## TAYLOR, STILES & COMPANY

RIEGELSVILLE, N. J., U. S. A.

Waterous Engine Works Company, Ltd.  
Brantford, Ontario, Canada  
Canadian Representatives

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## Ideal Vegetable Parchment Plant at Kalamazoo

**Kalamazoo Vegetable Parchment Co. Has Built Large Profitable Business and at the Same Time Has Devoted More Than Ordinary Attention to Welfare Work Among Its More Than 400 Employees—During Past Year Company has Built a New Parchment Division from the Ground Up—Glendale Pulp & Paper Co. Builds New Plant—An Ideal Water System and Other Improvements.**

Written Especially for the Annual Number of the Paper Trade Journal by Howard P. Hall

It is a happy, contented industrial family out Parchment way. A single visit to the model mill of the Kalamazoo Vegetable Parchment Company at Kalamazoo, Mich., is sufficient to give one a basis for that statement.

Here is a concern that is making money, paying dividends and doing something otherwise laudable. If the caller were to ask President "Jake" Kindleberger, something regarding the tonnage output for the year, a question pertaining to profits or any other point strictly commercial, he would likely be answered as the Yankee (for Jake is a Yankee with a German name) usually answered through a return question, say "have you seen our new school house?" or "don't you think our cottages for our help are attractive?"

That would send you off on an excursion, and just a bit north of the big mill is the particular school house in question. It is the model country school for the State of Michigan, containing not only ample room for school work, but a community center, gymnasium, lunch room and similar conveniences usually found only in the cities and towns. It is a handsome structure of paving brick and will have an attractive setting. The Prudential Nursery Company is doing a fine job of landscape gardening, planting trees and shrubs and trees to beautify the site, and all gratuitously.

In addition there will be a playground for the children.

### Model Homes for Employees

Along the River road, the highway that passes the plant, and both to the north and south of the mill, are the cottages in question. About thirty of them have been completed. They are varied in type of architecture, being homes, not barracks. Modern, sanitary conveniences are supplied and each home sets in its own neat, well kept plot of ground. Special pride is taken in the outside appearance of all these places.

They are rented to workers in the mill at moderate rentals, no profiteering here. The renting of houses gives Jake a chance to uncork another mental idiosyncrasy. He always favors the chap with a bunch of kiddies. If Jake had his way he'd head a Klu Klux Klan and go after all those landlords who hang out "no children wanted" signs on their rentable property.

Two other things are readily noticed by the visitor to the plant. One is that the K. V. P.

company is protecting its shade trees, also that it is rebuilding the River road along its entire length. Cinders from the boiler house are used for filling and grading and for a distance of over two miles the highway has been widened, rolled and scraped and is one of the best in the county. A coating of oil keeps it dustless and clean. It carries out another one of Jake's hobbies, i.e., a clean road leading to a clean mill, a clean site and clean homes.

### 1919 a Prosperous Year

But getting down to business, 1919 has been the most successful and prosperous year in the history of the Kalamazoo Vegetable Parchment Company. Over 400 hands are required to run the plant, and it operates 24 hours a day, week in and week out.

### New Parchment Division Built

During the past year the company has built a new parchment division from the ground up. It is of steel, concrete and brick. A new parchment machine has been added which manufactures a special treated paper known as Papercloth sheeting and rubber parchment. It is used by the rubber trade. This paper is designed to keep rubber goods from deteriorating and also used in conjunction to wrap up vulcanizing rubber and vulcanizing gum. It is used largely instead of Holland cloth. They have been experimenting for several years on this special product.

Another new line added is check and document paper, a paper used especially for important documents that are to be kept for a long period of years.

### Other Improvements

A new structure is now being erected over the switch that runs from the wax mill to the parchment mill, which will give considerable more storage capacity.

The latest model Ingersoll Rand air compressor is being installed in the parchment division. This will take the place of the old Ingersoll Rand compressor installed years ago.

### An Ideal Water System

Mr. Kindleberger is particularly proud of the water system installed for the plant. A daily average of 5,000,000 to 6,000,000 gallons is supplied from sixteen Rust system wells. The water is clear and cold, but to further guarantee its purity, the company is installing



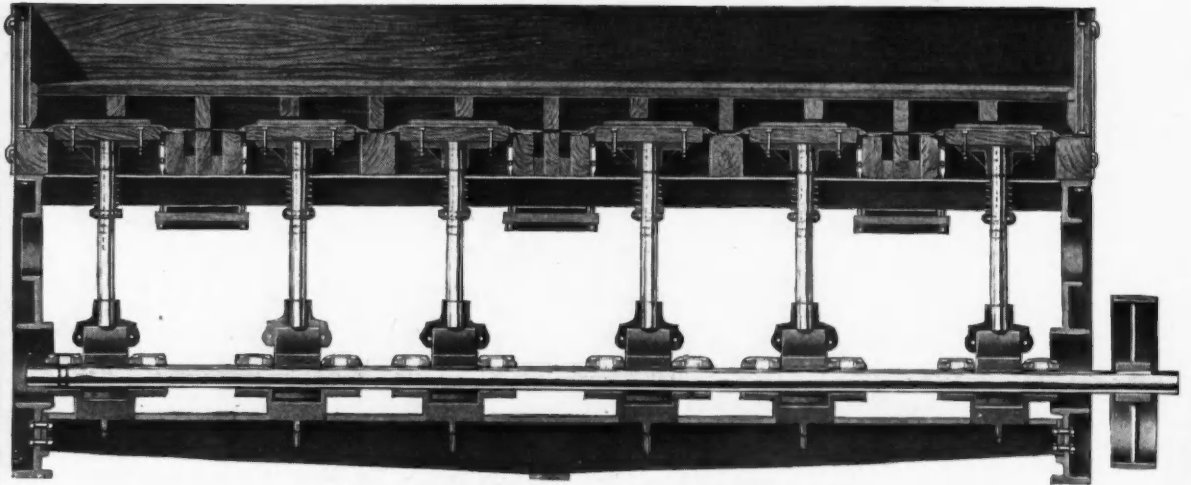
J. KINDLEBERGER

# THE BAGLEY AND SEWALL COMPANY

*Builders of Paper Making Machinery*

WATERTOWN, NEW YORK

Now building fourteen machines, to be the fastest running paper making machines in the world. Six of these machines driven by individual electric motors on all driving parts—the latest word in paper making machinery.



The Harmon Screen Now Built By Us

The best constructed Flat Type Screen on the market—essential for clean sulphite and soda pulp.

## PATENT INCLINED SCREENS

Inclined screens must be made under Harmon patents.

We are very glad to announce to the Paper and Pulp Mills that we have purchased the screen business from the Harmon Machine Co. and have all their drawings, patents, jigs, tools and fixtures.

We solicit your trade in Flat and Inclined Screens and ARE PREPARED TO FURNISH ALL REPAIR PARTS FOR THE HARMON SCREENS HERETOFORE BUILT.

# HARMON SCREENS



Elliot water filters, which will effectually remove any particles of foreign matter or oil that might be in the water. This will go a long way toward making this the cleanest mill in the world, using the cleanest water and making the cleanest paper.

#### High Mechanical Efficiency

The paper mill proper has been maintained at the highest state of mechanical efficiency. A model millright's room has been established in the basement. One of the machines in this department is a cylinder grinder, capable of handling rolls of twelve to fifteen tons weight. There is also a core department in the basement, where the company makes its own cores.

In the machine room and at the dry end of the giant 165 inch Pusey & Jones Fourdrinier machine, has been erected a Hamblet cutter, which is unique of its kind. This is a double acting cutter, cutting two length sheets at one time and also provides automatic counters which are as accurate as an adding machine. This cutter takes the rolls, eight in number and 5,000 to 6,000 pounds in weight each, direct from the machine by means of a compressed air hoist. Attached to this cutter is a Hamblet lay boy, and combined these two machines will cut and lay off a minimum carload of paper, 24,000 pounds, in about an hour and a half time.

In addition to the Pusey & Jones machines, there is also a 116 inch Harper Fourdrinier, the product of the J. H. Horne & Sons Company. The paper machines are operated by direct connected variable speed engines from the Ames Iron Works, Oswego, N. Y.

#### All Machines Uniformly Painted

A feature that immediately attracts the eye of the casual visitor to the machine room is the fact that all machinery has been uniformly painted a beautiful maroon, with the sidewalls and ceilings in white enamel, while all the piping is finished in silver bronze. This color effect is carried out in every department of the mill. The windows are exceptionally large and set in steel frames,

insuring a maximum amount of natural light. In summer months they are completely screened.

#### Ideal Beater Room

The beater room, 80 by 240 feet in dimensions, is the highest and lightest and airiest of its type in the valley. An excellent ventilating system carries away all fumes. It is equipped with four 1,500 pound Horne washers, with space for two additional. There are also ten 1,500 pound Horne beaters. Four more can be placed, if desired.

The power plant and boiler house, laid out by Billingham & Cobb, engineers, have proved satisfactory for the needs of operating the plant. There is a 1,250 k.w. turbine in the turbine room and a large marble switch board, both the product of the General Electric Company. The boiler house carries five 300 horse power Wickes water tube boilers, each equipped with a Murphy stoker, Green fuel economizer and Foster superheater, thus insuring a maximum of efficiency and economy in operation. Ashes are removed by the steam jet system.

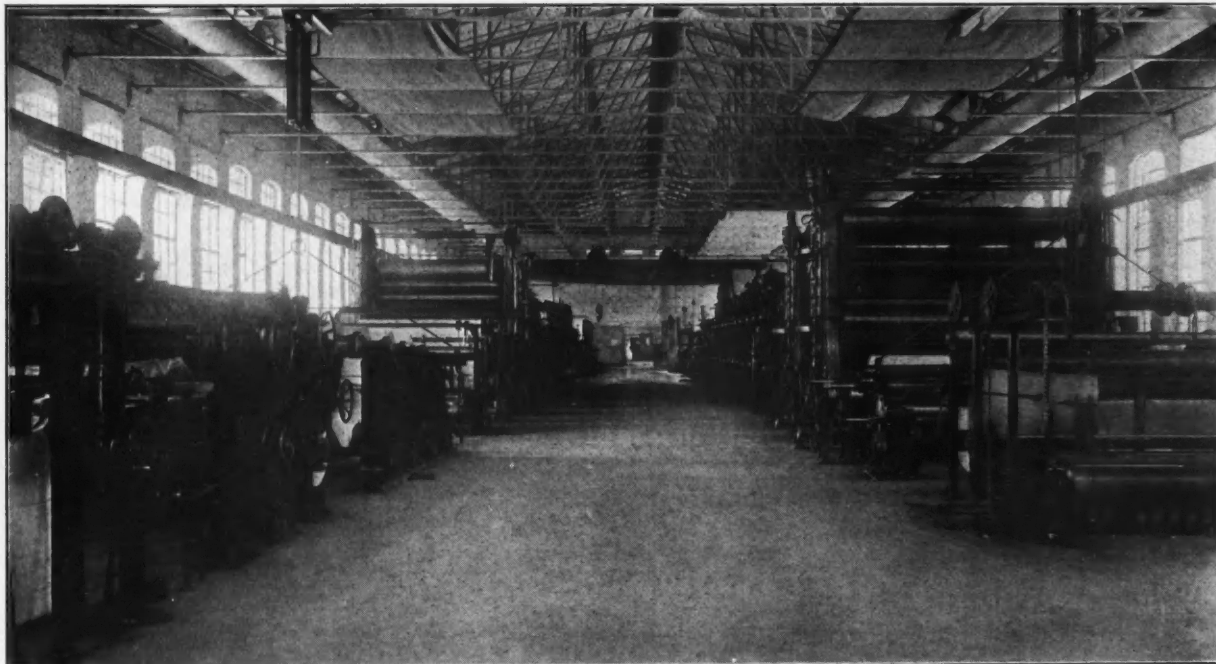
One of the improvements to be inaugurated at the mill this spring will be the extension of the sidings in and about the plant. Several hundred additional feet of trackage will be laid, thus insuring much greater car capacity for both incoming and outgoing freight.

#### Plant of Glendale Paper Co.

Immediately north of the Kalamazoo Vegetable Parchment Company's plant is the plant of the Glendale Pulp and Paper Company, a corporation with \$250,000 capital organized last August to manufacture pulp and reclaim paraffine out of waste waxed papers.

The plant is 48 by 172 feet in dimensions, three stories high. The construction is steel frame and steel sash, with brick sidewalls and reinforced concrete floors.

The Johns-Manville asbestos roof and mastic floor covering is used in the structure.



KALAMAZOO VEGETABLE PARCHMENT Co.'s MACHINE ROOM. 164-INCH FOURDRINIER ON RIGHT; 116-INCH HARPER FOURDRINIER ON LEFT; 160-INCH AUTOMATIC CUTTER LEFT FOREGROUND; 14-TON TRAVELING CRANE IN BACKGROUND

# COLORS FOR PAPER MAKERS

**W**E offer the Paper Industry of the United States all colors for the Beater, Calender, and for coating, and place at the disposal of Paper Makers our well equipped Paper Laboratories for the accurate and expeditious solution of problems relating to the application and cost of colors for paper.

## KUTTROFF, PICKHARDT & CO.

INCORPORATED

128 Duane Street, New York

### BRANCH OFFICES:

BOSTON.....86 Federal St.  
PROVIDENCE.....52 Exchange Pl.  
PHILADELPHIA.....111 Arch St.  
CHICAGO.....305 W. Randolph St.



KALAMAZOO VEGETABLE PARCHMENT CO.'S MACHINE ROOM—FOURTEEN 1,000-LB. "HORNE" BEATERS

Sixteen 1,800 pound Noble & Wood beaters, driven in pairs by nine 100 horse power Allis-Chalmers motors, have been installed. There are also two 72 inch Rogers wet machines, product of the Glens Falls Machine Company, which will automatically convert pulp into sheets.

Heating and ventilating is cared for by a Clarage fan blower system. An 8,000 pound Otis elevator is part of the equipment. The company will buy its power largely from the Consumer's Power Company, but has installed a 300 horse power Wickes boiler to furnish steam for cooking purposes. The water supply will be furnished by two artesian wells with 1,500,000 gallons' capacity a day. Billingham & Cobb were the engineers in charge of this work.

#### Special Process for Reclaiming Pulp

The Glendale Pulp & Paper Company has developed a special process for reclaiming pulp and paraffine from waste waxed paper. It is developed to the extent that a very fine quality of pulp is being produced, while the refining of the paraffine is so well done that it can hardly be detected from new paraffine wax.

#### 3,000,000 lbs. Waste Paper Waiting to Be Treated

Three million pounds of waste waxed paper are now in storage waiting to be treated. The concern is buying stock from all waxed paper users, thus opening a market for a product that for years past has been burned up to be disposed of. The mill will be in full operation in May.

#### Practically Under Management of K. V. P.

There has been considerable talk going the rounds that the Glendale Pulp and Paper Company will build a one machine paper mill in the immediate future, but the management has decided to wait a while. On account of the unsettled conditions, the uncertainty of delivery of paper mill machinery and the scarcity of labor it has been deemed advisable to refrain from taking this step at the present time.

The new mill is practically under the management of the Kalamazoo Vegetable Parchment company, but yet run entirely separate. The offices are: President, Jacob Kindleberger; vice-president, W. J. Lawrence; secretary, S. Ward Kennedy; treasurer, C. S. Campbell.

#### MAY BUILD SULPHITE MILL AT VANCOUVER

VANCOUVER, Wash., March 24, 1920.—At a special meeting of the city council recently, F. W. Leadbetter of Portland made a proposal to the city council, that if it would vacate certain streets, which run into his waterfront property on the Columbia river, he would build a sulphite mill, and start construction within 20 days, have it completed in six months and would give employment to 100 men to start and 500 men within six months after the mill begins to operate.

A sawmill will be built at once, and eventually a paper mill will be erected.

Mr. Leadbetter said that it would be to his advantage to have the mill here instead of shipping the paper pulp to California to be made into the finished product as when shipping pulp it includes 40 per cent water.

The council gave Mr. Leadbetter assurance that it will grant his request if it is legally possible.

While Mr. Leadbetter said he would not promise that he will build a paper mill here, he said that a paper mill would naturally follow after a sulphite mill is built.

#### ANGIER MILLS BUY MANSFIELD CO.

The Angier Mills of Ashland, Mass., has purchased the plant and business of the Mansfield Company, located at Mansfield, Mass. Both concerns have been manufacturing waterproof papers, and by the purchase the Angier Mills have added largely to their production facilities.

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In Bleached, Natural and Colors

**Detroit Sulphite Pulp & Paper Co.**  
**Detroit, Michigan**

## Building a Payroll of Capitalists

Employees of Detroit Sulphite Pulp & Paper Co. Are Urged to Become Stockholders in the Company Because of the Belief of the President, MacPherson, That "Other Things Being Equal the Man Who Owns Property in the Business Where He Works Is a Better Employee Than the Man Who Does Not"—Plan Is Bringing Best of Results—Some Instances of How It Is Working Out.

By F. H. MacPherson, President of the Detroit Sulphite Pulp & Paper Co., in System.

Here is our situation: We are tucked away in the heart of Detroit's manufacturing district. A mile distant are Henry Ford's blast furnaces. Down the street is a giant shipbuilding plant. Other big factories lie to the right and left of us and up and down the street. Jobs are plentiful. Wages are high. Men are comparatively scarce. The men we employ for many of our jobs are foreign-born, and, normally, are as uncertain from the standpoint of dependability as any body of workers picked for any kind of industry anywhere in the country.

Under these circumstances I think you will agree that a high labor turnover, deficient production, and constant labor dissensions would logically be expected in our business. Such is not the case. Our labor turnover is rapidly decreasing. Two years ago it fluctuated around 200 per cent. In the last six months of 1919 it was 90 per cent for our entire plant, and 3½ per cent for a group comprising between 55 per cent and 60 per cent of our employees. Production is higher than ever before: the output of a paper mill is spoken of in terms of tons; we have never been considered a 60-ton-a-day mill, but recently for an entire week the men maintained an average daily production of 62½ tons. As for labor dissensions, they do not exist.

All of these results I attribute to a plan which I am going to describe—not because I consider it in any sort of way as a panacea, for that would be foolish, but because it has developed so successfully in our plant that I think the idea or principle on which it is based must be fundamentally right.

The principle is simple. It is really a fact in human nature, other things being equal, the man who owns property is a better citizen than the man who does not! Correlatively, the man who owns property in the business where he works is a better employee than the man who does not.

Our thought, therefore, hinges around building a payroll of capitalists. For years I have given much thought to bringing about a better understanding between the employer and the worker. And we have not arrived at our present plan without difficulties. I have tried other plans and had them fail outright. We have had a strike—but that is fortunately forgotten. There was a time, and not too remotely in the past, when the air used to be charged with antagonism—if one foreman wanted something from another foreman, he was probably told on broaching the subject to "get the hell out—I'm running this department!" The same attitude was retained for the management. It used to be that when I walked through the plant, the men turned the other way if I looked as though I intended to speak.

When I first began talking to the men in groups, as I occasionally did, there was no handclapping when I finished.

### A Plan That Is Bringing the Best of Results

All that is changed, due to patient work extending over a considerable period. I do not presume to set up a hurdle that another employer can jump over and thereby instantly arrive at a solution

of his industrial problems. The management's plan and the manager must both be fitted to the job. Personality has a good deal to do with the success of any plan, I am convinced. But personality cannot carry through alone. There must also be an adequate plan.

This brings me specifically to what we have worked out. In August, 1917, we amended our articles of association and provided for \$500,000 of employee's participating preferred stock, in addition to our \$2,000,000 of common stock. At the stockholders' meeting at which this was done every share of common stock was represented, and every share voted in favor of the new stock issue. At that time our common stock was \$100 per share. We reduced the par value to \$10 so that the employees' stock could be issued in \$10 units.

There was a bit of psychology involved in doing all this. An employee who would tell his neighbor that he owned a share of stock in the company he worked for would perhaps arouse the comment, "Shucks! you don't amount to anything in that business." But he is a bigger pumpkin if he owns 10 shares.

The fundamentals upon which our plan is predicated are:

1. That the employee shall share equally with the employer, financial responsibility, above the 6 per cent cumulative dividend upon his investment.

2. That the employee shall pay in full for his stock just as does the employer.

3. That further participating dividends will be paid to a holder of employee's stock, dependent upon the earnings of the company on its invested capital; that is, capital and surplus.

4. That the dividends which the employee receives shall be at all times at least equal to the dividends paid to holders of common stock.

5. That length of service merits special consideration, which it receives under the plan here in effect.

6. That the holder of employee's stock shall be assured of a ready market for his stock at a price which will guarantee him against loss on liquidation, if for any reason he sees fit to quit the employ of the company or is dismissed.

7. That such stock ownership shall at all times be confined to employees of the company.

8. That the plan shall be sufficiently broad to cover every employee who may, after a short probational period, wish to take advantage of it.

9. That an employee reaching the age of 60 years and who has been 25 years in the service of the company may have the equivalent of a pension, which shall be derived from his stock ownership, but which is, in fact, the result of thrift and unbroken service.

It goes without saying that any plan of this kind must be predicated upon the payment of a fair day's wage for a fair day's work.

Now, mark you, the employee pays 100 cents on the dollar for every share of stock subscribed. The payment may be arranged

JAMES ROSENBERG, PRES.

LEO W. BOWMALL, VICE-PRES. & TREAS.

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HELSINGFORS, FINLAND

SPAIN  
ITALY

on an instalment plan satisfactory to the subscriber, and he is allowed interest on his partial payments.

Once, in a previous business, I decided to pay every employee at the end of the year a 10 per cent bonus of his year's salary if conditions warranted it. The first year every man-jack came in and thanked me for the welcome addition to his worldly goods. Along towards the middle of the second year the people began to inquire whether they would get their bonus when the year was up. Naturally, I could not give them any assurance that they would, and a certain amount of dissatisfaction resulted. At the end of that year when we did declare the bonus, only six people thanked me. The third year only two thanked me!

I do not mean to imply that I thought I should be thanked. In my thoughts I had put the bonus payment strictly on a basis of giving something as an incentive to get an adequate return. The point I am making is that after the novelty had worn off, the incentive value ceased. The employees came to accept the bonus as something they were fully entitled to on the basis of present efforts. They spent the money before they got it. I gave that experiment up as a bad job after three years' time. Out of this and similar experiences has grown my disbelief in and dissatisfaction with all types of payment to employees not springing directly out of what they have earned through their labor, or have paid for out of their own pockets.

Between October 1, 1917, when our present plan went into effect, and October 1, 1919, with an average of about 400 employees, over 50 per cent of the employees became stockholders. At the present time the number is between 55 per cent and 60 per cent; and I see every reason to believe that in time we shall enroll between 80 per cent and 90 per cent of all employees as partners and part owners of our business. Little need to point out how desirable this will be.

Is it not logical and desirable that something like this should take place? Taking their holdings dollar for dollar, the employee stockholder is more of an asset to the business than the outsider. The former has a double interest in the welfare of the business—his salary and his dividends; the latter is interested only in dividends.

To date, dividends have been paid ranging from 10 per cent to 15 per cent, dependent upon the net earnings of the business and the length of service of each stockholder. These dividends are paid by check every two months. The employee has thus a constant reminder of the benefits of stock ownership, and the use of the income. The employees tend to become pretty good salesmen of the plan among their fellow workers. Each stockholder is likely to show his dividend checks around, and to comment on his advantage from being one of the owners.

No employee can become a shareholder until he has been at least six months with the company. By that time he knows whether ours is the sort of company he wants to tie up with permanently—and we, in turn, have had time to decide if he is the right kind of employee to have as a permanent partner.

The maximum of stock for which an employee may subscribe is 20 per cent of his annual earnings; but he may subscribe up to 20 per cent each year. This percentage is more or less arbitrary, having been based upon the idea that the remaining 80 per cent should be devoted to the support of the family or other home purposes.

Provision is also made so that stock ownership acts in part as a pension in cases where employees have reached the age of 60 years, and have put in 25 years of service with the company.

A natural inquiry at this point will be, why should the holder of employee's stock be assured a ready market at a price that will guarantee him against loss should he leave the employ of the company or be dismissed? My answer is:

1. This class of stock does not carry with it the privileges which common stock possesses: namely, the advantage arising,

through increase in market or sale price growing out of unusual earnings, or for other reasons;

2. The privilege of public disposal is denied;

3. Lastly, and most important, "fear of loss," which would have the effect of reducing efficiency of service, is removed.

There is no question in my mind but that the time will come, after complete confidence between management and worker has been fully restored, that the worker will be quite satisfied to buy common stock. Meanwhile it is important that special recognition be given to this question of guarantee.

The stock is non-negotiable and non-transferable. For this reason and because of the further fact that it would be unfair to restrict the use of the stock for borrowing purposes, without providing a means of financial assistance should it be needed, the company undertakes if, on account of illness, death in the family, or for other sufficient reasons, a holder of this stock finds himself in need of a temporary loan, to arrange the loan upon application to the treasurer of the company. The stock is pledged as security. Interest is charged at the current bank rate and the loan is paid off in instalments as may be agreed. Whatever dividends are earned by the stock during the period of the loan are regularly paid to the owner. This plan makes the stock readily available, and relieves the preferred stock owner of paying exorbitant interest.

The company reserves the right, at the option of the board of directors, to redeem any or all of the preferred stock, and to select the specific shares for redemption at \$13 per share, if the holder of the shares to be redeemed is then living, is over 60 years of age, and has retired after 25 years' service; at \$11 per share if the holder is then an employee of the company, or if his employment has been terminated by his natural or accidental death; and at \$10.10 per share in every other instance. Thus an employee's stock, in case of his leaving, or being discharged, is "called" promptly and retired at \$10.10 per share, plus dividends accrued to the date of the call.

When the aggregate amount of stock subscribed by employees reaches a reasonable sum we intend to have the employees select one of their number to represent them upon the board of directors.

Following the annual meeting of the company, a meeting of the employees holding participating preferred stock is called, and a statement made to them of the year's operations—and the disposition of the earnings, with the reasons for such disposition. At the last annual meeting of employee stockholders, I prepared my address more carefully, and went into greater detail about the operation of the business and its financial condition than I did at our annual meeting of holders of common stock. I said in part:

"The rates of wages generally paid in this mill are higher than in other like mills throughout the country and higher also than the union scale. There are two principal reasons for this. First, the production you are getting—and are working hard to get—enables us to keep the cost down lower than if we had less production. We are therefore able to pay higher wages, keep our cost on a level with the other mills and get our fair share of business in competition with other mills.

"Remember always, that even though we may like to see our wages increased from time to time, there is a point past which we cannot go—because if we do, the cost of our product will be so much higher than our competitors' that we will not get our share of orders. If the orders cease, then we cannot run the plant efficiently; in any event we cannot run at a profit.

"No matter what any one else may try to tell you, just keep it clearly in your minds that there is only one way to keep wages up—and that is to keep production up.

"The more paper we can produce, the less the cost per pound, and the greater the profit. What share of the earnings we do not

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get in our pay envelopes, we will get in our dividend checks—and since we are going to share and share alike in the profits according to our stock holdings, it is up to each one of us, by thrift and saving, to accumulate as much stock as we can.

"The second reason why the wage rate is higher than in other paper mills, is on account of the fact that wages generally in Detroit are higher than most anywhere else, and of course we have to try to keep up with the procession. Just on this point it may be worth while to suggest that sufficient consideration is not perhaps given to the fact that where in some cases wages may be higher here in Detroit than we pay, the life of the job is frequently shorter—perhaps it lasts only for a few weeks or months, while here the jobs are steady, and that fact ought to count for something, and I know that it does with most of us.

"You will notice I am using the words 'we' and 'us' a good deal. We are all employees—all workers. I am no different from the rest of you. I, too, am an employee; so are the directors of the company. The stockholders employ the directors to look after their interests, the directors employ Mr. Dunn, Mr. Behnke, Mr. Ward, Mr. Allan, Mr. Hulbert and myself, to assist in directing and running the business along with the rest of you. Some of us use our brains only, while others of us use both brains and hands—all are necessary to the success of the business. Now, I couldn't do the work you men are doing very well—nor you women either. I'd make a mess of most of it, and you probably would have trouble doing some of the things that I undertake to handle in the front office. Each of us must do the work that our training and experience best fits us for, but we must have teamwork or we will not be successful.

"You all know that it takes a lot of money to build and operate a paper mill, and that there is always the risk that the enterprise will not be a success. Some of you men who have been here for the past 15 or 20 years know of the shape this plant was in away back in 1903-04-05. You know of the fire, and you know how the management was up against it for money to put the plant in shape and to meet the payrolls—and yet the payrolls were always met somehow.

"Did you ever stop to consider just that one point? When a company is hard up—and short of money—the biggest thing in the minds of the people in the front office is how to keep the plant going and find the money to meet the payroll.

"The common stockholders of this company have borne the burden of financing and carrying on this company for years, and they waited patiently for the day to come when they might get back a fair return on their investment.

"I am sure that there is not a single person in this meeting who does not know and understand that all of the net earnings of the business cannot be paid out in cash dividends. The machinery and equipment is wearing out all the time—every minute—whether the plant is running or not. It is depreciating, rusting, or being eaten up by acids in some parts of the plant. When replacements have to be made, it takes money—lots of it—twice as much today as it took in 1913—and that money must come from some place. Now, there are only two places that money can come from: the stockholders would have to put it up; or else it must come out of the earnings of the company—that is, the price charged for the product which we sell must be enough more than will return a fair cash dividend on the stock to provide the money to make these repairs and replacements.

#### An Illustration Out of a Known Instance

"To illustrate: the acid tower which has just been abandoned has been in use for 16 years, and had reached its end. Some of us have wondered that it has not fallen down long ago. It has been getting worse each year. So this last year we built the new cement towers. The old towers when they were put up were modern—about the best that were known of at that time. Since then there have been great advances in the methods of acid

making. Cement has come into use for construction purposes, with the result that these new towers will last very much longer than the old ones—and the cost of upkeep and repairs will be much less. There is going to be a saving in sulphur and in the cost of operating—all of which should have the effect of enabling the mill to make, first, a better product, and second, more profit. Now, since you are all stockholders and know that you are each one of you going to participate in that profit, you are all interested in making as much profit as possible.

"This brings us to the question of stock dividends. One of the criticisms which the worker has often been heard to express is that the common stockholders, in addition to the cash dividends which they receive, get, every little while, a stock dividend, upon which later they receive cash dividends. Now, it may be worth while to discuss for a moment how these stock dividends come about—why the declaration of stock dividends is possible.

"I have just told you how some portion of the money earned each year must be put back into the plant to keep it up to 100 per cent efficiency. This extra money is shown on the books of the company in the profit and loss account, or in the surplus account, as it is also called. Both terms mean the same thing—money that has been earned in the business, which has been put back into the plant in some form or other. That surplus, or balance of profit, belongs to the stockholders, and whenever it reaches an amount to make it worth while, a stock dividend is declared—or as some put it, a melon is cut—and distributed to the stockholders according to the number of shares held by each.

"Under our plan here, it is proposed—and the directors have gone on record unanimously approving the action—that whenever a stock dividend is declared in the future all stockholders, common and preferred, will share in it equally, each according to his holdings in his kind of stock.

"The directors felt that, inasmuch as the employee stockholders were paying 100 cents on the dollar for their stock and since their money was just as good as the money of the common stockholder, they were entitled to exactly the same consideration when it came to the question of distributing a stock dividend.

#### The Wherefore of the Redemption Clause

"You will therefore understand that whenever a stock dividend is declared you will each of you receive your proper proportion of it.

"A little while ago I asked one of you how the boys generally regarded this plan of ours—and he replied that a good many of you thought it was 'too good to last'—I think these were his very words. He also referred to the clause in the stock certificate which provided that all stock might be called at any time by the directors at \$11 per share, as indicating that the company had kept a string on the stock, so that it could be called—by called I mean, of course, redeemed by paying back to the stockholder the original price which he paid and a premium of 10 per cent, or \$1 a share.

"I should like to explain just here—not only about that point, but also about the provision which is in the stock certificate that all of the preferred stock shall be redeemed on December 31, 1934. Under the law of the state of Michigan, corporations are given permission to do business for a certain number of years—30 years in our case—and provision is made as a natural consequence for the redemption of preferred stock just before the expiration of the charter. Provision is likewise made for the renewal of the right to do business as a corporation, at the expiration of each company's charter. It so happens that this company's charter was taken out on the 25th day of February, 1905, and expires on the 25th day of February, 1935. In applying for the amendment to the charter, or articles of association as it is called in this state, provision had to be included for the redemption of the preferred stock at a date just a little before the date of expiration of the charter.

# DICK CROTTEAU

## Paper Mill Agent

Chicago, Illinois



Western Agent  
Fletcher Paper Co.  
Mitscherlich Fibre

Exclusive Agent  
Fifty Tons  
Wisconsin News Daily

"In the natural order of things, early in 1934 application will be made to the state of Michigan for a renewal of the company's charter for another 30 years, and the life of the employees' participating preferred stock will be renewed for a further 30 years at the same time.

"Now, with regard to the provision that the stock may be called at any time. When this plan was being worked out, it was not known whether it would be a success; whether the employees would accept the opportunity which was offered them in the spirit in which it was being offered, and it was therefore just ordinary common business prudence—horse sense—to include in the charter a provision for redeeming the little stock that might have been taken, so that the decks could be cleared to try out some other plan, if one could be devised that would be more acceptable.

The splendid way in which the plan has been received is evidence to the directors that their judgment in adopting this plan was right. I believe I speak the mind of every common stockholder when I tell you that provision will never be exercised unless the stockholding employees themselves by some unfriendly act shall make it necessary.

"I want to say further, that it will be a great satisfaction to the directors of this company, if each and every employee can each and every year take up the full proportion of stock which is available for his subscription—20 per cent of his or her annual earnings in each year.

#### The Old Employees Convert the New Ones

"There will be plenty of stock available for everybody who wants it, and who is entitled to it. I say this because I believe that if each and every present stockholder understands this thoroughly, you will each feel the more free to explain the advantages of stock ownership to the newcomers in the plant; the newcomers will the more readily subscribe for the stock if it is recommended by fellow workers. It will be well to keep clearly in mind the fact that it is to your own selfish interest to have as many employees interested as stockholders as possible. The greater the interest of each, the greater the profit for all. Some one may say: the more money we make, the more profit there will be for the common stockholders. That is true—but since every employee stockholder knows that he will get just as great a percentage of the profits that are available for distribution as does the common stockholder, is any employee going to be so blind to his own interests as to refuse to help himself because he is going to help some one else at the same time? I do not believe it.

"Now, there is another thing to which I want to call your attention, and that is, that, except as there may be stock dividends from time to time (in which you will all share) the common stock of the company will not likely be increased. In other words, no new stock will be issued and sold to common stockholders. Unless we were to decide to increase very largely the mill capacity, there will be no necessity for any further increase of common stock and there is no thought of any increased capacity at this time that cannot be taken care of out of the earnings.

"As I have said, the common stock is therefore not likely to be increased, while the stockholdings of the employees will increase each year—so that while your interests will be building up and growing all the time, the interests of the common stockholders will remain stationary.

#### The Mutual Value of Employees and Stockholders

"As I have told you on previous occasions, the amount of employees' participating preferred stock has been fixed for the time being at \$500,000—but when that amount has been subscribed and paid for, the charter can be amended to provide for a further lot of stock. I am very well satisfied that there will be no limit to the opportunity which is before each one of you to become, as time goes on, more and more interested as a partner in this business. If it is good for the common stockholders to have you as partners—it is equally good for you to have the common stock-

holders as your partners. Remember always that if it had not been for the willingness of the common stockholders to risk their money in this enterprise in the early days, receiving no dividends, the business would not be upon the solid financial foundation on which it rests today—and you have not been asked to take that risk—you were not invited to come in until the risk was passed. You are investing your money in a business that has already been put upon a sound profit-earning basis, and your responsibility and mine is, simply, by strict attention each of us in his own particular job, to keep this business in the front ranks of industry as a good profit-making concern.

"We can do this by team-work, by having as little waste as possible, by getting all the production possible, and by seeing to it that the quality is always maintained at the highest standard. By setting a standard for yourselves that will produce the above results, you will by your diligence and attention, each to your job, be setting the pace for those who have not yet become interested as stockholders."

Following this talk, I presented the annual statement for 1919 showing sales, costs of sales, net earnings, and the way the net earnings had been used, the amount paid out in dividends, the amount put back into the plant in the form of improvements and renewals, and the balance available for improvements authorized and then under way. You will see that I have withheld nothing. Frankness is essential to the plan's success.

Citizenship has not been made a prerequisite to stock ownership. In working out the plan, careful consideration was given to this question and the decision arrived at that the bars should be left down, so that any employee, regardless of nationality, who had put in the probational period of service should be permitted to buy stock. We figured that if we could obtain the interest of the foreign-born unnaturalized employee, by taking him into partnership, then in the great majority of cases the matter of citizenship would take care of itself. And it is working out just as anticipated. Some men who had planned on going to their families in Europe are now sending for their families to come to America, and others who were going back are now debating as to what they had best do. If they stay here they will become American citizens and they will be the right kind, because they have a "stake" in the country of their adoption—they are capitalists.

There are some straws showing which way the wind is blowing in our plant, and I think you may be interested in them as corroborative evidence. For instance, during the war we were short-handed, as nearly everybody else was. Our superintendent did not believe we could get out the work. But the men turned in with a will, doubled up on jobs in some cases, and kept up production.

#### No Question Now That Suggestions Will Be Made

Again, our master blacksmith had three helpers. Of his own volition he said to the superintendent one day:

"You buy me a steam hammer. I'll get along with one less man."

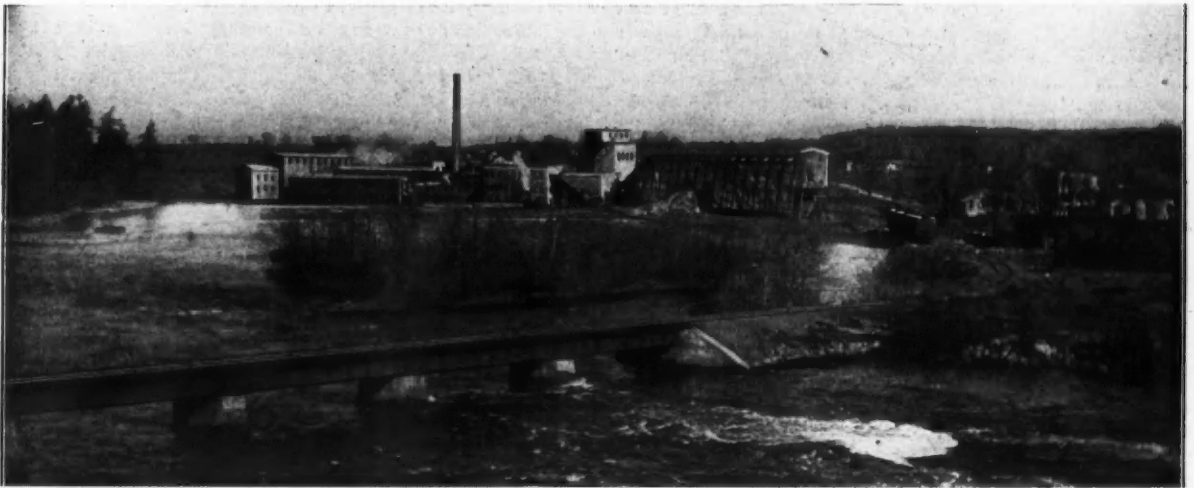
We bought him the hammer at a cost of \$700, and we were able to dispense with the cost of a man drawing about \$1,500 a year. Ordinarily, the incentive would be lacking for such a suggestion. But this man knew that it was to his interest to help the company save.

Another little incident came to my attention not long ago. It used to be that a man, if he wanted to take a day or so off, would say nothing to anybody. His absence might cripple production in his department, and perhaps slow up the whole plant. We were more or less accustomed to this sort of thing under the old order.

On the occasion I am speaking of, two or three of the men wanted to go off on a hunting trip together. But instead of just going and leaving us in a hole, they fixed it up among themselves to have some of the men on the other shifts double up and handle their work while they were away.

# THE J. P. LEWIS COMPANY

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Another little thing that pleased me immensely, and is, I think, indicative of a new spirit in the plant was this: After I had finished discussing the condition of the business at the meeting of employees mentioned earlier, one of the men got up and asked permission to present a resolution. It appears that several of the men had got together in advance and prepared it. It was very short, and I will quote it:

"Resolved, That we the preferred stockholding employees of the Detroit Sulphite Pulp and Paper Company extend a vote of thanks to our president, Mr. MacPherson, and the board of directors of the Detroit Sulphite Pulp and Paper Co.:

"First—For having given us the opportunity of becoming partners in the business; and,

"Second—For the frankness with which they have made known to us the business affairs of the company.

"We wish to assure the management that we appreciate to the fullest extent the spirit which prompted them to take us into their confidence."

#### Friction Removed

I have already mentioned the friction that used to exist between foremen. That has vanished. Now, every working day at noon, all our foremen sit down at dinner together. At this time their interdepartmental difficulties are threshed out. The superintendent and myself sit down to dinner with them whenever possible. A spirit of cooperation and camaraderie has developed, as a result of which problems are openly discussed, and the good of the business as a whole, rather than in its parts, is looked after.

#### Proof of the Plan's Value—In Terms of Results

It is outside the realm of possibility at this time to determine all of the advantages that are likely to accrue from the adoption of this plan—the good feeling, the friendship, the confidence which is being created. Some of the benefits already seen are:

(a) Greater interest and satisfaction of employees in their work;

(b) A material reduction in the total labor turnover;

(c) An almost negligible labor turnover among stockholding employees;

(d) A substantial difference in the percentage of accidents as between stockholding and non-stockholding employees, some part of which, at least, can be credited to the plan now in effect: stock interest naturally creates self-interest, and makes the employee more careful;

(e) All of which is having, and is bound to continue to have, a beneficial effect on production with results that are beneficial to every one concerned.

You may ask whether we have discovered any disadvantages. The answer is: no, not up to this time, and we can see no evidence that there may be any.

The impression must not be left with you that we have been relieved of all our business worries and troubles. That can never happen. But in the matter herein considered, they are growing less as the days go by. And we feel reasonably satisfied that eventually they will be reduced to negligible proportions—just enough to add zest to doing business.

I can fancy that some of you are debating in your own minds how this plan will work when hard times come—when dividends may be cut down, or discontinued altogether for the moment—when wages may be required to be reduced—as in the course of events may happen.

As I see it, the plant in which a plan such as this is in operation is going to be one of the very last to be affected—"community of interest" will mean more economical production and economical production will, in turn, enable the concern to stay in the market and obtain its share of such business as is to be had, longer than can other concerns.

No man or firm or corporation that is thinking of adopting this or any similar plan, can possibly hope for success unless prepared to approach the subject in a broad, wholehearted spirit, dealing with it in an absolutely honest, open, broad-minded manner. The worker must be made to believe in the sincerity of the principle, else the plan will not be a success. With absolute confidence established there can in my judgment be no question as to the result.

## PAPER SCARCE IN TORONTO

Business continues to pile up on every hand in the Toronto paper market and all branches of the trade are feeling the shortage more keenly as each week passes. A number of advances have just gone into effect. On toilet paper there has been a jump of 50 per cent in list prices and the discount has also been raised, making the net advance about 10 per cent on the average. This makes the third elevation in quotations since the beginning of the year and still business keeps up to the top notch. Prices are practically 25 per cent higher now than they were in January last.

In tissues there has been a climb from ten to thirty cents a ream and the following quotations per ream to jobbers are now in force: No. 1 white, 24 x 36, \$2.35; 20 x 30, \$1.65; manila, 24 x 36, \$1.50; 20 x 30, \$1.10; sulphite, 24 x 36, \$1.95; 20 x 30, \$1.40; white cap or natural white, 24 x 36, \$1.80; 20 x 30, \$1.25. In colored and snow white sulphites there has been a raise of one cent per pound, the former going at 10½ and the latter at 11½ cents. Paper towels have advanced 25 per cent, being the second increase since the first of the year. It is the same story with paper napkins which are now selling from \$1.00 to \$1.60 per thousand, according to quality. The recent advance was five cents per thousand and the previous one a few weeks ago ten cents.

Kraft, both glazed and unglazed, is now eleven cents in car load lots to jobbers, less a discount of 5 per cent, the jump being half a cent and making the fourth increase in price since the first of January. There can be no orders on glazed kraft delivered

for many months owing to the business already placed. Kraft pulp is now quoted at \$120 to \$125 per ton, and it is reported that the figure for sulphite pulp may advance 20 per cent on the first of May, which will make further stiffening of prices on all lines of book and writings of the better grades.

One branch of the trade which has felt the effect of the shortage keenly is the waxed paper plants, which are rushed to the limit and are suffering greatly from scarcity of raw stock. Some waxed paper plants have ceased taking orders altogether. The increase in the price of wax and other materials has practically put the sealed loaf of bread out of business by reason of the heavy cost. There is a great demand for waxed papers of all kinds in sympathy with the marked activity for cartons.

The scarcity of news print is becoming more accentuated, now that the Supreme Court of Canada has decided that the Board of Commerce has no control over this commodity. As high as 12 and even 15 cents in one case has been offered Canadian mills for delivery of spot lots.

Another matter that the Canadian mills are complaining of is the inefficiency of labor, particularly in the finishing and cutting departments, where, it is said, that measured by man power there has been a decrease of 50 per cent in the last three or four years and yet wages are climbing all the while. Thus the costs of pulp, coal, labor, freight and raw materials continue skywards and as to when the end will be reached there is no one in the industry who will even venture a prediction.

# Bigger than the World's Model Paper Mill

*is the idea back of it*

"Save Food!"—it is a tremendous idea, war or no war. *KVP vegetable parchment* (the paper that is better wet than dry) and *KVP waxed papers* save food. They enable the packer and baker to confidently advertise and market their products with the assurance that these papers, correctly applied, will preserve food quality and flavor. They reduce food spoilage. This "Save Food!" idea is something more than the cold type you have just passed over. It is a *living thing* with us—because almost every car that leaves Parchment town carries cargoes of economy to large handlers of food stuffs. The trade mark—the three letter symbol—K. V. P.—stands primarily for food economy.

## **KALAMAZOO VEGETABLE PARCHMENT COMPANY**

Kalamazoo,  
Michigan

Makers of *KVP*  
*Vegetable Parchment*  
and *Waxed*  
*Papers*

**KVP**

Write for Handsomely  
"Setup" booklet from  
Roycroft:  
"A Further Palaver on Paper"

Publishers of that Cheerful  
little Monthly:  
**PARCHMENT PRATTLER**



KALAMAZOO VEGETABLE PARCHMENT CO. KALAMAZOO MICH.

## Spanish River Mills, Ltd., Add Two Machines

Two 164-Inch Fourdriniers Are Added to Mill at Espanola, Making It a Six-Machine Plant—Actual Work on the Improvement Was Begun June 4 and No. 5 Machine Began Making Paper 138 Days After That Date—Believe That a Record in Building and Equipping the Addition Was Established by the Work at Espanola.

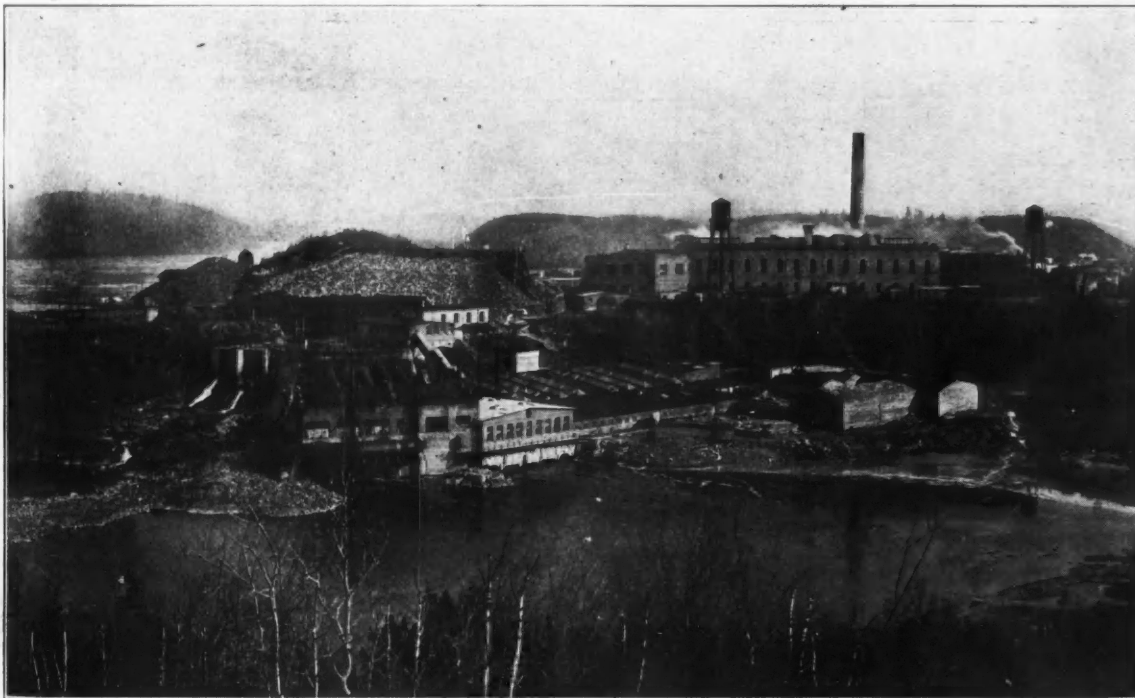
With the completion of the present addition, Espanola Mill takes a distinct step forward in its history as it goes from a four machine mill to a six machine mill, says the *Spanish River News* of the Spanish River Pulp and Paper Mills, Ltd. The decision to make it a six machine mill was reached in the year 1916. The demand for news print paper was such at that time that the president and directors reached the conclusion that the company should have a greater output and Espanola offered the logical point for extension due to the fact that it had a surplus of ground-wood. Accordingly, an order was placed with Pusey-Jones Company for two paper machines. The entry of the United States into the war in the spring of the year 1917 was the reason, as is well known, for the changing of a great many commercial plans and so it was decided that the building of the mill which was to house the new paper machines and the other extensions consequent upon their installation, should be indefinitely postponed. The matter, therefore, lay in abeyance during the years 1917 and 1918 and was only revived after the armistice. It was even then

only revived as a matter for discussion and no decision was reached until the middle of May, 1919, when, following the President's visit to Europe, a definite decision was reached.

### Undertaking a Big Proposition

After this momentous decision was reached naturally the first question which was asked of the management was, "How soon could you get these machines running?" And at the same time the statement was made that "they should be ready by November 1 to take advantage of the usual active market which occurs about that time." To complete construction, the work involved was the building of a two machine mill from foundations up and the complete installation of machinery and equipment in these buildings, so that it can be seen that it was rather a large order to complete by November 1, and its accomplishment was deemed hardly possible at the time.

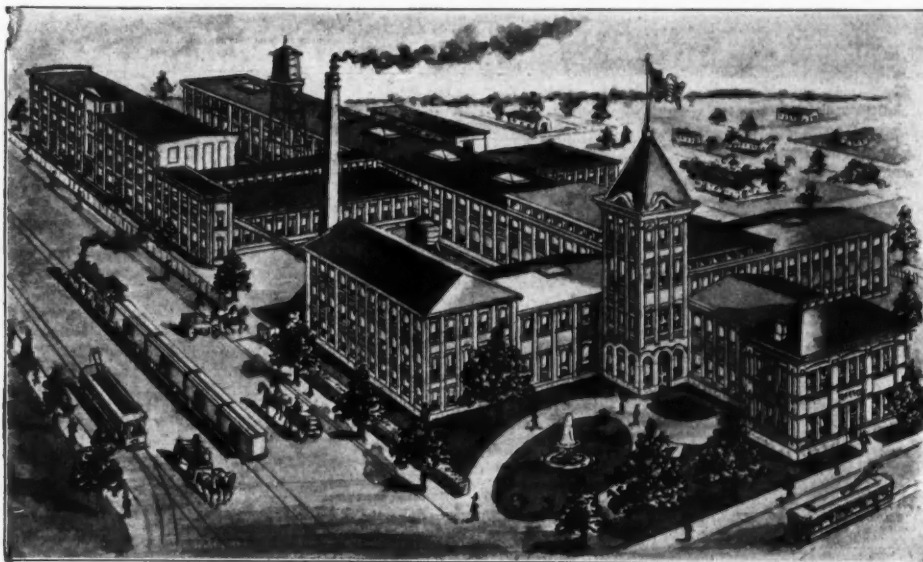
The first action taken was the complete study and preparation of a plan under which the work was to be done. It was decided that the engineering work should be done by the Management



THIS IS AN UNUSUALLY COMPREHENSIVE VIEW OF ESPANOLA, FOR IT SHOWS THE RIVER ABOVE AND BELOW THE FALLS, AND RANGE AFTER RANGE OF HILLS IN THE BACKGROUND, AS WELL AS A VERY DISTINCT VIEW OF THE PLANT OF THE SPANISH PULP AND PAPER MILLS, LTD., AND A SMALL PART OF THE TOWN

# The "Hamilton" Felt

KNOWN IN THE MARKETS OF THE WORLD



Is making records that we are proud of on many paper machines.

---

## Pioneer Manufacturers of American Felts

FOR PAPER MAKERS' USE

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SATISFACTION GUARANTEED

**Shuler & Benninghofen**

A TRIAL IS INVITED

HAMILTON, OHIO.  
U. S. A.



Engineering and Development Company of Dayton, Ohio, and it immediately commenced work on the completion of all necessary plans and the preparation of all drawings and specifications. For the actual construction work it was decided to create a construction department at Espanola under the direction of a superintendent of construction who would organize his own staff, and in conjunction with Mr. Hussey, the general superintendent, would carry out the work. L. D. Smiley, who is very well known at the Soo, where he was on the staff of the H. E. Talbott Company, when that firm built the Soo Mill, was chosen as superintendent of construction. The study of all the facts, with the plans and drawings available, by a combination of the management, engineers and superintendents led to the conclusion that it was perfectly possible to complete the construction by November 1 providing the program adopted could be carried out, if the machinery and equipment contractors lived up to their estimated dates. The job was to see that all concerned carried out their individual part of the program; in other words, it was necessary that there should be perfect team work and co-operation not only within the organization but on the part of the machinery and equipment contractors.

#### Actual Work Begun June 4

The actual work of construction was commenced on June 4, when the first sod was turned. Number 5 machine commenced making paper 138 days after that date; in other words, on October 20. These 138 days constitute a time of incessant work, continuous planning and the most earnest effort on the part of the entire organization. Not only was it necessary for every one to carry out his part but it was necessary that every one should be alert and avoid accidents or mistakes of any kind because,

for instance, one accident, whether it was a serious accident to the mill or a railroad accident, would have spoilt the record.

It is believed that a record in building and equipping the addition is established by the work done at Espanola. It has been an excellent example of team-work and genuine Spanish River spirit all the way through.

These machines are standard Fourdrinier type of news print machines and were built and erected by the Pusey & Jones Company, Wilmington, Del. The following is a description of them:

#### Widths

Breast roll, 166" face; table rolls, 166" face; lower couch roll, 166" face; lower press rolls, 164" face; drying cylinders, 162" face; calendar rolls, 160" face; reel drums, 164" face; Slitter and winder, 16." face.

#### Flow Box and Apron

The design of the flow box embodies the features of economy of space and the proper distribution of the pulp upon the apron. The flow box is made of cypress wood. The apron is made of wood carried on wooden folding brackets, and was entirely remodelled by our own men upon arrival at the mill.

#### Wire

The arrangement of the Fourdrinier part is suitable for a wire 80 ft. long and 164 in. wide.

#### Breast Roll

The design of the breast roll insures a minimum weight of maximum strength and stiffness.

Speed of machine 700 feet per minute.

#### Table Rolls

Table rolls are 5½ in. diameter, having cast iron heads with steel journals, 1¼ in. diameter, 3¾ in. in length. Rolls are dynamically balanced for a speed of 700 ft. per minute.

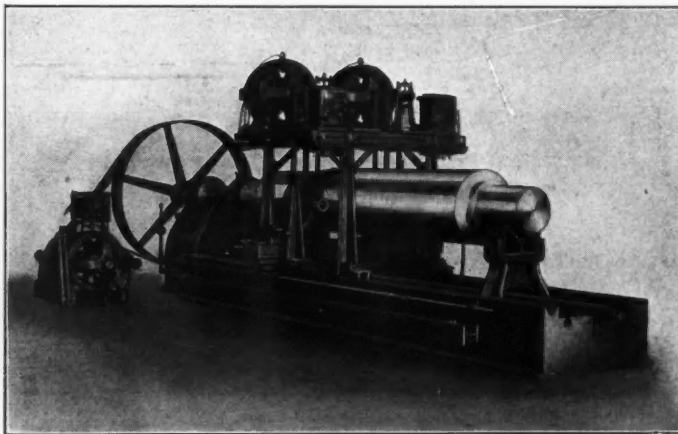


NEW MACHINES, SPANISH RIVER PULP AND PAPER MILLS, LTD., No. 5 AT RIGHT, No. 6 AT LEFT.

Three Requisites for  
Up-to-Date Paper Mills

## Chilled Roll CALENDERS

Furnished complete. Fitted with patent  
ELECTRIC MOTOR LIFT  
HYDRAULIC LIFT  
or RATCHET LIFT  
All operated from floor



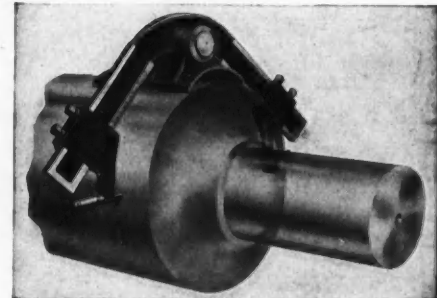
## Roll Grinding Machine

PROVIDED WITH  
Patent Automatic  
Crowning Device

EFFICIENT

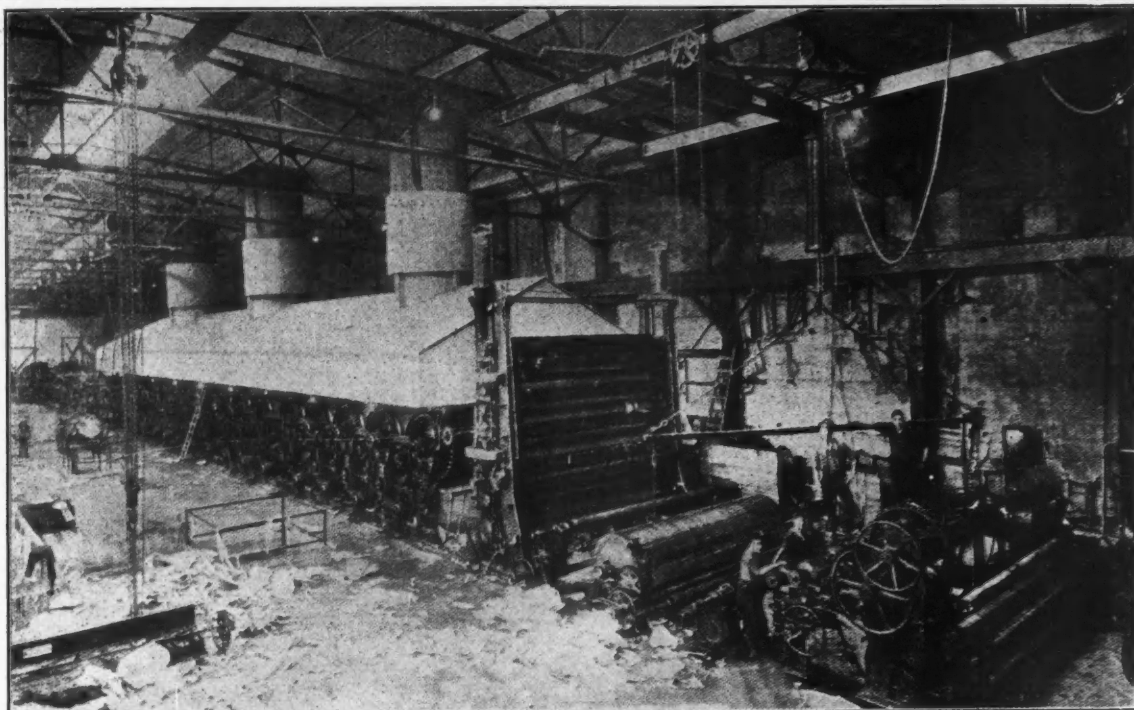
## Micrometer Caliper

CORRESPOND WITH



# LOBDELL CAR WHEEL CO.

WILMINGTON, DELAWARE



AFTER THE FIRST PAPER WAS TAKEN OVER—TUNING UP THE WINDER

#### Automatic Guide Roll

The machine is equipped with automatic guide roll 10 $\frac{3}{4}$  in. in diameter and Nash automatic wire guide.

#### Couch Rolls

Upper couch roll 26 inches in diameter.

Lower couch roll 28 inches in diameter.

The upper roll has a casing  $\frac{1}{2}$  inch thick of special quality gun metal bronze. The same is true of the lower roll.

The upper rolls have centre collar oiling and centre thrust rings.

#### Dandy Roll

Diameter 13 in., 166 in. face made as light as possible. Dandy roll has central bearing for shower. There is a wooden wiper bar and trolley for removing dandy roll. There are adjustable brass bearings so designed as to enable the machine tender to raise or lower both ends of the roll at the same time, when standing on either side of the machine.

#### Suction Boxes

There are eight extruded metal suction boxes with expanding heads.

There is a system of pipes for priming both ends of each box to the same water level so that the machine tender need observe the tending side of the machine only.

#### Shake and Stationary Rails

The shake and stationary rails are of steel brass cased. The shake rails are 9 inches wide, 2 inches deep; stationary rails 9 inches wide, 2 inches deep.

#### Water Pipes and Showers

There is a complete system of galvanized iron water pipes.

#### Shake

The machine is equipped with Pusey & Jones Patented "New Century" shaking frame with spring supports.

#### Press Rolls

The upper wooden press rolls, 26 inches in diameter, are of sweet gumwood. The upper gun metal cased roll has a casing  $\frac{1}{2}$  inch thick. The lower rubber covered rolls have a rubber cov-

ering  $\frac{3}{4}$  inch thick, over a hollow cast iron body, having cast steel heads and journals.

#### Paper Rolls

The three paper rolls at the third press will be 7 $\frac{1}{2}$  inches in diameter, made of brass tubing, each fitted with a flywheel pulley

#### Dryers

There are 32 cast iron paper dryers, each 60 inches in diameter, 162 inch face. Dryers to have centre collar oiling and centre collar thrust.

#### Calenders

The calender stack is of chilled iron calender rolls, the total weight of which is 35 tons.

#### Reel

There is one 164 inch uniform speed reel arranged with two winding drums, each 5 $\frac{1}{2}$  inches in diameter, made of extra heavy steel pipe.

The winding drums are carried in swinging arms having brass lined bearings with caps.

The maximum diameter roll of paper that can be wound around on this reel is 42 inches.

#### Unwinder

There is one unwinder of the geared type to receive the drums filled with paper taken from the reel.

#### Slitter and Winder

Upper slitter bar 4 $\frac{7}{8}$  inches in diameter, lower slitter shaft 3 $\frac{1}{8}$  inches diameter.

The drums are balanced at a surface speed of 1500 feet per minute.

#### Driving Arrangement of Machine

Driving arrangement is of the parallel rope type beginning with a large sheave wheel with grooves suitable for 1 $\frac{1}{2}$  inch diameter cotton ropes, a short heavy shaft, two ring oiling, babbitted, rigid pillow blocks, and two wedge adjusting cast iron stands.

The power is furnished by a four cylinder angle engine of 450 H. P., which was supplied by the American Engineering and Electrical Company. The constant speed line is motor driven.

# Oxford Paper Company

FIFTH AVENUE BUILDING

200 FIFTH AVENUE

NEW YORK

*Manufacturers of*

*Super Calendered and Machine Finish*

## *Book and Lithographic Papers*

CAPACITY OF MILL:

**250 Tons of Paper Per Day**

MILLS: RUMFORD, MAINE, U. S. A.

## Reclamation of Paper Stock from Rubbish

Interesting Demonstration Is Made at Hartje Bros. Paper Mill, Toronto, Ohio, Showing That as Much as 30 Per Cent of Fibre Suitable for Paper Making May Be Obtained from Ordinary Household Rubbish by Recently Invented System of the Shartle Continuous Beater Co.—Bureau of Standards, Washington, D. C., Gives Description of the Test.

The supply of paper stock is becoming a very serious problem. Just a few years ago there was an overproduction of all kinds of waste material to be used for the manufacture of paper. The demand for the different grades of paper, made from old paper, is growing by leaps and bounds.

### Increasing Demand for Paper Stock

Just a few years ago practically the only use for rags was the manufacture of high grade paper. In late years, owing to the increased cost of lumber, and because paper roofing is much better for the purpose than shingles, the demand for this kind of paper has increased many hundred times.

The demand for boxboard has also increased many hundred times. This is also due to the increased cost of lumber, and because boxes made from paper were found to be much better for the purpose than those made of wood. Lately the express company made a ruling not to accept packages weighing 25 pounds and over unless put up in a box. This also increases the demand.

Prior to the war lower grades of mixed papers sold for \$6.00 per ton delivered at the mill. Today this same stock is sold at \$36.00 per ton, and the supply does not in any way equal the requirements.

### Another Source of Paper Stock

There is another source of paper stock, and while it has not been overlooked, the recovery of it has never been accomplished until the last few months. This problem was solved by the Shartle Continuous Beater Company, which took two carloads of rubbish, such as thrown upon the dump, from the city of Pittsburgh, shipped it to the Hartje Brothers Paper Mill, Toronto, Ohio, and put it through its standard Continuous Beating System.

This rubbish contained everything which a householder would discard other than ashes and garbage. There were metals and minerals, old shoes, bottles, rubber, excelsior, hay, grass, weeds and fine dirt. This material was all put through the continuous beating system, and as a result 98 per cent of the fibres were extracted and made into paper. It was found that as much as 30 per cent of this rubbish was fibre suitable for paper making.

The City of Pittsburgh collects an average of 200 tons of this rubbish per day one-third of it being paper stock. It means that this city would provide about 66 tons of pulp per day. Taking this for a basis, all cities in the United States of 125,000 inhabitants and over would produce 4,000 tons of pulp per day.

To those who are interested the Shartle Continuous Beater Company will forward a sample of the paper which was made from the rubbish of Pittsburgh.

A representative of the U. S. Bureau of Standards, Washington, D. C., was present at the demonstration of the Hartje Brothers paper mill at Toronto and made a report which follows:

### Mill Test on Dump Stock

"This test was an attempt to demonstrate the possibility of reclaiming paper stock from city rubbish as collected from houses

and generally wasted on the city dump. For this purpose 70 bales of rubbish were sent from Pittsburgh. This rubbish was not sorted except to take out large boxes or crates that might be collected by the wagons. The weight of this material was approximately 37,570 pounds.

The material was carried by a conveyor from the car to the third floor of the mill, the bale wire was taken off and the material dumped down a chute into a breaker. This material going into the breaker contained wood and metal as well as paper stock and rags and other refuse. Due to the fact that there was a right angle turn in the pipe leading from this breaker to the settling trough, large pieces of wood were taken out by hand. After the material circulated with water it went through an overflow in the breaker into an 18 inch pump having 16 inch ball and 12 inch inlet and outlet. No trouble occurred due to tin cans or wood at this pump. From the pump the material went to a settling trough approximately 30 feet long, two feet wide and 18 inches deep, and then went to a circular tank where floating material was skimmed off by hand. The settling trough was cleaned occasionally and from it tin cans, iron and dirt were obtained. From the circular tank the material went to two flat plate screens in series approximately 20 feet long equipped with drags or scrubbers which scraped off any material that would not go through the screen plates. The paper stock which had been broken up fine enough went through the screen plates to a pulp thickener and from there to the Jordan chest. The rags and material that would not go through the screen were scraped off into a continuous beater equipped with a perforated metal back fall. Here the rags were cut up and beaten and went from this beater to the Jordan chest. The material in the Jordan chest was pumped through the Jordan and from there to the machine chest and finally over the paper machine. This machine was of the cylinder type with four cylinder molds having 80 inch trim, equipped with 30 dryers. The grade of paper made on the test was indented board for glass packing. Approximately 11,500 pounds of this material was obtained making a total reclamation of slightly over 30 per cent paper stock.

At a reduction plant at Pittsburgh a total reclamation of this rubbish is 16 per cent, but this includes metal and glass. Ordinarily only 7 per cent of paper stock is obtained at this plant, the remainder being burned in the furnaces. This test therefore demonstrates that at least four times as much paper stock was obtained by this process as ordinarily obtained by usual methods of sorting. It is to be noted that the equipment of the paper mill was built to use mixed papers and was adapted for this test. Certain improvements and changes should be made if it were to be used for dump stock. The material generally used at this mill is news stock or mixed papers and this material does not contain metals, wood or rags. Further advantage of this method of reclaiming paper stock is that labor costs can be materially reduced

# ISLAND PAPER COMPANY

*Manufacturers of*

HIGH GRADE FIBRE  
PAPERS AND SULPHITE

MENASHA

WISCONSIN

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# WOLF RIVER PAPER AND FIBER COMPANY

*Manufacturers of*

MACHINE GLAZED  
WATER FINISHED AND  
DRY FINISHED FIBRE PAPERS  
SULPHITE AND GROUND WOOD PULP

SHAWANO

WISCONSIN

since only fifteen men working in three shifts are needed for this purpose if an ordinary wet pulp machine is used in place of the cylinder machine with dryers. At this plant of a reduction company in Pittsburgh, Pa., under normal conditions, approximately 100 men and women were used, since this plant must run 24 hours per day and take care of the rubbish from the wagons.

The cost of installing machinery for the purpose of reclaiming paper stock by this "flotation-sedimentation" method would not be very great as it will require only a breaker, large pump, settling trough, large screen, pulp thickener, continuous beater, chest and wet pulp machine.

The test, as made, was not an accurate test and merely was an

attempt to demonstrate what could be done. The weight of the baled rubbish was obtained from the reduction company, and the weight of the finished material was obtained from the back tender of the machine. Before the test was begun the chests were run out, and at the conclusion of the test all materials which came from the rubbish bales was run out and weighed as finished paper. Broke and trimmings were over in the beater. It is therefore felt that this was only a demonstration and yet that it showed that a material saving could be made of paper stock by this method which would otherwise be burned or lost by the usual methods of sorting the rubbish ordinarily conducted.

## KALAMAZOO COST ASSOCIATION DOES GOOD WORK

It is oftentimes remarked that an organization is just as good as its officials. Bearing that in mind, it is safe to say that the Kalamazoo Valley Local division of the cost association of the paper industry has been well officered since the opening of its career, December 10, 1918.

In this short period of sixteen months this organization has taken its place among the progressive and valuable adjuncts of the paper industry in the Middle West. The personal membership has increased from ten to 33, while the mills represented are now 20 against seven at the outset.

Under the direction of George T. Jubb, president; C. V. Kean, Jr., vice president; Harry C. Bradford, secretary, and Paul L. Broesamle, treasurer, the Kalamazoo Valley local has enjoyed a useful career. The meetings are very interesting and attract a steadily increasing attendance. Some of the best known cost accountant experts have appeared at the sessions and plans for even greater effort are laid for the future. It is the pioneer cost association of the paper industry and as such holds an enviable position in the industry.

The complete membership of the association at this time follows:

Geo. T. Jubb, Kalamazoo Paper Company, Kalamazoo, Mich.; C. V. Kean, Jr., Bardeen Paper Company, Otsego, Mich.; H. C. Bradford, King Paper Company, Kalamazoo, Mich.; Paul L.

Broesamle, Monarch Paper Company, Kalamazoo, Mich.; Harry D. Barney and Mr. Oliver, Bardeen Paper Company, Otsego, Mich.; Roy L. Strong, Lee Paper Company, Vicksburg, Mich.; S. H. Dunwell and A. D. Stauffer, Michigan Paper Company, Plainwell, Mich.; G. T. Ingling, Kalamazoo Paper Company, Kalamazoo, Mich.; J. T. Bachelder, Standard Paper Company, Kalamazoo, Mich.; C. E. Spangler and R. C. Simpson, Mac Sim Bar Paper Company, Otsego, Mich.; H. M. Bolgoyne and A. E. Endy, Wolverine Paper Company, Otsego, Mich.; C. Burdick, Charles Boldt Paper Company, Cincinnati, Ohio; Claude Fenstermaker, Hawthorne Paper Company, Kalamazoo, Mich.; Ralph S. Clark, Glendale Pulp and Paper Company, Kalamazoo, Mich.; J. Carter and C. H. Martin, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich.; Frederick Rosenberg, Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich.; E. R. Snyder, Peninsular Paper Company, Ypsilanti, Mich.; Wm. Allen, John Ross, Allan B. Milham and Albert Milham, Bryant Paper Company, Kalamazoo, Mich.; Clare Crossley, King Paper Company, Kalamazoo, Mich.; Geo. Ferguson, Watervliet Paper Company, Watervliet, Mich.; S. M. Clymer, Eddy Paper Company, White Pigeon, Mich.; Ray C. White, W. P. Coated Paper Company, White Pigeon, Mich.; P. Bosker and Edwin Hacking, Rex Paper Company, Kalamazoo, Mich., and Wm. F. Youngs, Sutherland Paper Company, Kalamazoo, Mich.



HARRY C. BRADFORD, SEC.



KALAMAZOO COST ASSOCIATION  
GEO. T. JUBB, PRES.



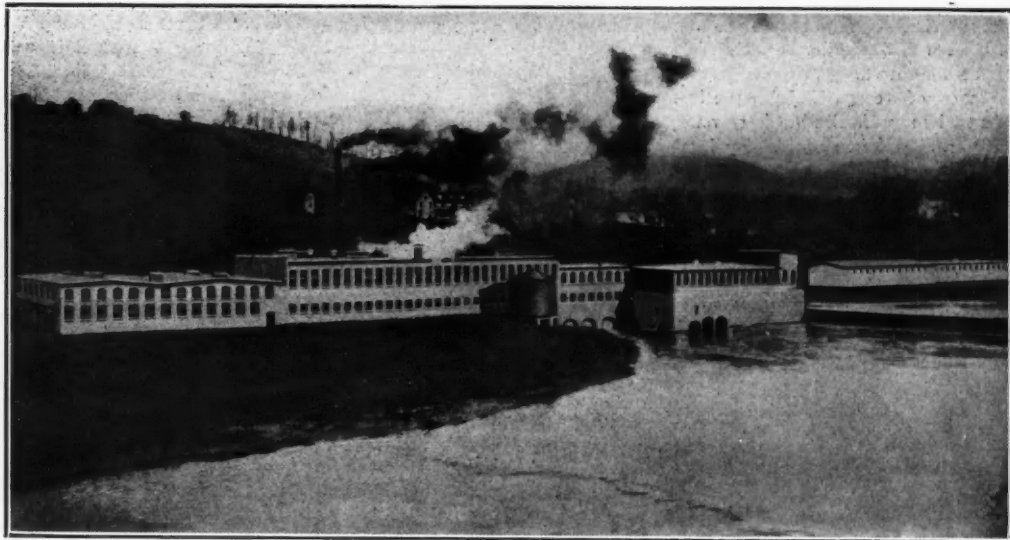
PAUL L. BROESAMLE, TREAS.

**MILTON E. MARCUSE**  
President

**ISAAC J. MARCUSE**  
Vice-President

**ALEXANDER J. MARCUSE**  
Treasurer

**MOSES M. MARCUSE**  
Secretary



Paper and Pulp Mills of Bedford Pulp & Paper Co. at Big Island, Va.

Manufacturers of

# BUTCHERS' FIBRE

## Special Papers for Fibre Containers

General Offices . . . . . RICHMOND, VA.

Paper and Pulp Mills at Big Island and Coleman Falls, Va.



## Book Paper Experiences Interesting Year

**Starts Out with a Tremendous Demand, See a Tremendous Slump and Then Another Tremendous Demand, All in the Period of a Few Months—Elimination of Fictitious Prices Now More Than Anything Else Will Prevent Chaos in a Declining Market—Paper Merchant Cannot Afford to Create Fictitious Market Because with Large Stocks Bad Break Means Much to Him.**

Written Especially for the Annual Number of the Paper Trade Journal by D. W. Pratt, Manager Mill Department  
J. W. Butler Paper Co., Chicago

Although this article is supposed to cover the book paper market from March, 1919, to March, 1920, I think it would be well to start a little prior to that period in order to show some reasons for the light demand a year ago.

### Mills in Arrears at War's End

Up to the time of the signing of the armistice on November 11, 1918, mills making book papers were in arrears on deliveries and had full order books. Publishers and other large consumers of book papers had been placing orders in excess of their requirements and storing what surplus they could procure. Merchants were obliged to keep heavy tonnages specified for their warehouse stock on account of heavy demand and slow deliveries.

Rumors of "this and that" raw material plant being commandeered by the Government were frequent; the transportation situation was acute and very few people looked for a rapid cessation of hostilities abroad. The regular Government Departments and new departments created for war service, were using tremendous amounts of paper. The foreign demand was extraordinary, owing to the fact that former sources of supply in the Old World were closed to them.

Raw materials and labor costs had been advancing rapidly, which justified higher prices to a certain extent, but the willingness on the part of a large number to pay premiums for prompt deliveries had the effect of creating a fictitious market, in a good many instances.

### Orders Begin to Drop Off

When the armistice was signed and war at an end, buyers who had anticipated trouble getting their supplies, stopped to "catch their breath" and began looking over their unfilled orders and stocks on hand to see just how they stood. The manufacturers had orders enough on their books to keep them busy for some time and so did not feel, the "dropping off" in orders at once. Therefore, the market stayed reasonably firm for the balance of the year 1918.

The opinion of the majority of business men was to the effect that we must expect a lull until we could adjust ourselves to a new order of things, but as a rule, they were optimistic and did not fear for the future.

January and February, 1919, however, showed no improvement and by this time mills had made the larger portion of specifications in hand and were not receiving new ones. Merchants' stocks, which had been filled up rapidly, were very heavy and the demand was so light they could not reorder. Raw material costs were being reduced to some extent and manufacturers started bidding for business. Naturally, the fictitious prices which had been created went tumbling and at the first big drop in prices, buyers were all the more reticent about placing what specifications they could have entered, feeling that the market would go still lower.

### An Error of Foresight

Right here, the lack of foresight on the part of the administration in not planning ahead for the reconstruction period, began to have its effect. Plants which had been running on war work were unable to make a quick turn from a war product to their legitimate field, owing to the delay in getting their affairs adjusted. Consequently, they had to delay planning their advertising campaigns.

Exporters were having trouble getting bottoms to ship what goods they could dispose of and all this time the slackened demand and bidding for business by the book paper manufacturers had the effect of lowering the market to a point where the matter of profit did not concern them, if they could keep their plants running.

### Consumers Play Waiting Game

The administration was trying, through various boards and the Secretary of Commerce, to get prices down, and specifications for all kinds of material were withheld to await the outcome of these efforts. Many a paper merchant heard the words "I am going to wait a while before issuing my catalog until the prices of paper go down." I recall one instance of this kind and desire to cite it here, as it shows how far waiting for a lower price can be carried.

A certain manufacturer who sold his entire product by mail, through his catalog, was at lunch with a friend; this friend introduced him to a third party who was in the paper business, but the manufacturer did not know this. They were discussing his particular kind of business and he made the statement that he had not issued his yearly catalog and was not going to do so until the prices for paper and printing had receded. The paper merchant then asked him the number of pages his catalog would usually run, the size, weight and quality of stock used. After making some quick calculations he found that as far as the paper was concerned, a drop of 4 cents per lb. would mean a saving of not more than \$800 on the job. He asked the manufacturer what his sales were annually and found that they were approximately half a million. It did not take him long then to convince the manufacturer that he could not afford to be without his only sales medium for three or four months, even though he did pay more for his catalog.

### Change Began in March

This light demand had continued from the time of the signing of the armistice through the month of March, 1919, or a little later, and then a change started. Large manufacturing plants began turning their equipment on products which had to be placed before the people. Confidence in prices began to be restored. Labor continued to be scarce. The shipping situation was improved so that more bottoms were available for export shipments.

The activity in advertising is, of course, the best barometer on which to base the demand for book paper, and by early summer magazines were turning down millions of dollars' worth of ad-

Established 1885

Incorporated 1891

Capital and Surplus \$2,750,000

# The Paterson Parchment Paper Co.



Exclusive Manufacturers of

## Vegetable Parchment Papers

Highest Awards at World's Columbian Exposition

Our Paterson "Pioneer" Brand Vegetable Parchment Paper has been in continuous use by U. S. Commissary Dept. during construction of Panama Canal, receiving favorable mention in the Industrial Roll of Honor.

We manufacture our own raw material in our own paper mill, thus assuring a uniform product at all times. Our location is most convenient for shipment to all points, domestic and foreign.

Remember "Paterson" when thinking of the best in Vegetable Parchment Papers. Follow the thought by sending your order to us.

General Offices

**Passaic, New Jersey, U. S. A.**

Western Union Code

Cable Address "Parchment"

vertising due to lack of facilities to handle it. Printers of every description started to run their plants to capacity and every increased hour of press time meant that much more paper.

Business houses who had delayed issuing catalogs, heard rumors of book paper manufacturers becoming filled up with business and rushed to cover their own requirements; insisted on quick deliveries and when they found shipments being delayed, started booking their future specifications so that they would be taken care of.

Newspaper advertising space was purchased in such great quantities that this class of publishers found their regular tonnage contracts did not give them sufficient paper and by fall, they started bidding for extra supplies. The prices offered for news were so attractive that a large number of mills making the lower grades of book paper, turned their machines on news print and decreased the production of book paper considerably.

#### Wages Increase

All through the year, labor was insistent in its demands, and several general wage increases were granted and to "cap the climax" the Eastern states had had the most severe winter experienced in a long time. Freight embargoes were levied and book paper manufacturers found themselves without "this or that" raw material and in a great many instances, had to shut down machines.

Mills both in the East and Middle West, were greatly affected by the coal shortage. In a great many cases they were running from "hand to mouth" and some machines had to be shut down temporarily due to lack of fuel.

All of these conditions made it impossible for a manufacturer to figure what it was going to cost him to make paper two months ahead and consequently, he was forced to operate on a price prevailing time of shipment basis.

The above gives one a brief idea of what can happen in the book paper industry in a few months period. We start out with a tremendous demand—see a tremendous slump and then another tremendous demand.

#### Lessons of the Past

Would it not be a pretty good plan for each paper manufacturer and paper merchant to take a few hours each day away from the turmoil of his office, to see what could be learned from the experiences of the past fifteen months that would prevent, even in a slight degree, such a fluctuation in prices and demand as has occurred? Without careful thought on the question one might say "When they want paper they don't care what they pay for it and when they don't want it, you can't give it to them—so what's the use?" However, times have changed a lot of customs which we once figured were permanent. For instance, what paper merchant would have sent an order to a mill five years ago without knowing what he was going to pay for the stock? How much did either the paper merchant or the manufacturer know of the problems of the other? What manufacturer would have thought of having a yearly contract for certain raw materials with a price adjustment every month or sixty days?

Conditions have naturally thrown together the manufacturer and merchant, the two most important cogs in the book paper industry. All phases of the situation have been discussed jointly and the industry as a whole has benefited by this exchange of views. The merchant has seen advantages in the price prevailing at time of shipment idea from his standpoint, as well as the manufacturer. He has seen that the necessity of speculating in so far as his warehouse stock is concerned, is unnecessary. Tonnage allotments have become very common and with nothing to be gained on the part of the merchant by speculating, does it not seem reasonable to assume that a more even flow of tonnage from manufacturer to merchant will naturally result and, is that not going to be one step toward keeping the industry on a more even keel?

I think we all feel that the market has about reached the peak

and there is no getting away from the fact, that we must face a decline and a slackened demand sooner or later. Therefore, why not start now making what preparations we can in order that the return to lower levels will be accomplished with as little friction and turmoil as possible?

#### Should Eliminate Fictitious Prices

To my mind, the one thing more than any other that will prevent chaos on a declining market, will be the elimination of fictitious prices now. Manufacturing costs are high, therefore, prices must necessarily be high and there is no reason why any manufacturer should not obtain a proper margin of profit on his costs of production and the paper merchant would be the last party to argue against his procuring it. The tremendous demand, however, has in some cases caused certain fictitious prices on book, as well as other grades of paper and this certainly tends to create an unhealthy condition in the industry.

Could we but be wise in this emergency to the extent that those in control of the several essential divisions of the paper business—viz: suppliers of raw materials, pulp, the manufactured products, etc., would eliminate fictitious values through profiteering and hold to what can be fairly termed "legitimate margins," the entire industry would be stabilized and placed upon a sound footing for maintained values. The future fluctuations would then rest quite entirely upon the labor market, the variations in which are necessarily gradual, and labor in the last analysis represents a large percentage of actual cost. The result of such course would be to free our industry from speculating elements, place it upon an even keel, and thereby permit its normal prosecution.

The paper merchant cannot afford to be a party to creating a fictitious market, because a bad break means much more to him with his large stock investment, than it does to the party selling paper without carrying a stock. Therefore by properly handling his business, he is bound to lend a stabilizing effect to the market. A constant exchange of ideas between manufacturer and merchant and a frank discussion of each others' problems, will result in the book paper industry being handled in a manner which will be beneficial to everyone under all conditions.

#### Market Should Be Firm for Some Time

To sum up, on the basis of the natural increase in consumption of book paper in our country from year to year, it will be some years before new equipment can be installed which will take care of it. Consequently, it would seem that the market should hold firm for some time. On the other hand, we know that prices of all commodities are extremely high and the higher they get, the farther they have to fall. Therefore, let the paper manufacturer and the paper merchant, working closely together for the good of the industry, start shaping their affairs so that they will come as near being prepared for what must eventually come, as they possibly can. There is no denying that by acting in this way, wonders can be accomplished.

#### PAPER WOULD NOT BE SO SCARCE

If nothing but truth should be written,  
Paper would not be so scarce,  
But everyone having a plenty,  
Could then write more than he dares.

If nothing but truth would be printed,  
Dealers would have a supply  
Of all papers sent to them promptly  
From mills now passing them by.

If nothing but truth could be published,  
Paper would then reach around;  
Where paper now badly is needed,  
Shortage would never be found.

M. F. F.

# MUNROE FELT & PAPER CO.

MANUFACTURERS OF

## PARCEL POST KRAFT

Mills at Lawrence, Mass.

Office: 79 Summer Street, BOSTON

For High Class Wrapping, Bags, Envelopes, etc.  
Tough, Elastic, Pliable, Uniform  
Free from acid and adulterants



Made from 100% Pure Sulphate Pulp

MAKERS ALSO OF

**Blanks, Carpet Linings, Cheviots,  
Crimps and other Specialties**

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**C. W. RANTOUL CO.**

42nd Street Building

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New York Agents

# MANUFACTURERS IN CONVENTION

**American Paper and Pulp Association and Affiliated Organizations Hold Important Meetings at Waldorf-Astoria**

**Forty-Third Annual Convention of the Association Held Throughout This Week Is One of the Most Successful in the History of the Organization—President George W. Sisson, Jr., Reviews Conditions in the Paper Industry in a Carefully-Thought-out Address That Wins Applause—Mr. Sisson Re-elected to Head the Association—Other Officers of the Association Re-elected.**

In spite of the railroad strike the forty-third annual convention of the American Paper and Pulp Association at the Waldorf-Astoria, Monday to Thursday of this week, was an unqualified success.

Forestry, taxes, the labor situation, vocational education, trade customs and cost problems were among the important subjects discussed not only at the meeting of the American Paper and Pulp Association but by the affiliated associations as well. The meetings of all of these associations drew a large attendance of members, each with new and progressive views on the various phases of manufacture in his particular field. The value of co-operation between manufacturers was touched on at nearly all of the meetings.

The general business meeting of the American Paper and Pulp Association was held on Thursday, and extended through the morning and afternoon, with an hour's recess for lunch. The meeting was called to order by George W. Sisson, Jr., president of the association. Mr. Sisson's annual report was unusually interesting and timely and dealt ably with many of the vital problems of the day.

The next matter considered was the report of Frank L. Moore, chairman of the Forestry Committee, which was immediately adopted.

Carlile P. Winslow, director of the Forests Products Laboratory of the Forest Service, Madison, Wis., read a letter from E. T. Meredith, secretary of the Department of Agriculture, to President Sisson, in which the secretary mentioned the seriousness of the newsprint situation and stated that the Department of Agriculture in order to serve well the paper and pulp industry depended upon, first, its ability to hold well-trained and experienced men under the compensation afforded by Congress,

and second, its financial resources for undertaking or extending work of obvious importance, closing with the remarks that the present situation of the Federal departments in both these respects is extremely critical.

Secretary Hugh P. Baker then read a partial report of the Pulp and Paper Traffic League. This was followed by a talk by P. T. Dodge, president of the International Paper Company, who urged members of the American Paper and Pulp Association to contribute to the amount of \$4,000 to the financial support of the National Industrial Conference Board, Boston, Mass.

Mr. Dodge then started the "drive" by the International's contribution of \$2,000 and the balance was quickly supplied by other firms represented at the meeting.

Henry W. Stokes, chairman of the Tariff Committee, said in his report that in view of the fact that there had been no tariff legislation since the last convention, the Tariff Committee had no report to make, although it is in close touch with tariff affairs in Washington, and has received assurance that no changes in tariff laws were made during the last fiscal year.

The report of the Income Tax Committee was read by Frank H. MacPherson, committee chairman, followed by a symposium on the income tax problems.

Next came the reading of the report of D. E. Burchell, chairman of the Committee on Education, which was unanimously adopted.

Dr. James E. Campbell, chairman of the Resolutions Committee, read additional resolutions, all of which were adopted.

The Nominating Committee recommended that inasmuch as Dr. Hugh P. Baker had so recently been chosen secretary-treasurer, it seemed to them not timely to change officers and recommended that all the old officers be re-elect-



GEORGE W. SISSON, JR., PRESIDENT.

Eastern—Western  
**Paper Makers Chemical Co.**

---

ROSIN SIZE  
SATIN WHITE  
CLAYS  
ANTIFROTH OIL  
VEGETABLE TALLOW  
FELT SOAP

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**Factories**

EASTON, PA.  
HOLYOKE, MASS.  
KALAMAZOO, MICH.  
WATERTOWN, N. Y.

**Mines**

OKAHUMPKA, FLA.  
LANGLEY, S. C.  
ST. AUSTELL,  
ENGLAND

**Rosin Refineries**

PENSACOLA, FLA.                      JACKSONVILLE, FLA.

ed. This recommendation was adopted. The officers for the ensuing year follow:

#### Officers Elected

President, George W. Sisson, Jr., Racquette River Paper Company, Potsdam, N. Y.

Vice-president, Frank L. Stevens, Stevens & Thompson Paper Company, North Hoosick, N. Y.

Vice-president, Arthur H. Nevius, Miami Paper Company, West Carrollton, Ohio.

Secretary-treasurer, Dr. Hugh P. Baker, 18 East 41st street, New York.

#### PRESIDENT'S ADDRESS

The following address was delivered at the opening of the general business session by George W. Sisson, Jr., president of the American Pulp and Paper Association:

*To the Members of the American Paper & Pulp Association:*

You are to-day assembled in your forty-third annual business meeting under circumstances differing somewhat from those of a year ago, but presenting features and problems fully as difficult, though perhaps a little more clearly seen. Then uncertainty was in the air, we lacked plain roads and paths to follow and during the past year industry has been feeling its way with some hesitation, but with its problems becoming more clearly defined as the months have passed.

The same pressure for large and efficient production to meet world requirements crowds industry to an activity like that of war times, with a growing realization by industry that one of the striking features of the aftermath of war is the general lowering of efficiency in man power, making recovery slow and painful.

To trace the causes of this lowered efficiency would point us, in a large measure, to the disastrous effect of Governmental control of or interference with industry. I directed your attention a year ago to the astounding spectacle of Federalized control of industry which we had witnessed during the war period and which we have found those in charge so very loath to give up. It is well in this time of reconstruction and readjustment to again remind ourselves of certain fundamentals which cannot be ignored without danger or, indeed, actual disaster to industry not only, but to our very Government itself.

The cornerstone of American Government and of American life is the civil liberty of the individual citizen. The essentials of that civil liberty are proclaimed in the Declaration of Independence and defined in the Constitution of the United States. Ours is not a Government of absolute or plenary power before whose exercise the individual must bow his head in

humble acquiescence. Our Government is, on the contrary, one of clearly defined and specifically designated powers, and the Constitution itself provides that powers not delegated to the United States by the Constitution nor prohibited by it to the states, are reserved to the states respectively or to the people. This means that those powers which the people have not seen fit definitely to grant, either to the national or the State Government, are reserved to the people themselves to be exercised as they may *individually* see fit. We do not derive our *civil liberty* or our *right to do business* from the Government; we, who were in possession of civil liberty and the right to do business, have ourselves instituted a Government to *protect* and *defend* them.

If our Government and civil servants and the many commissions and bureaus that have been set up would not so often misinterpret their functions as to become irritant rather than helpful, our entire business structure would be more stable, more efficient, and would better serve our entire citizenship than is now the case. A narrow and restricted view, a suspicious and over-critical attitude, a frowning on co-operative effort and associated activity in industry—all are contrary to the American business genius and imagination which, in their quality, unite boldness and generosity of vision with keen and sure sense of actual results. American industry demands that there shall be on the part of Government only such intelligent supervision of business as shall eliminate abuses that might threaten the public interest, while leaving the freest course to co-operation in industry, the broadest scope to honest business, with no circumscribing of opportunity rightly used by any American business man.

#### Membership

Your association is growing steadily in membership and influence. Compared with a year ago we show an increase of over 75 members. We have added five important organization members and two associate members. The printed report of the secretary summarizes the history of the past year, traces the development of our work under the plan of reorganization adopted by you at the last annual meeting and may well be preserved in your permanent files as sketching the beginning of a new era of definite usefulness for this association.

There is a growing sense the country over of the importance and vital necessity of our industry and a higher appreciation on the part of ownership and management of the dignified position this industry commands among the industries of America. The American Paper and Pulp Association has attained such recognition in the field of national industry that she must assume the responsibilities and accept the opportunities for service that contact with the entire industrial situation demands. She cannot shrink from full participation in the great drama of the industrial life



DR. HUGH P. BAKER, SECRETARY-TREASURER

# Hart Trading Company, Inc.

Tribune Building  
New York City



Sole Selling Agents for the Westfield River Paper Company, Russell, Mass., manufacturers of Glassine and Parchment Papers, and Sole Selling Agents for the News, Krafts and Water Finish Papers, manufactured by the Hartje Paper Manufacturing Co., Steubenville, Ohio.

Exclusive agents for European manufacturers of foreign specialties—kraft, unglazed and machine glazed; sulphites unglazed and machine glazed; manifolds, bible papers, cigarette papers; light weight papers, etc.



*Suppliers to Domestic and Foreign Trade*



of our nation, but must take part in the broad activities and national problems of American industry, letting her voice be heard, her influence felt to the end, not only of benefiting our particular industry, but of making her full contribution to the general welfare.

It is in line with this conception that our association through its officers and committees is keeping in close touch with developments in the field of education as affecting industry, with developments in the field of industrial relations, particularly through our affiliation with the National Industrial Conference Board, with the tax situation through our Taxation Committee and actually taking the lead in crystallizing sentiment for a National Forestry Policy that is receiving general commendation and support from all quarters.

This organization is so constituted that the most effective way to carry forward its work is through standing committees. It is always difficult to select the personnel of committees in such a way as to represent fully an organization with such diversified groupings and interests. I am sure you will appreciate the fact that it is not an easy matter to develop the necessary standing committees and make them effective working groups during the entire year. It is exceedingly desirable to have various sections of the country represented on our standing committees. However, committees made up of representatives from New England, from the Middle West and from the South, find it almost impossible to get together more than once or twice a year.

The experience of the past year with these committees leads me to suggest that the secretary of the association should be the secretary of each of the standing committees. This would not only bring the work of the committees closer to your officers, but the secretary, being in touch with the entire industry, should be able to give great assistance in such mechanical matters as bringing the committees together for meetings, and he should be especially helpful in gathering material to lay before the committees for their consideration.

#### National Industrial Conference Board

During the past year your president, Mr. Crocker and Mr. Daniels, our other delegates to the National Industrial Conference Board, have taken active part in the deliberations of that body. The genuinely scientific character of the research work of the board in the industrial field and the value and soundness of the conclusions reached have been increasingly recognized, until the board is now widely acknowledged the most constructive agency in this country having to do with the solution of industrial problems. As you already know it was called upon to participate as speaking officially for the employers of America in the President's first Industrial Conference at Washington, on which occasion its representatives enunciated a statement of fundamental principles underlying the employment relation that appealed in its common sense, sanity and fairness to the great majority of our citizens. Those of you who were so fortunate as to hear the addresses on this matter given at our last fall's conference by Messrs. Fish and Alexander received an intimate survey of the valuable type of work the board is doing and must realize what its activities mean to the manufacturers of this country. The board maintains a working staff of over fifty people, with an annual budget already around \$250,000, and, with an enlarged program of usefulness now in contemplation, it should have a budget of a half million dollars for carrying on, as it alone can, this type of constructive service to all American industry. The board merits our active co-operation and generous financial support. I would like to see a contribution of not less than \$1,000 from our association as such, and liberal individual contribution from the paper industry to a total of at least \$20,000. The present total support from our industry is about \$8,000. The frequent and timely publications of the board are available to our members at a nominal price and

any phase of the employment situation in which a member may be particularly interested can be studied to advantage with their help, and, indeed, suggestion and advice may be had from the board's staff on request. Plans are being formulated to keep our members frequently and fully informed as to the character of the investigations undertaken, their progress and the findings when reached. The board can generally make special investigations that may be desired by our members and will be glad to render such service where the results sought would be of benefit to industry generally.

The cost of living studies that have been conducted by the board are considered the most authoritative, accurate and unbiased of any similar work now being carried on either by the Government or other private agencies. There is great demand for these reports which find useful application where accurate information on the cost of living has important bearing on the adjustment of labor situations. Special cost of living studies have been and can be made in particular localities where desired, at the actual cost to the board of conducting the studies.

A weekly service letter with timely information on industrial topics and investigations is sent out to all supporting contributors to the board in amounts of \$100 or upward.

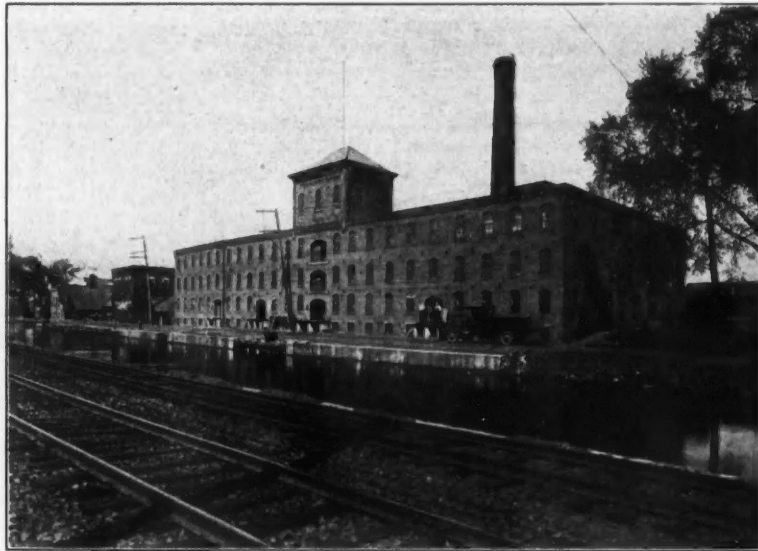
#### Industrial Relations

It is natural in a period of readjustment that great industrial problems should arise, or that long standing difficulties should be emphasized. A careful study of industrial conditions in America and a somewhat exhaustive inquiry into the efforts made and the attitude taken by the more thoughtful, far-seeing and enterprising manufacturers to meet the demands of the hour, reverse any mal-adjustments of the past and prepare the developments of the future, give warrant for the hope that these disturbing problems will be solved by a process of orderly evolution, having as its basis a genuine spirit of co-operation and good will, predicated on clear recognition of mutual responsibility as between employer and employee and by them jointly to the public. Capital and labor will reach the sure ground of adjustment whenever, through sanity or suffering they arrive at a willingness to be fair. Fairness is absolutely necessary to the full development of industry. It is as essential as steam. It asks nothing of generosity, nothing of mercy; it is simply the child of justice, and before it no labor difficulties can long endure.

If we are to look for a few of the major causes of general unrest in this country and the world over they might be found *first*, in the reaction that followed the most terrible war in history; *second*, in the disorganization and demoralization following the gradual return to normal conditions from the centralization of power exercised by all governments during the war; and *third*, the effect of the extensive use of machinery in modern industry where the worker sees and participates in but one process that enters into the finished product, and thus his pride and satisfaction in the finished article is taken away.

Again a situation conducive to dissatisfaction lies in the present high prices of commodities caused by under-production and the lowered purchasing power of the dollar. *We must prod our production.* The outstanding fact of the situation is that the workers of the United States and those who direct them can and must produce an ample supply of the things that contribute to the comfort, security and refinement of our life. All of us are producers except the few who evade the call of common duty; and with every man working to reasonable capacity by way of doing his share of the nation's work, no general or prolonged shortage can exist. *Morale* is the stuff that makes workers work. Lack of production, disorder and the willingness of workers to trifle with false doctrines may be ascribed to impairment of morale.

The trouble has been that the specious and unsound arguments



**Paper Mills of C. H. Dexter & Sons, Inc.**

**Princess Covers** are practically indestructible; their folding and embossing strength are remarkable. Made in 12 rich and practical colors. The catalog or booklet covered with Princess is strikingly handsome and durable.

**Levant Cover Paper** simulates in colors and texture the finest Levant leather. It combines rich beauty with a novelty in the most exacting good taste. Seven beautiful colors.

**Star Manifold Linen** has a place in every up-to-date office. It is a real linen writing paper in tissue weight, with a perfectly finished surface that insures clear, legible carbon copies. Of great strength and durability. In 7 colors and White in several distinct finishes.

Fads and fancies in paper come and go, but these three Dexter products stand among the "fixed stars" that maintain their prestige and position year after year. Each stock is produced to meet an established, growing, sensibly-businesslike demand. Every sheet is the finest that skill, best of material and pride-in-product can make it. Dexter papers are invariably reliable in quality.

Cheaper papers than Dexter's are plentiful, but for real economy there is nothing like a Dexter product. Service, beauty, satisfaction,—these are the qualities that determine the value of a stock. Judged by these standards, C. H. Dexter & Sons papers are the best investment to be had at any price.

*If you are not acquainted with any or all of these products, permit us to send you samples and prices*

**C. H. DEXTER & SONS, Inc.**  
WINDSOR LOCKS, CONN.

of the agitator have met with practically no organized opposition and the possibilities of a campaign of education in the simplest terms on the fundamentals of economics in steadying the working man and enabling him to draw his own conclusions as to the fairness of his treatment are indeed great. If the viciousness of the doctrine of class solidarity is to be exposed and condemned; if the false propadanda that often emanates from university "teachers" serving "life terms" where academic walls shut out the light of human activity, who conceive themselves able to devise formulæ for the radical reconstruction of our social system, is to be met; if the mischievous activity of the idle and irresponsible rich, from whose ranks our parlor Bolsheviki are largely recruited, is to be curtailed, the whole process is suggested by the word "education." While a well organized, ably directed army of agitators are ceaselessly working night and day fanning the flames of discontent in the hearts of practically every worker in the country, conservative Americans display a shocking apathy towards this threatening danger. While most American workmen are sound to the core, many are taking part in hundreds of out-law strikes because they have been thoroughly convinced by agitators that they are receiving only ten to fifteen percent of the actual earnings of industry. These men should be made familiar with actual industrial statistics through systematic educational effort.

A phrase much used nowadays and growing of course out of the aspiration of mankind for better things is "a new world order." Our ministers speak of it in the pulpit and are right in using the phrase so far as it expresses an ideal in human relations toward which mankind must struggle, but no "new world order" industrially or socially can be expected to step out upon the stage fully clothed in all the garments of perfection, but only through the orderly processes of amendment and betterment can such a desirable condition progress and develop from the conservation of that which has been built by the sure methods of social and economic adaptation and growth.

There are current developments in industry which seem to indicate very strong desire on the part of employers for practical co-operation. I refer to the introduction by many of some form of employee representation, by which the men are given some voice with the management in the internal affairs of the plant; employee participating stock plans, or other methods by which a spirit of co-operation and feeling of partnership can be built up in industry. Provided the spirit in which these plans are conducted answers to the new conception of mutual interest the results cannot fail to be mutually educative, conducive as well to industrial peace as to enlarged production. They are worthy of the most careful study and consideration by our members, remembering always that only by experimentation and adaptation can there be worked out and set up any satisfactory means for co-operative relations in the operation of a plant. There must also be sympathy and good will with the earnest intent that, whatever the means employed, they must be effective.

#### Industrial Education

There are strong grounds for the special interest of industrial managers in the general field of public education which should not be overlooked when considering special training or vocational education for any particular industry. Until very recently the schools and factories of the United States had nothing to do with one another. There is even to-day in the minds of some people the sharpest possible contrast between *going to school* and *going to work*. This attitude of aloofness between the educational system of the country and its industries is commencing to give way to an attitude of mutual recognition and interdependence. Manufacturers realize that they are dependent for their future on a better adjustment between education and industry. The young people of the country are for the most part going into industry,

but unless they go at the *right time*, for the *right purpose* and with *proper training* the results will be disastrous both to them and to those who depend upon them for the success of their enterprises. On the side of the schools there has also been an awakening. Where formerly there was a suspicion that all industry was a plan of exploitation of individuals, there is now widespread enthusiasm for such types of school organization and studies as will prepare children for their later practical lives. To keep pupils *in school* is not so much to-day a program for keeping them *out of industry* as it is a program for fitting them better to take a useful place *in industry*. Industry and education will have to come to an understanding. The financial support of schools is drawn in the last analysis from industry. The demand for funds to pay for schools is becoming so large a part of the taxes under present systems that industry is forced to be interested in schools as tax-consuming institutions. Another reason why industrial managers should make a study of the school situation is that the schools themselves are among the largest employers in the country. There are about 700,000 teachers employed in the United States. There is now very sharp competition between the schools and other forms of public and private service. There is likely to be a shortage of teachers amounting to 100,000 next year. This situation is the more serious because it strikes at the very roots of social order. Teachers are restless and in many cases out of sympathy with the communities which they serve, and are open to exploitation by organizers using the present unstable conditions to ally the teachers with the labor union movement and push them in the direction of political action which is not controlled by motives of public service. All this indicates the urgent necessity for careful study of the teacher situation in the same intelligent manner as we would study the employment problem in the shops of the country.

With such an attitude of intelligent interest and participation on the part of industrialists in the broad field of public education provision could be made for the real development of a social and economic system by courses giving good training for general citizenship. There should also be strong scientifically organized courses on economics, and our system of production and transportation, and, in general, the trend of instruction and the character of the teaching force should be considered in their relation to turning out citizens who have respect for law and order and for the constructive activities of the communities through which they live.

#### Vocational Training

The necessity for trained men in the paper industry has been clearly recognized and we have already commended the courses in Vocational Education in Papermaking prepared by the Joint Executive Committee of the Technical Association. I am informed that the first volumes will be ready for beginning instruction next September and that others will quickly follow. Arrangements are being made with University Extension Departments, Vocational Educational Boards, and other public agencies for giving instruction through the use of the text books in various localities. These text books have been prepared by the best qualified practical men, and, when fully completed, will give the pulp and paper industry the distinction of being the first great industry, whose principal raw material is wood, that has provided means for instruction in these essential processes. The expenses of the committee in this great undertaking have been kept strictly within the limits of the proposed budget of \$30,000, of which \$20,000 was assessed upon mills in the United States. About \$16,000 of this has been contributed by some 100 pulp and paper firms and the remaining \$4,000, which is needed at once, should be provided by those who recognize the essential character of this educational movement and would naturally desire to be identified with it.

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### Technical Research

Modern industry has come to realize its dependence for exactness and economy of operation and quality of product on the chemist, the physicist and the trained engineer. Genuinely scientific research by whatever agency carried on should contribute to the fund of exact knowledge sorely needed in our industry. Numerous plans are being brought to the attention of this and other industries for assistance in research. You have taken special interest and given strong support to adequate appropriations for the Forest Products Laboratory at Madison. This laboratory is doing most excellent work and should receive your continued interest and support. The industry should give sympathetic interest and support to the right kind of research wherever done, whether by the Government, by educational institutions or even by individual manufacturing plants. The association as a whole, through its Committee on Education, should make a careful survey of what the United States Government can do for the industry in the way of research, through the Forest Products Laboratory at Madison, through the Bureau of Standards in Washington, and in other ways. It should study the facilities which our larger institutions offer for research. It should have full knowledge of the research work being carried on in private laboratories in this industry, some of which are better equipped to-day than those of the Federal Government. Your committee should investigate fully, for the benefit of the association and the entire industry, the various plans proposed for instruction in the industry. It would seem that there is unusual opportunity for the association through its committee on Education to function for you individually and for the entire industry in these matters.

In all these efforts to improve the science and art of papermaking we recognize the fundamental importance of the work of the Technical Association of the pulp and paper industry. Their truly helpful activities deserve generous recognition and substantial support from the members of our industry.

### Forest Conservation

A year ago I stated that "Our industry would be lacking in foresight did it not recognize the immediate necessity of well considered measures for the conservation of our raw material supplies." Prodigal and wasteful methods in the past, both in our forests and in mill processes, have brought the industry and the consuming public face to face with an alarming condition, remedies for which it will be difficult to find. A most able committee was appointed to study the problem and at your business conference last November the committee submitted a report embodying a proposed National Forestry policy most comprehensive in scope. I venture to say that up to that time no more careful and exhaustive study of this matter had been made, and certainly no more well considered and actually practical plans that should unite all interests had ever been presented. The report has met with surprisingly favorable comment and action, largely because it deals in a sane and effective way with the fundamental principles involved in the solution of the problem of so handling the forests of this country that they will support properly the industries dependent upon them. Five thousand copies of this report were printed and distributed widely over the United States and Canada. The American Newspapers' Association took very great interest in the report of your committee, sending copies of it to nearly all the English-speaking dailies of the United States.

In comparison with suggestive forest policies proposed by other organizations, the plan proposed by your committee apparently meets the demands of the situation in a very effective way. The *American Lumberman* of Chicago states that:

"The forest policy as recommended by the American Paper and Pulp Association is a much more feasible plan than that proposed by the Committee for the Application of Forestry of the Societies of American Foresters, and is one in which for-

esters, timber owners and the public, ought to be able to co-operate."

Your committee will present a second report at your convention to-day in which they will outline plans to put into effect the principles enunciated in their first report. It is our purpose to hold the leadership which we gained through the earlier action of your committee, and, if the report of the committee meets with your approval, bills will be promptly introduced in the National Congress and in State Legislatures, calling for legislation on the principles set forth in your committee's reports. Such legislation should have your intelligent and hearty support.

A factor having direct and most important bearing on the future raw material supply for American pulp and paper mills is the attitude of Canada in prohibiting the export of pulp wood from leased Crown lands, even where these leases were purchased years ago in good faith by American manufacturers, and the further intimation in recent public utterances by men of note in Canada that export of wood from private lands might also be curtailed. While these statements and attitude may not reflect a definitely settled policy, they deserve attention and discussion by the members of our association.

The markets of America have been freely opened to the products of Canadian mills and the industry there owes its phenomenal development to that fact. It is further true that Canadian industry must have American coal of which several millions tons annually are sent across the line. There should be no clashing of interest through misapprehension, but full recognition of the similarity of the problem on both sides. Co-operation on a large and magnanimous scale and in the most sympathetic spirit must be the rule if the industry is to prosper in both countries. Common fairness indicates that access to raw materials needed should not be denied on either side, and a restrictive policy in excess of what is fairly necessary for national requirements is not in accord with the co-operative spirit which must hereafter rule in international relations.

The so-called Underwood Resolution now before Congress providing for the appointment of a commission to take up these matters with the Canadian Government with a view to working out a fair and equitable solution, has the official support of the association, and we confidently look for a successful outcome of their negotiations.

### Hydraulic Development

Closely allied to the problem of adequate supply of raw material is that of abundant and reasonable cost of hydraulic power. America has not yet taken advantage of the possibilities in this direction and development has been retarded by lack of knowledge and narrowness of view in both State and National aspects of the matter. It is encouraging to note that National legislation conducive to development seems about to be realized, but there are situations, particularly in the State of New York, where a policy is being pursued that is not in accord with either the best interests of the State at large or the development of our industry. This matter requires careful study and it should be one of the functions of this association to educate public opinion to the end that intelligent and helpful legislation may be had.

### Taxation

In view of the unsatisfactory results of the application of war taxes to difficult peace time conditions there is scarcely a National organization of manufacturers or of business men generally, which has not turned its attention more or less aggressively to the problem of so changing the Federal and State Tax Laws as to bring about a condition that will help rather than hinder industrial development. Notable among these activities for the correction of unsatisfactory tax systems are the Tax Committee of the National Industrial Conference Board, the Business Men's

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National Tax Committee, the Chamber of Commerce of the United States and other similar agencies. It is very fitting that we should have a general Taxation Committee which will, through careful study and co-operation with the Tax Committees of other similar organizations, be able not only to inform the membership of the association as to ways in which unsatisfactory tax conditions may be improved, but to take a reasonable part in the effort of industry at large, at Washington or elsewhere, in bringing about wise and helpful changes in tax legislation. Your Executive Committee has authorized the appointment of a standing Committee on Taxation and the president will welcome suggestions as to men qualified and willing to assist in this very practical and helpful work.

#### Income Tax Questionnaire

Our members, and indeed the entire industry, which we have been representing in this matter, have been kept fully informed as to the progress of the negotiations with the Treasury Department undertaken by our special Income Tax Committee. It may be that some of our members have not fully understood the import of this work or felt that our interests would have been better served by holding entirely aloof from the matter. The members of our very competent and representative committee, who have given it most careful study in every phase, are fully convinced that a great saving will result from their negotiations in simplifying and clarifying our income tax returns. Their report with sample questionnaire and explanatory primer will be presented at your meeting to-day. The committee has been at work some months and has incurred quite a little expense which we must look to the entire industry to finance and we confidently expect a ready response.

#### Foreign Trade

A year ago I touched upon the danger of neglecting our opportunities in foreign trade. While we do not particularly need this foreign business today, many far-seeing manufacturers recognize that the time will come when this trade will be necessary to absorb the country's excess products.

To be recognized as a dependable exporter, America must show equal consideration for the foreign market in times of inflated demand at home, as in times of depression. The foreign buyer will buy in dull times from the country that supplied his needs when they were greatest. Now, therefore, is the time to keep faith with our newly acquired foreign friends.

In the face of depressed exchange which enhances our present prices by as much as 25 to 60 per cent, the foreign buyer still looks to us, and in many cases without hope, for his supplies. The demand from abroad to-day cannot be met and it would be beneficial if each mill would apportion part of its product to the foreign trade.

Manufacturers are again cautioned against placing their product through any but well-established exporters of paper, having the facilities and full technical knowledge of foreign trade, and the manufacturing limitations and trade rules of our mills. Such concerns will study the mutual interests of the mills and the buyers, and strengthen the growth of a permanent American paper export trade.

#### Affiliated Activities

I desire to commend in the highest terms the work of the Cost Association of the paper industry. They are doing a most practical and effective service, rapidly extending their local organizations and influence, and I bespeak for them the co-operation and financial support of every mill in the industry.

The Salesmen's Association, just now nicely launched, bids fair to provide a place in our activities for the men whose relation to the industry is oftentimes as important as the actual manufacturer of the product itself.

The Pulp and Paper Traffic League was organized something over a year ago with the purpose of conserving the traffic and transportation interests of the industry through co-operation and negotiations with Government authorities and the carriers. A condensed report of their work will be presented at this meeting.

In closing I desire to express my appreciation and that of all your officers for the support and consideration you have given to our efforts to serve you. Your presence here and active participation in the study of these problems indicate your approval of our present general policy.

With full recognition of our responsible position in the industrial life of America may it be that we shall make of this American Paper and Pulp Association a genuinely constructive business organization with vision to see, courage to grapple, and intelligence to solve the problems that are bound to confront us from year to year.

#### SECRETARY-TREASURER'S REPORT

The following is the report of the secretary-treasurer, kindly prepared by L. B. Steward who occupied that position until about six weeks ago when he was succeeded by Dr. Hugh P. Baker:

Realizing the desirability and necessity for a comprehensive record to preserve the continuity of the annals of the Association, and to fully acquaint its members with the developments of one of the most interesting periods since its organization in 1878, this report is presented somewhat at length and in sufficient detail to make the history complete.

#### Introduction

The record of the work and accomplishments of the Association during the fiscal year just closed is marked by an abrupt change in conditions as compared with the previous fiscal period.

Our activities of the year Nineteen Eighteen were necessarily dominated by the great world war. The paper industry was essential in every avenue of war as well as domestic activities; and, after a most restless and intense period of over a year and a half, had somewhat adjusted itself and become more or less accustomed to the unprecedented conditions which, it was probable, would continue for months and perhaps years.

There was no expectation that the war would end in the Fall of 1918, it being generally conceded that hostilities would continue through the winter, with hope, if not expectation, of a decisive victory for the Allies in the Summer or Fall of 1919. The stage was accordingly set for an extended performance; but there were unknown forces working behind the scenes, and, on November 11, 1918, almost without warning, the final curtain was rung down and the lights of war extinguished on an audience, confused and confounded, in its return to Peace and Normality, by the dark and unfamiliar avenues of readjustment and reconstruction.

#### New Responsibilities

In full realization of the new responsibilities thus thrust upon us, our president, in his call of December 9, 1918, for the forty-second annual meeting of the association, wrote as follows:

"The many problems that confront us in bringing about peace conditions demand the earnest thought and careful consideration of every one of our members. We are not dealing wholly with a return to peace as it existed before the war. Changed conditions necessitate readjustment and reconstruction along many lines."

#### Necessity for Reorganization

Our executive committee, moved by the same sense of responsibility, and recognizing the advantages gained by co-operation during the war, began early in January, 1919, to give earnest thought and consideration to the necessity for reorganizing and readjusting the affairs of the American Paper and Pulp Association in keeping with the changed conditions.

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### New Articles of Association

New articles of association, with a broader declaration of purposes, were prepared and finally adopted at the annual meeting, February 6, 1919. A copy of the articles will be found elsewhere in this report.

### Developments Under New Articles of Association

*Article 2, Purpose (a).* "To encourage and bring about, wherever possible, the organization of individual manufacturers in each branch of the industry into live working associations, and to induce such associations to become members of this association."

### New Organizations

Prompted by this declaration, there has been organized during the year the following:

Cardboard Manufacturers' Association, Waterproof Wrapping Paper Manufacturers' Association, Toilet Paper Converters' Association, Book Paper Manufacturers' Association.

All of the above associations are members of the American Paper and Pulp Association. In addition, The Grocery Bag Manufacturers' Service Bureau became affiliated with us in August of this year as an "Organization Member." In February, 1919, the Waxed Paper Manufacturers' Association was changed from a "dependent" to an "independent" association, with its offices removed from the Association rooms to 505 Fifth Avenue, under the direction of a paid secretary.

*Article 2, Purpose (b).* "To make a study of, gather and disseminate to its members information upon the Relations of Government to the Industry; the Relation of the Industry to Labor; Encouragement of Safety and Welfare Work; Vocational Training; Legislation Affecting the Industry; Conservation of Paper Making Materials; Forest Protection and Timber Supply; Development of Water Power and Storage of Water; Problems of Transportation, and other matters of general interest."

### Standing Committees

To make possible, and facilitate, the work provided for by the enlarged scope of activities, the president, empowered so to do by the executive committee, appointed standing committees on some of the most important subjects: Industrial Relations; Forestry; Education; Tariff; Income Tax, and Foreign Trade.

With the same impetus that actuated united and cooperative war activities, these committees embraced the opportunity placed in their hands to formulate and recommend constructive policies for the guidance of the industry in the return to peace conditions. Further reference to the accomplishments of these committees will follow later in chronological order in this report.

*Article 2, Purpose (c).* "To study, formulate, and urge the adoption of proper cost accounting systems appropriate to the requirements of its members."

### Cost Association of the Paper Industry

The cost association is the outgrowth of the cost section of the American Paper and Pulp Association, and, under its auspices, was formally organized at a convention held in Buffalo, New York, December 12 and 13, 1918. Headquarters were arranged for in the offices of the parent organization, and for the first five months its affairs were looked after by the executive committee, assisted by Mr. S. L. Bush and Mr. L. B. Steward, acting secretaries.

The form of organization provides for a president, not more than four vice-presidents, secretary-treasurer, executive committee, and committee on cooperation.

To the first call for membership, made shortly after the Buffalo convention, sixteen mills responded. Ninety paper and pulp manufacturers and converters are now on the membership roll.

In May, 1919, the association was fortunate in securing the services of Mr. M. F. Peterson as secretary-treasurer, whose keen conception of the purposes of the organization, and its ultimate possibilities of service to the industry, has, in a large measure,

made possible the satisfactory developments of the last year. Mr. Peterson resigned February 1 to accept an important position with the United States Envelope Company. He was succeeded by Mr. J. M. Allen, the present secretary-treasurer.

The association encourages local divisions, four of which are now well established in paper and pulp mill centers; and group committees for the advancement of better cost accounting in individual branches. It publishes at irregular intervals a bulletin which serves as a chronicle of association activities and as a medium for the exchange of cost accounting news and information. Co-operative work with universities teaching advanced accounting and business administration has been initiated.

The purposes of the organization, outlined in the following paragraph, should command the attention and interest of the entire industry:

**PURPOSE:** The cost association of the paper industry was organized for the purpose of bringing about co-operation to a high degree among manufacturers of pulp and paper and converters of paper, to the end that there might be developed, in every plant, a cost system that will furnish proper methods of control leading towards economies in cost of production; and to assist in making the future of the industry economically secure through the promotion of the sound business principle of taking into prominent consideration costs, accurately determined, when making selling prices."

*Article 2, Purpose (d).* "To foster the study and development of knowledge regarding the technical processes of manufacture and all improvements developed from time to time."

### Technical Association of the Pulp and Paper Industry

This association was organized February, 1915, by certain men in the industry, who felt the need of technical research methods as an adjunct to the more or less crude practices which had heretofore obtained.

It has been, and will continue to be, conducted as an independent entity; but, following the above provision, close and more intimate relations have been established, and Technical Association is now an "Associate Member," and its president sits on the Executive Committee of the American Paper and Pulp Association.

The proceedings of the last annual meeting of the association are undoubtedly familiar, or should be, to those interested in technical work. They were published under the caption "Technical Association Papers, Series 2," and were quite liberally subscribed to through the offices of the American Paper and Pulp Association.

*Article 2, Purpose (e).* "To encourage the development of an organization with the association for exchange of views upon sales methods."

This particular declaration was prompted by a suggestion made by Mr. L. B. Steward in a letter, dated February 14, 1918, to the President of the Association, Mr. George W. Sisson, Jr. This letter gave evidence of the necessity for more intelligent sales methods in the industry; proposed a salesmen's organization, and outlined certain functions that might properly and profitably be employed by such an association.

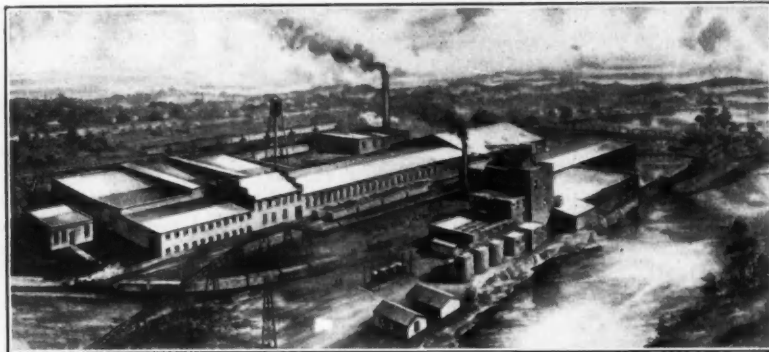
Within sixty days from the date of this letter our country was at war, and this matter, together with other proposals of greater and less importance to the industry in times of peace, was relegated to the file labeled "for future reference."

It was revived, however, in due time, perhaps largely as a result of the period of business stagnation following the signing of the armistice; and, on July 23, 1919, the executive committee, by resolution at its regular quarterly meeting, authorized the secretary, under the direction of the president, to initiate action for the organization of such an association.

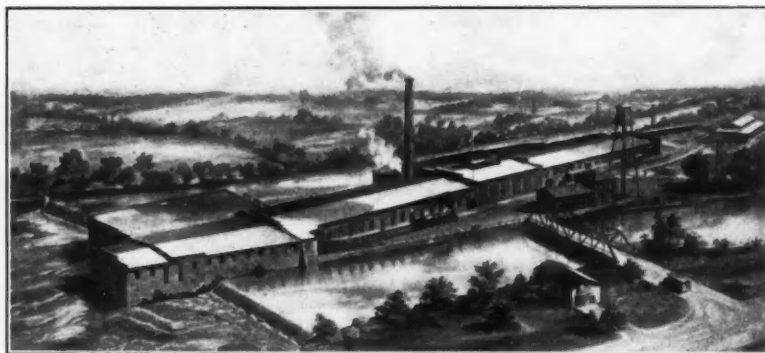
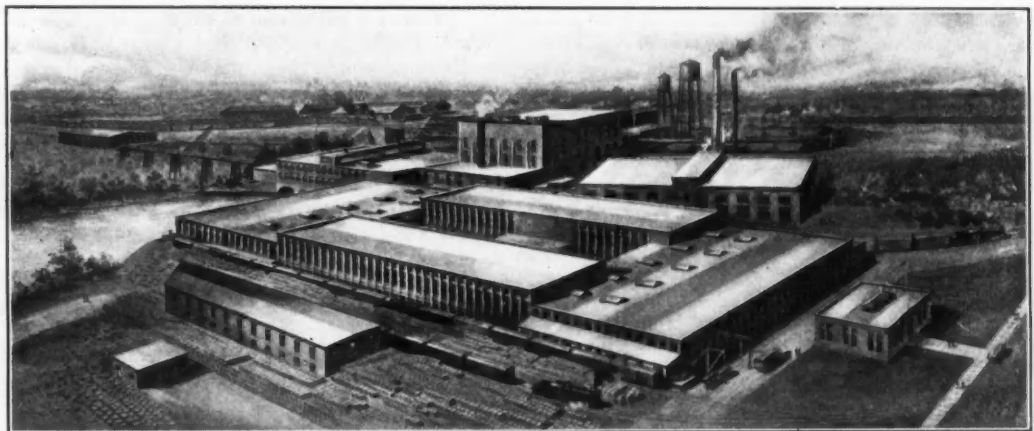
In pursuance of this resolution, twenty representative salesmen were called together on September 11, 1919, at which time

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a committee on organization was appointed. On September 27, 1919, the proposed organization was announced to all paper mills in the United States, and the various companies invited to supply names and addresses of their salesmen, or others eligible to membership.

On October 3rd the committee on organization held its second meeting and outlined tentative articles of association. A third meeting was held on October 15th, at which time plans were constructed for an organization meeting to be held in November during the week of the business conference of the American Paper and Pulp Association.

On October 16, 1919, the date of the organization meeting was announced for November 13, 1919, at the Waldorf-Astoria Hotel. It was voted to organize, and articles of association were adopted. Short addresses were given, suggesting a variety of activities for the new association, and a lecture on the psychology of salesmanship was delivered by a well-known author on the subject.

To provide for the conduct of affairs in the meantime, Mr. L. B. Steward was elected chairman and empowered to appoint an advisory committee to collaborate with him. Up to this writing 78 salesmen have enrolled as members. This report must go to press too early to include an account of the results of the annual meeting, which was held yesterday.

#### **Income Tax Returns, Timberland Questionnaire, Separate Questionnaire for Paper and Pulp Mills**

Following the co-operative activities of the National Lumbermen's Association with the Bureau of Internal Revenue in matters pertaining to the administration of the Income Tax Law, as it applies to forest industries, the bureau, early in June, 1919, requested the American Paper and Pulp Association to arrange a conference between one of its representatives and the manufacturers of pulp and paper who were owners of timberlands.

Accordingly, a meeting was called by the secretary on June 16, at which time representatives of twenty companies were present. The subject was presented by Major David T. Mason, Forest Valuation Expert of the Bureau of Internal Revenue, and after full discussion, a committee was appointed to attend a conference in Washington, in June 18, between owners of timberland and officials of the Treasury Department. Lumber interests of all parts of the United States were represented at this conference, which continued in session until June 27.

Much of the time was taken up in discussing the principles involved under the various headings of a proposed questionnaire, and in presenting logical arguments for the elimination of questions of doubtful value to either the tax-payer or the department. As the result of a true spirit of co-operation, which established confidence on both sides, practically all objectionable and unnecessary features were struck out; and by the middle of July the questionnaire, as finally agreed upon by the conference, was submitted to our committee.

In September the completed questionnaire was officially issued by the department to all timberland owners and forest industries for use by the tax-payer in connection with his income tax returns.

It developed at the Washington conference that the department felt the necessity for a separate questionnaire for pulp and paper mills, designed for the purpose of (a) the establishment of values of physical properties, and (b) the determination of general average annual rates for depreciation, inadequacy and obsolescence in connection with such physical properties.

Several conferences in relation to the proposed separate questionnaire were held between Henry E. Surface, Forest Valuation Engineer of the Bureau, and the president and secretary of the Association. Various members who had been consulted from time to time felt that the questionnaire would involve an immense amount of time and expense; that many of the proposed features were impractical and impossible of definite results; and the bureau

officials were advised of the doubt existing as to the ultimate utility of the questionnaire.

After the due consideration, however, the Government officials still felt that such a questionnaire was necessary, not only for pulp and paper mills, but for other industries as well, in order to enable the Bureau of Internal Revenue to justly audit the Income Tax Returns in the interest of both the Government and the tax-payer.

In a letter dated November 7, 1919, Mr. J. L. Darnell, head of the Natural Resource Division of the Treasury Department, requested the Association to co-operate in this matter. The subject was presented to the members at the Fall Conference, November 14, 1919, by Mr. F. L. Bell, on behalf of the Association, and Mr. Henry E. Surface, for the Bureau of Internal Revenue. The president was authorized to, and did, appoint a committee to confer with the Treasury Department at Washington.

This committee, consisting of fifteen members, met the following day and elected Mr. F. H. Macpherson as chairman. To facilitate the work a sub-committee was appointed, consisting of Mr. Macpherson, Mr. F. L. Bell, and Mr. George W. Sisson, Jr. This committee, at considerable personal sacrifice, prepared a brief expressing its views, and submitted it in person to the Treasury Department officials in Washington on December 12, 1919. The result of this conference is given in the following quotation from the report made by the sub-committee at the "open meeting" held at the Waldorf-Astoria Hotel, New York City, January 21, 1920:

"The Treasury Department representatives being, as above stated, of the fixed opinion that, in order to properly audit the accounts of the years 1917 to 1919, inclusive, and subsequent years, it was necessary that information which would exhibit sound valuations of property as of March, 1913, should be obtained; that, so far as possible, information, which would enable the determination of fair rates covering depreciation, inadequacy and obsolescence, should likewise be obtained to be used for proper application to the valuations of the properties of tax-payers subsequent to the above mentioned date, as well as in the determining of sound values as of March 1, 1913. Having regard to the needed requirements of the Treasury Department, your committee felt that it was in duty bound to acquiesce, to the fullest extent, in the request of the Treasury Department that the industry should collaborate with it in order that a questionnaire might be prepared, as simple in form as possible, and yet one that would obtain, to the greatest extent available, information bearing upon the subject matter of the questionnaire, as was in the possession of each respective tax-payer.

"A further meeting was held in New York, January 6 and 7, for the purpose of studying the rebuilt questionnaire. A considerable number of amendments were made to the questionnaire at said meeting, all with the purpose of making it as simple as possible in both form and language."

Further developments are given in the following quotation from the report of the committee, which was sent out to all pulp and paper mills in the United States on January 29, 1920:

"The committee which, on request of the Bureau of Internal Revenue, has represented the industry at the various conferences with the Treasury Department representatives, has, as a result of such conferences, become profoundly impressed with the necessity for, and the importance of, the furnishing, by the interested tax-payer, of the information called for in the proposed questionnaire, to the end that the Bureau of Internal Revenue may be enabled to administer the Income Tax Law in such manner as will insure both the Government and the tax-payer full protection against injustice or discrimination.

"After most painstaking study and analysis of the objects to be gained through the sending out of this questionnaire, the

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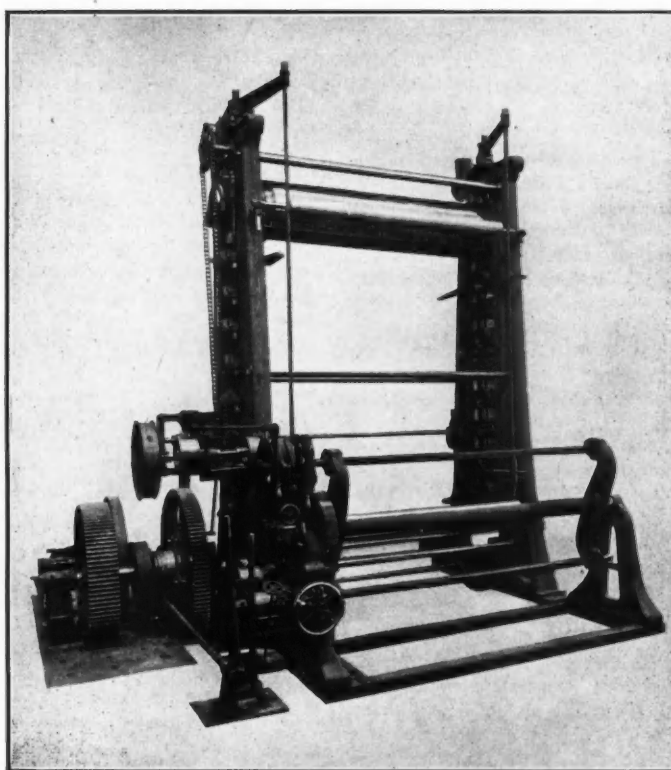
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Chilled Iron Rolls

EXTENSIVE BUILDERS OF

## Mechanical Filters, Both Gravity and Pressure Types

*If You Have a Water Proposition, Avail Your-  
self of the Advice of Our Filtration Engineers*

# NORWOOD ENGINEERING COMPANY

FLORENCE, MASS., U. S. A.

committee is of the opinion that, in its present form, every question, every table, and every column has a definite and practical use either for the determining of values or auditing of returns.

"The committee further urges that the greatest care should be taken by the tax-payer in the filling out of the tables and replying to the questions asked for. The work must be done thoroughly, and not perfunctorily, else the tax-payer may not receive the full benefit to which he might otherwise be entitled.

"The committee will endeavor to prepare a 'primer' in question and answer form, in further elaboration of the subject matter covered by the questionnaire, which primer will be mailed to all tax-payers as soon as ready, and the hope is expressed that it may prove of assistance.

"Assurance has been given the Bureau of Internal Revenue that the industry would as a whole, and individually, use its utmost endeavors to aid, to the fullest extent, the work of said bureau. May the committee rely upon each one to do his part?"

By the time this report is presented the questionnaire will undoubtedly be in general use. In undertaking the work of collaboration with the Treasury Department in this important matter the officials of the Association were fully conscious of their responsibility to the entire industry; and they, as well as the members of the Income Tax Committee, have at all times freely consulted with representatives of pulp and paper manufacturers, who are not members of the Association, in order to obtain the views, guidance and sympathetic co-operation of the entire industry. It is the general opinion of those who have given careful thought to this matter, and studied it in all its phases, that it is one of the greatest accomplishments of the Association in recent years; and that it will result in impressing the individual manufacturer with the vital necessity for intelligent and adequate accounting methods as well as an immense financial saving to the industry.

#### First Business Conference

On account of the action taken at the annual meeting of the American Paper and Pulp Association in February, 1919, changing the date of its annual meeting from February to April, a period of fourteen months would elapse before the holding of the next convention in 1920. For this reason a member of the Executive Committee suggested a fall meeting to bring the industry together for the discussion of general business conditions.

The matter was presented to the Executive Committee at its regular quarterly meeting on July 23, 1919, and after full consideration it was the unanimous opinion that such a meeting should be held, the definite date to be determined by the president and secretary after conferring with the affiliated organizations.

In pursuance thereof the president, on September 30, 1919, issued a call for a special meeting and business conference to be held at the Waldorf-Astoria Hotel, New York City, November 12, 13 and 14, 1919.

During the first two days, meetings of various affiliating organizations were held, and on November 13 the Salesmen's Association of the Paper Industry was organized.

The special meeting and business conference was held on Friday, November 14. The morning session was followed by a luncheon in the Astor Gallery, at which over three hundred were seated; the afternoon session was continued in the same room, with the members seated at the luncheon tables.

This was the largest and most interesting meeting ever held by the Association. The following is a conspectus of the proceedings, taken from the verbatim minutes:

#### Synopsis of Special Meeting and Business Conference of the American Paper and Pulp Association

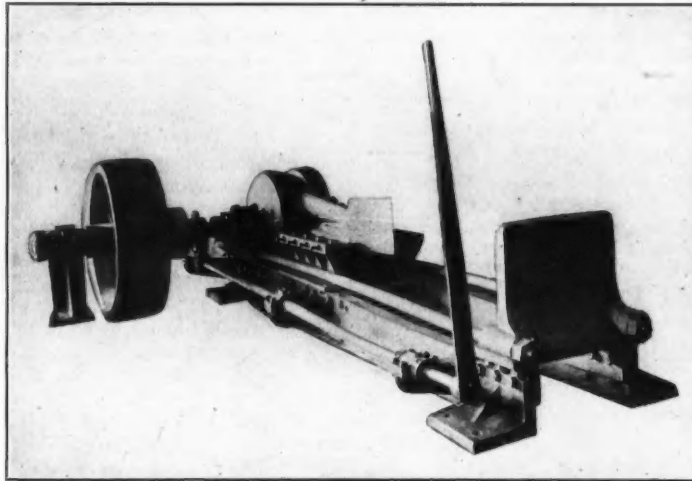
Friday, November 14, 1919, Waldorf-Astoria Hotel, New York City.

1. Conference called to order, 10:45 a. m., by the president, Mr. George W. Sisson, Jr., chairman.

2. Address of the president:
  - (a) Introduction.
  - (b) Activities of the Association:
    - Increase of membership by addition of:
      - 5 associations as "organization members."
      - 1 association as an "associate member."
  - (c) Review of committee work on following subjects:
    - Relations with National Industrial Conference Board;
    - Review of work of board; question of financial contribution toward support of board.
    - Industrial education.
    - Forest resources.
    - Cost association.
    - Tariff.
    - Income tax matters.
3. Voted: That the Articles of the Association be amended as suggested by the Association's legal counsellor, Mr. Henry A. Wise.
4. Forest Conservation.
  - (a) Report of chairman of committee (Mr. Frank L. Moore), entitled "Suggestions for a National Forest Policy, with Especial Reference to the Pulp and Paper Industry." (Report in printed form on file.)
  - (b) Discussion by Dean Hugh P. Baker, of the State College of Forestry at Syracuse.
  - (c) Discussion by Mr. Peters, of the United States Forest Service.
  - (d) Discussion by Prof. R. S. Hosmer, of Department of Forestry of the State College of Agriculture.
  - (e) Discussion by Mr. Alfred Gaskill, State Forester of New Jersey.
  - (f) Comments from Prof. A. B. Recknagel, secretary of the Empire State Forest Products Association.
  - (g) Discussion by Prof. Ralph H. McKee, of Columbia University.
5. Voted: That the report of the Committee on Forest Conservation, and its promulgation as the policy of the American Paper and Pulp Association, be adopted.
6. Address by Mr. Magnus W. Alexander on "The President's Industrial Conference."
7. Address by Mr. Frederick P. Fish on "Fundamental Principles Governing the Employment Relation."
8. Report of Committee on Industrial Relations.
  - (a) Report of Mr. Ernest Behrend, of the Hammermill Paper Company, read by the president.
  - (b) "An Experience in Industrial Democracy," by Mr. Frank H. Macpherson, of the Detroit Sulphite Pulp and Paper Company. (On file in pamphlet form.)
9. Report of Committee on Education, by Mr. D. E. Burchell.
10. Income tax returns:
  - (a) Address by Mr. Frank L. Bell on Timber Questionnaire.
  - (b) Address by Mr. Henry E. Surface, Valuation Engineer in the National Resources Sub-Division, on Valuation Questionnaire.
  - (c) Committee appointed consisting of:
    - Frank L. Bell, Glens Falls, N. Y.
    - H. R. Weaver, International Paper Company.
    - George Nelson, West Virginia Pulp and Paper Company.
    - B. E. Hutchinson, American Writing Paper Company.
    - Frank H. Macpherson, Detroit Sulphite Pulp and Paper Company.
    - F. S. Harrison, Halltown Paper Board Company.
    - John C. Schmidt, Schmidt & Ault Paper Company.
    - W. J. Raybold, B. D. Rising Paper Company.

ON THE SUBJECT  
**OF WOOD SPLITTING**

**LABOR** is constantly growing more expensive.  
**BETTER MACHINERY** must be employed to increase output.



An Economical Wood Splitter

Electric Motor May Be Readily Applied

**THE GIANT SPLITTER**

7½ h. p. ample for 4-foot wood  
10 h. p. gives generous factor of safety

**OPERATES WITH 15-INCH STROKE**

The largest pulp manufacturers are sending in repeat orders. One large manufacturer has already sent in **ten duplication orders** after installing the first.

*For particulars on this money-saving apparatus, write us.*

**THE APPLETON MACHINE COMPANY**  
APPLETON, WISCONSIN

Colonel B. A. Franklin, Strathmore Paper Company.

11. Report of Committee on Tariff, by Mr. Henry W. Stokes, chairman.

No general tariff legislation is contemplated until after the next Presidential election.

12. Adjournment, 5:25 p. m.

#### Resignation of Secretary and Appointment of His Successor

On December 1, L. B. Steward, secretary-treasurer during 1918 and 1919, notified the president of his resignation, to take effect at the end of the fiscal year, January 31, 1920.

The resignation was accepted by the Executive Committee at a special meeting December 19, 1919. Resolutions of appreciation and respect were adopted, and a copy presented to Mr. Steward.

A special committee, empowered to take definite action in the matter, engaged Dr. Hugh P. Baker, Dean of the New York State College of Forestry at Syracuse, as secretary-treasurer. Dr. Baker assumed the office March 1, 1920.

#### General

##### MEMBERSHIP.

The membership of the Association at the present time is 391 companies.

##### EXECUTIVE COMMITTEE.

The Executive Committee has held six meetings during the past year.

##### FINANCES.

The report of the Auditing Committee shows that the finances of the Association are in splendid condition. There are no outstanding obligations, and all dues and assessments for the fiscal year have been paid.

#### Service

##### STATISTICS.

Statistics covering certain branches of the industry are compiled by the Association and kept on file for the benefit of the members. Charts illustrating important statistics of the various branches of the Association are kept as a matter of record. The Association also compiles statistics in relation to the imports and exports of pulp and paper, and imports of pulpwood.

##### BULLETINS.

The number of bulletins issued during the year was 584, of which 465 were for the various divisional organizations; 174 bulletins were issued for the general association, 15 of which were considered to be of such importance to the industry that they were sent to all paper mills in the United States.

##### GENERAL INFORMATION.

The Association has received, during the past year, from members and non-members, including wholesale dealers, exporters, printers, etc., 683 requests for information on a variety of subjects pertaining to the pulp and paper industry. In every instance these requests have been given careful attention and the information supplied promptly.

##### IMPORT AND EXPORT INFORMATION.

During the year the Association furnished the members the following reports:

- Monthly comparative statement of the imports of print paper.
- Monthly comparative statement of the imports of wrapping paper.
- Monthly comparative statement of the imports of pulp.
- Annual comparative statement of the imports of wrapping paper for the last six months of 1914 to and including 1917.
- Annual comparative statement of the imports of print paper for the years 1910 to 1917, inclusive.
- Annual comparative statement of the imports of pulp for the years 1910 to 1917, inclusive.

#### FEDERAL TRADE COMMISSION.

The Association was represented by the secretary at the hearings of the Federal Trade Commission on matters of importance and interest to the paper and pulp industry.

#### Cooperative Activities

##### NATIONAL INDUSTRIAL CONFERENCE BOARD.

The Association is a member of the National Industrial Conference Board, which is composed of twenty leading national associations of manufacturers. The board, as its name indicates, directs its activities to the broader national questions of interest to manufacturers.

The American Paper and Pulp Association is represented on the National Industrial Conference Board by Mr. A. B. Daniels, Mr. C. A. Crocker and Mr. George W. Sisson, Jr. During the past year the secretary has attended several of the open meetings of the board held in New York City.

##### CHAMBER OF COMMERCE OF THE UNITED STATES.

The Association is a member of the Chamber of Commerce of the United States, Washington, D. C.

#### REFERENDA.

By virtue of its membership in the Chamber of Commerce of the United States, the Association has, during the last year, voted on the following referenda:

No. 26. Report of the Federal Trade Committee of the Chamber regarding trust legislation.

No. 27. Report of the Committee Regarding Principles of Industrial Relations.

No. 28. Report of the Committee on Railroads on Remedial Railroad Legislation.

##### NATIONAL SAFETY COUNCIL.

The Association is a member of the National Safety Council in the work of which many of our members are actively interested and engaged. There are 126 paper and pulp mills in the United States on the membership records of the National Safety Council.

#### General Organization Work

##### BABSON STATISTICAL ORGANIZATION.

The Association subscribes for the service of the Babson Statistical Organization under an arrangement by which the members of the Association receive a discount from the regular rates. Thirty-two members have taken advantage of this service and are regular subscribers through the Association.

##### BROOKMIRE ECONOMIC SERVICE.

The Association subscribes to the above service for the benefit of twenty-two members.

##### PROUDFOOT'S COMMERCIAL AGENCY.

The Association is a subscriber to Proudfoot's Commercial Agency. During the past year many of our members have taken advantage of this means of obtaining reports on various companies, organizations and associations.

#### LIBRARY.

The most complete library of its kind, comprising books and publications on matters relating to the pulp and paper industry, is maintained in the Association rooms. During the past year 208 publications have been added to the library.

##### MEETINGS IN THE ASSOCIATION ROOMS.

During the year seventy-six meetings have been held in the Association rooms, No. 18 East Forty-first street, New York City. The total number in attendance was over seven hundred.

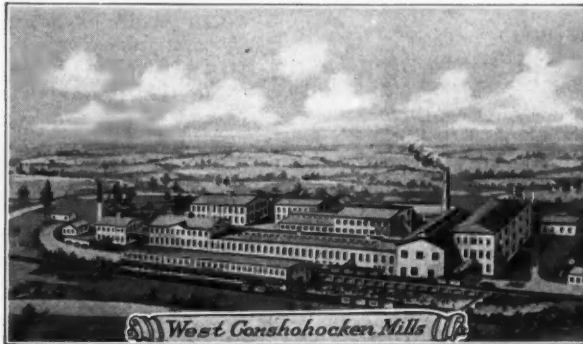
#### LIST OF MEMBER ORGANIZATIONS.

1. Binders' Board Manufacturers' Association.
2. Book Paper Manufacturers' Association.
3. Card Board Manufacturers' Association.
4. Cover Paper Manufacturers' Association.
5. Glazed and Fancy Paper Manufacturers' Association.
6. Grocery Bag Manufacturers' Service Bureau.
7. Pulp Manufacturers' Association.
8. Tissue Paper Manufacturers' Association.

# PAPERS THAT PROTECT

*Mills and Factories*

**Bridgeport, Pa.**  
**Elsmere, Del.**  
**W. Conshohocken, Pa.**  
**Chicago, Ill.**



*Mills and Factories*

**Boston, Mass.**  
**Toronto, Canada**  
**London, England**  
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Where Our Protective Papers Are Made

A Mark of Quality



A Sign of Service

## PROTECTIVE PAPERS

**Glassine**

**Greaseproof**

**Parchmoid**

**Vegetable Parchment**

**Filter Paper**

**Diamond-F** PROTECTIVE PAPERS are pure cellulose, free from oils, chemicals, waxes, metals, etc. They are made from the best raw materials obtainable. They are carefully inspected, purified, and prepared. Every operation is conducted in our own plants, which insures the highest grade products.

These papers have a tough, dense texture which provides folding or creasing without cracking. They can be printed or pasted. They keep out contaminating agents and preserve the original goodness of the product. Furnished in rolls, sheets, and circles. See your jobber or write us direct.

*Send for samples.*

# Diamond State Fibre Company

BRIDGEPORT, PA. (Near Philadelphia)

*Offices in Principal Cities*



9. Toilet Paper Converters' Association.
10. Vegetable Parchment Manufacturers' Association.
11. Waterproof Wrapping Paper Manufacturers' Association.
12. Waxed Paper Manufacturers' Association.
13. Wrapping Paper Manufacturers' Service Bureau.
14. Writing Paper Manufacturers' Association.

ASSOCIATE MEMBERS.

1. Cost Association of the Paper Industry.
2. Technical Association of the Paper Industry.

Respectfully,

L. B. STEWARD, *Secretary-treasurer.*

## REPORT PULP AND PAPER TRAFFIC LEAGUE

T. T. Webster, secretary of the Pulp and Paper Traffic League, read the following partial report:

In some ways it may be said that the Pulp and Paper Traffic League was not very active during 1919, but at the same time, the members of the Executive Committee feel that it well served its purpose, and that by continuing the League, even though it is comparatively inactive, the Pulp and Paper Industry has the benefit of a skeleton organization which can readily be marshalled into activity whenever conditions demand it.

At the time the League was formed, in January, 1919, the Railroad Administration had actively in hand the matter of canceling all exceptions to the various classifications. A large tonnage of pulp and paper is handled at ratings published in these exceptions, and their cancellation would have meant a considerable increase in rates. We went to the extent of employing C. R. Hillyer, an attorney who has specialized in commerce matters for many years, having formerly been an Attorney-Examiner in the Interstate Commerce Commission. He kept in very close touch with the matter at Washington for some little time. Other manufacturers were also going to be seriously affected by this proposal of the Railroad Administration, so in view of the very severe protests which were going to be made, if the Administration's plans were carried out, the matter was ultimately dropped by the Administration authorities. We feel that the Traffic League should receive considerable credit for the steps it took in this particular matter.

One of the suggestions in connection with new railroad legislation, was that an absolutely rigid long-and-short-haul clause be incorporated in the law. Without going into detail, I might say that in connection with the rates on pulp and paper throughout the Eastern part of the United States and Canada, there are numerous violations of the long-and-short-haul provision of the law which is known as the "Fourth Section." These departures, generally speaking, are all justifiable, and any change in the law which would have made them illegal would, no doubt, have resulted in their being corrected by increases in a great many rates. Having this in mind, the members of the Pulp and Paper Traffic League very actively protested to various members of the Senate and the House of Representatives. In our protests, we attempted to explain why the present Fourth Section which permits certain departures from the long-and-short-haul clause, is preferable to any rigid requirements. As in the other case, representatives of many other lines of industry also were opposed to a rigid long-and-short-haul clause, and they, likewise, took action toward educating the members of Congress along the lines of practical rate-making as opposed to theory. I am pleased to say that the final change made in the Fourth Section is quite satisfactory, and I do not think as a result of it there will be any changes necessary in the pulp and paper rates. While, of course, our League cannot claim all the credit for this result, nevertheless, what we did contributed materially to it.

Through the offices of the League, the Inspection Bureaus of the Eastern and Western railroads were able to get in touch with the Paper Industry, with a view to working in a cooperative

way with the industry toward standardizing practices as to loading paper of all kinds. Several conferences have been held, and another conference will be held in Montreal on April 14. The matter is not really being handled by the League for account of the paper manufacturers, but the League had considerable to do in making arrangements for the conference. The matter was taken up by the League, because of the fact that the Railroad Administration some months ago, instituted an investigation which had for its purpose the publication of rules and regulations to govern the loading of paper and had even gone to the extent of prescribing rules in some cases. Certain of these rules were impractical, and it was felt by the officers of the League, it would be much better for the paper industry to cooperate with the carriers, with a view to working out rules which would be mutually satisfactory, than to have the Administration establish rules which would likely be impractical and expensive in their operation.

While the Railroad Administration is no longer in control, it is our understanding that the Inspection Bureaus of the railroads are convinced of the advisability of continuing these conferences with the paper manufacturers, and no doubt, the committees which are at work, will be able to make a report to the Pulp and Paper Industry, as a whole, within the next few months.

## REPORT OF FORESTRY COMMITTEE

The following report was submitted by the Committee on Forest Conservation of the American Paper and Pulp Association:

### The Next Steps in the Forestry Program

The production of all kinds of paper in the United States in 1919 was nearly 6,200,000 tons, or 115 pounds per capita. In news print alone, one of the most essential of all commodities, the annual consumption has increased from 3 pounds per capita in 1880 to not less than 35 pounds in 1920. Increases in the use of other grades of paper have been equally striking and no one can set a limit to the possible extension of the field for paper products. It is most truly a Paper Age.

### Principles Approved

But as has been repeatedly emphasized, the bulk of the raw material for paper now is wood and probably will continue to be wood so long as wood can be obtained. The report of this committee submitted to you on November 14, 1919, which received your unanimous approval, attempted only to lay down the general principles which must be followed in any practical and adequate solution of the problem of a future timber supply so essential to this great industry. That report pointed out the proper share of responsibility to be borne by the timberland owners and by the public in maintaining our forest resources. We had 5,000 copies of the report printed and most of them have been distributed in response to widespread and continued demands for these suggestions for a National Forest Policy. Copies were sent to nearly all the English-speaking dailies of the United States by the Paper Committee of the American Newspaper Publishers' Association. Favorable comments upon the plans proposed have been numerous in addition to the passage of resolutions of similar character by other prominent organizations. Many well-known foresters have commended the principles set forth, and while editorial approval has been given in many publications, space prevents the quotation of more than typical illustrations. For example, after reviewing in detail the report to the Society of American Foresters entitled "Forest Devastation," made by the Committee for the Application of Forestry of that organization, the *American Lumberman* says: "The Forest Policy as recommended by the American Paper and Pulp Association is a much more feasible plan than that proposed by this Committee and is one in which foresters, timber owners and the public ought to be able to cooperate."

A leading editorial in the *World's Work* reviews the whole situation and then says:

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## Pulp and Paper Makers

DAILY PRODUCTION

600 TONS

Bleached Soda and Sulphite Pulps.

Machine Finished and Supercal-  
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Writings and Bond.

Music, Envelope, Tablet, Cover.  
Kraft and Express Wrappings.

**WE SPECIALIZE IN SPECIALTIES**

"In the furtherance of welfare and prosperity the public is faced with problems which are as urgent in demanding attention as is that of conserving our national forests. But there are few in which the application of a solution will more surely produce the desired result. Thus, the outlook is optimistic in this distressing situation of our shrinking timber supply. The solutions are at hand, governed by the laws of nature and formulated by forestry experts. It only remains to put these into intelligent operation in order to insure an abundant future supply of every sort of wood. The fundamental requirement is two-fold. First, it is necessary to protect the forests which we still have; and secondly, provision must be made for a future supply."

After stating the recommendations made by our Committee, the *World's Work* editorial concludes:

"It is upon these or similar lines that the State and National governments should cooperate without delay, and leave no effort unspared to restore the balance between, consumption and supply in this absolutely essential industry."

The most significant of all is a signed editorial by Dr. Fernow in the January *Journal of Forestry*, (the official organ of the Society of American Foresters), which says:

"The American Paper and Pulp Association at a business conference on November 14 accepted a report of its Committee on Forest Conservation with suggestions for a national forest policy. It takes the position that there is 'no basis for any legal compulsion upon the private land-owner to keep his land forested except in cases where after proper classification and indemnification it may be decided that the general welfare demands watershed protection,' but it admits that the private owner 'is under moral and legal obligation to handle his property in such a way that it does not become a public menace and the State may require him to conduct his cutting operations in such fashion as to lessen the fire danger.' It declares that 'the production of large-sized timber is too long an undertaking with too great hazards and too low a rate of return to attract private capital in adequate amount.' It advocates a forest survey and land classification; public purchase of cutover lands by National and State Governments in cooperation, and also more vigorous extension of Federal cooperation with the States in fire prevention: fair forest taxation laws: a very large programme of forest planting nurseries and working plans and other means of aiding reforestation operations, especially for smaller land holders; and a definite policy in operating State owned lands. It is also admitted that some paper and pulp concerns might practice forestry on their own lands.

"With this attitude and program we can certainly not find any fault. It expresses all that we have contended for as practicable means for carrying out a national forest policy. What we need now are definitely drawn acts of legislation."

#### Proposed National Legislation

Your Committee thoroughly agrees that the time has now arrived for definitely drawn acts of legislation and we therefore recommend that authorization be given the Committee to proceed immediately in the formation and introduction into Congress of a bill embodying an adequate National Forest Policy upon the general theory that in addition to the direct activities of the National Government a comprehensive forest policy requires cooperation of the States, since State forest reserves will contribute to National wealth and the products of such reserves will be used by States that are con-contributory. Hence aid in the State development of forest wealth available for inter-State consumption should be contributed by the National Government.

The National Forest Policy should therefore include:

1. A permanent annual Federal appropriation of \$1,000,000 to be expended in cooperation with the States, for forest protection, care and management, and the distribution of forest planting material. The annual expenditures from this fund in any State should not exceed the State appropriation for the same purpose

and the benefits of the law should be limited to States which comply with certain definite standards to be fixed by the Secretary of Agriculture in cooperation with the State authorities as to the methods of forest protection and regeneration to be instituted in the various localities.

*This is an item of expense and administration which while not directly chargeable to the investment account of our forest resources will greatly increase their value. This appropriation will not be sufficient after a short time and provision should be made for automatic increases up to a maximum of \$5,000,000 as the States qualify under the provisions for cooperation.*

2. An annual appropriation of \$500,000 to continue so long as necessary to enable the Federal Government to make a complete and accurate forest survey and classification of all lands now included within the boundaries of the National forests and to cooperate with the States and private owners upon a mutually contributory basis in the making of similar surveys and classifications of public and privately owned lands, to the end that accurate knowledge may be obtained as to kinds, character and quantity of existing timber stands, the areas which are better fitted to forest production than other purposes, and that such surveys and classifications may serve as the basis for an adequate permanent forest policy, National, State and individual.

*This is an item of proper expense which provides the necessary knowledge and basis upon which to make subsequent Federal and State investigations of lands suitable for timber growing. The work which has already been done in classifying the National Forests is a good start toward a forest survey and land classification for the entire country.*

3. A permanent annual Federal appropriation of not less than \$3,000,000 to be expended in the completion of the program contemplated in the acquirement of forest areas upon the watersheds of navigable streams in New England and the Southern Appalachians and the extension of purchases of land suitable only for timber growing to all parts of the country where areas best adapted to Federal management can be obtained.

*This is a direct investment account whose ultimate value to the Nation will be far in excess of the amount expended.*

4. The extension of general authority to the Secretary of Agriculture to exchange National forest land, stumpage or timber certificates for private timbered or cutover land within or adjacent to existing National Forests, it being the recognized permanent policy to continue the extension of National Forests through exchanges as herein provided or direct purchase of suitable areas as provided in paragraph 3 until the area of National Forests shall be at least 200,000,000 acres.

*This item, while not requiring any great expense, since the work involved will be done by the regular force of the Forest Service, will eventually add much to the value of the National Forests through a blocking up of holdings which will permit far more effective administration and operation.*

5. A permanent annual appropriation of at least \$1,000,000 for forest planting operations in the National Forests upon lands adapted to timber growing which will not become productive through natural agencies.

*This entire appropriation is a direct item of investment which eventually should yield good returns to the Nation.*

6. A permanent annual appropriation of \$500,000 for direct aid to forest research and investigation.

*Proper and effective use of all forest products and resources is impossible without continuous research and investigation. The expenditures proposed will yield in the aggregate a much greater return than the expense involved, since the information secured and methods of utilization devised will be of permanent value to the forest using industries and to the public.*

7. The extension of the Federal Farm Loan Act to include loans for a maximum period of fifty years for the purchase or improvement of forest lands cut over or bearing immature growth, for

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ORISKANY, N. Y.

FELTS AND JACKETS  
WOOLEN DRYER FELTS  
STRAINER CLOTH AND TUBE

holding or protecting such lands previously acquired, for reforesting land or the employment of any other measures designed to promote timber growth. Such loans to carry a specific obligation by the owner to retain the land in growing timber and to protect and care for it during the life of the loan according to definite standards of silvicultural management.

\* \* \* \*

*These recommendations cannot be criticized on the basis of the expense involved. They are exceedingly moderate in view of the magnitude of the problem to be solved, and represent true economy in the treatment of a basic national resource.*

To recapitulate, the initial yearly expenditure proposed in the foregoing items may be classified as follows:

For forest investment .....	\$4,000,000
For care of forest resources.....	1,500,000
For research and investigation of forest resources.....	500,000

Total .....\$6,000,000

The present annual appropriation for all the work of the United States Forest Service, including the protection and administration of 135,000,000 acres of National Forests, is only \$6,000,000, and over two-thirds of this amount is returned to the public in receipts from the sale of timber, grazing fees and other privileges. A conservative capitalization of the present values of the resources of the National Forests totals \$1,250,000,000.

Adding to the present Forest Service appropriation all the items above suggested would make the total annual National expenditure upon our timber supply less than one-half the cost of one modern fully equipped battleship and only one per cent of the capitalized value of the forest resources which are nationally owned. Surely no adequate proposal could be more modest!

**Proposed State Legislation**

That the practice of forestry is the only solution of the problem of developing non-agricultural lands has been accepted as a principle by the Federal Government which is actually practising forestry over considerable areas of the National Forests. This principle, which is basic in any economy discussion of the use of land, has not been accepted generally by the States, and little has been done to develop "Forest Land" so that it may contribute to State support.

Appropriations which in some States run into the millions of dollars are made annually for the development of agriculture. If it is fundamental that the agricultural lands shall share in the support of the State and therefore be aided by the State in development, it is equally fundamental that the forest land shall bear its share of the support of the State and that the State should develop all lands suitable for forest growth.

That the States of the Union may put into effect the principle that all land must be made as productive as its character will allow and that all land must share alike in the support of government, your committee recommends authorization to proceed in the formulation and introduction into State legislatures of bills which shall embody policies harmonizing with those suggested for the Federal Government but applicable to the special needs of the several States. Such bills should state clearly:

1. That it is a fundamental principle in State economy that the soil which is a basic wealth producer shall be made reasonably productive, either through the application of agriculture or forestry.

2. That while both agriculture and forestry deal with crops from the soil there should be a clear distinction based upon the fact that methods used in the production and utilization of the forest crop are fundamentally different from those applicable to farm crops. That the administration of the natural resources of the States should be under a conservation commission sub-divided into departments of forests, waters, fish and game, and that the men appointed by the commission to head these departments

should be especially qualified by education and experience to carry on the work of those departments in the most efficient manner, and to cooperate with the Federal Government in accordance with the plan proposed in the preceding section of this report.

3. That appropriations should be made and means given for a thorough survey of the State, that it may be known just what is forest land and what is agricultural land. Such surveys should be carried out in cooperation with, or through aid given by the Federal Government.

4. That the lands of the State should be so classified for the application of forestry that the forests necessary for protection of water supply or of slopes of hills and mountains of such character that it is unsafe to remove the forest cover, shall be acquired and set aside as parks, such forest parks to be dedicated to recreation and to the protection of the wild life of the forest. The remaining forest lands should be utilized both for direct returns from timber and indirect returns from game and recreation.

5. That protection of the forest from fire and other destructive agents is fundamental, and therefore organized fire protection should be State wide. Private owners should share an equal burden with the State in forest protective measures in proportion to the area of timber land owned and the amount of protection given. That the State be empowered to cooperate fully with the Federal Government in plans for fire protection.

6. That the commission and the various departments empowered to carry out the conservation laws of the State shall be given authority after due procedure to determine regulations necessary to protect and develop those natural resources. No State law should attempt to define methods and details of protection, management, etc.

7. That industries dependent upon the forest may be permanent in the State, there shall be such adjustment of taxes upon forest lands as will insure the permanency of the private ownership of forest land. This to be done either through the taxing of land and timber separately or by the timber tax being collected as a yield tax at time of cutting, or by the Federal Government through the State, or the State itself assisting in supporting county and town government, later to be reimbursed by the collection of the yield tax.

8. That assistance in the practice of forestry be given the private owner through the preparation of working plans, supplying of planting material, and supervision of silvicultural operations free of charge or at the lowest possible cost when requested. That provision be made for the State to take charge of reforesting operations upon private land, when requested to do so, the cost thereof to be a lien upon the crop, this lien to be discharged by the owner upon payment of cost and carrying charges at a low rate of interest. That the State be empowered to take over at a fair valuation and administer as part of the system of public forests, any land which after competent examination is classified as suitable for timber growing only in case the owner refuses to avail himself of the opportunities and assistance provided by the public to encourage forestry upon private lands.

9. That adequate support be given by the State to educational and experimental work in forestry, both that the State may appreciate the necessity of proper development of the forests and the vital character of the forests and their relation to water storage, fish and game, health and recreation and the great industries depending upon them.

10. That all State property under control of the conservation commission be capitalized upon the records of the commission in order that all expenses in connection with the development thereof and returns therefrom may be properly accounted for as in the other legitimate business undertakings, so that the people of the State who furnish the funds for the undertaking and enjoy its results may know at any time what their investment is and what yield may be expected therefrom.

Fred M. Temple, Prest.

Chas. D. Thompson, Treas.

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Your Committee submit the foregoing as their mature judgment as to the means best adapted to promote the maintenance of the timber supply and recommends that they be authorized to proceed upon their own initiative and in cooperation with other individuals and agencies to secure the passage of the legislation proposed and that funds be provided for the actual expenses of the Committee in carrying out this program.

D. A. CROCKER,  
W. E. HASKELL,  
R. S. KELLOGG,  
C. H. WORCESTER,  
FRANK L. MOORE, *Chairman*,

Committee on Forest Conservation of the American Paper and Pulp Association.

### REPORT OF THE COMMITTEE ON EDUCATION

When the Committee on Education was appointed last Summer and began its investigations it found there was great activity in all lines of education for the promotion of commercial and industrial training. Several of these activities have begun since the signing of the armistice. Some of them are movements to solve the industrial problem, some are to promote personal interest, some for private gain, some to get a new start after the depressed conditions of the war period. Each and all of these activities had merit and many of them worthy of heartiest support of industrial concerns and some of them could be immediately adapted and used by the paper industry.

At first it was thought that while they were adoptable and adaptable for the paper industry, much time and effort could be saved by laying out a plan particularly for the paper industry. When a plan is laid out to fit all industries it naturally lacks directness of purpose and economy of effort and sometimes fails to give satisfactory results. It was for this reason that the Committee believed it could serve the industry best by taking advantage of the various activities and design and install, for the industry, a plan of educational training which would touch at every point and every division of the country. Of course, the Committee had, as the basis of this, the excellent work in process by the Technical Association of the paper industry and by building around the Technical Association's work and utilizing their plan to the fullest extent our central Committee on education would be able to accomplish definite results in the shortest possible time.

There are two objections to this definite concentrated plan. First, that there were already too many educational activities along commercial and industrial lines which were being only partially used yet represented a considerable expenditure of money without satisfactory returns. Second, the laying out of a complete training plan for the industry would entail a considerable expense in addition to that which is being contributed to the Technical Association and the Committee felt it necessary to withhold any efforts along these constructive lines until it was sure the industry would not only feel justified in the financial support but, which is more important, would make extensive use of such a direct and definite plan when the work was done and put in operation.

Your Committee was prepared to report upon this plan last November but, as you will recall, was prevented on account of the congested program and having only five minutes to show evidence of progress. Since then several paper manufacturing concerns have taken active part in some of the industrial educational activities referred to and have made subscriptions for their support and expect to use their service. This leads the Committee to a plan of more reserved procedure; namely, to work between the paper manufacturing concerns and the promoters of commendable industrial educational activities. For instance, the Committee is collecting available data on each and all of the larger and more useful industrial training activities. It will prepare a brief description of each of these activities and be prepared to furnish such

information to members of the industry. Upon request it will co-operate with members of the industry in working out plans of training, using the organizations which are ready to serve the interest to advantage. The Committee will also work with educational organizations who are undertaking to serve the industry and help them to fit their training to the industry to the best advantage to the industry. The Committee will take an interest in all movements for commercial and industrial education whether public schools, universities, federal and state movements or what not and be prepared to serve the industry from the standpoint of their information and acquaintance with activities worth while.

Your President, in his report this morning, has emphasized the necessity of education and the importance of our taking an active part in shaping educational movements that they may serve better the young people who will enter industry as a life work. Your President has also pointed out several necessities for education as the best method of accomplishing co-operation and stabilization of the industry.

Your Committee on Education is aware of these many needs and possible value of education and training for the industry; it is only a question of the industry's awakening to the needs and possibilities of education as a means to the end.

Whatever is done by the Committee will be formulated and delivered to the Secretary-Treasurer of the Association where it can be utilized and passed out to the industry in the regular course of service rendered. Special reports may be had upon request. When a need is shown for more definite work by the Committee and a more constructive plan, the Committee stands ready to undertake whatever is to the best interests of the industry. In the meantime the Committee will conduct its general plan of research, co-operation, co-ordination and correlation of the industry's needs and the available educational facilities.

D. E. BURCHELL, *Chairman*  
G. E. WILLIAMSON  
S. A. UPHAM  
D. C. EVEREST  
KARL MATHIE

### REPORT OF INCOME TAX QUESTIONNAIRE COMMITTEE

Shortly preceding the business conference of the American Paper and Pulp Association held in the city of New York, November 14, 1919, representatives of the National Resources subdivision (Timber Section) of the Bureau of Internal Revenue (Treasury Department) Washington, D. C., made request of the officers of this Association, that it should, as representing the industry, collaborate with the said Bureau, in the consideration and preparation of a questionnaire which it was about to prepare for submission to all pulp and paper manufacturing and associated business. The *primary* purpose of the suggested questionnaire was understood to be (a) the ascertainment of the values of the physical properties of those corporations, firms or individuals, engaged in the manufacture of pulp, paper and collateral products, and, (b) the determination of what would fairly seem to be general average annual rates covering depreciation, inadequacy and obsolescence, of such physical properties; this information being required to check the accuracy of (1) the depreciation claimed as a deduction in the year 1917, and subsequent returns of annual net income, (2) all profits or losses reported on the sale of physical property, (3) the value of physical property for purposes of invested capital from year to year, and (4) the establishing of a fixed basis for the determining of these items for the future.

During the business conference above mentioned a committee was appointed by the executive committee of your association charged with the duty of studying the draft questionnaire there submitted by a representative of the government (Mr. Henry E.



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Lexington, Ky.  
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Philadelphia, Pa.  
Providence, R. I.





Surface, Valuation Engineer) and of collaborating with the Bureau of Internal Revenue, in its final preparation.

Upon careful study of the draft questionnaire (which document, as explained by the government representative, was more or less tentative) the Committee then appointed was unable, without further conference, to satisfy itself as to the *real* necessity therefor, or, in any event, that much of the information sought to be obtained, was really germane to the then understood primary purpose or object of the Bureau of Internal Revenue. It also appeared to the committee that the questionnaire as submitted in its original form would prove exceedingly burdensome and expensive to the individual members of the industry. Accordingly, a brief was prepared (copy of which has already been transmitted to all members of the industry as part of Bulletin No. 110), and submitted to the proper officials at Washington by a sub-committee.

The conference with the Treasury Department officials at Washington resulted in satisfying the sub-committee that there was a *real* need for much of the information covered by the questionnaire, and resulted, also, in a practical agreement to strike from the proposed questionnaire all information asked regarding (a) cost of inventories, (b) operating costs, and (c) that "associated business" should not be required to make reply thereto.

The Treasury Department representatives were of the fixed opinion, however, that in order to properly audit the accounts of the years 1917 to 1919 inclusive, and subsequent years, it was necessary that information which would exhibit sound valuations of property as of March, 1913, should be obtained; that, so far as possible, information which would enable the determination of fair rates covering depreciation, inadequacy and obsolescence should likewise be obtained, to be used for proper application to the valuations of the properties of taxpayers subsequent to the above mentioned date, as well as in the determining of sound values as of March 1, 1913.

Having regard to the needed requirements of the Treasury Department, the committee felt that it was in duty bound to acquiesce, to the fullest extent, in the request of the Treasury Department that the industry should collaborate with it in order that a questionnaire might be prepared, as simple in form as possible, and yet one that would obtain, to the greatest extent available, in the possession of each respective taxpayer in the industry, information bearing upon the subject matter of the questionnaire.

The committee, and its sub-committee, have held numerous meetings for the purpose of studying the rebuilt questionnaire, and a considerable number of amendments have been made, all with the purpose of making the questionnaire as simple and understandable as possible in both form and language.

A meeting was called in New York on January 21, of *all* members of the industry, (at which attended a considerable number of mill owners and executives) on which occasion the revised questionnaire was presented and discussed in very great detail. Representatives of the Government (Major David T. Mason and Mr. Henry E. Surface) were present and explained in general terms the needs of the Bureau of Internal Revenue, and the necessity of the questionnaire, from *its* standpoint.

The questionnaire, substantially in like form as presented at the above meeting, has been printed and is now being sent out to all pulp, paper and paper-board making concerns, accompanied by a letter from the Commissioner of Internal Revenue, which letter contains extracts from the interim report of the Income Tax Questionnaire Committee (Bulletin 110) and which, for purpose of emphasis, are repeated here:

"The committee which, on request of the Bureau of Internal Revenue, has represented the industry at the various conferences with the Treasury Department representatives has, as a result of such conferences, become profoundly impressed with the necessity for, and the importance of, the furnishing, by the interested tax-

payer, of the information called for in the proposed questionnaire, to the end that the Bureau of Internal Revenue may be enabled to administer the Income Tax Law in such manner as will insure both the government and the taxpayer full protection against injustice or discrimination.

"After most painstaking study and analysis of the objects to be gained through the sending out of this questionnaire, the committee is of the opinion that, in its present form, every question, every table, and every column has a definite and practical use either for the determining of values or auditing of returns.

"The committee further urges that the greatest care should be taken by the taxpayer in the filling out of the tables and replying to the questions asked. The work must be done thoroughly, and not perfunctorily, else the taxpayer may not receive the full benefit to which he might otherwise be entitled."

In furtherance of the intent of this committee to be of greatest service to the industry, a "Primer" in question and answer form, in further elaboration of the subject matter covered by the questionnaire, has been prepared which primer, as soon as printed, will be sent to members of the industry, regardless of whether they are members of the American Paper and Pulp Association or not. While all the questions that may possibly arise in the minds of the interested taxpayers have not been thought of, and answered, it is believed that the "primer" will be found exceedingly helpful. This, at least, is the hope of the committee.

At the risk of being thought self-congratulatory, the Income Tax Questionnaire Committee desires to say that it is of the definite belief that the work of this committee has resulted in the saving of hundreds of thousands of dollars to the industry as a whole. If the questionnaire had been sent out in its original form, the cost in time and money would, it is certain, have been many times greater than it will now be.

It is fair to say also with regard to the questionnaire, even in its present form, that the committee has advised the representatives of the Treasury Department that many of the answers to the questions propounded will be incomplete and unsatisfactory; but, in order that the requirements of the Treasury Department *under the law and regulations* may be fulfilled, it has been felt that these questions must necessarily be submitted, and answers made thereto, according to best information, by each taxpayer.

Assurance has likewise been given the Bureau of Internal Revenue by the committee that the industry would as a whole, and individually, to the fullest extent, aid the work of said bureau, and the committee confidently relies upon each one to do his part.

Before closing this report it is perhaps proper to say that the Treasury Department, in selecting the American Paper and Pulp Association to represent the industry as a whole, did so after careful thought and investigation and because of the fact that through no other channel could the diversified interests affected be so well represented. In all its activities the Income Tax Questionnaire Committee has had the welfare and interest of the entire industry at heart, and not any section or division thereof.

If those members of the industry, who are not now connected with the American Paper and Pulp Association directly, or through on or other of its several associated bureaus, believe that the action of the committee appointed by the American Paper and Pulp Association has rendered helpful and beneficial service, the committee will feel that ample recognition has been made, if, and when, the members of the industry outside the association "join forces" by affiliating with those who now make up the association.

The committee, in closing, wishes to place on record its thorough appreciation of the courteous treatment received from, and the open-minded attitude of, the representatives of the Treasury Department in the various conferences which have been had; and the committee desires also to formally recognize the very valuable and painstaking assistance afforded by Mr. H. R. Weaver, Mr. P. R. Browne, Mr. Frank L. Bell and Mr. John C. Schmidt, with

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particular recognition of the services rendered by Mr. Weaver in connection with the preparation of the "Primer," which has just been completed.

Respectfully submitted,  
F. H. MACPHERSON, *Chairman.*

### RESOLUTIONS ADOPTED

RESOLVED: That the American Paper and Pulp Association approves the report of the Committee on Forestry, which provides for Federal and State legislation, as follows:

#### Federal Policy

1. A permanent annual Federal appropriation to be extended in co-operation with the States for forest protection, care and management and other purposes pertinent thereto.
2. An annual Federal appropriation for a forest survey and land classification within the national forests and for co-operation with the States for surveys and classifications of forest lands.
3. An annual Federal appropriation for acquiring forest areas upon navigable streams and other lands suitable for timber growing, the same to be under Federal management.
4. The extension of authority to the Secretary of Agriculture for the exchange of certain forest resources for private timber or cut-over lands within or adjacent to national forests until the national forests shall embrace at least 200,000,000 acres.
5. An annual Federal appropriation for planting in the national forests.
6. An annual Federal appropriation for forest research and investigation.
7. The extension of the Federal Farm Loan Acts to include loans for the purposes of acquiring cut-over lands and other reclamations for forest purposes.

#### State Policy

1. That the soil shall be made protective through agriculture or forestry.
2. The creation of a conservation commission consisting of experts for carrying out the State policy and co-operating with the Federal Government.
3. A survey to differentiate forest from agricultural lands.
4. A separate classification of all forest lands necessary for the protection of water supplies and the acquisition of such lands.
5. The protection of forests from fire and other destructive agents.
6. The use of forest revenue for forestry purposes.
7. Authorization of the commission to make regulations for the protection and development of forest and other natural resources.
8. Adjustment of taxes to insure the permanency of forests under private ownership.
9. Assistance to private owners in the practice and application of forestry principles and an acquisition by the State of any lands suitable for timber growing in case of failure of owners to practice forestry.
10. State encouragement of educational experimental work.
11. That all State property under the control of the Conservation Commission be capitalized upon the records of the Commission in order that all the expenses in connection thereof and returned therefrom may be properly accounted for to the people of the various States.

WHEREAS, The restrictive Orders-in-Council, adopted at different dates, but now in effect in the provinces of Ontario, Quebec,

and New Brunswick, prohibiting the exportation of pulpwood cut on Crown Lands, unless manufactured into lumber, pulp, or paper, and withholding the raw material of the pulp and paper industry of the United States, which furnish a free and profitable unrestricted market for the product of the newsprint mills of Canada and which permit the exportation to Canada of raw materials like oil, sulphur, coal and cotton without impost or restriction, and

WHEREAS, The lessons of the mutual participation in the sacrifices and struggles of the great war teach the interdependence of neighboring nations, and the need of fair and equitable economic accommodations, and

WHEREAS, The Underwood Joint Resolution, so-called, provides for a commission of five, authorized and empowered to negotiate with the provinces of Ontario, Quebec, and New Brunswick, or with the Dominion of Canada, as may be necessary, the removal of the existing restrictions on Crown Land pulpwood for the purpose of establishing by friendly convention an equality of opportunity between the pulp and paper industry of Canada and that of the United States:

NOW THEREFORE BE IT RESOLVED, That the American Paper and Pulp Association in annual convention assembled does hereby pledge its full and unqualified support to the Underwood Resolution as the only practical measure yet presented to Congress for the safe-guarding of a great American industry and the future protection of the publishers of the United States, and

BE IT FURTHER RESOLVED, That the secretary of the association be and he hereby is instructed to print this resolution and to send a copy thereof to each member of the Congress.

WHEREAS, The character of the research work of the National Industrial Conference Board has been of great value to industry in general, and

WHEREAS, The National Industrial Conference Board is now widely recognized as one of the most constructive agencies in this country having to do with the solution of industrial problems,

THEREFORE, BE IT RESOLVED, That this Board merits our active co-operation and generous financial support and that the American Paper and Pulp Association contribute to the National Industrial Conference Board a sum not less than One Thousand Dollars per year, and

BE IT FURTHER RESOLVED, That the American Paper and Pulp Association urges each of its members to make individual contributions to the fund of the National Industrial Conference Board.

WHEREAS, The president of the American Paper and Pulp Association together with his officers have been painstaking and untiring in their efforts to promote the welfare of this association, and

WHEREAS, For these purposes our officers have given unremittingly of their time and attention,

THEREFORE BE IT RESOLVED, That the American Paper and Pulp Association hereby expresses to Mr. George W. Sisson, Jr., and to his corps of officers the appreciation of this association.

### VEGETABLE PARCHMENT ASSOCIATION

The Vegetable Parchment Manufacturers Association meeting was held Monday morning, April 12 at 10 o'clock and was presided over by W. R. Brunner, president of the Paterson Paper Company, Paterson, N. J., who was reelected president and chairman of the association.

At 1:30 a luncheon was had in the Empire Room, after which the second session was begun.

Trade customs were discussed among other things, and the members went into the legal phase of shipping. After this O. B. Towne, secretary and treasurer of the association, read his re-

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port which was followed by a lengthy discussion regarding the difficulties in obtaining raw material, pulp and waterleaf as affected by the present freight embargoes, strikes, and general scarcity.

This association is now compiling facts and figures of the volume of manufactured vegetable parchment on the market, which data will be accumulated through Mr. Townes' office for the use of the Tariff Committee of the American Paper and Pulp Association.

The Vegetable Parchment Association will look into the Federal laws governing the marketing of imitation vegetable parchment under the name of the genuine article, in view of the fact that several firms manufacturing these imitations are alleged to have indulged in this practice.

The association was then addressed by Stanley L. Otis, executive secretary of the Insurance Federation of the state of New York. Mr. Otis urged the members to join the Americanization movement of the National Board of Fire Underwriters. He said that the Federation has already secured the co-operation of many manufacturer associations, employers associations, chambers of commerce, trade organizations, labor unions and women's clubs in all parts of the country.

Resolutions adopted were:

1. To exercise any influence opportunity may offer for the suppression of disloyalty and the promotion of Americanism.
2. To support the widest possible dissemination of American ideals through the schools, the press, the pulpit and in public meetings.
3. That this organization co-operate with the National Board of Fire Underwriters in forwarding the Americanization movement for the preservation of the fundamentals of our government.

#### SALESMEN'S ASSOCIATION MEETS

L. B. Stewart of Shuttleworth, Kieler & Co. and former secretary of the American Paper & Pulp Association, presided as temporary chairman at the meeting of the Salesmen's Association, held Wednesday morning, April 14, in the Roof Garden of the Waldorf Astoria.

The report of the temporary secretary, F. W. Main was followed by five minute talks by George W. Sisson, president of the Racquette River Paper Company; Henry Stokes, president of the Wrapping Paper Manufacturers Service Bureau; John C. Schmidt of the Schmidt & Ault Paper Company, York, Pa.; S. E. Everest of the Marathon Paper Mills, Rothschild, Wis., and Robert E. Ramsey, director of sales promotion of the American Writing Paper Company, who gave sales suggestions and epigrammatic pointers on the profession of salesmanship. After these talks the members entered into a business session. A nominating committee was appointed after which the meeting adjourned for a buffet luncheon on the roof.

The afternoon session opened with a report of the nominating committee and the nominating of officers after which an address was made by the president of the association.

"Why Salesmen Should Co-Operate" was the subject of an excellent talk by Charles F. Abbott, director of publicity and sales research of the National Aniline and Chemical Company; former director of Sales Celluloid Company; assistant general manager of the Art Metal Construction Company, Jamestown, N. Y.; general sales and advertising manager of The Flintkote Company, Boston, Mass.; Co-organizer and ex-president of the New York Sales Managers Club; and co-organizer of the American Society of Sales Executives.

He was followed by an address by H. Gardner McKerrow, advertising manager of the National Aniline and Chemical Company, on the topic, "Salesmen of the Future," after which the meeting was adjourned.

#### BOARD SPECIALTIES ASSOCIATION

The Pulp & Paper Board Specialties Association met in room 106, Tuesday, April 13 at 10 A. M., and was presided over by H. E. Lindquist, secretary of the association.

The following resolution was favorably acted upon: Resolved that the present organization be continued as the Bristol Board Manufacturers Association with the following officials appointed to act with a view of constructing a permanent organization to be affiliated with the American Paper and Pulp Association:

Norman Harrower—President.

Page Wheelwright—Treasurer.

H. E. Lindquist—Secretary.

The following resolutions were voted upon and adopted covering the manufacture and sale of Index Bristols, to be made effective July 1, 1920:

1. Sealed in packages of 100 sheets for all sizes not larger than  $25\frac{1}{2} \times 30\frac{1}{2}$ .

2. Priced per pound.

3. The Trade Customs Stock Sizes shall be:

$20\frac{1}{2} \times 24\frac{3}{4}$

$22\frac{1}{2} \times 28\frac{1}{2}$

$25\frac{1}{2} \times 30\frac{1}{2}$

Any order other than in a stock size must be for not less than one ton in an equivalent weight and regular color.

4. *Weights*—Index Bristols shall be made in the following weight basis:

$25\frac{1}{2} \times 30\frac{1}{2}$  — 110 — 140 — 170 — 220

$20\frac{1}{2} \times 24\frac{3}{4}$  — 72 — 91 — 111 — 143

$22\frac{1}{2} \times 28\frac{1}{2}$  — 91 — 118 — 140 — 181

5. The variation of 5% in weight to constitute a good delivery. Standard Stock sizes to be billed at nominal weight.

6. Special weights lighter than  $25\frac{1}{2} \times 30\frac{1}{2}$  — 100 lb. base weight, and all intermediate special weights shall carry same ream price as next heavier base weight and shall not be made in lots of less than 3 tons.

For lots of 25,000 lbs. or more of one basis weight this rule does not apply.

(Signed H. E. LINDQUIST),  
Secretary

#### WRITING PAPER ASSOCIATION

The Writing Paper Manufacturers Association held its meeting Wednesday morning, April 14, in the East Room of the Waldorf-Astoria, and was presided over by secretary and chairman E. H. Naylor. Only routine business was discussed and the following officers were re-elected for the coming year: President, W. J. Raybold of the B. D. Rising Paper Company, Housatonic, Mass.; first vice-president, R. F. McElwain of the Crocker-McElwain Company, Holyoke, Mass.; second vice-president, Norman W. Wilson of the Hammermill Paper Company, Erie, Pa.; and secretary-treasurer, Emmett Hay Naylor, 18 East 41st Street, New York City.

#### TOILET PAPER CONVERTERS

The Toilet Paper Converters Association held its first annual meeting at 2:30 Monday afternoon, April 12, during which members generally discussed routine business.

All of last year's officers were reelected as follows:—John M. Ross of Utica, president; P. S. Wagner of Green Bay, Wis., vice president, and E. H. Naylor, secretary and treasurer.

Membership in this comparatively young association covers almost the entire converting field, there being but very few converters who are not members. The most important achievement of the association during the past year has been the organization

Z. T. HOLLINGSWORTH, *President*  
CHARLES VOSE, *Vice-President*

V. HOLLINGSWORTH, *Treasurer*  
ROBERT W. LENNOX, *Asst. Treasurer*



# Hollingsworth & Vose Co.

*Manufacturers of*

## Rope *and* Jute Manila Papers

Fourdrinier *and* Cylinder Sand

Electric Insulating Papers

Duplex Papers

Red Rope *and* Pattern Papers

Rope *and* Jute Tag, Envelope,  
Wrapping, etc.

*Special Papers for Special Uses*

Also Manufacturers of

**Iron Tag**

*and*

**NORFOLK**  
TOWELS

*Office*, 141 Milk Street, Boston, Mass.

Mills at East Walpole and West Groton, Mass.

(Daily Capacity, 90,000 pounds)

of the Toilet Paper Label Registration Bureau, with offices at 18 East 41st street, New York.

In operation it serves as a clearing house for all brand information. Any manufacturer may register his brand with the bureau, and may utilize the bureau to ascertain whether a proposed brand conflicts with any already established.

#### WAXED PAPER ASSOCIATION

At a meeting of the Waxed Paper Manufacturers Association held at 10 a. m. Tuesday in room 112, there were the Ohio Waxed Paper and Printing Company, Columbus, Ohio, and the West Carrollton Parchment Company, West Carrollton, Ohio, were admitted to membership. The meeting was presided over by President W. J. Eisner of the Newark Paraffine and Parchment Company of New York.

The difficulties of production as affected by the scarcity of labor, raw material and waxing stock in general were discussed, and a committee is to be appointed in the near future to look into the market with a view to facilitating the obtaining of raw material by waxed paper manufacturers. The chief cause for the present scarcity in the pulp field, it was said, is that approximately forty per cent of Canada's pulp is being sent abroad, thereby taking large quantities of material out of the American market.

Immediately after the meeting the twenty members present adjourned to room 142 where luncheon was served. There were no elections or changes in officers of the association, all elections being held last February.

The Wax Paper Manufacturers' Association held its second meeting Wednesday morning, W. J. Eisner, of the Newark Paraffine and Parchment Paper Company, presiding. Trade customs and cost systems were principally discussed.

The next regular meeting of the association will be held May 21-22.

#### GLAZED AND FANCY PAPER ASSOCIATION

The Glazed and Fancy Paper Manufacturers Association which met Tuesday morning at 10 o'clock in room 107, was presided over by William H. Shuart of Springfield, Mass., the association's president. In addition to the discussion of routine business, a change in the trade custom of granting 3 per cent discount for cash within thirty days, was voted on and altered to 2 per cent discount for cash within ten days.

The following officers were re-elected: William H. Shuart, Springfield Glazed Paper Company, president; Norman H. Fowler, Hampden Glazed Paper & Card Company, Holyoke, Mass., vice-president; Frank O. Walther, of Walther & Co., 72 Duane Street, New York City, secretary, and G. Frank Merriam of the Holyoke Card and Paper Company, Springfield, Mass., treasurer.

#### COVER PAPER ASSOCIATION

The Cover Paper Manufacturers Association met in the East Room of the Waldorf-Astoria Tuesday afternoon. No new business was brought up and the meeting was devoted to a discussion of trade customs and routine business. All of the old officers were re-elected for the coming year as follows: President, S. S. Rogers, Chemical Paper Manufacturing Company, Holyoke, Mass.; vice-president, Thomas Beckett, Beckett Paper Company, Hamilton, Ohio, and secretary-treasurer, E. H. Naylor, 18 East 41st street, New York City. The Executive Committee remains unchanged.

#### INCOME TAX COMMITTEE MEETS

The Income Tax Committee met Monday afternoon at 2 o'clock in room 107 and discussed the income tax problems as affecting the paper industry. An income tax primer compiled by the committee for use of members of the paper industry was discussed and prepared for presentation on Thursday at the general busi-

ness meeting of the American Paper and Pulp Association. The purpose of this primer is to explain the Income Tax Questionnaire.

#### TISSUE MANUFACTURES ASSOCIATION

The Tissue Paper Manufactures Association met in the East Room, Tuesday, April 13. Members discussed routine business and re-elected all officers for the coming year. They were: President, A. D. Coffin, of C. H. Dexter & Sons, Windsor Locks, Conn., who presided; vice-president, W. R. Hobbie, Phoenix Toilet and Paper Manufacturing Company, Phoenix, N. Y., and secretary-treasurer, E. H. Naylor, 18 East 41st Street, New York City.

#### CARD BOARD ASSOCIATION

The Card Board Manufacturers Association met in room 106, Wednesday morning, April 14. Each member present was called upon to give a summary of the conditions in his locality as regards labor and shipping, and the basis on which his company was accepting orders. In addition to this, routine business was discussed. All of last year's officers were re-elected for the coming year.

#### BOOK PAPER ASSOCIATION

At a meeting of the Book Paper Manufacturers Association held in the East Room, Monday, April 12, at 11 A. M., routine business was discussed and the only officer of the association, E. H. Naylor, secretary and treasurer, was reelected for the coming year.

#### PULP MANUFACTURERS' ASSOCIATION

A meeting of the Pulp Manufacturers Association which was better termed by H. H. Bishop, secretary of the association an "informal conference" was held in room 109, Wednesday morning, April 14. There was no election or other business of special importance.

#### WRAPPING PAPER SERVICE BUREAU

The Wrapping Paper Manufacturers Service Bureau met Wednesday morning, April 14 in the Roof Garden Sun Parlor of the Waldorf Astoria, A. J. Stewartson, secretary of the bureau presided. A discussion of routine business occupied the meeting.

#### SULPHITE BOND DIVISION

The Sulphite Bond Division met Wednesday afternoon, April 14, in the East Room. Routine business was discussed. All of last year's officers were re-elected.

#### MARKET FOR PAPER IN SERBIA

Paper towels are in quite common use in the hotels in Serbia. These towels are of Hungarian make and are imported from Budapest at a price of from 6 to 12 Hungarian crowns per hundred, according to the quality. (The present rate of exchange (February 27) is about 200 Hungarian crowns to \$1). Local dealers state that this price is too low to admit of successful American competition.

The toilet paper, imported from the same place, is proportionately cheap.

The market for paper bags and writing paper is fairly large. The opening for American goods along this line will depend entirely upon prices. Dealers, however, think that the rate of exchange (32 dinars to \$1) would be too great a handicap upon American goods. Prior to the war the high-grade writing paper came from England and France and the cheaper grades came from Austria. There were no imports of these goods from the United States.

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# "DRYDEN" KRAFT PULP

Extra Strong, Long, Pure  
Sulphate Fibre

Daily Capacity 120,000 Pounds

## KRAFT WRAPPING PAPERS SHEATHING

Daily Capacity 45,000 Pounds

**The Dryden Pulp & Paper Co., Ltd.**  
DRYDEN, ONTARIO, CANADA

J. B. BEVERIDGE, Vice-Pres. and Gen. Mgr.

# TECHNICAL ASSOCIATION MEETS

**Lengthy and Important Program Is Carried Out During Three Days' Session at the Waldorf-Astoria Hotel.**

**Raymond E. Hatch of Hamersley Mfg. Co. Chosen to Head the Association for Another Year—Interesting Symposium on Rag Selection and Cooking as Well as One on Extent to Which the Jordan Can Replace the Beating Engine in the Production of Paper Are Held—Numerous Helpful Papers on Important Subjects Are Read During the Convention.**

The fifth annual meeting of the Technical Association of the Pulp and Paper Industry was held at the Waldorf-Astoria Hotel from Tuesday to Thursday, April 13 to 15, 1920.

On Tuesday morning the standing committees held their meetings in the Myrtle Room and Room 151 of the Waldorf-Astoria, and it was not until Wednesday at 9:45 a. m. that the first general session of the Association was called.

After the address of welcome and the response, Raymond S. Hatch, of the Hamersley Manufacturing Company, Garfield, N. Y., the president of the Association, delivered his address.

#### President Hatch's Address

The time which has elapsed since our last meeting has been one of great activity for all the members of our association. The paper industry, like all other industries, is today faced with an increasing scarcity of labor, and is turning to its technically trained men for the solutions of problems, which to a great extent, were unsuspected until we entered the post-war period of readjustment.

Never before has the world so fully realized that the great mission of science is to learn the workings of the natural laws and interpret them for the lasting benefit of the human race. The right interpretation of these laws, whether in the field of physical, chemical or psychological science, places us in harmony with the universal law which governs the constructive advance of all nature, and in these trying times, the responsibility placed upon men of scientific training should be a source of sober thought and a resolve for a more nearly perfect realization of the ideal of industrial activity in which all men will find justice and joy in their labors.

As science increases its field of activity, the scientifically trained men in our industry must broaden the scope of their activities and interpret the natural laws, not only as applied to the operation of machines and processes, but also as applied to the relation of man to his fellowmen.

I cannot recommend to your favorable consideration too strongly the importance of this heretofore largely neglected branch of science.

Your Executive Committee has, at its meetings during the past year, given careful consideration to the growth and future development of our association. This will be fully covered in the committee's report.

There is one thing, however, I would recommend to your earnest consideration. A new grade of membership has been proposed, through which, it is hoped, the association will be able greatly to broaden the scope of its work, and I ask your hearty endorsement of this step.

Since the formation of our association, some five years ago,

our growth has been rapid, and the amount of valuable work done in the interest of the industry by our committees, and by individuals, is increasing daily. This growing activity in the technical field of the pulp and paper industry, places a new responsibility on our association; we must see to it that we have full control of the form in which the records of the work done are placed before the industry.

There is only one means by which this can be successfully accomplished, and this is through the publishing, by the Technical Association, of its own journal. It might be appropriate, to outline for your benefit, the possibilities of such a journal. In it, primarily, should be published all papers and proceedings of our association. There is also much data of general interest now published individually by the various member associations which make up the American Paper and Pulp Association. The journal I have in mind would serve as a medium for the spread of this information, and would place it in a form to be used for reference as could be done by no other method.

The pulp and paper industry is closely connected with the lumber, textile, and other industries and they would all find a common meeting ground in the kind of journal I mention. None of the journals at present published have the scope of the one which I have outlined, and I am sure that we can make such a piece of work stand out as an achievement well worthy of taking its place besides the splendid accomplishment of the Committee on Vocational Education.

The proper launching of such a venture requires considerable capital, and it largely rests with you to make it a success. I need hardly emphasize the financial soundness of the proposition. As an advertising medium it would be of the highest character and should attract the advertising of all materials which go to build up the pulp and paper industry. You will readily see that a journal of this character, under competent management, would not only become rapidly self-sustaining, but would soon prove a sound business investment.

In order to maintain the character of the journal I mention, at a high standard, it would be necessary to keep the control within the Technical Association, and to that end I would suggest some such plan as the issue of stock, to be taken up by the members of the Technical Association and their friends.

It has been roughly estimated that twenty thousand dollars would be sufficient to start the journal and put in on a paying basis. If this twenty thousand dollars consisted of two thousand shares of ten dollars par value each, every member would be able to invest according to his resources, and we should have no difficulty in providing adequate capital to carry the enterprise through.

There may be other and better means of financing this project. I have only suggested one possibility; the details of the financing

# BROWN'S Linen Ledger Papers



*It's all right! Don't worry!*

**I**T'S only a blot. The paper is Brown's Linen Ledger. A few scratches of the erasing knife and the blot will disappear in a fine powder. And the erasure can be written over with a fine point pen. The pen point won't stick or spatter, the ink won't run or blur. Brown's perfect writing quality extends clear through the sheet.

It pays to insist that your loose leaf ledgers and record books are made of Brown's Linen Ledger Paper. For, mark this well—a book made of cheap, inferior paper costs only 2 or 3% less than the same book made of Brown's Linen Ledger Paper. This is one reason it pays to recommend Brown's to your customers.

*Write for Brown's sample book  
and test the papers*

L. L. Brown Paper Company, Adams, Mass., U. S. A.



Established  
1850

plan can be easily worked out if it is your pleasure to take up what appeals to me to be the most important step we have before us in the near future.

In conclusion I wish to thank the members of the various committees for the loyal support they have given during the past year. The work they have done and the plans for future accomplishment place our association high in the ranks of the scientific bodies of the world.

#### Reports of Committees

Immediately thereafter a committee was appointed to consider the recommendations contained in the president's address, consisting of John H. Thickens, chairman; Henry E. Surface, Ross Campbell, H. P. Baker and R. S. Kellogg.

The report of the Executive Committee and that of the secretary-treasurer were read and accepted, and the following committee appointed to audit the books of the treasurer: E. C. Tucker, L. M. Yoerg and J. D. Rue.

W. W. Cronkrite was then appointed chairman of a committee to nominate officers for the ensuing year, and Fred A. Curtis and W. O. Johnson were appointed to act with him.

The following reports of the standing committees were reported by the respective chairman of each committee: Ross Campbell reported on "Abstracts of Literature"; Henry E. Surface, "Bibliography"; William A. Kelly, "Groundwood"; Edward P. Gleeson, "Heat, Light and Powder"; Frederick C. Clark, "Paper Testing"; George R. Wyman, "Pulp and Paper Machinery"; Martin L. Griffin, "Soda Pulp"; E. C. Tucker, "Standard Methods of Testing Materials"; Olai Bache-Wiig, "Sulphate Pulp"; Herbert G. Spear, "Sulphite Pulp"; George E. Williamson, "Vocational Education."

#### Election of Officers

At the Wednesday afternoon session the following officers were re-elected for the ensuing year: Raymond S. Hatch, president, the Hamersley Manufacturing Company, Garfield, N. J.; Robert B. Wolf, vice-president, Aeolian Building, New York, N. Y.; Thomas J. Keenan, secretary-treasurer, 471 Fourth avenue, New York, N. Y.

The Executive Committee elected consists of the following: Raymond S. Hatch, chairman; Robert B. Wolf; Henry E. Fletcher, Fletcher Paper Company, Alpena, Mich.; Frederick C. Clark, American Writing Paper Company, Holyoke, Mass.; Henry P. Carruth, Mead Pulp and Paper Company, Chillicothe, Ohio; R. S. Kellogg, and George E. Williamson, Strathmore Paper Company, Mittineague, Mass.

#### Symposium on Rag Cooking

The members next divided into two groups, one of which adjourned to Room 151, where E. C. Tucker acted as chairman of a Symposium on Rag Selection and Cooking which touched on 1—Selection of rags and their standardization. 2—Cooking of rags.

- a. Reasons for cooking and objects accomplished.
- b. The cooking liquor.
- c. The rotary boiler and drive, with special reference to any recent improvement, power consumption, etc.
- d. The factors of time and pressure and how cooking is influenced by them.
- e. The washing of rags in the boiler and their handling from boiler to washer.

#### Special Papers

Meantime the remaining members in the Myrtle Room read and discussed the following special papers: "Some Further Mill Trials on the Pulping of Second Cut Cotton Linters," by Otto Kress and Sidney D. Wells; "Testing Tearing Strength of Paper with the Elmendorf Tearing Tester," by Armin Elmendorf; "Fuel from Sulphite Waste Liquor," by George Barsky and Ralph H. McKee; "Grinding Woodpulp Efficiently," by A. F. Meyer, and

"Advantages of Liquid Sulphur Dioxide for Sulphite Pulp Manufacture," by Vance P. Edwardes.

A short third general session of the Association was held prior to recessing for attendance on the general meeting of the American Paper and Pulp Association in the Astor Gallery on Thursday shortly after 9:30 a. m.

#### Other Papers

The fourth general session convened at 2 p. m., and at this meeting the reading and discussion of the following papers took place in the Myrtle Room: George M. Trostle's paper on "Possibilities of Developing a More Efficient Method of Extracting the Soda Salts from Black Ash"; E. R. Barker's paper on "Improved Equipment for Sulphite Mills," which described a new type of limestone acid system; a new apparatus for automatic melted sulphur feed; an automatic alarm to show sublimated sulphur; a device for regulating the strength of acid in jenssen levers, and a system for controlling automatically the strength of acids from milk of lime systems. Next followed W. E. Byron Baker's article on "Methods of Cooking Control"; Stephen A. Staeger's paper on "Sectional Individual Motor Drive for Paper Machines"; John W. Brassington's article, "Application of Pragmatic Philosophy to Papermaking Industry," and "Some New Methods of Waste Sulphite Liquor Recovery," by Walter H. Dickerson.

#### Symposium on Jordan and Beater

At the same hour in Room 151 was held a symposium on the extent to which the jordan can replace the beating engine in the production of paper. The discussion was led by W. I. Nixon, of the Chemical Paper Manufacturing Company. Max Zimmerman, of the Charles Bolat Paper Mills, contributed a special paper on the same subject. A symposium was later led by T. F. Enderlein, of the Brompton Pulp and Paper Company, Ltd., East Angus, P. Q., and R. M. Radsch, of the Thilmann Pulp and Paper Company, Kaukauna, Wis., during which was discussed the recovery of black liquor with special regard to the most durable method of lining the smelters used in the sulphate recovery process.

#### PROVINCIAL COMPANY ON NEW BASIS

In the recent reorganization of the Provincial Paper Mills Company, Toronto, Ont., the name has been changed to Provincial Paper Mills, Limited, and in the distribution of stock, holders of common have three shares of the new for two shares of the old. The preferred shares are transferred on the basis of share for share in the new organization. The change involves an amalgamation of the Provincial Paper Company with the Port Arthur Pulp and Paper Company of Port Arthur, Ont., which is a subsidiary concern, the former holding a large percentage of the stock of the latter. The Port Arthur plant manufactures sulphite pulp, production being about 60 tons a day, half of which is bleached. The shareholders of the Provincial Paper Company will now receive directly what they have in the past received indirectly in dividends from the subsidiary company. The common stock has been increased from \$2,481,300 to \$3,500,000. The outstanding preferred shares stand the same as before at \$1,700,000. I. H. Weldon, president of the company, and S. F. Duncan, secretary-treasurer, have as trustees each been allotted 1,500 fully paid preferred shares, which carry an annual dividend of 7 per cent. The common since the first of the year has been on a 6 per cent basis, being raised from 4 per cent. The Provincial Paper Company will shortly move into its new and commodious offices on Simcoe street, Toronto, extensive alterations to the property, which was purchased for \$90,000, now being under way. The company turns out about 70 tons a day of book papers at its plants at Mille Roches, Georgetown and Thorold and is the largest producer of this line of paper in Canada.

# The Jessup & Moore Paper Co.

Philadelphia  
16 S. Broad St.  
Commercial Trust Building

## PAPER MAKERS

New York  
50 E. 42d St.  
Heckscher Building

Manufacturers of High Grade Paper

Book Papers

Specialties

Chemical Fibre



Augustine Mills

Rockland Mills

Delaware Mills

Kenmore Mills

Radnor Mills

## Advantages of Liquid Sulphur Dioxide In the Manufacture of Sulphite Pulp

In Addition to Simplicity of Operation and Control Liquid Sulphur Dioxide Has Other Important Advantages Over Elemental Sulphur When Used in Acid Making—All Sides of the Question Presented to Inform Pulp Men of the Present Situation and to Enable Them Intelligently to Estimate Prices They Would Be Willing to Pay for Liquefied Sulphur Dioxide.

Read at Meeting of Technical Association by Vance P. Edwardes, Engineer at Forest Products Laboratory, Madison, Wis.

Since the last meeting of the Technical Association more or less interest has been displayed in the use of liquid sulphur dioxide in the manufacture of sulphite pulp. This paper has been prepared with the idea of presenting such facts which are now available upon this subject.

The production of liquid sulphur dioxide from smelter smoke has long been recognized as a possibility, but previous to the world war no liquid sulphur dioxide from any source was produced in this country. Prior to 1914 the Forest Products Laboratory was using liquid sulphur dioxide obtained from Germany in cylinders of approximately 200 pounds capacity. It was some time after the institution of the blockade before we were able to obtain the liquefied gas in this country. There are now, however, at least two concerns manufacturing this material from elemental sulphur, though upon a small scale, so far as pulp manufacture is concerned, and one smelter producing something in the neighborhood of fifty tons of liquid sulphur dioxide per day.

Fumes from smelters operating upon pyritic ores carry anywhere from 0.5 to 3 percent sulphur dioxide in the gas stream emanating from the main stack. However, from certain of the smelting operations, such as sintering, roasting and converting gas of much higher concentration is obtained. Gas from this source is naturally selected for liquefaction inasmuch as high concentrations of sulphur dioxide require less total amount of gas per pound of product.

### Process Employed

The process employed follows rather closely the procedure outlined by Hanish and Schroeder and patented by them in Germany. The patent, however, expired sometime ago. The flow sheet and following description will serve to clear up the main points at least. The gas is first cooled, then passed through dust scrubbers which remove nearly all of the suspended solids and much of the sulphuric acid mist. In modern plants the Cottrell electric precipitator would very satisfactorily handle this step of the process. After cleaning, the gas is passed into absorption towers where as strong as possible a solution of sulphur dioxide and water is made up. In actual operation, the strength of this solution tests in the neighborhood of 1 percent. The sulphur dioxide is next recovered from the water solution by the application of heat and agitation, is cooled, dried and compressed to 60 to 75 pounds, and cooled again to 20° Cent., at which temperature it is liquified. Another method patented by Moulin and Vardini<sup>1</sup> comprises the direct cooling and liquefaction of the entire gas stream, but has, as far as known, never been put into practice. The great disadvantage of this process lies in the enormous amount of inert gas which must be handled by the compressors. Other methods are that of Pictet, where sulphur dioxide is produced by the action of molten sulphur and sulphuric

acid. This method was used to some extent in France, as was that of Melsen's and Pictet, of freezing sulphurous acid solutions.<sup>2</sup> The solution of the sulphur dioxide in nonaqueous solvents, such as soya bean oil, has been recently patented in this country<sup>3</sup> and another method where the carrying media is a silica jelly, is being developed.

### Difficult to Figure Costs on Plant

At the present time it is particularly difficult to figure costs on any plant, especially one of this type. Much, of course, depends upon local conditions, such as gas concentration, fuel and water supply, and what is very important the efficiency of the different units of the system. We, however, feel, and in this are borne out by others, that liquid sulphur dioxide can be produced at a cost of about \$10 a ton. The cost of tank car equipment must necessarily be included and nearly \$2 a ton will be added by this item, depending upon the storage capacity at each end of the line and the daily output. The smelter must naturally make a profit out of the operation, leaving but a small allowance for freight charges. However, for purposes of calculation, it is safe to assume that this material would carry the same rate as sulphuric acid, or about 15 cents to 18 cents per 100 pounds for a 150-mile haul. With the shippers owning the cars, a certain rebate would be allowed by the transportation company. Just how much this would amount to, however, I am unable to say.

The rate applying on the west coast is somewhat less than that just mentioned, being 12½ cents per hundredweight for a haul of about 145 miles.

### Value of Liquid Sulphur Dioxide

The value of liquid sulphur dioxide for acid making and its advantages in cooking are to a certain extent unknown quantities, though it can certainly be assumed that it is worth in excess of its equivalent weight in sulphur. That is, if sulphur costs \$24 a ton at the mill liquid sulphur dioxide is worth more than \$12. Neglecting any of the chemical advantages due to the use of liquid sulphur dioxide, it is estimated that mechanically the decreased handling charges and simplified operation alone would permit \$15 being paid for this material.

In addition to simplicity of operation and control, we feel that liquid sulphur dioxide has other and more important advantages over elemental sulphur when used in acid making. These may be briefly enumerated as follows: Freedom from sulphuric acid and sublimed sulphur; elimination of burners and coolers; smaller piping necessary and that of iron; stronger acid and shorter make-up time due to the more concentrated gas, and the advantage which would be gained in the summer by the acid plant

<sup>1</sup>Molinari's *Industrial Inorganic Chemistry*, p. 245.

<sup>2</sup>Richter & Moore, U. S. Patent 1,315,189; see also *Paper Industry*, October, 1919, p. 536.



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being independent of the cooling water. With the exception of sulphuric acid and acid strength, the other points have been considered in the above estimate.

#### Sulphuric Acid Causes Loss

Sulphuric acid most frequently causes a loss of twenty pounds of sulphur per ton of pulp in addition to the lime which is precipitated out.<sup>5</sup> On the above basis this amounts to thirty-five pounds of calcium oxide per ton. The material loss from these items alone can easily amount to 35 cents a ton of pulp made, and in many cases is doubtless more. In addition to actual monetary loss, indirect, and more serious losses are incurred due to the cost of cleaning the acid system and piping of precipitated lime, and the rapid depreciation of such equipment. A saturated solution of clear cooking acid can carry about twenty pounds of calcium sulphate in the liquor per ton of pulp. This is precipitated at cooking temperatures and could easily form a protective coating over the ends of the chips, effectually plugging the pores, and seriously retarding penetration by the cooking acid, thus causing unevenly cooked pulp. Doubtless, everyone has noticed "egg-shells," which appear at times in the finished sheet. These spots are calcium sulphate.

In pulping woods carrying even small amounts of pitch, the precipitated calcium sulphate offers a nucleus around which the pitch may collect and examination of pitch taken off the couch guard beard will show it to consist in the main part of mineral matter.

If the waste liquor is to be used for ethyl alcohol production, it has been found that sulphuric acid has a retarding effect upon the amount of sugar formed. This is possibly contrary to what would be expected from the ease with which wood is hydrolyzed by sulphuric acid in the production of alcohol from wood waste.

#### Effect of Increased Gas Concentration

The effect of increased gas concentration upon the speed of reaction and acid strength is well known, but deserves reiteration.<sup>6</sup> With a gas concentration of 100 per cent and at 20° Cent. and atmospheric pressure, the maximum amount of sulphur dioxide which can be dissolved in water is 10.8 per cent. With burner gases testing between 16 per cent and 17 per cent, approximately one-sixth or only 1.8 per cent free sulphur dioxide could be made. In addition, acid is usually made under a vacuum, thus further reducing the possible acid concentration. Before going further, I wish to explain the terms used above: By free acid in this case, is not meant the usual mill test "free," but true free sulphurous acid. As an example,—an acid which by the mill test analyzes 4.0 per cent total, 2.6 per cent free, and 1.4 per cent combined, actually has the following composition: 4.0 per cent total, 1.2 free and 2.8 combined. That is, the total amount of sulphur dioxide present is 4 per cent, sulphur dioxide in free sulphurous acid, 1.2 per cent and that combined with the bases 2.8 per cent. It would be possible then to make up an acid under atmospheric pressure and 20° Cent., using liquid sulphur dioxide of the following approximate composition, as indicated by the mill test. Total 13.2 per cent, free 12.0 per cent and combined 1.2 per cent. In comparison with this, using a 17 per cent gas at 16° Cent., and atmospheric pressure, the limit of solubility was reached when the mill test showed 4.0 per cent total, 2.8 per cent free, and 1.2 per cent combined.<sup>7</sup>

Assuming that it was not possible for any reason to use all liquid sulphur dioxide in the acid plant it still would be very

advantageous to fortify the burner gases with this material. In such a case it would probably be best to introduce the sulphur dioxide into the burner gas stream at the beginning of the coolers, thus obtaining the cooling effect of the expanding gas. Most important, however, would be the advantage derived from the increased acid plant capacity without increased absorption equipment.

In acid making, then, we have several factors, the effect of which can be reasonably expressed in dollars and cents, and others which I feel to be of greater importance, but which are difficult to estimate.

#### Advantages from Use of Stronger Acids

The advantages arising from the use of stronger acid in cooking have been repeatedly proved. What the effect of cooking with an acid of 10 to 15 per cent total sulphur dioxide concentration means, I cannot definitely say. It would be expected that increased yield due to more even penetration would be obtained, together with a shorter cooking time and lower bleach consumption. Such experiments as we have made indicate that with an acid of double the sulphur dioxide concentration than that usually employed, the time was decreased by 25 per cent and the yield increased by 10 per cent based on normal yields. While these figures remain to be confirmed, they will serve as a basis for calculating the saving effected. With a digester making two cooks a day a reduction of 25 per cent in the cooking time would add three cooks a week to the mill output. The increased saving due to greater yields would amount to about 100 pounds on a cord of wood, or you would be getting 1,100 pounds for the cost of 1,000 pounds. In the case of a 10-ton digester, the weekly output due to shorter cooking time would be increased from 120 tons to 150, while the higher yield would add 15 tons, bringing the total to 165 or a 37½ per cent increase.

Liquid sulphur dioxide upon expansion absorbs about 94 British thermal units per pound, and it is conceivable that the cooling water for the relief lines could be used to supply at least part of this heat. Also, it would be possible to pass the cooled relief gases directly into the acid system, regulating the flow of gas from storage tanks to suit conditions. This, of course, would be impossible if the gas supply was obtained from burners. The reclaimed liquor would be collected in a separate tank and there would be no raw acid tanks.

Summer, with the temperature of the cooling water mounting upward, is generally looked forward to by the sulphite man as a time full of trouble. Because liquid sulphur dioxide upon expansion absorbs heat, hot cooking water will not have the same drawbacks as when sulphur is burned.

Against these advantages must be charged the various alterations necessary and the enlarging of the recovery system to handle the greatly increased amount of gas from the digesters. What this may amount to we unfortunately have not the data upon which to base any calculations, so must leave the problem to those who are in closer touch with mill conditions.

#### Smelter Man's Wishes

So far we have considered only the pulp mill side of the proposition. However, it takes two to make a bargain, and the smelter man's wishes must not be insulted. He must first be assured of a steady demand for a term of years at a fairly definite price before he can be induced to invest his capital in a plant for liquid sulphur dioxide manufacture. The proposition is new, and technical details will have to be worked out before the plant will be able to operate at anywhere near the highest efficiency. All this costs money and plenty of it, and while the smelters would be very glad to be able to dispose of their waste gases in such a manner, in many cases products other than liquid sulphur dioxide can be manufactured. Sulphuric acid, of course, offers the biggest field, both as a final product and when used in the

<sup>5</sup>A. S. Cosler, "Burning Gas Cooling"—*Paper*, 2-13-18, p. 19.

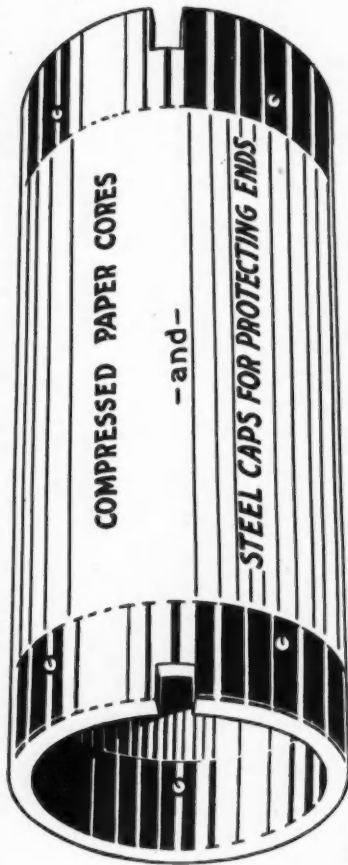
<sup>6</sup>Griffin, M. K., "Sulphur Dioxide Absorption Systems." *Paper*, February 13, 1918, p. 64.

<sup>7</sup>Barker, E. R., "Theory and Practice of Acid Making." *Paper*, February 13, 1918, p. 24.

<sup>8</sup>P. A. Paulson, "New Absorption Apparatus." *Paper*, February 13, 1918, p. 170.

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production of phosphate fertilizer. Then it is possible to reduce the fumes to elemental sulphur which, however, would probably be a drug on the market. Sulphur when manufactured into sulphuric acid returns at present a greater revenue per unit of sulphur than a price of \$15 a ton for liquid sulphur dioxide would allow, and the manufacturing costs are nearly the same. The argument in favor of the liquefied product is that the sulphuric acid market is subjected to rather violent fluctuations, while the pulp mill demand should be fairly constant.

#### To Inform Pulp Users

The foregoing has been written with the intent of presenting all sides of the question as fully as possible in order that the pulp men might be informed of the present situation, and enabled intelligently to estimate the price he would be willing to pay for liquefied sulphur dioxide.

## WANTS DAMAGES FOR ODOR FROM SULPHATE OF SODA

The hearing has commenced in the Superior Court in Montreal before Justice MacLennan, of an action in which Albert Joseph Brown, K. C., is suing the Canadian Paper Company for \$15,000 damages and asking for the issue of a writ of injunction which shall restrain the company from using sulphate of soda in the manufacture of pulp and paper at its works at Windsor Mills, Que. The action is one of great importance to pulp manufacturers, and undoubtedly the judgment rendered will be looked upon as a precedent.

Mr. Brown is the owner of a summer residence at Windsor Mills, and he complains in his action that he was deprived of the enjoyment of that residence during the summers of 1917 and 1918 owing to the disagreeable odors emanating from the defendants' works through the use of the chemical complained of.

The residential property in question has been in the possession of the Brown family since 1801. It is situated in grounds covering fifty or sixty acres, and since Mr. Brown came into possession in 1905 he has, he told the court, spent something like \$50,000 in improvements, including the laying out of lawns, planting some 500 Irish rose trees, and upwards of ten thousand shrubs. Previous to 1910, the company defendant, in the production of pulp and paper at its mills, used a chemical known as carbonate of soda, or soda ash, and there was no nuisance or inconvenience to the neighborhood therefrom. Subsequently, the company changed the chemical and used sulphate of soda, and as a result there arose offensive smells which menaced the health of the people in the neighborhood. The inconvenience suffered by plaintiff and his household was very great. They were forced to keep the windows on the south side of the house always closed. And as a matter of fact, during the summers of 1917 and 1918 they were not able to enjoy the use of the house at all.

There had been considerable negotiations between plaintiff and the company with the object of effecting a remedy, and an offer had been made to purchase plaintiff's property—excluding two small houses on the estate—for \$45,000; but plaintiff hesitated to part with the property in view of the fact that it had been in possession of the family for four generations. The correspondence between the parties was filed in the case, showing that all efforts to come to an amicable understanding had failed. A notarial protest was served on the company defendant in 1918; injunction proceedings followed, and finally the present action was taken.

It was supported by the evidence of upwards of sixteen witnesses, mostly residents of Windsor Mills, who described the odors from the defendants' mill as very disagreeable. Three doctors—Dr. Malcolm MacKay, of Sherbrooke, and formerly of

Windsor Mills; Dr. John MacAbe, and Dr. Joseph Champagne, of Windsor Mills—agreed that the odors were bad and detrimental to health.

Not all mills will be able to obtain a supply of this material, because a relatively small tonnage of pyritic ores are smelted in the pulp-producing centres. The total amount of liquid sulphur dioxide which could be manufactured is in excess of 2,200 tons a day, but by far the greater part of this is produced in the West. Upwards of three-fourths of the possible production is within easy shipping distance of the national forest areas, several smelters being on the forest borders.

Evidence for the defence is to the effect that while the odors from the discharged gases of sulphate pulp at the defendant's mill were not pleasant, nevertheless they were not injurious to health.

In addition then to obtaining a plentiful supply of wood at a reasonable price, together with power sites and plentiful water supply, pulp mills locating upon national forests would have the added advantage of being able to obtain liquid sulphur dioxide from smelters within easy shipping distance. It is entirely possible that this last feature will be one of the deciding factors in the establishment of pulp mills in the Rocky Mountain States.

One of the witnesses, a retired farmer, now living at Windsor Mills, and formerly engaged on a farm two or three miles from that town, at which distance he said the odors were "manifest," said they were not objectionable at all. In fact, he confessed to liking them, and at times he had found them of some practical utility inasmuch as in their varying strength they indicated a coming change in the weather. Judgment will be given later.

#### NO LABOR TROUBLE IN NEW YORK MILLS

Labor troubles in the paper mills of Northern New York this spring were practically placed beyond the bounds of possibility Sunday through the actions taken by union locals throughout that section. While the action taken on the referendum to determine whether the workmen would accept the offer of 20 per cent advance in wages made by the manufacturers was in the nature of a secret vote, information has leaked out that the paper makers gave a favorable vote which was almost unanimous. It is said that the pulp and sulphite workers also approved the proffered schedule.

The leaders of the unions presented for consideration by the manufacturers an agreement which carried a schedule demanding 25 per cent increase in wages to paper makers and from 30 to 35 per cent increases to pulp and sulphite workers. This was for the new agreement to be made effective on May 1. For some time there have been negotiations in progress over the demands, and finally the labor heads submitted the offer of 20 per cent advance all around to the workmen in all parts of the United States and Canada where their organization controlled. The vote yesterday sets at ease all feeling of unrest and means that the mills of the country will run smoothly over the period which in the past has frequently given rough traveling.

Some of the pulp workers now get as high as 60 cents an hour, while some get as low as 43 cents. A large percentage of the paper makers draw from 60 to 80 cents an hour, but there are special cases where as high as \$1.23 an hour is paid. Under the new agreement there will be a general advance of 20 per cent in wages in the paper and pulp mills effected. This applies specifically to union mills under working agreements, but the advance will be reflected upon mills not governed by working agreements.

Alvah Miller   Tom T. Waller   Arthur C. Hastings   Nathaniel L. Miller

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## Fuel From Sulphite Liquor

**Evaporations of the Liquor and Burning of the Concentrated Residue Under Boilers for the Generation of Steam to Supply Power and to Evaporate the Liquor Is Urged Because of the Growing Acuteness of the Waste Liquor Situation as Manifested by the Increasing Legislation and Improved Means for Burning Fuels That Do Not Ordinarily Give High Furnace Efficiency.**

Read at Meeting of Technical Association by George Barsky and Ralph H. McKee, Dept. Chemical Engineering, Columbia University.

Any method of getting rid of the sulphite waste liquor nuisance with a moderate profit or even with only avoidance of loss is of interest to many if not to all sulphite mills. The great developments of the last few years in boiler design and boiler practice, the burning of powdered coal and of oil have made possible the use at a profit of concentrated waste sulphite liquor as a fuel. We wish to emphasize that we do not consider the use of sulphite liquor as a fuel to be the ultimate use of that material. Amounts of sulphite liquor are being used for tanning, as a core binder, for briquetting etc. Undoubtedly still more valuable uses will develop with time and research. It is a safe prediction that eventually whatever use is made of the material, the liquor will have to be concentrated. Hence evaporation is a logical step in advance for the utilization of these organic materials since at any time in the future the concentrated liquor could be diverted to its new use.

We wish to advocate the evaporation of the liquor and the burning of the concentrated residue from the evaporation under boilers for the generation of steam, this steam to be used to supply power and to evaporate the liquor. Our reasons for examining the phases of this system are the growing acuteness of the waste liquor situation as manifested by the ever increasing legislation, and the improved means mentioned above for burning fuels that do not ordinarily give high furnace efficiencies.

### Examination of the Residue

In connection with an investigation being pursued at Columbia University on the utilization of sulphite waste liquor, we examined the residue from the evaporation of three kinds of waste liquor:

1. Raw liquor from the blow-pit.
2. Fermented liquor of the old type, that is liquor in which the free SO<sub>2</sub> is neutralized previous to the fermentation by means of lime.
3. Fermented liquor of the new type. In this liquor the free and part of the loose SO<sub>2</sub> is blown out by means of air, the current of which is kept up during the course of the fermentation. This scheme is known as "air fermentation."

This examination yielded the following data all calculated on the basis of residues dried at 110° C.:

	(1)	(2)	(3)
B.t.u. per lb. ....	8,100	7,480	7,950
% Ash .....	10.1	18.7	13.9
%S in residue .....	5.4	5.8	5.4
% S in ash .....	1.4	2.6	1.9
% S volatilized .....	4.0	3.2	3.5

### Can Be Burned in Form of Pitch

The residue can be burned in the form of a pitch containing 50 per cent of solid material. Such a pitch is quite fluid, sufficiently so to be burned by means of the ordinary form of oil burner in which oil is sprayed into the furnace. Moreover, such a pitch

does not contain too much water and can support its own combustion.

The spray method of burning is one that is quite efficient and requires very little attention as it is almost entirely automatic in operation. The burning of a pitch obviates the difficulty of evaporating the liquor completely to dryness and the handling of solid material, a thing that is more bothersome than the handling of liquids.

The high percentage of sulphur in the residue does not present any problems in boiler design that have not already been solved. It is not unusual for power plants to use coals running as high as 4 per cent in sulphur. No corrosion will take place if the gases coming into contact with the metal parts are above 300° Fahr., that is, at this temperature the flue gases are sure to be "dry."

While the high ash content of the residue is a disadvantage, it is not sufficient to make the utilization of the residue for fuel impracticable. The ash content of the residue is greatest with the lime fermented liquor and least with the raw liquor. The ash percentage of the air fermented liquor is higher than that of the raw because of the reduction of the percentage of nonash by fermentation, and because of the addition of inorganic salts which serve as yeast food.

The air fermented liquor presents the least difficulties in the evaporation process, since most of the free and loosely combined SO<sub>2</sub> has already been removed and the lime salts are low. The absence of much free and loose SO<sub>2</sub> is a decided advantage as it means that the amount of noncondensable gas that has to be handled in the vacuum evaporation is low and the corrosive action on the evaporator is small. The lime fermented liquor has a large amount of calcium sulphate and sulphite in solution as well as a large amount of loosely combined SO<sub>2</sub> and some free from SO<sub>2</sub>. These lime salts will deposit out and cause trouble by scale formation in the evaporator tubes.

### Calculations

On the basis of the above data we have made the calculations given below.

The unit chosen for calculation is one ton of pulp per day. We get 1,800 gallons of liquor per ton of pulp. The liquor weighs 8.66 pounds per gallon and contains about 10 per cent of solids.

Therefore we have for the raw liquor:

$$\begin{aligned} \text{Total weight of liquor} & 1800 \times 8.66 = 15,600 \text{ lb.} \\ \text{Total weight of solids} & 1,560 \text{ lb.} \end{aligned}$$

In the air fermented liquor, some of the solids have been fermented and alcohol has been distilled off. These solids, sugars, amount to about 2 per cent of the raw liquor. But during the operation the liquor has been concentrated somewhat so that the percentage of solids is not less in the air fermented than in the raw liquor. With the air fermented liquor the total solids are reduced to 80 per cent of that of the raw liquor and the percentage of solids is 10 per cent of the liquor.

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Total weight of solids  $1,560 \times .80 = 1,250$  lb.  
 Total weight of liquor  $1,250 \times 10 = 12,500$  lb.

Since we are going to burn a pitch containing 50 per cent of solids,

Weight of pitch from raw liquor 3,120 lb.  
 or  
 Weight of pitch from fermented liquor 2,500 lb.

The heat given off by the burning of the pitch will be equal to the heat given off by the burning of the solid less the heat required to drive off the water. For the raw liquor

B.t.u. developed by the burning of solid:  $8100 \times 1560 = 12,630,000$   
 B.t.u. required to drive off the water  $= 1,650,000$

This last figure is made up of the following two parts, a and b:

(a) To raise water from 120° to 212° F.

$92 \times 1560 = 143,000$

(b) To evaporate off the water

$970 \times 1560 = 1,510,000$

Accordingly the B.t.u. developed by the burning of the pitch is the difference of the above figures or 10,980,000 B.t.u. This is the equivalent of 780 pounds of coal of 14,000 B.t.u. per pound. By a similar calculation we find that the burning of the pitch from the fermented liquor will give 8,610,000 B.t.u., equivalent to 610 pounds of the same kind of coal.

Calculating the amount of 150 lb. per square inch gauge pressure steam this fuel will develop, we find from the steam tables:

Total heat of steam at 150 lb. gauge = 1195 B.t.u. per lb.  
 Total heat of feed water at 120° Fahr. = 88 B.t.u. per lb.

Heat required to form 1 lb. steam = 1107 B.t.u.

Assuming a boiler efficiency of 75 per cent from the raw liquor residue we will get

$.75 \times 10,980,000 = 7,450$  lb. of steam.

1,107  
 and from the fermented liquor residue.

$.75 \times 8,610,000 = 5,830$  lb. of steam.

1,107  
 In order to get the pitch we must evaporate

15,600—3,120 or 12,480 lb. of water from the raw liquor,  
 or  
 12,500—2,500=10,000 lb. of water from the fermented liquor.

Summarizing these calculations, we have the following:

	<i>Raw</i>	<i>Air</i>	<i>Ferm.</i>
	<i>Liquor</i>	<i>Liquor</i>	<i>Liquor</i>
Pounds of 150 lb. steam that can be made	7,450	5,830	
Pounds of water that must be evaporated	12,480	10,000	

We may use the steam generated for the development of power in noncondensing steam engines. The exhaust steam of such engines could be used to evaporate the liquor in multiple effect evaporators. On the basis of this system we have the following calculations. A simple noncondensing Corliss engine has a steam consumption of about 25 lb. of 150 lb. steam per indicated horsepower. Therefore from our steam we get

$7,450$

$24 \times 25$

=about 12 I.H.P. for 24 hours a day per ton pulp with the raw liquor, or

$5,830$

$24 \times 25$

=about 10 I.H.P. for 24 hours a day per ton pulp with the fermented liquor.

The steam exhausted from this type of engine is at a pressure of about 3 to 5 lb. per square inch. According to the Molieré diagram such exhaust steam is 88 per cent dry. Let us assume that owing to condensation in the pipes and other heat losses we deliver but 75 per cent of the theoretical amount to the evaporators. Then we have

$7,450 \times .88 \times .75 = 4,930$  lb. steam per ton pulp for the raw liquor.

$5,830 \times .88 \times .75 = 3,850$  lb. steam per ton pulp for the fermented liquor.

From an evaporator catalog we find the figures given below, which enable us to calculate the steams required to evaporate the amounts of water mentioned above from the liquors.

No. of effects	Pounds of low pressure steam required to evaporate		
	1 lb. of water	The water from raw liquor	The water from ferm. liquor
1	1.110	13,830	11,100
2	.558	6,960	5,580
3	.372	4,640	3,720
4	.276	3,440	2,760

From this it can be seen that in addition to having the power mentioned previously, we have exhaust steam that is more than sufficient to effect the evaporation of the liquor in ordinary triple-effect evaporators.

**Boiling Point Does Not Change**

Owing to the colloidal nature of sulphite liquors, the boiling point does not change appreciably during the course of the evaporation. Hence it lends itself admirably for use in a thermo-compressor evaporator, since in this form of apparatus there is only a small difference of temperature between the heated and the heating side. If we use a thermo-compressor operating with 150 lb. steam and connected to double effect evaporator, i.e., a triple-effect evaporator, the first effect of which is a thermo-compressor, we will have probably the most efficient type of evaporator for this type of material and also an installation of only moderate cost. Such an arrangement will evaporate about 5.4 lb. of water per lb. of 150 lb. steam used. This amounts to .185 lb. of high pressure steam as compared to .276 lb. of low pressure steam for quadruple effect.

	<i>Raw</i>	<i>Liquor</i>	<i>Ferm. Liquor</i>
Pounds of steam required for evaporation..	2,300	1,850	
Excess of steam .....	5,150	3,980	

This excess steam is equivalent to about 410 lb. of coal for the raw liquor or about 315 lb. for the fermented liquor per ton of pulp per day.

Thus it can be seen that the solid material of the waste liquor has sufficient fuel value to evaporate the liquor and enough in addition to supply some power of steam for other purposes.

**MUCH LUMBER STRANDED IN THE WOODS**

Practically all the snow in Eastern Canada has now disappeared. The thaw was the most rapid one for many years past. There had been no thaw at all during the winter, but a couple of weeks ago a thaw set in and it continued day and night until all the snow had disappeared. The thaw was so rapid that it caught many woodsmen by surprise. One or two days sufficed to make all the roads in the woods impassable and there was no chance to use them again before all the snow had gone. In most years a considerable amount of hauling is done in the woods after a thaw sets in, because the snow roads freeze over at night. But this year there were no frosty nights. Reports from Eastern Canada indicate that large quantities of lumber will be left in the woods and some of the lumber operators are hard hit.

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## Revolution in Paper-Machine Drive

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Paper Read at Meeting of Technical Association by Stephen A. Staeger, Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

One of the subjects to which comparatively little attention has been given at the regular meetings of the Technical Association, yet one which is most deserving, is the subject of paper-machine drive, particularly with respect to the use of individual motors for each section of the variable speed line.

Paper-machine drive has received more or less serious consideration by the paper industry and by the electrical manufacturers, but as is well known, until very recently little improvement had been made in the method or system of drive, except for the development of electrical means of obtaining variable speeds over any range desired with automatic control. In all other respects, the present mechanical systems of drive are essentially the same as have been employed for many years. To be sure, several modifications and small improvements have been made with a view to the elimination of the annoying and expensive bevel gears, spur gears, and friction clutches, but which has resulted in a multiplicity of belt and rope drives and has brought us very little nearer the solution of the problem.

The paper industry was early to recognize the value of the use of electric power in manufacturing operations and has very generally adopted motor drive in most parts of the mill, the paper machines being the one place where individual motor drive has not generally supplanted the older systems of engine, or motor group drive, and moreover, it is the one place where there is less to be said for group drive than in almost any other application. It is not because of any disinclination on the part of the paper industry to accept individual motor drive, that the old mechanical systems have been so long continued in use, but because of the inability of the electrical apparatus heretofore available to meet the exacting speed regulation requirements of sectional individual motor drive.

### Disadvantages of the Mechanical System

Although we are all familiar with the various objectionable features of the old system of mechanical drive with its attendant annoyances, it may be well to review briefly some of the more important of the disadvantages of the mechanical system. In the first place, considerable space is required for the long line shaft with its numerous cone pulleys and vertical belt drives, usually the entire basement being occupied for this purpose, and in addition considerable space is required back of the machine for the transmission system there, including the cone pulleys, friction clutches, bevel gears, etc. In the transmission between the motor or engine driving the variable speed line of the machine to the machine itself there is a very large power loss, varying somewhat, of course, on different machines, but averaging approximately 50 per cent of the total power delivered by the motor, which item itself is of considerable moment, especially in the drive of a large, high-speed news machine. On account of the large number of bevel gears, belts, pulleys, clutches, shafts and bearings that have to be maintained and kept in running order,

there is usually exceedingly high maintenance in connection with every paper machine, the belt item and gears alone frequently running into many thousands of dollars annually. In addition to the cost of belts, gears and mechanical parts, which actually have to be renewed, a large amount of labor is also required, not only to be on hand in case of accident to make quick repairs, but to rebuild and fix up equipment after it has been taken off for repairs.

Among other disadvantages of mechanical transmission may be mentioned the noise and vibration of the gears, the hazard to employees coming in close proximity to gears, belts, shafting, etc.; the fire hazard occasioned by the large number of bearings, which, if not given proper attention, may become hot, igniting the oil; the large amount of oil required for the lubrication of so much shafting and bearings; the high first cost of the mechanical drive including the line shaft; the lack of flexibility and the considerable investment in spare parts that has to be carried as well as the space required for the storage of these parts.

### Where Lost Production Originates

Probably the largest item affecting lost production on a paper machine is trouble with the mechanical transmission, and while it is not always evident at once why the machine is making "broke" it can frequently be traced to belt slippage, and not infrequently will the belt have to be taken up before production can be resumed, the vertical belt drives from the cone pulleys being one of the worst possible types of belt drive and requiring constant attention. In addition to the belt trouble, there is frequent gear breakage, bearing troubles, etc., which may result in several hours shutdown at each interruption.

Not only does the mechanical system of drive interfere with production directly in the ways above mentioned, but indirectly imposes limitations on the output of the machine on account of the limitations in the speed at which it is possible or practicable to operate. This limitation is determined by a point which is always reached in the speed of a paper machine, where mechanical drive is used, above which the increasing cost of maintenance and lost production makes it impracticable to go. This is because of increasing and varying belt slippage resulting in an excessive amount of "broke," gear trouble, clutch trouble, difficulty in holding the equipment down and in alignment caused by excessive vibration, etc., and in addition to this the mechanical transmission losses increase so rapidly at the higher speed as to make the power input to the machine almost prohibitive.

### The Question of Belt Slippage

Let us analyze a little further the question of belt slippage with its effect upon the machine section speed and paper breakage. It is well understood that in every belt drive transmitting power there is a certain belt slippage and this slippage is dependent

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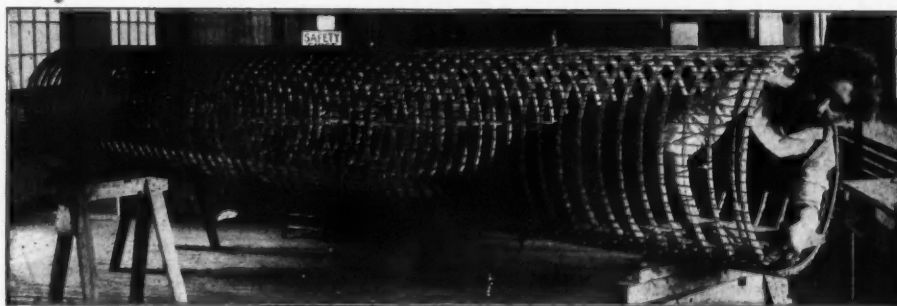
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largely upon the power being transmitted, although it is also considerably affected by other conditions such as atmospheric humidity, temperature, condition of the surface of the belt and pulleys, belt tension, the presence of particles of oil or water on the belt or pulley, etc. However, if we assume that all of these other factors for any given time remain practically constant, the belt slippage might be assumed roughly to be approximately proportional to the load being transmitted. Now, if we assume that there is a constant slippage of say 2 per cent when the belt is transmitting its normal full capacity with constant load, any variation in load might be expected to result in a somewhat corresponding variation in the belt slippage, and therefore in the speed of that section of the machine. Should there be a variation in load on the belt of say 10 per cent, we would expect to get a variation in the belt slippage of something like 10 per cent of the former slippage, or perhaps a variation of 2/10 of 1 per cent in the speed of the section.

In addition to the variations in belt slippage caused by variations in load, there are also changes in belt slippage and consequent changes in the section speed caused by variations in the coefficient of friction which result from particles of dust, dirt, grease, water, etc., and from water vapor and atmospheric changes which are constantly going on. Any of these factors may or may not cause sufficient change in the belt slippage to break the paper, but are objectionable and contribute to the sum total of trouble experienced and loss of production.

#### What Has Been Done to Improve Conditions

Let us now see what has been done to improve these conditions. Some ten or twelve years ago after electric drive had fairly established itself in the paper industry, several serious efforts were made by a number of electrical manufacturers to introduce a system of individual motor drive wherein adjustable speed direct-current motors could be geared direct to the machine shaft on each section of the paper machine, thereby eliminating the line shaft, bevel gears, friction clutches, belt drives, etc. While a great improvement in the mechanical arrangement was effected, as well as in the overall efficiency of the installation, the fact immediately became apparent that the speed regulation of the several motors driving the various sections of the variable speed line was of vital importance and not easy to obtain. It was also soon discovered that it was quite impossible to design motors, the relative inherent characteristics of which were sufficiently alike to give them absolutely the same speed regulation under all operating conditions, making it necessary to resort to external control or regulation in order to hold the speed of the various motors sufficiently alike to prevent the breakage of the paper as it passes from one section of the machine to another.

As there were no speed regulators or governors on the market, which could be expected to hold the speed of the motors much closer than 1 per cent or 0.5 per cent, at the best, it was practically useless to search for remedies in that direction, and in connection with the machines for individual motor drive, where installations were actually made, hand operation of field rheostats for controlling the motors was resorted to. While hand operation of the field rheostats, or hand regulation, has in a few instances kept the machines in operation and resulted in a moderate degree of success, a number of other installations were removed on account of the difficulty or impossibility of controlling the speed well enough to make paper on a commercial basis. Where the individual motor drive was, however, ultimately kept in operation in the case of the few machines mentioned, the degree of success finally attained was not until after the electrical manufacturers had spent a great deal of time and money in the undertaking, and it may also be said that no small part of the credit for the operation of these equipments has been due to the willingness and determination of the operators to make a success of the equipment

and individual system of drive. However, even with the best of intentions on the part of the operators, it has been impossible to maintain the speed of the motors with a sufficient degree of precision to prevent breakage of the paper and considerable loss of production on account of imperfect speed control regulation.

Had the electrical manufacturers fully understood the exacting regulation requirements of sectional individual motor drive, they probably would not have undertaken this problem when they did, as they had no solution for the regulation problem at that time.

#### Slow in Adopting Sectional Individual Motor Drive

Quite naturally, reports of the several failures of individual motor drive, and the only moderate success attained by others, in this radical departure from the old established mechanical drive, was rapidly circulated throughout the paper industry, and on account of the hazard involved in undertaking a project of this kind, it was natural that everyone should become exceedingly skeptical, and inasmuch as no solution was offered, a lapse of some years passed without the installation of any new paper machines with sectional individual motor drive.

#### Speed Regulation Problem Solved

Finally an answer has been found to the perplexing question of speed regulation, which has opened the way for the long-looked-for revolution in paper machine drive, whereby this phase of paper manufacture can take its place with that of the most modern and advanced in the industry; in fact sectional individual motor drive for paper machines with automatic regulation and control can now properly occupy a place second to none in the application of electrical equipment to mechanical apparatus.

The secret of the final success of individual motor drive is the development of a speed regulator which is sufficiently sensitive to indicate the most minute speed variations of any of the motors and quickly to correct it.

It should be noted that in order to maintain the proper "draw" on each section of the machine, it is necessary that the motor driving each section maintain its correct speed without a variation of so much as 1/10 of 1 per cent. Not only must the motor maintain this high degree of regulation when the load on the machine is constant, but when the load varies at times, such as when the bearings are being oiled, when the paper breaks between the dryers and the calenders, or on any such occasion where there is a variation in the load, the regulator must act so quickly as to prevent the breaking of the sheet or the accumulation of slack between the sections and yet must be absolutely "dead beat" in action and not overtravel.

#### Requirements for Individual Motor Drive

In the change from mechanical to electrical drive it is nearly always found that many refinements are made possible in the operation and control of equipment of all kinds and this is true to a marked degree in the case of sectional individual motor drive for paper machines.

In order to take advantage of the various features which will contribute to the efficiency and convenience of operation, we suggest the following requirements for a complete and satisfactory system of individual motor drive for paper machines:

1—To have the entire machine and each individual section completely under the control of the operator by push button stations easily within reach.

2—Ability to start the machine or any section of it by push button stations and to operate these at a very slow speed for considerable periods of time for putting on felts, or for similar operations.

3—To be able to start any section of the machine independently and to bring it up to the running speed whether or not the other sections are in operation.

4—To have the regulator controlling the speed function automatically without requiring any personal operation or attention.



## KNOWLTON WALL BOARD CUTTER

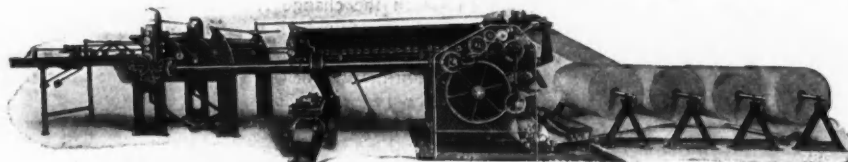
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5—To enable the operator to shut down any section quickly, or the whole machine as a unit.

6—To provide means for increasing or decreasing the speed of the entire machine from a push-button control station.

7—To control the speed regulation of the entire machine as a unit, with a high degree of precision so as to maintain the proper weight of the sheet, drying uniformity, etc., and to maintain a perfect draw at each section of the machine so that no loss of production will be occasioned on account of imperfect regulation.

8—Another requirement of equal importance is that all parts of the equipment be rugged and dependable so as to eliminate entirely the possibility of interruption of service on account of transmission troubles.

Since continuous and uninterrupted production of paper is of primary importance in the operation of a paper machine, it is of utmost importance that there be no weak link in the system.

#### Advantages of Sectional Individual Motor Drive

To cite some of the advantages of sectional individual motor drive over the former mechanical system of drive, some or all of which may have been drawn by inference from what has already been said, we have the following:

Through the use of a thoroughly high grade, totally enclosed, self-lubricated, herringbone gear set, by means of which the motor will be connected to the machine section shaft, the equipment can be made entirely noiseless and vibrationless, having a maximum degree of efficiency; no personal hazard is involved, as there are no exposed gears, no clutches, no pulleys, no belts, and the only shafting is the short section shaft of the machine itself. There is less fire hazard, on account of the exceedingly few bearings which are well lubricated and require no personal attention for months at a time, and the quantity of oil required is far less than with the old system, practically the only maintenance being the occasional attention to brushes on the motors and the periodical changing of oil in the motor bearings and gear set case at long intervals. So far as spare parts are concerned, this is an almost negligible quantity, except that it is desirable to have a spare motor on hand as insurance against accident, but so far as the transmission equipment is concerned, the mechanics can be entirely eliminated.

The electrical equipment, reduction gear sets, control apparatus, etc., for a system of this kind, should have a life several times as long as would practically any part of the old mechanical system and with much greater reliability, and impart a flexibility which could not be approached under any other system.

It has been demonstrated that with sectional individual motor drive the variable speed line of the paper machine can be driven with approximately half of the power required where mechanical drive is used on account of the great reduction in power losses. It is also possible greatly to increase speed and production. Another advantage in the case of new mills being constructed, is the fact that with individual motor drive it may be possible to eliminate the entire basement under the machine room, also to make the machine room somewhat narrower.

With the introduction of this system of drive it is no longer necessary for the machine tenders constantly to watch the draw of each of the sections, for when the "draw" has once been properly adjusted, it will be maintained automatically without further attention.

#### Possibilities of Increased Speed

Now in addition to all of these items, consider the possibilities of increased speed. There are a great many machines in operation at the present time, the speeds of which cannot be consistently increased on account of the limitations of the mechanical transmission. With individual motor drive, however, there will be practically no limit so far as the drive is concerned, inasmuch as sufficient power can be delivered and a perfect draw can be as well maintained at a high speed as at a low speed.

#### Where Sectional Drives Are Necessary

I believe it is universally conceded that for large high-speed news machines, the maximum speed which can be attained with mechanical transmission has already been reached, so far as commercial operation is concerned. This means that where speeds of 1,000 feet a minute or more are desired, sectional individual motor drive will be absolutely necessary, and furthermore, is the only system by which a satisfactory and economical drive can be attained even at much lower speeds.

## JORDAN AND BEATER IN PAPERMAKING

By MAX ZIMMERMAN, Mgr., The Charles Boldt Paper Mills, Cincinnati, Ohio.

In a contribution to the symposium on the extent to which the Jordan can replace the beating engine in the manufacture of paper, at the annual meeting of the Technical Association of the Pulp and Paper Industry, Mr. Zimmerman expressed himself as follows:

"In regard to the question, 'How far can a Jordan replace a beater in the manufacture of paper,' I would say this depends entirely on the grade of paper which a mill manufactures.

If a mill makes a high grade of light weight paper the long beating process and shorter treatment in the Jordan is the more satisfactory. Mainly, this process makes a much better close-up sheet and also a snappier and better finished sheet. On the other hand, if a mill makes heavier weights of high-grade paper it is best to use the Jordan more extensively and do less work on the beater as this gives better formation and less crushed paper.

Now, with box board made on cylinder machines the opposite conditions prevail. Less work in the beater and more on the Jordan has proved more satisfactory. The reason of this is that the raw material used in the manufacture of box board contains all kinds of fibre, from strawboard to bond paper. Therefore, by doing less beating and more work on the Jordan the machine tender can regulate the length of the fibre for the particular weight of the board being run much quicker than he could by

having a lot of stock beaten ahead in the beaters, which would be likely to give him all kinds of trouble in running long beaten stock on the paper machine.

With reference to print paper, where there is not much long fibre used, no beating is necessary. The Jordan will do all the beating that is necessary for the stock on a fast running news machine. There is thereby obtained a more uniform length of fibre and better formation, as well as increased speed on the paper machine.

It is a rather difficult proposition for one man to recommend a certain process for beating stock as while we all make the same grade of paper no two superintendents or papermakers work alike. We all have our own methods and it is a difficult matter to turn any papermaker away from the methods he has learned through personal experience. They generally explain themselves—"You will have to show me."

The foregoing is from the writer's own experience and if it is of any benefit to any member of the Technical Association it will be highly appreciated.

The Paper Products Company, Detroit, Mich., capital \$10,000, has filed articles of incorporation. The original stockholders are Leo F. Smith, Richard A. Bird and Sidney Miller, all of Detroit.

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## Testing the Tearing Strength of Paper

In the Instrument Designed by the Author of This Article and Built by the Forest Products Laboratory an Endeavor Was Made to Overcome Various Difficulties That Had Heretofore Been Encountered in Measuring the Tearing Resistance of Paper—Contrary to Usual Observations Values Obtained Will Show New Instrument as Very Uniform—Other Special Features of the Instrument.

Read at Meeting of Technical Association by Armen Elmendorf, M.Sc., M.E.

A strength test, no matter on what material it may be conducted, may be defined as an investigation formed for the purpose of determining the relative merit of a particular material in comparison with competitive materials for withstanding such forces or conditions which tend to disrupt or destroy the material. In the case of steel or wood failure may take place in a variety of ways, as by compression, by tension, or by shearing. In the vast majority of cases the failure of paper, on the other hand, takes place in only one way, namely, by tearing. It is for this reason that the experienced buyer when passing judgment upon paper will take a sample of the material and tear it by hand. While it cannot be contended that the tearing resistance of paper is its only important property, it is, nevertheless, true that for a variety of purposes for which paper is used, as for example, in wrapping packages and for paper bags and sacks its tearing resistance is the best criterion of its suitability for these purposes.

### Elimination of Personal Equation

Realizing the importance of a knowledge of the tearing resistance of paper, a number of investigators have developed machines for determining this property. The purpose of all machines is the elimination of the so called "personal equation." An experienced buyer may tear a sample of paper with his fingers and determine its value with considerable precision. The seller may also be very confident as to his ability in passing judgment upon the strength of paper; yet the two persons may disagree. Testing the strength by means of a machine eliminates this factor entirely and enables the consumer to select his paper on the basis of strength figures obtained mechanically. In this case it is simply a matter of comparing the magnitude of the tearing strength figure for one paper with that for another. By means of such data the manufacturer may also control or develop the quality of his paper by modifications in the process of manufacture. Paper may be bought or sold according to definite specifications.

### Difficulties Encountered

While the need for an instrument for the tearing strength of paper has long been recognized, no such instrument has been developed to date which gives complete satisfaction. The difficulties encountered in determining the tearing resistance of paper were shown by Sidney D. Wells<sup>1</sup> to be as follows:

(1) The tearing resistance of paper varies greatly in different parts of the sheet and any device that would apply a varying load by means of a spring, a pendulum or other arrangement may possess so much inertia that after the tear had passed a strong spot the momentum of the load would carry it through the adjoining weaker area without registering the strength thereof.

(2) The variation of paper is such that it seemed to be neces-

sary to use an integrating attachment to measure work rather than force and the consequent complications with the probable expense necessary to develop and manufacture such an instrument discouraged further work.

(3) The force required to tear a sheet of paper is so small that irregularities in the action of most types of instruments tried caused an error which amounted to a considerable percent of the total force and vitiated the value of the results.

### Endeavor to Overcome Difficulties

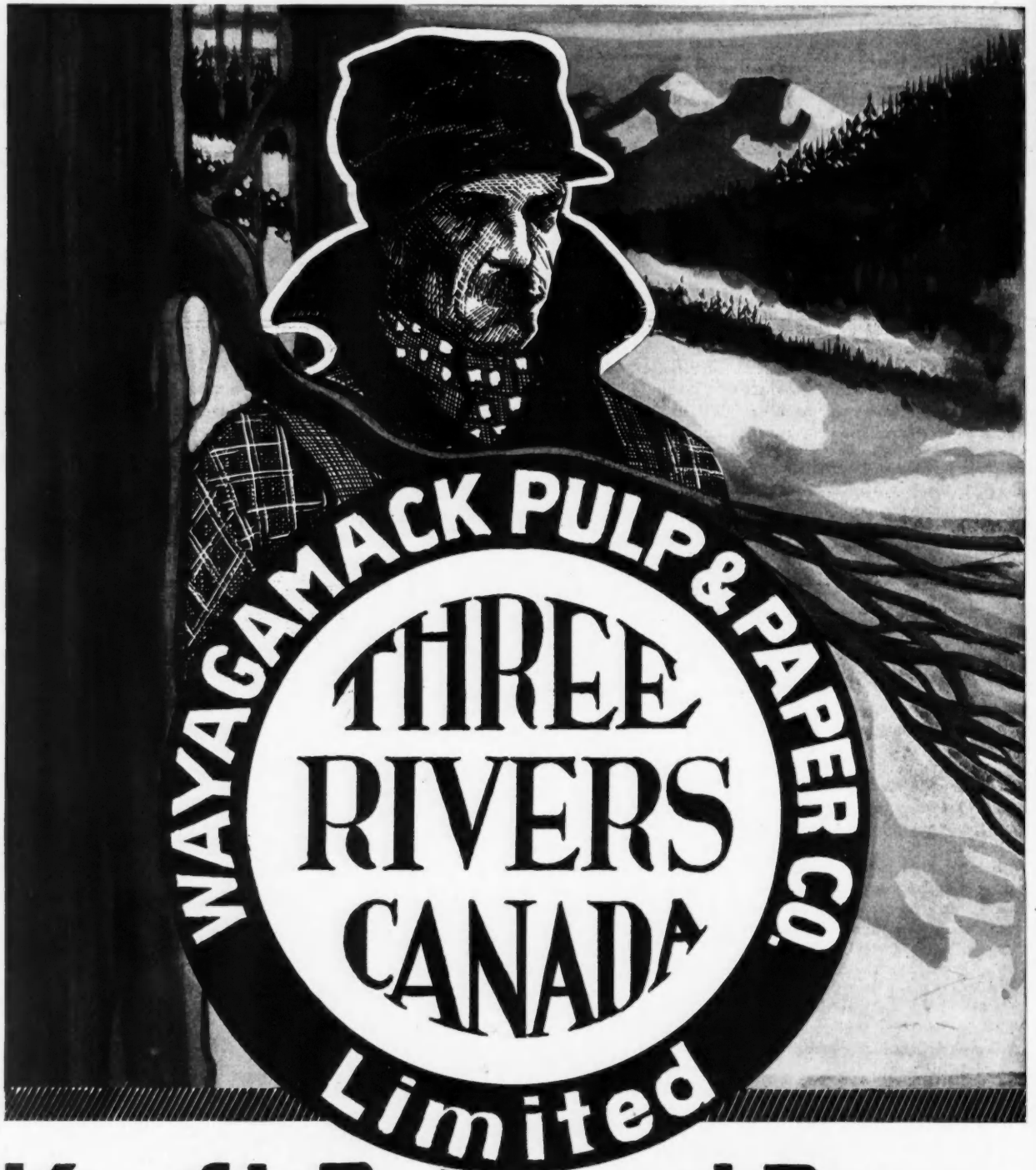
In the instrument designed by the author and built by the Forest Products Laboratory, U. S. Forest Service, the endeavor was made to overcome each of the difficulties mentioned by Mr. Wells. The fundamental idea underlying the operation of the machine lies in the fact that the tearing force is not measured directly, but is determined indirectly by means of the work required to tear a sheet of paper. From the relation existing between work, length of tear, and force, the tearing force is determined. The elementary principle of mechanics that work is equal to the produce of force times distance is used. If, for example, an average force of  $1\frac{1}{2}$  pounds is required to tear a sheet of paper and the length of the tear is equal to 3 inches, then the work done in tearing is equal to  $1\frac{1}{2}$ -inch-pound. Or, *vice versa*, if the work done is  $1\frac{1}{2}$ -inch-pounds and the length of the tear is 3 inches, then the average tearing force is  $1\frac{1}{2}$  pounds. The latter procedure is followed in the author's instrument.

A second well known principle of mechanics, that energy may be converted into work is also utilized in the instrument. How this is done in the tearing test may be seen by referring to Fig. 2, which shows the operation of the machine in diagrammatic form. The test specimen, which is shown in Fig. 3, is held fast to the base of the testing machine over the two lips indicated and a paper clip holds the central strip, which is torn out in two places, each tear being two inches long. A cord to which the paper clip is attached passes over a pulley. The end in turn is fastened to this pulley. When the pendulum which is initially raised to the left is allowed to fall it turns the pulley and raises the clip, thereby tearing out the strip of paper. The potential energy stored in the pendulum when at the left of the vertical is given by the product of its weight and the distance through which the centre of gravity has been raised vertically. Its energy on the right of the vertical after the paper strip has been torn is also represented by the product of the weight and the distance through which the centre of gravity has been raised. The latter energy is less than the former, due to the work done in tearing the paper. The difference between these two quantities therefore represents the amount of energy consumed in tearing the paper, that is the work done. Dividing the work done by the length of the tear yields the average tearing strength during the entire tear.

The initial angle is the same for all tests, the pendulum being swung through an angle of 70 degrees. It is held by a pin in this position. The length of the tear is constant for all test speci-

<sup>1</sup> Presented at the fifth annual meeting of the Technical Association of the Pulp and Paper Industry, New York, April 14, 1920.

<sup>2</sup> Paper presented at the annual meeting of the Technical Association of the Pulp and Paper Industry, New York, February 6, 1919.



# Kraft Pulp and Paper



mens. In order to determine the tearing strength of a certain sample of paper it is only necessary to hold the test specimen in clamps and to read the final angle or the angle after the tear has been made. By referring to the table, a section of which is given in Fig. 4, the force corresponding to the weight used and the angle read on the instrument is given directly in .01 pound. By suitable calibration of the arc on the testing instrument it may be made to yield the tearing force directly.

**Effect of Speed of Testing Eliminated**

It is apparent from the operation of the instrument that the effect of the speed of testing has been eliminated inasmuch as the force of gravity operates the pendulum and no hand wheel or crank manipulated by a person is used. The test is rapid, for it is only a matter of clipping the specimen in place and allowing the pendulum to swing. A light pointer is moved as the pulley turns and remains in the position of the maximum angle to which the pendulum turns after the tear has been completed. Several sheets of paper are usually torn together, so that an average value may be readily obtained. Although the force required to tear each individual sheet is not affected by the number of sheets used it has been found most practical to tear three sheets at one time. In order to get a good average value of the tearing force it is best to select the test specimens from various

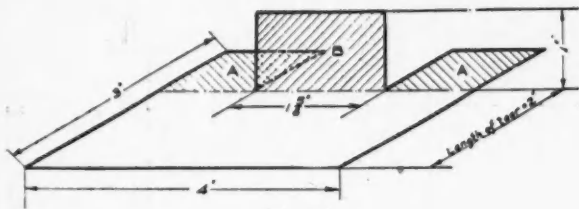


FIG. 3.

places in the larger sheet of paper, preferably using five sets of three specimens of each. By using two specimens of each kind it is also possible to determine the average of the machine-



FIG. 1. MACHINE FOR TESTING TEARING STRENGTH OF PAPER

direction and across-the-machine-direction tearing strength values simultaneously. In the case of heavy paper individual sheets may be torn.

**TABLE I**  
**Log of Strength Tests of Various Paper**

No.	Paper.	Weight Per Ream, 24x36, 500 Basis.	Per Cent Relative Humidity.	Temperature, °F.	Mullen Test, Lbs.	Points Per Lb.	Average Break Length, Meters.	Average Fold Test, No.	Average Stretch, Per Cent.	Tearing Strength in Machine Direction, .01 Lbs.	Tearing Strength Across Machine Direction, .01 Lbs.	Average Tearing Strength Per Lb. in Machine Direction.
1	Amber flat, 45% cotton hull fibre, 55% sulphite pulp.....	59.0	66	76	23.0	0.389	3,200	30.9	2.79	44.2	.....	0.75
2	Amber flat, 50% rag, 50% sulphite.....	56.0	66	76	19.5	0.348	2,859	16.2	3.4	35.0	.....	0.63
3	Special ledger, 50% cotton hull fibre, 50% sulphite.....	57.0	65	73	22.3	0.391	3,254	13.9	3.5	37.2	.....	0.65
4	Special ledger, 50% rag, 50% sulphite.....	52.5	64	74	23.1	0.440	3,668	33.3	3.5	39.0	.....	0.74
5	Commercial paper, 75% cotton hull fibre 25% sulphite.....	48.0	65	72	11.8	0.245	2,426	8.1	2.8	33.3	.....	0.69
6	Commercial paper, 50% cotton hull fibre, 50% sulphite.....	46.0	66	71	13.8	0.300	3,262	7.5	2.28	29.0	.....	0.63
7	Black willow sulphite, cook 378.....	57.1	68	71	20.0	0.350	3,933	14.8	1.66	35.3	38.9	0.62
8	Bald cypress, sulphite, cook 379.....	53.8	67	71	24.8	0.460	3,430	186.2	2.59	56.9	54.8	1.06
9	Unfinished wedding, 100% cotton hull fibre.....	73.0	65	80	18.1	0.248	2,233	6.7	2.30	52.4	.....	0.72
10	Finished wedding, 100% cotton hull fibre.....	71.0	64	79	18.4	0.259	2,206	10.7	2.56	48.8	.....	0.69
11	Commercial kraft, 30 lbs.....	28.0	62	..	21.6	0.772	4,460	148.0	2.17	34.9	.....	1.25
12	Commercial kraft, 40 lbs.....	40.6	66	..	24.4	0.600	3,935	191.0	2.80	59.4	.....	1.46
13	Commercial kraft, 50 lbs.....	50.0	62	..	36.4	0.728	4,465	361.0	1.74	78.9	106.5	1.58
14	Commercial kraft, 40 lbs.....	43.7	67	..	42.0	0.962	6,258	1008.0	3.50	78.7	.....	1.80
15	Commercial kraft, 25 lbs.....	28.1	62	..	25.8	0.918	5,700	597.0	4.00	34.1	47.0	1.21
16	Commercial kraft, 30 lbs.....	33.4	61	..	32.4	0.970	5,612	460.0	3.80	44.4	70.2	1.33
17	Commercial kraft, 40 lbs.....	44.8	64	..	45.8	1.020	6,178	1221.0	4.12	60.6	71.5	1.36
18	Commercial kraft, 50 lbs.....	54.2	63	..	56.4	1.040	5,948	976.0	3.73	97.5	81.6	1.80
19	Commercial kraft, 90 lbs.....	99.0	..	..	97.0	0.980	5,800	3715.0	3.65	196.8	.....	1.99
20	Commercial kraft, 40 lbs.....	42.7	67	..	43.6	1.020	6,670	3023.0	3.60	73.2	87.2	1.71
21	Commercial kraft, 50 lbs.....	45.8	64	..	50.0	1.090	6,660	3699.0	2.92	81.1	.....	1.77
22	Commercial kraft, 33 lbs.....	33.3	62	..	31.0	0.933	5,445	526.0	3.34	39.1	.....	1.17
23	Commercial kraft, 40 lbs.....	42.7	64	..	27.6	0.647	4,640	457.0	2.15	80.0	86.0	1.87
24	Kraft, longleaf pine, cook 237.....	31.0	..	..	35.6	1.150	.....	.....	.....	.....	53.8	.....
25	White spruce, sulphate.....	38.0	67	70	19.0	0.500	5,690	1110.0	1.73	39.2	.....	1.03
26	White spruce, sulphate.....	38.5	68	69	28.0	0.730	6,070	1061.0	1.88	41.2	41.8	1.07
27	Spruce ground wood, news, grinder run No. 143.....	33.0	..	..	14.8	0.448	3,593	.....	1.83	8.6	13.7	0.26
28	Flax tow, cook No. 2, soda.....	59.5	..	..	42.7	0.720	5,680	1838.0	4.72	114.1	106.5	1.92
29	Flax tow, cook No. 5, sulphate.....	56.6	..	..	42.9	0.760	6,215	1243.0	4.62	79.0	70.8	1.40
30	Flax tow, cook No. 6, sulphate.....	53.0	..	..	34.3	0.650	5,875	1318.0	4.60	44.0	.....	0.83
31	Flax tow, cook No. 7, sulphate.....	45.8	..	..	28.2	0.620	4,835	1724.0	3.88	82.0	81.1	1.79
32	Commercial, all linen bank note.....	50.0	..	..	52.0	1.040	6,360	3562.0	7.42	60.3	73.9	1.20

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#### Values Obtained Very Uniform

Contrary to the usual observation made in determining the tearing strength of paper the values obtained with the instrument under consideration are very uniform. When tested in groups of five the average variations of an individual strength value from the average strength is found, in general, to be only about 3 or 4 per cent. Extensive tests were made to determine the effect of using weights of different magnitudes. It was found, however, that no variation in the tearing strength was obtained over the range of weights with which the machine is equipped.

Numerous tests were made at the Forest Products Laboratory upon representative commercial papers and papers of various grades and types made experimentally. These tests were made with the instrument shown in Fig. 1. The results of the tests are given in Table 1. They were all conducted under standard conditions, namely, at 65 per cent relative humidity and approxi-

mately 70° Fahr. temperature. The results of the "pop" test, the tensile test, folding test, are also included in the table as well as the stretch and the weight. It will be noted that the tearing strength across the machine direction is usually appreciably higher than the strength when the tearing is made in the machine direction. The tearing strength per pound also increases with the weight of the paper.

Figure 5 shows the relation between the tearing strength of three grades of paper and the pervading atmospheric humidity. While the tearing strength increases with the atmospheric humidity in all cases, the change in strength is most pronounced in the case of the kraft wrapping paper for which the tearing strength at 95 percent relative humidity was about twice that at very low humidities. This is undoubtedly due to the greater toughness resulting from improved cohesion between the fibres at higher moisture contents.

## PESHTIGO PULP & PAPER CO. TO START IN MAY

The Peshtigo Pulp and Paper Company is fast rushing its new plant at Peshtigo, Wis., to completion with the opening date now set for early in May.

The company was organized in 1919, with capital stock placed at \$600,000 which is largely held by Green Bay and Appleton capitalists and which has been fully subscribed.

The company purchased the saw-mill buildings and thirty-five acres of land of the Peshtigo Lumber Company, and at once began the erection of a large fireproof steel and concrete building 75 x 250, two stories in height. The trouble experienced in getting material, coupled with a very severe winter, has hampered building operations and delayed the formal opening of the mill six weeks or more.

The building was arranged for two paper making machines, one of which has arrived and is partly installed, and the other ordered for delivery as quickly as it can be constructed. Jordans and beaters are being placed and motors installed and everything being rushed as speedily as possible.

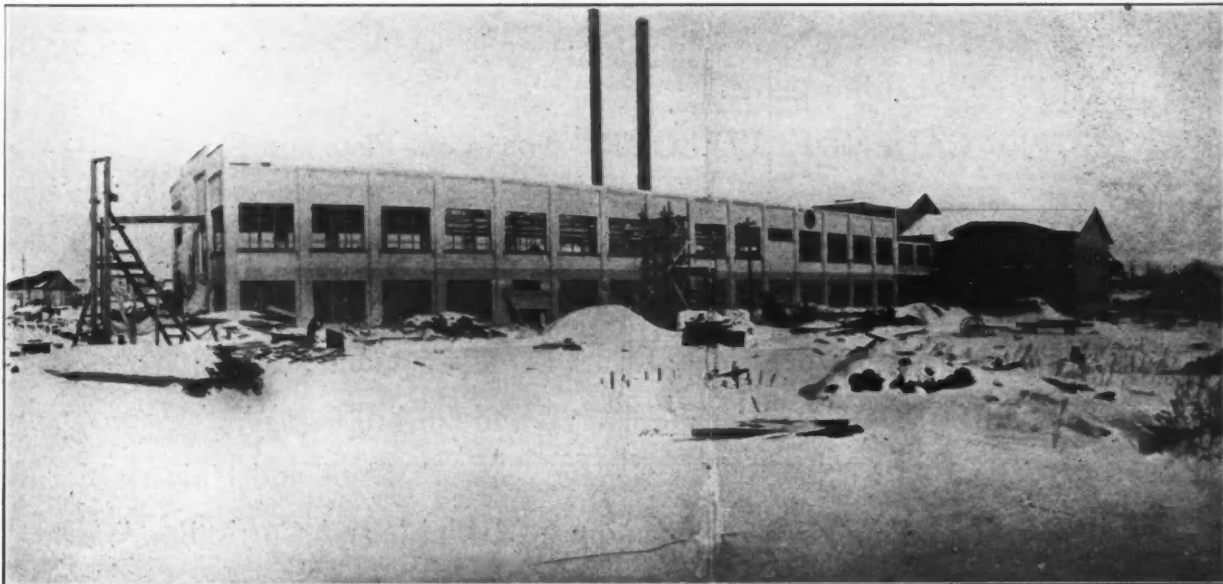
The output of the mill will be tissues and light weight paper specialties, and when completed will yield about 36 tons of paper

per day. The machines are of the very latest pattern and are supposed to possess a wider versatility than any now in use. M. F. Herb, the general superintendent, has had years of experience in the paper-making business and has the entire confidence of all connected with the venture.

The officers of the company are: President, John A. Kittell, Green Bay; vice-president, A. J. Tipler, Green Bay; secretary, Harry M. Lord, Peshtigo; treasurer, C. W. Collier, Green Bay; manager, D. R. Mead, Grand Rapids; superintendent, M. F. Herb, Peshtigo.

#### BIG ROSIN PLANT NEAR JACKSONVILLE

The Western Papermakers Chemical Company, of Kalamazoo, Mich., is erecting a big rosin plant near Jacksonville, Fla. It will have a daily capacity of 75 barrels at the outset and will be enlarged as soon as more production is required. William J. Lawrence, vice president and general manager of the company, directly in charge of the Kalamazoo division, will go south to inspect the work that is being done. This concern now operates large rosin plants near Pensacola, Florida.

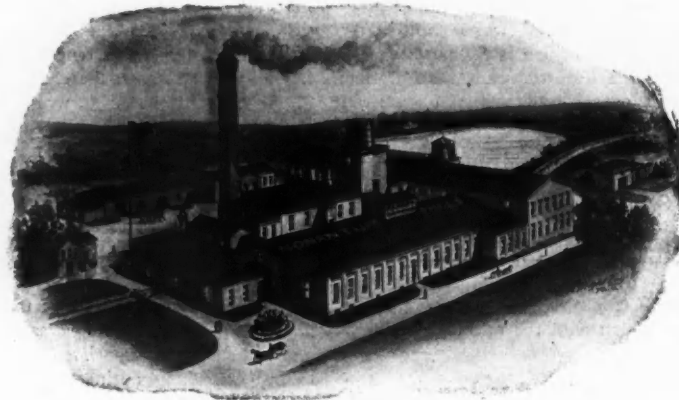


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## Limestone Examination and Evaluation For Bisulphite Liquor Manufacture

**Success in Operation of Limestone Towers Is Dependent Upon Certain Characteristics in Limestone, and Quality of Pulp Produced in Cooking Is Influenced by Extent to Which Certain Materials Foreign to Calcium Carbonate Exist in the Stone—Limestone for This Reason Should Be Chosen on the Basis of a Relatively Complete Analysis—Such Analysis Is Certain to Prove Beneficial.**

Read at Meeting of Technical Association by W. E. Byron Baker, of the York Haven Paper Co., York Haven, Pa.

In the preparation of bisulphite liquors for the manufacture of sulphite pulp the character of the limestone used is an important factor. The relative degree of success in the operation of the limestone towers is dependent upon certain characteristics in the stone, and the quality of the pulp produced in cooking is influenced by the extent to which certain materials foreign to calcium carbonate exist in the stone.

If the truth of the foregoing is adequately realized, no question should arise concerning the advisability of choosing a limestone for these purposes on the basis of a relatively complete analysis. The importance of drawing correct conclusions is equally as great as that of making accurate analyses, but it is certain that the correctness of any conclusion is directly codependent upon the accuracy of the knowledge of the constitution of the sample under consideration, and the precise understanding of the nature of the influence of the impurities present.

The term "accurate analysis," so far as limestone is concerned, may have different meanings for the mineralogist, geologist, chemist, and sulphite pulp manufacturer, but in any case the term signifies the determination of the amounts of various substances present which exert a known influence, and produce a known effect upon the solution of the particular problem confronting the person in question.

For this reason sulphite cellulose manufacturers are not interested in the determination of the small amounts of titanium, manganese, phosphorus, barium, strontium, copper, nickel, cobalt, zinc, vanadium and molybdenum which are sometimes found in certain types of limestones. The United States Geological Survey chemists have found that vanadium is almost always present in limestones, though in very small amounts. But these items are of interest only to the geologist; we do not know the effect of their presence so far as the use we make of the limestone is concerned, and consequently we may disregard them entirely.

In the opinion of the writer the chemical constituents of limestone which are of interest to the sulphite pulp manufacturer are as follows, named in the approximate order in which they are determined:

(a) Insoluble carbonaceous matter, silica, insoluble inorganic matter, iron as ferrous and ferric oxides, aluminum oxide, calcium oxide, magnesium oxide, alkali metal oxides, carbon dioxide, sulphur trioxide, sulphur present as sulphide, hygroscopic (surface) moisture, crystal or combined water. In addition to the above it is sometimes desirable to know the mineralogical constitution of the stone, or at least determine the form in which the calcium and magnesium carbonate exist. The questions which arise concerning these points are: "Does the calcium carbonate exist as calcite or as aragonite, and does the magnesium carbonate exist as magnesite or as dolomite?"

### Mineralogical Considerations

The reason for investigating these points is the difference in reaction velocities of the various carbonates named.

For example, calcite effervesces vigorously when treated with cold dilute acids, while dolomite is scarcely attacked to a visible degree under these conditions. Magnesite acts very slowly, similar to dolomite, while aragonite, which is orthorhombic calcium carbonate, has a high reaction velocity.

The limestone used for bisulphite liquor manufacture, so far as the writer has been able to observe, consists of "calcite" stones, with varying admixtures of dolomite. The aragonite form of calcium carbonate is rarely found in limestones, because of the fact that aragonite can be deposited from bicarbonate solution only at temperatures exceeding the temperature of sea water.

Furthermore, aragonite changes itself into calcite in certain types of deposits, e. g., the oolites. Magnesite, or simple molecules of magnesium carbonate are very rarely found in limestones, the magnesium present existing as the double carbonate, with calcium as dolomite.

Detailed discussion of methods for distinguishing between these various forms of calcium and magnesium carbonate is out of the scope of this paper. The writer wishes merely to call attention to several established tests. The Meigen test distinguishes between aragonite and calcite by their conduct toward a dilute solution of cobalt nitrate. The former, upon immersion, is colored lilac red, which color persists on boiling; the latter is not colored except on continued boiling, when a dull greenish blue shade develops.

If magnesite or dolomite is present in admixture with calcite the color is modified to a brighter, purer blue. In distinguishing between calcite and dolomite the Lemberg test is useful. While the Meigen test depends upon the formation of basic cobalt carbonates of differing colors, the Lemberg reaction for distinguishing calcite from dolomite depends upon the formation of a violet colored lake by union of the coloring matter of logwood with aluminum hydroxide selectively precipitated by calcite from a solution of logwood extract (hematoxylin) in an aluminum chloride. By boiling a mixed stone in powder form for fifteen to twenty minutes, and examining the powder under the microscope the particles of calcite are found to be colored deep violet, while the dolomite (and magnesite) particles are unaffected. For further and more detailed discussion of these tests the writer desires to refer the reader to the (a) Meigen article in *Zentralblatt für Mineralogie*, 1901, page 577. (b) Hutchinson, in *Mineralogical Magazine*, vol. xiii, 1903, page 28. (c) Lemberg, in *Zeitschrift der deutschen geologischen Gesellschaft*, vol. xv, 1905, page 1. (d) Vaubel in *Journal für praktische Chemie*, 86, 366-381. (e) Niederstadt, in *Zeitschrift für angewandte Chemie*, 25, 1219. On the subject of the geology of the formation of calcite and aragonite, Lincks' paper in *Neues Jahrbuch für Mineralogie, Geologie und Palaeontologie*, Beilage, Band 16, page 495, will be found interesting.

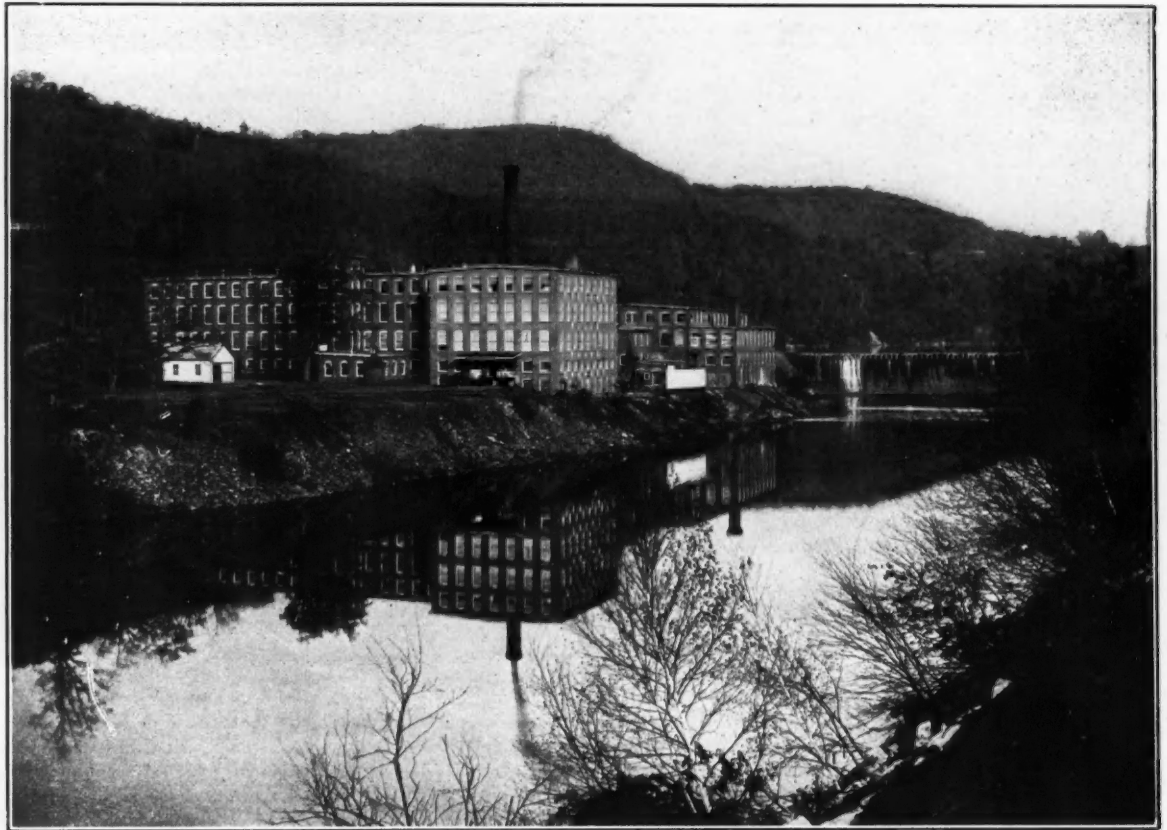
In the writer's experience he has found as near as can be recalled, only one stone suitable for bisulphite liquor manufacture

# Millers Falls Paper Company

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which gave the aragonite reaction. In one or two instances observations seemed to indicate that free magnesite was present in certain types of stone used for "acid making." Assuming that dolomite decomposes as a unit under conditions existing in this process, which I believe can be proven to be the case without any difficulty, and taking into consideration the fact that the velocity of decomposition of calcite is much more rapid than that of dolomite at the temperatures prevailing in a tower system for liquor manufacture, it is difficult to understand how it is possible to have a "sludge" form which contains more than equimolecular proportions of magnesium carbonate and calcium carbonate. This was observed on several occasions by the writer, there being present somewhat more than one molecule of magnesium per molecule of calcium. The writer does not wish to convey to the reader the idea that such stones as those referred to above are very desirable for bisulphate liquor manufacture. For reasons to be explained later, this type of stone is to be avoided.

The author recently made a few determinations of specific gravity of stones, and noted in one instance that a comparatively very slight difference in the specific gravity of two stones very nearly alike in all other respects seemed to cause a relatively large difference in the rate of decomposition in acid solution of given concentration and temperature. This incident is mentioned merely because it is possible that it may lead to further investigation along these lines which may produce results of significant value.

#### Chemical Considerations

The determination of the chemical constituents outlined in paragraph four are of interest because of the influence the presence or absence of these constituents and the variation in their proportions exert upon the conduct of the process of preparing the bisulphite liquor, and upon the results obtained in cooking pulp by using a liquor so prepared, and also upon the results obtained in case the waste liquors are utilized for the manufacture of by-products. The value of each determination is discussed below.

**Insoluble carbonaceous matter.** This is present in greatest amount in the highly colored limestones, particularly those of a purer blue color. It exists in these stones in extremely finely divided particles, colloidal suspension. It is nearly always in the form of free carbon. When the stone is dissolved in the towers this carbonaceous matter is put into suspension in the liquor to a large extent, the balance depositing in the base of the towers. By a series of tests extending over a considerable period of time, the writer has found that the carbonaceous matter in suspension in the liquor was proportionate to the amount present in the stone, and that in the cooking process the carbonaceous matter was deposited out of the liquor in the early part of the process and was attached to the fibers.

It is readily seen that when the amount becomes considerable, an undesirable effect or result upon the pulp may be experienced. If agglomeration takes place, dark specks of "dirt" will be found; otherwise the color of the pulp will be influenced. One per cent carbonaceous matter can make its presence quite evident in this respect.

Silica should be determined in a sample of stone for these uses, because it occurs so frequently in relatively large quantities, in many instances between 5 and 15 per cent. Needless to say, such stones are undesirable for acid making because of the large amount of waste occasioned by their use. Silica, when present in these amounts, collects in the bottom of the limestone towers, and interferes with the proper operation of the towers. In addition to this, portions float or are carried along through the pipes and pumps by the liquor and do injury to pumping equipment and valves in the pipe line.

Aluminum oxide is determined because it gives a good idea of the state of combination in which the silica exists. The aluminum oxide in the soluble portion of the stone, found in the filtrate

from the silica determination, is present as the result of the decomposition of a meta- or orthosilicate of aluminum and an alkali metal. If the insoluble portion remaining after the determination of the silica is appreciable, which is often the case when the total inorganic insoluble is large in amount, this residual inorganic insoluble should be analyzed, and will likely be found to consist largely of aluminum oxide. A large amount of soluble aluminum oxide also points to a relatively large amount of alkali metals present in the stone. The effect of the presence of aluminum solution in the bisulphite liquors has not been made a subject of study.

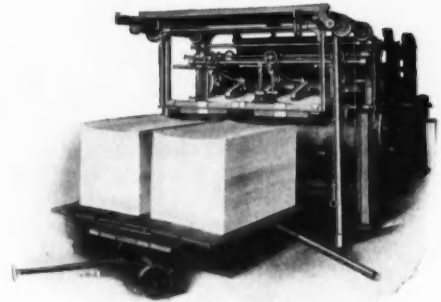
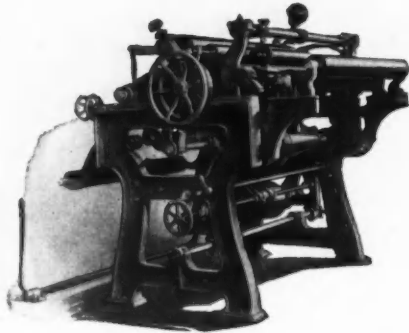
Iron, which usually exists in the stone in the form of ferrous carbonate, exerts known influences in the cooking process, so far as the resulting products are concerned. All the ferrous iron as carbonate in the stone is dissolved in the making of the liquors and part of the iron dissolved may have existed in ferric form as oxide (hydrated). Unless the amount of total iron in the soluble portion is large and the amount of carbonaceous insoluble matter is considerable, it may be considered as being totally in the ferrous state as carbonate. It should also be remembered that if sulphur is found in the insoluble portion of the stone, iron will likewise be found as such sulphur exists as pyrite. This occurrence is comparatively rare in a stone which is at all suitable for bisulphite liquor preparation.

Iron is detrimental to the permanency of strength and color of pulp and paper. Several investigators have shown this, and have simultaneously pointed out the affinity of cellulose fibers for iron in solution. A large proportion of the iron present even in very dilute solution is readily absorbed by the fibers. Such absorbed iron functions as an oxygen transfer agent resulting in an oxidation of the cellulose and consequent weakening and also a production of a brownish tint in part due to ferric compounds. This seems to take place most rapidly in rosin-sized papers. A further objection to iron in the stone is the resulting contamination of the waste sulphite liquors, in case these are to be utilized by conversion into substances suitable for use in the leather tanning industry. Any iron present in such a tanning extract exerts a decided darkening action on the leather produced.

The necessity for the determination of calcium and magnesium as oxides is self-evident, since they, in the form of the carbonate, are the principal constituents entering into the reaction in the bisulphite liquor making process. The proper relationship between the amount of calcium and magnesium has been the subject of considerable discussion, and certain misconceptions exist among the operatives of sulphite pulp mills in reference to this point. Until a few years ago the majority of acid making systems were of the milk of lime type. At that time it was generally agreed that a burnt lime made from dolomite was best adapted to this process, for at least two or three reasons. A theoretically pure lime of this sort, consisting of equimolecular portions of magnesium and calcium oxides, would contain 41.8 per cent of magnesium oxide. Many manufacturers endeavored to obtain a lime containing as close to this percentage of magnesium oxide as was possible. The high magnesia content was advocated for these reasons chiefly—to wit:

- (a) Such lime had a higher absorption coefficient for sulphur dioxide gas.
- (b) The high magnesia lime was said to make better pulp than the ordinary lime. In the opinion of the writer this assertion has never been thoroughly justified.
- (c) In the processing of the liquor any sulphates formed would be shared by the magnesia, producing a portion of magnesium sulphate, which is more soluble than if the equivalent calcium sulphate had been formed. The percentage of calcium sulphate would be thereby reduced somewhat.

The losses due to incomplete slaking in the making of the milk of lime solution, and the higher temperatures required for this purpose were in most cases ignored.



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When limestone tower systems were introduced many operatives endeavored to apply the same concepts regarding magnesia ratio to the selection of a stone for the towers. Certain disadvantages were experienced as a result. To enumerate these disadvantages and correct any misconceptions which exist at the present time, the writer wishes to summarize the facts of the case in the following statements.

When a stone containing considerable calcium magnesium carbonate, or dolomite, is used in towers a sludge is formed on the bottom, consisting chiefly of calcium magnesium carbonate and sulphite, because of the fact that the dolomite in the stone is so much more slowly attacked than the calcite portion at any given temperature and gas concentration. As this sludge is washed away to make proper tower operation possible, this represents a loss which at least partially equalizes the gain due to greater absorption capacity of the magnesia or dolomite portion over that of the calcite portion. Furthermore, if a straight dolomite stone is used, which decomposes more uniformly, a higher temperature must be carried in the towers, which is detrimental to the subsequent recovery of the relief gases in the recovery tower and fortification of the liquor to the desirable composition of cooking liquor. In addition to the foregoing, if a mixed stone is used, particles of the undecomposed dolomite float along in the liquor until the recovery tower is reached. Here the concentrated relief gases dissolve these particles, resulting in an increase in the amount of combined acid.

Since the amount carried with the liquor is variable, this complicates and often renders impossible the control of the percentage combined acid to the desired degree of accuracy.

Furthermore, the magnesium bisulphate in the solution reacts with the chips in the digester at a lower speed than the calcium bisulphite, according to the observations the writer is now making concerning this point. The magnesium compounds formed as a result of this reaction are apparently not so readily reversible to sulphurous acid as the corresponding calcium compounds. This is one possible advantage in the use of a dolomite stone, provided the difficulties enumerated above can be overcome. The reaction taking place in the digester seems to progress more smoothly under these conditions.

Sulphur trioxide should be determined in a limestone used for these purposes. The presence of calcium sulphate is detrimental in a cooking liquor because its maximum solubility is greatest at the making temperature, being one-fifth greater than 32 deg. Cent. than its solubility at 100 deg. Cent., and upon heating such a liquor in the digester, small particles of calcium sulphate separate, forming nuclei about which resinous and pitchy matter can and does agglomerate.

The sulphur present as sulphide should receive some consideration. Except in rare instances practically all of this exists in the stone in the form of pyrite, and because of the relative insolubility at the temperatures and concentrations of acid in the towers, a very small amount is acted upon. While nearly all of the pyrite is precipitated as sludge, any that is carried along in fine state of division in the liquor into the digester is there acted upon to a far greater extent, resulting in the liberation of hydrogen sulphide and the consequent formation of pentathionic acid, and precipitation of sulphur. Other unstable thionic acids are also formed. Pentathionic acids and these other unstable thionic acids at boiling temperatures decompose into sulphuric acid, and also precipitate more elemental sulphur. The elemental sulphur again unites with sulphur dioxide, forming the very unstable trithionic acid, which very readily breaks up into sulphuric acid and sulphur. It is, therefore, evident that the changes are continually progressive, as well as cumulative in respect to sulphuric acid, sulphates, and free sulphur. Furthermore, Professor Klason has shown that these reactions are very destructive to the making of good pulp, and create a marked disturbance in the control and

progress of the reaction in a digester when the elemental sulphur exists in a concentration of only one-sixtieth per cent. His observations were made on trial cooks by the Mitscherlich process. Dangerous as these conditions are in Mitscherlich procedure, how much more dangerous they become in the high temperature short cook process!

While it is true that the presence of sulphide sulphur in amounts exceeding what may be considered traces is relatively uncommon, because of the character of the above reactions, it should always be looked for in the examination and evaluation of a stone for this purpose.

The carbon dioxide content of a stone should be determined because it is a main constituent, and the amount present in excess of that which is equivalent to the magnesium and calcium oxides present permits the analyst to form a more definite conception of the condition in which the iron present exists.

Water present in a sample of limestone should be determined to two forms, hygroscopic water and combined water. The combined water indicates the condition of some of the mineral constituents, and is derived chiefly from hydrous silicates which are of zeolitic character. Of course, in the determination as given below hydrogen present in organic matter is included as water in this result. These facts must be taken into consideration.

The sodium and potassium oxides should be determined, though it is not always necessary to separate them. Practically the entire amount of alkali oxides present exist in combination as silicates. Silica combined in this manner is more likely to go into colloidal solution as hydrosol than when otherwise combined, if treated with comparatively dilute acid at low temperature. Such silica would not precipitate in the acid making towers, but some observations indicate that it does precipitate in the digester.

#### Methods of Analysis

**Sampling.**—If stone is sampled in the quarry a large number of chip samples should be taken at random from various sections of the quarry. These should be chipped from the rock mass by the sampler, and in size or volume should approximate that of a walnut. If the stone is of a porphyritic structure, a greater number of samples should be taken than otherwise, and special precautions should be taken to make sure that the sample is taken truly at random. If the stone is sampled from a carload shipment, similar chips should be taken at random from the various stones at a number of places in the car during the process of unloading, observing similar precautions to those stated above.

**Crushing.**—The samples are crushed to a fineness of twenty mesh. This may best be done by use of an Ellis mortar, which is made of highest grade tool steel, hardened to the very greatest degree possible, and which is somewhat similar in form to a Plattner's "diamond" steel mortar, except that the pestle does not fit so snugly. The sifting may be done with a twenty-mesh brass wire sieve. The twenty-mesh stone is then thoroughly mixed and quartered, the diagonally opposite quarters being rejected. The process is continued until the weight of the sample remaining equals about twenty-five to fifty grams. This sample is then ground in an agate mortar, with an agate pestle, and sifted through a sieve made of silk bolting cloth, about 25 meshes per centimeter. Needless to say, as before, every particle must pass the sieve; the rejection of any portion is not permissible. The powder is then ready for the final grinding in a large agate mortar, or with such a grinding apparatus as that manufactured by McKenna Brass Company, of Pittsburgh, known as McKenna ore grinder.

In reference to crushing to twenty mesh, a method less tedious and time consuming than the above may be used, and is sufficiently accurate for our purpose, in the opinion of the writer. The chips of stone are fed into a crusher regulated for twenty mesh. All steel parts of the crusher coming into contact with the stone must be clean and free from corrosion. The resulting

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twenty-mesh product is thoroughly mixed and quartered as before, and the ultimate sample is spread out in a thin layer on a sheet of glazed paper, leaving a portion of the glazed paper exposed. A similar sheet of paper is stretched in a plane parallel to the first, and a small distance, say one-eighth inch above it. A magnet is held above this paper and will pick up any particles of steel derived from the jaws of the grinder. By moving the magnet over the entire area covered by the powdered stone all the particles of steel may be separated and moved to the clean portion of the sheet, and released there by lifting the magnet. By similar procedure these may again be separated magnetically from any adherent particles of stone, but this is rarely necessary, if the first is carefully done. The remainder of the grinding is done in the same manner as before. The last sifting may be done with a brass wire sieve of one-hundred mesh. In fact if this is kept clean and bright it is to be preferred to the silk sieve.

The ground sample is kept in a cork stoppered bottle, where it may be shaken and mixed thoroughly, and samples taken from time to time in the processes of analysis, or all required samples may be taken at the beginning of the analysis.

**Qualitative Examination.**—A qualitative test should first be made for the purpose of determining the amount of insoluble matter approximately, and observing its characteristics, color, etc. According to the amount of insoluble matter, and the desirability of examining this with more or less accuracy, the size of the sample for the quantitative analysis is determined. This qualitative test is carried out by treating one gram of the powder with about 5 to 8 per cent hydrochloric acid in the cold.

The presence of sulphur in form of sulphide may be qualitatively detected here by treating the insoluble with concentrated hydrochloric acid under reflex condenser with carbon dioxide, holding a strip of filter paper moistened with lead acetate in the path of the escaping gas. Of course, if sufficient is present the odor will establish its presence without the above manipulation.

**Determination and Analysis of Insolubles.**—Two samples of two to give grams are weighed out, according to the amount of insolubles indicated in the qualitative test. These are decomposed with 5 to 8 per cent hydrochloric acid at about 30 deg. Cent. unless slightly increased temperature should be necessary to complete the solution in reasonable time, if the stone contains relatively large portions of dolomite. The first sample is filtered through an ashless filter paper, the bone-dry weight of which has been determined, and washed thoroughly with hot water. The filter paper is again dried at 105 deg. Cent. and weighed. The increase in weight is considered "total insoluble matter." The filtrate is saved for further use.

The second sample is filtered through an ignited asbestos plug or mat filling a slight constriction in a combustion tube. The asbestos mat may be supported by a perforated disk of platinum, or porcelain, such as the disk used as a base for a Gooch crucible. The insolubles on the filter are well washed with hot water, both filtration and washing being done under light suction. The filtrate, collected in a suction flask, is saved for the determinations to follow in order to check or verify determinations on number one filtrate. The combustion tube and filter are thoroughly dried at 105 deg. Cent. and finally the filter is tilted over with a glass rod, so as to make an easy passage for air, and the tube is placed in a combustion train consisting of the following, named in the order in which the air passes through them—viz.:

(a) Two tubes for removing carbon dioxide from the air. The writer prefers to use a concentrated solution of potassium hydroxide for this purpose. The tubes should preferably be made by fitting two long test tubes with two-hole rubber stoppers carrying intake tubes terminating close to the bottom and delivery tubes extending just inside the stopper. The tubes are half filled with the potassium hydroxide solution.

(b) Three long U tubes filled with calcium chloride to absorb moisture from the air.

(c) The combustion tube described above.

(d) A calcium water absorption tube. Before using this calcium chloride tube, the calcium chloride must first be saturated with moisture-free carbon dioxide, and then "swept out" with carbon dioxide and moisture-free air.

(e) A Geissler bulb containing concentrated potassium hydroxide solution. The discharge arm is equipped with a tube, the discharge end of which is filled with calcium chloride, while the other half is filled with soda lime in the usual manner.

(f) An aspirator bottle.

The air current is started through the apparatus, and after it is swept out of the tube "d" and bulb "e" are accurately weighed. They are then reconnected, the air current started, and regulated at a speed of ninety bubbles per minute. The flame is then applied, and the combustion is completed in several minutes. The flame is then removed and the air is allowed to pass through the apparatus for some time longer, in order to draw through the absorption tubes the last portions of moisture and carbon dioxide. The absorption tube "d" and Geissler bulb "e" are again accurately weighed. The increase in the weight of the former represents the weight of water contained in any hydrous minerals present plus the water equivalent of any hydrogen of organic matter, which is generally very small. The hydrous minerals may be considered silicates. The increase in the weight of the Geissler bulb is the carbon dioxide equivalent of the carbon of the carbonaceous matter.

The above process is in reality designed for stones containing no sulphide sulphur. In case sulphide dioxide and trioxide are present in the solution immediately after weighing, the corrected weight increase is the true weight of carbon dioxide. Furthermore, in these cases it will be found advantageous to us phosphorus pentoxide as dehydrating agent instead of calcium chloride. The sulphur dioxide may be determined by acidification and titration with iodine; the total sulphur as barium sulphate. The difference is sulphur trioxide.

The sulphide sulphur may be determined by heating the fourth sample in a tabulated Gooch crucible in a current of air. Under these conditions all of the sulphur is retained as calcium sulphate. Care must be exercised to avoid reaching the decomposition temperature of calcium sulphate. This figure calculated as total sulphur, minus the sulphur equivalent of the sulphate found in the filtrate of samples one or two determined later on, gives the sulphur equivalent of sulphide sulphur.

The fusion method for total sulphur may also be used, as described later on.

The silica content of the insoluble matter is determined by burning the filter paper and carbonaceous matter in number one in a platinum crucible with a comparatively low flame. The insoluble incombustible residue is heated with concentrated hydrochloric acid, and filtered on an ashless filter paper. The insoluble residue and filter is ignited in a platinum crucible, blasted a few minutes, after which the crucible is cooled and the weight of the crucible and residue noted. Now the residue is treated with hydrofluoric acid and a little sulphuric acid, and evaporated to dryness, and again blasted. The loss in weight is silica.

The "total insoluble matter" minus the sum of the silica, carbonaceous matter, water, and sulphide sulphur gives the "undetermined inorganic insoluble matter."

**Determination of Soluble Silica in the Stone.**—If the stone contains partially soluble silicates some of these may pass into solution under the conditions of dissolving the stone, even when low temperature and low acid concentration is used as in samples number one and two. This approaches the conditions existing in the acid-making towers. Such silica may be determined if thought warranted by evaporating the filtrate from number one or two to dryness, "baking" the residue on a hot plate for one hour, taking



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up the residue with very dilute hydrochloric acid, filtering and washing the residue on a filter paper, subsequently igniting, blasting and weighing in a platinum crucible. Such silica should be reported "soluble silica."

#### The Iron and Alumina Determination

An aliquot portion of the filtrate from the "soluble silica" determination is used for the remaining determinations of aluminum and iron oxides, calcium oxide, magnesium oxide. This is boiled in a beaker of alkali-resisting glass and several drops of oxidant are added. The choice of oxidant depends on whether manganese is present in the stone in appreciable quantities. While we are not determining manganese, the writer considers it preferable to have it contaminate the aluminum and iron precipitate when present in place of remaining in solution and possibly occurring as a contamination of the magnesium when later precipitated as pyrophosphate. For this reason the writer prefers to use hydrogen peroxide instead of nitric acid or bromine, as is often recommended. The latter reagents should be used when it is desired to keep the manganese in solution and determine it separately. This hydrogen peroxide procedure has been followed by A. Classen and by Gooch.

After the foregoing treatment the solution is transferred to a platinum dish, or if this is not available one of fused quartz or of porcelain will be preferable to glass, this being a good procedure whenever hot alkaline precipitations are made, as siliceous contaminations from the glass are avoided. The solution is brought to boiling, and if sufficient hydrochloric acid is not present to produce sufficient ammonium chloride upon neutralizing to prevent the precipitation of the magnesium assumed to be present, the required balance is added. Ammonia is now added to the boiling solution until the neutral point is somewhat exceeded and the faint odor of ammonia is detected. The precipitate is allowed to settle and quickly collected on a filter paper, washed with hot water, and sucked comparatively dry. It is then dissolved in moderately strong (12 per cent.) hydrochloric acid, the filter paper being washed with hot water and finally dilute ammonia, and reprecipitated by the addition of hydrogen peroxide and ammonia. The precipitate is allowed to settle and is collected on the same filter as before, washed with hot water containing a very small amount of ammonia and finally with water containing a little ammonium nitrate, and partially dried by gentle suction. The two filtrates are united and saved for the remaining determinations of calcium and magnesium.

If greater accuracy is desired the filtrates should be concentrated, and the small amount of aluminum which has gone into solution may be recovered and added to the above. However, if a slight but not too great excess of ammonia is used in the precipitation, the amount of aluminum in the filtrate is negligible. Only a faint trace of iron will be present in the filtrate, and as this is the most important of the two oxides so far as we are concerned, the recovery of the small amount of aluminum present in this filtrate is scarcely worth while, since the iron recovered is so very much less in proportion to the very small amount of aluminum oxide recovered.

The precipitate is ignited moist in a platinum crucible, using a very low flame at first, so as practically to dry the paper before burning it, then increase the size of the flame, so that the paper burns fairly rapidly; ignite thoroughly, but care must be taken not to use too high a test, as there is a tendency toward reduction of the ferric oxide present under these conditions. Label this weight iron and aluminum oxides.

**Separation and Determination of Iron.**—The combined oxides obtained above are fused in the crucible with one gram potassium pyrosulphate, using a low flame. Fusion readily takes place, and heating should not be continued longer than necessary. When fusion is complete the cooled melt is dissolved and transferred to a larger platinum dish by dilute sulphuric acid and evaporated

cautiously on the bath. Concentrated sulphuric acid is added and the evaporation is continued on the sand bath until fumes are given off rapidly. The melt is cooled, and should be moist and pasty, provided not quite all of the sulphuric acid has been driven off, as is desirable. This is dissolved in a small volume of water, say 50 to 75 cubic centimeters, and the solution is digested for fifteen minutes on the water bath. By this time a trace of silica may be visible, and should be separated, for great accuracy, and added to "soluble silica," by filtration of the solution, igniting and weighing.

The filtrate is reduced by leading a current of hydrogen sulphide gas through it. This causes a precipitation of elemental sulphur, and some platinum sulphide derived from the dish. The solution is brought to boiling in the beaker during the passage of the gas, causing agglomeration of the solids in suspension, rendering them easily filterable. The liquid is filtered hot into a flask, avoiding undue exposure to air, and the filter washed with hot water. The filtrate is diluted until the iron concentration is approximately 1:1000, boiled water being used, and is brought to boiling, hydrogen sulphide gas passed through for a minute or two to reduce any iron oxidized in the filtration. The hydrogen sulphide gas stream is stopped, and a stream of pure carbon dioxide led through during boiling until last traces of hydrogen sulphide are expelled. When this point is reached the flask is cooled to room temperature by immersion into cooling water, without the interruption of the carbonic acid gas flow. The flask is held in one hand and a slight "swirl" is given to the solution while a standard solution of permanganate is added slowly until the end point is reached.

The equivalent ferric oxide is calculated from the number of cubic centimeters of permanganate used. The difference between this figure and the "iron and aluminum oxides" is "aluminum oxide," which in this case is to be understood to contain also the phosphoric acid, and the majority of the manganese and titanium which may be present in the stone.

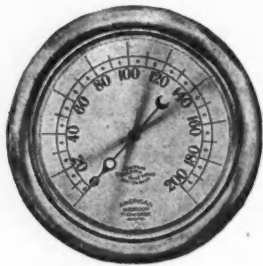
When the color of a stone is not due to ferric oxide admixed with carbonaceous matter in colloidal suspension, and when the carbon dioxide content of the stone exceeds that equivalent to the calcium and magnesium oxides, the iron is present in ferrous condition as carbonate. For our purpose the ferrous iron content of the stone may be considered as the equivalent of the carbon dioxide in excess of that equivalent to the magnesium and calcium combined as carbonates. In determining the calcium as carbonate, deduction must be made for the calcium oxide equivalent of the sulphate found in the stone.

The exact or even approximate determination of total ferrous iron in a limestone is almost an impossibility, owing to interference of carbonaceous matter and some forms of manganese which sometimes occur in the stones. Sulphides also interfere with the determination. The writer considers the time which he spent on the determination of ferrous iron wasted, except in one or two cases where the iron was almost all in ferrous condition and no sulphides or carbonaceous matter were present. This ferrous iron was entirely acid soluble, existing as ferrous carbonate. These stones were, practically speaking, marble. I used the method of Gooch, described in his *Representative Procedures in Quantitative Analysis* (page 235), but substituted sulphuric for hydrochloric acid. Soluble ferrous iron may always be determined satisfactorily in this manner.

**The Determination of Calcium.**—The filtrate from the above determination of iron and aluminum oxides is used. The calcium is precipitated as oxalate and determined as oxide or by titration with permanganate. The errors in the precipitation are due chiefly to two facts:

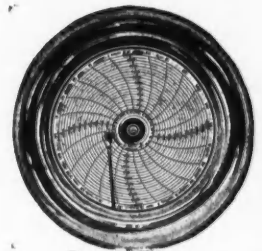
(a) The solubility of calcium oxalate in a solution of magnesium chloride and ammonium chloride is overlooked. For this reason, if the precipitation is made by addition of ammonium

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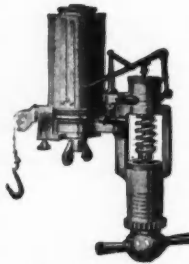


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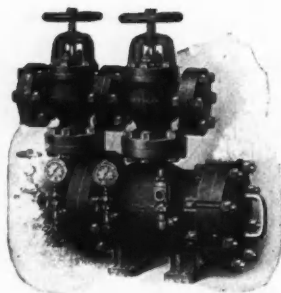
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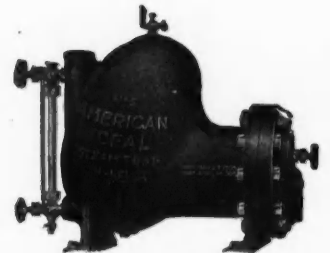
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oxalate, enough must be added to represent a fair excess over that required for all the calcium and magnesium.

(b) The failure to make a double precipitation of calcium oxalate.

Fresenius draws particular attention to the first consideration, and the writer has found in his experience that if it is duly observed the amount of calcium found in the succeeding magnesium pyrophosphate precipitate is reduced to a negligible quantity. Magnesium always contaminates the calcium precipitate as oxalate, particularly when the calcium oxalate is digested on the steam bath for some time previous to filtration. For this reason the precipitate must always be redissolved off the filter into the original beaker and reprecipitated by the addition of hydrochloric acid, followed by ammonia until slightly alkaline, and a drop or two of ammonium oxalate solution. Richards, McCaffrey and Bisbee in the *Proceedings of the American Academy of Arts and Sciences*, vol. xxxvi, page 375, have shown that this process of redissolving and reprecipitation is also necessary to free the precipitate from sodium as well as magnesium. Attention is called to the fact that overwashing of the calcium oxalate precipitate is to be avoided.

The above-mentioned difficulties are overcome by the following procedure:

The filtrate from the iron and aluminum oxides generally contains sufficient ammonium chloride to prevent precipitation of magnesium; if this is not the case, add ammonia and hydrochloric acid. A drop of methyl orange is added, as advised by the method of Blasdale in the *Journal of the American Chemical Society*, vol. xxxi, page 917, and the solution is brought to acid reaction by hydrochloric acid, and the precipitation made in the dilute (0.2 per cent. CaO) boiling solution by the alternate addition of oxalic acid in small portions at intervals, followed by the neutralization by dilute ammonia, the methyl orange functioning as indicator. The precipitate is digested on the steam bath for an hour or two, and the supernatant liquid is poured off through a filter paper, being drained as thoroughly as possible from the calcium oxalate, part on the filter and part in the beaker. That on the filter is redissolved completely with hydrochloric acid and washed through the filter back into the beaker. Dilute ammonia is then poured through the filter into the beaker, after all in the beaker has been dissolved. A drop or two of oxalic acid is also added. When the reprecipitation is completed, which should be done in the hot solution, the precipitate is digested until filterable, and filtered on the first filter paper which should have an alkaline reaction. The calcium oxalate on the filter should be washed four or five times with hot water, using only small portions. The paper and precipitate are ignited, cautiously at first, in a platinum crucible, and finally to constant weight over the blast, and weighed as calcium oxide.

A method which is quicker and just as accurate consists of dissolving the calcium oxalate precipitate in dilute sulphuric acid (10 per cent.) and titrating the solution at about 70° Cent. with standard permanganate solution.

*The Determination of Magnesium.*—This determination as phosphate is really more difficult than the aforementioned determinations in the analysis of limestones, because of the fact that more factors influencing the speed of precipitation, and the nature and composition of the precipitate must be dealt with. The combined filtrate from the calcium precipitation is used. This nearly always contains very large proportions of ammonium salts. These retard the speed of precipitation, and affect the composition of the precipitate, introducing more ammonium, and producing a precipitate which, when ignited, contains less magnesium than under proper conditions and much more phosphoric acid, producing a positive error in the calculation of the magnesium oxide. These facts were clearly shown by Gooch and Austin in *Chemical News*, vol. lxxix. The disadvantage in using the large excess of ammonia during the precipitation was also

pointed out. If large amounts of ammonium salts are present and little magnesia, it is evident from the data of Gooch and Austin that the filtrate should be evaporated, after being made slightly acid with hydrochloric acid and the ammonium salts volatilized. The residue is then taken up with sufficient hydrochloric acid to prevent the precipitation of the magnesium as hydroxide when neutralized with ammonia. The precipitant should also be added to dilute acid solution, and precipitated slowly at room temperature with stirring by the gradual neutralization of the acidity with very dilute ammonia, a slight excess being added. The latter fact should be noted particularly when it is not considered necessary to volatilize the ammonium salts. In all events, the solution to which the precipitant is added should never be more than faintly alkaline.

Neubauer has also given some valuable data on this determination (*Zeitschrift für angewandte Chemie*, 1896, page 435). He found that magnesium could be completely precipitated, but noted that the character and composition of the precipitate was greatly influenced by the amount of ammonium salts and ammonia present when the precipitant was added. To overcome this he "blasts" the precipitate for a long time, until constant weight is reached, this operation requiring an hour or more.

The precipitating agent may be either sodium ammonium hydrogen phosphate or disodium-hydrogen phosphate. With the use of the latter it is often necessary to allow longer time for the last traces of the precipitate to form.

This seems to the writer to be a disadvantage, particularly when the ammonium salts are not volatilized, and ammonium oxalate is consequently present in solution. Under these conditions the writer has found magnesium oxalate present as a contamination even to a slight extent in the reprecipitated magnesium. This condition may be partially corrected by the addition of several drops of sodium ammonium hydrogen phosphate at time of reprecipitation, but as magnesium oxalate frequently separates from ammonium chloride solution on long standing, as has been noted by Classen, it is quite possible for the last portions of the precipitate to be formed with a slight admixture of oxalate, which, when the precipitate is ignited causes a twofold reduction action.

In view of what has been said above, the writer chooses to use the following procedure:

The faintly alkaline combined filtrate from the calcium precipitations should be clear unless it has stood for some time, when occasionally a slight deposit of magnesium oxalate can be seen. If this is the case, add a small amount of hydrochloric acid and neutralize back to faint alkaline reaction with ammonia. The solution will then be clear. Make again faintly acid and evaporate finally to dryness, and volatilize the ammonium salts by gentle ignition. Take up the residue in hydrochloric acid, just sufficient to prevent the precipitation of hydroxide when ammonia is added to neutralization and faint alkaline reaction. To the clear, faintly alkaline diluted solution obtained by treating with ammonia and water is added slowly sodium ammonium hydrogen phosphate, somewhat in excess, and the solution stirred for an hour. Then about 5 Cc. of concentrated ammonia are added, stirring continued thirty minutes longer, and the solution allowed to stand for four or five hours more. The supernatant liquid is then poured through a filter, and the precipitate redissolved in the least possible amount of hydrochloric acid, and reprecipitated with ammonia by the very gradual addition of the latter in dilute solution, stirring in the meantime. A drop or two of sodium ammonium hydrogen phosphate is added to the solution. Agitation is continued for an hour, 5 Cc. concentrated ammonia added, stirring thirty minutes longer, and the solution is allowed to stand several hours longer.

Since we do not care to determine the very small amount of impurities in this precipitate (calcium for example), we may collect this precipitate in a weighed Gooch crucible. In igniting



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the flame is at first kept very low to avoid reduction of the phosphate by the ammonia liberated, after which the temperature is raised to full red heat. A "glow" may be observed as it passes over the residue heated to redness, which indicates a molecular change in the pyrophosphate, showing that the ignition has been sufficiently prolonged. Weigh as  $Mg_2 P_2O_7$ , and calculate to magnesium oxide.

It is noticed that the above procedure is all done in the cold. If it is not desired to remove the ammonium salts, a little time might be saved at the expense of accuracy to a certain extent. Under these conditions the author has employed the Gibbs method with satisfaction. Observing the same precautions regarding any separated magnesium oxalate as above, the clear solution is made neutral and sodium ammonium magnesium phosphate is gradually added in considerable excess to the solution at or near boiling point, boil for five minutes, cool, add ammonium hydroxide in about same amount as in former procedure, or until distinctly recognizable by odor. The supernatant liquor is poured off through filter, the precipitate is redissolved and reprecipitated as in former procedure, ignited and weighed as before.

Certain difficulties are sometimes encountered in the Gooch crucible ignition, due to the fact that the asbestos used is sometimes of the inferior serpentine variety. If this is experienced the precipitate may be ignited very cautiously in an ordinary platinum crucible as is the practice of the U. S. Geological Survey chemists. Then dry the precipitate wrapped in its moist paper, in the crucible, and slowly char the paper without igniting it; the carbon is burned off completely under increasing flame and finally a weak blast is used.

#### Determination of Sodium and Potassium Oxides

We are interested in knowing the alkali metal oxides in solution, although some may exist in the inorganic insoluble matter under the above given method of determination which differs from most methods, but is of special value to us in evaluating and selecting a stone for our purpose. To determine the dissolved alkali metals is tedious because it involves their separation from magnesium in a separate sample. When this is desired, original sample number two is carried along as a check sample only until the magnesium determination.

Filtrate number two is now evaporated to dryness and ammonium salts expelled by ignition. Based on the magnesium determination in sample number one, just enough ammonium chloride is added to keep the magnesium from precipitating as hydroxide, and the magnesia is precipitated as before, using, however, ammonium phosphate in slight excess over the amount required to precipitate the magnesia found in number one, based on equivalent phosphorus pentoxide content. The precipitate comes down slowly and should be redissolved and reprecipitated for greater degree of accuracy, filtering and washing in each case with 2 per cent. ammonia. The filtrate now contains all the alkalis, ammonia, ammonium salts and ammonium phosphate, and also traces of magnesium.

The ammonium phosphate must be removed by precipitation as basic ferric phosphate, by the following procedure: Expel most of the free ammonia from solution by evaporation, make slightly acid with hydrochloric acid, add ferric chloride somewhat in excess until the solution is very slightly yellow. Neutralize with ammonium carbonate, heat to boiling, filter basic ferric phosphate and wash with hot water. Evaporate filtrate to dryness, expel ammonium salts by ignition. Weigh the alkalis in the residue as chlorides.

The Berzelius method, later modified by Zimmerman, gives comparatively good results also, in some instances better than the foregoing. This is dependent upon the conversion of magnesium chloride in the mixed chlorides by mercuric oxide to mag-

nesium oxide, relatively insoluble in water. The chlorides of the alkalis are leached from the comparatively insoluble magnesium oxide with the least water possible. This gives a relatively positive error, while the previously described method contains two errors which perhaps more nearly balance. The Berzelius method is more applicable when the magnesium oxide present does not greatly exceed the alkali oxides.

In each case the alkali oxides may be determined indirectly by noting the total weight of the alkali chlorides, titrating the chlorine content with standard silver nitrate solution. From these data we can calculate the amount of potassium and sodium present, and finally the equivalent oxides of each.

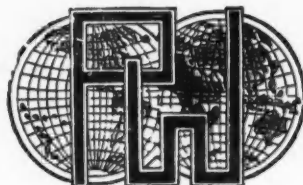
The U. S. Geological Survey chemists use the J. Lawrence Smith method for alkalis in carbonate rocks, following the procedure for silicate rocks in every detail except that only half the usual amount of calcium carbonate is used. The reader is referred to this method in Treadwell's *Quantitative Analysis* and also in Dr. W. F. Hillebrand's treatise on *The Analysis of Silicate and Carbonate Rocks*. When this is applied to our problem the determination should be made on a separate sample of the stone, and a similar determination made on the inorganic insoluble matter portion of number one. The difference between these two determinations gives the sodium and potassium oxides in the soluble portion. These oxides in each case may be determined indirectly as before. The knowledge of the amount of these oxides in the two portions gives us a good conception, when considered with the soluble aluminum, of the nature of the admixed silicates in the stone.

*The Determination of Carbon Dioxide and Sulphur Trioxide.*—Carbon dioxide in a limestone is most accurately determined by direct weighing of the carbon dioxide evolved by acid treatment of the stone and subsequently reabsorbed in a suitable container by a suitable absorption agent. The best types of apparatus for this purpose are those used in the Fresenius-Classen method, or the modification used in the U. S. Geological Survey laboratories. The former is illustrated on page 381, of Treadwell's *Quantitative Analysis*. For our purpose it is well to insert a tube between tubes *a* and *b*, containing pumice impregnated with at least partially dehydrated copper sulphate, prepared according to instructions in the footnote. This will absorb any hydrogen sulphide which may pass along with the carbon dioxide. The acid funnel should be changed in design, equipping it with a tube for leading carbon dioxide-free air through the entire apparatus during the boiling following the decomposition period, making the apparatus essentially the same as the Geological Survey modification, which is illustrated in *The Analysis of Silicate and Carbonate Rocks* by W. F. Hillebrand, and in *Representative Procedures in Quantitative Chemical Analysis*, by F. A. Gooch. It is a good plan in each case to use a Geissler bulb containing sulphuric acid at the end of the train, so as to be able to measure the gas flow. In the procedure, the absorption tubes are weighed, after being "swept out" with dry carbon dioxide-free air. Meanwhile, the sample number three of the stone is placed into the flask, best weighed by difference, from a weighing bottle, at the beginning of analysis, and is covered with enough hot water free from carbon dioxide to make the flask one-quarter full. The apparatus is now "swept out" with carbon dioxide free air and the acid for decomposition is placed in the funnel, of such concentration as to fill same completely. The carbon dioxide free air tube is fitted into the top of the funnel. Now the weighed absorption tubes are connected in the train and the decomposition started by letting the hydrochloric acid gradually into the flask at such a speed that the rate of displacement of the air by the carbon dioxide does not exceed two or three bubbles per second. When the decomposition is complete the solution in the flask is brought to boiling, and the current of carbon-dioxide-free air is passed through slowly until

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all the carbon dioxide has been driven through the absorption tubes. Then the flame is removed from the flask and the current of air is increased until the apparatus has cooled. The absorption tubes are then reweighed. This procedure gives far more dependable results than the determination by difference by the shorter alkalimeter method for reasons which are obvious.

The solution from the foregoing acid treatment is filtered, and the filtrate is very nearly brought to neutral point by the addition of ammonia. To the hot solution a small amount of barium chloride solution is added. This precipitates all sulphate sulphur present as barium sulphate, which is filtered and weighed in the usual well-known manner.

Sulphide sulphur present is determined by the difference between total sulphur and sulphate sulphur found above. The total sulphur in the stone may be determined by fusing sample number four with half its weight of sodium carbonate. If the amount of sulphur present is large, a little potassium nitrate is added. The platinum crucible in which the fusion is made should be supported in a perforated disk made of platinum and the lower half of the crucible should project through a hole in a piece of asbestos board, the whole apparatus being supported in an inclined position over the burner flame. The sintered mass is separated from the crucible, placed in a beaker with water, and the crucible is cleansed with dilute hydrochloric acid "washing" several times and pouring from the crucible into the beaker. Enough hydrochloric acid is added just to dissolve the fused mass at room temperature or with very slight heating, avoiding excess of acid.

The resulting solution is filtered, and the filtrate is brought to boiling after dilution. To the very slightly acid solution a solution of barium chloride is added, avoiding great excess. The precipitated barium sulphate is filtered off and weighed.

When much soluble silica has been found in the stone, it is safer and a trifle more accurate to evaporate the filtered solution to dryness, "bake" the residue, take up in a very small amount of hydrochloric acid, dilute somewhat, heat, and filter. In the filtered solution precipitate barium sulphate as above.

Subtract the sulphide sulphur thus found from the insoluble inorganic matter to obtain a corrected figure for the latter.

**Determination of Hygroscopic Water.**—For this determination use sample number five. The hygroscopic water should be determined by direct weighing after absorption in a calcium chloride tube. Pass purified, moisture-free air over the sample contained in a glass tube extending just through an air bath heated to 105° Cent. To the end of the tube is attached a calcium chloride U tube for the purpose of absorbing the moisture. The tube is weighed before and after the absorption. The difference is hygroscopic water.

**Determination of Combined Water.**—Combined water is determined by the difference between total water and hygroscopic water, and is understood to comprise any water of crystallization present as well as any water of constitution of such minerals as zeolitic silicates, if the silica is present in such form. For this determination made on sample number six the writer prefers to use the Jannasch method of fusion with dehydrated borax in a hard glass tube. The sample should be ground exceptionally fine for this, and intimately mixed in a tube with an expanded bulb such as is illustrated on page 37, figure 10, of Gooch's *Representative Procedures in Quantitative Chemical Analysis*. A current of purified moisture-free air is passed through this tube slowly while the bulb is heated with a blast lamp. The moisture in the air coming from the apparatus is absorbed in a U tube containing the same drying agent as was used in drying the air prior to entering the apparatus, e. g., calcium chloride. Jannasch advises the use of borax to the extent of twice the weight of the sample. The operator must also not neglect to keep the retainer layer of fused

and granulated lead oxide heated with an auxiliary flame. The U tube must be disconnected before the flame under the fused mass is extinguished, for the glass tube immediately breaks upon removal of the flame. The water is weighed in the same manner as in the last determination.

All the determinations having been completed, the results of the analysis are tabulated as follows:

Insolubles—Silica  $\text{SiO}_2$ .  
 Insolubles—Carbonaceous Matter C.  
 Insolubles—Sulphide Sulphur S.  
 Insolubles—Undetermined Insoluble Inorganic Matter.  
 Soluble Silica  $\text{SiO}_2$ .  
 Aluminum oxide  $\text{Al}_2\text{O}_3$ .  
 Ferrous oxide  $\text{FeO}$ .  
 Ferric oxide  $\text{Fe}_2\text{O}_3$ .  
 Calcium oxide  $\text{CaO}$ .  
 Magnesium oxide  $\text{MgO}$ .  
 Sodium oxide  $\text{Na}_2\text{O}$ .  
 Potassium oxide  $\text{K}_2\text{O}$ .  
 Carbon dioxide  $\text{CO}_2$ .  
 Sulphur trioxide  $\text{SO}_3$ .  
 Hygroscopic water  $\text{H}_2\text{O}$ .  
 Combined water  $\text{H}_2\text{O}$ .

While the above analysis scheme is relatively complete and enables one to make an intelligent selection of a stone for bisulphite liquor manufacture, the writer does not wish to indicate the opinion that so complete an analysis is always necessary in checking up the shipments of stone received almost daily from any particular source. For this purpose one needs determine only the insoluble matter, and the acid absorption capacity of the stone by treating with acid and titrating the excess used with standard alkali using methyl orange indicator. Any appreciable variation from the usual tests may be investigated further by submitting the sample to the complete analysis as outlined in this paper. In this connection, in rapidly checking the magnesia and calcium ratio in daily shipments the hydrogen electrode titration method of Hildebrand and Harned may be used to advantage. This is reported in the *Journal of the American Chemical Society*, vol. xxxv, page 867, and also in the proceedings of the Eighth International Congress of Applied Chemistry.

The writer feels certain that the application of the knowledge acquired by the analysis of limestone according to the methods described above will result beneficially to any pulp manufacturer. He who spends the time necessary and who is sufficiently painstaking in his work in reference to this subject will surely realize ample returns for his labors. If this paper has succeeded in assisting the reader to adequately appreciate these facts, the writer is amply repaid.

#### FORESTPORT GROUNDWOOD PLANT SOLD

The Gibbs-Brower Company, paper and pulp mill brokers, at 261 Broadway, New York City, announce the sale of the Forestport groundwood plant, at Forestport, N. Y., for the owners, represented by attorney, Benjamin A. Capron, attorney of Boonville, N. Y., to the Durham Paper and Pulp Company, Durham, Bucks Co., Penn.

This property, at the present time, is a very valuable asset, on account of the shortage of groundwood, which condition is very apt to continue for several years to come.

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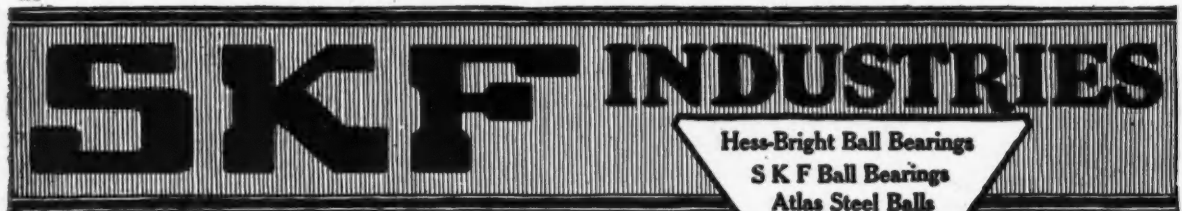
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## Pulp From Cotton Linters

**Some Further Mill Trials on the Pulping of Second-Cut Cotton Linters Trade at the Plant of the Mead Pulp & Paper Co. at Chillicothe, Ohio—From These Tests It Was Concluded That These Linters Can Be Prepared Free from All Dust, Can Be Pulped with Ordinary Soda Pulp Equipment and Can Be Economically Bleached with 2 Per Cent of 25 Per Cent Bleaching Powder.**

Report to Meeting of Technical Association by Otto Kress and Sidney D. Wells.

In June, 1919, one of the writers of this paper gave a brief talk at the convention of the Interstate Cotton Seed Crushers Association at New Orleans, on the possible use of second-cut cotton linters and cotton hull fiber for paper purposes. As a result of this talk a linter and hull fiber committee for developing new uses for cotton linters was appointed and the laboratory agreed to conduct some pulping trials on a shipment to be furnished free of charge by the association. Arrangements were made with the Mead Pulp and Paper Company, Chillicothe, Ohio, through whose courtesy permission was obtained for these trials. A shipment of second-cut linters was accordingly made by the linter committee from the Grenada Oil Mill, Grenada, Miss., which was described as representing a 60-pound second cut after a 40-pound mattress cut and which could probably be furnished in large quantities at around two cents a pound. An examination of the raw stock indicated an absence of cinders, of dirt and the presence of a small proportion of hull fragments that could readily be removed by pulping.

In view of the present abnormal demand for pulp and paper but two pulping trials and one paper machine runs were made, in order to avoid as far as possible interference with the ordinary mill operation and consequent loss of production.

### Cook No. 1

The cook was made in a regular stationary upright soda digester (8 feet x 28 feet) fitted with a steam injector for circulation and also with a direct steam line. The digester was furnished

ing additional black liquor was pumped into the digester to assist in blowing, but approximately 20 per cent of the cook remained in the digester, requiring two reblows. In this cook, 17.1 lb. NaOH was used per 100 lb. bone-dry fiber, and the resulting black liquor showed an efficiency in alkali consumption of 57.2 per cent, indicating that but 9.8 lb. of NaOH had been used per 100 lb. bone-dry fiber.

### Cook No. 2

In cook No. 2 there was used per 100 lb. bone-dry fiber 10.75 lb. NaOH and 87 gallons of cooking liquor of a concentration of 14.8 g.p.l. The digester was raised to pressure in half an hour and held five hours at 105 lb. per square inch. In view of the decided reduction in the amount of active alkali used it was considered advisable to give this long time of pulping to insure complete cooking, but probably a saving in time of two hours could have been made. Prior to blowing, black liquor was pumped into the digester resulting in a clean blow.

The pulp from cook No. 2 was pumped to a Bellmer bleacher but as the trials were seriously interfering with the mill production, the stock was allowed to run to waste as there was no means available for saving and holding it. Several hundred pounds of the unbleached unbeaten stock were pressed and shipped to the laboratory for bleaching and making into paper.

The general pulping data for these two runs are given in Table I.

TABLE I.  
COOKING DATA ON COTTON LINTER COOKS AT MEAD MILL.

Cook No.	Air Dry Weight.	B. D. Weight.	Total NaOH.	NaOH Per 100 Lbs. B. D. Cotton.	Causticity.	Conc. White Liquor.	Liquor Volume.	Water Added.	Total Vol. Cooking Liquor.	Conc. Cooking Liquor.
	Lbs.	Lbs.	Lbs.	Lbs.	Per Cent.	G. P. L.	Gals.	Gals.	Gals.	G. P. L.
Cook No. 1.....	2,960	2,664	457	17.1	92	30.5	1,800	1,800	3,635	15.1
Cook No. 2.....	3,091	2,790	300	10.7	95	15.	2,400	.....	2,436	14.8

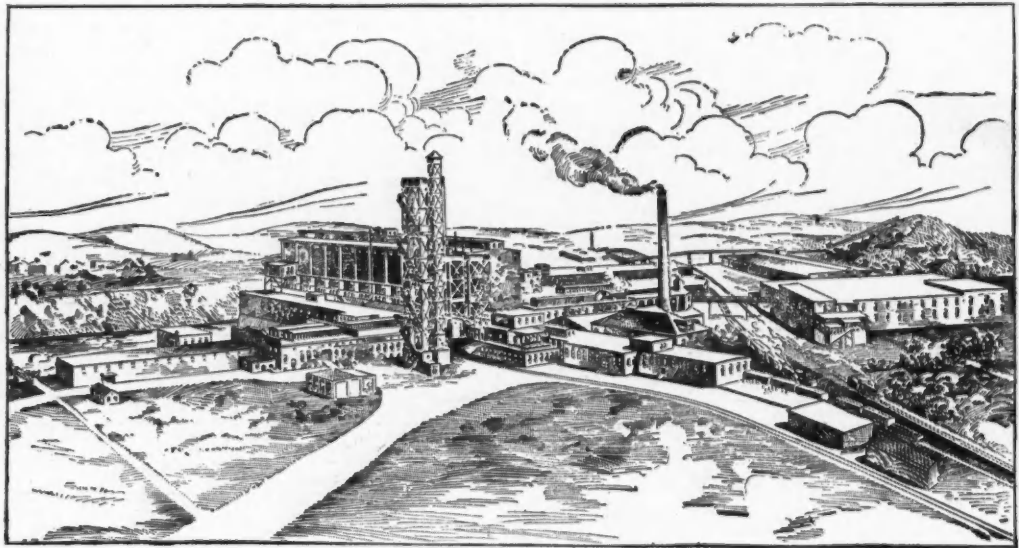
Cook No.	Vol. Cooking Liquor Per 100 Lbs. B. D. Cotton.	Max. Steam Pressure.	Time-coming to Pressure.	Time at Max. Pres.	Active Alkali in Black Liquor.	Effect of Alkali Consumption.
	Gals.	Lbs. Per Sq. In.	Hours.	Hours.	Per Cent.	Per Cent.
Cook No. 1.....	123	100	1.0	3.75	42.8	57.2
Cook No. 2.....	87	105	.5	5.00	16.9	83.1

with 1,100 gallons of white liquor of a concentration of 30.5 g.p.l. to which was added 2,960 lb. of air-dry fiber (89.8 per cent bone dry). Additional white liquor was then added to bring the total volume to 1,800 gallons. The stock floated on the liquor filling the digester approximately to half of its capacity and owing to a leak in the steam line the injector did not properly circulate the cooking liquor. Approximately 1,800 gallons of water were added reducing the final concentration of the cooking liquor to 15.1 g.p.l. The digester was then brought to pressure in the usual manner in one hour, being frequently relieved to remove the gases produced and held at 100 lb. maximum pressure for three and three-quarter hours. Just before blow-

In both of the cooks in view of the high yield of pulp expected it was not considered advisable to fill the digester with fiber as otherwise the pulp would have overflowed the wash pan. Further, it was considered inadvisable to attempt to fill the digester to capacity and interrupt the blowing so as to discharge from the balloon intermittently into two or more wash pans.

The pulp was washed in the usual manner, hosed to the stock chest and pumped directly to a Bellmer bleacher. At the Mead mill the practice is to pump the soda pulp to flat diaphragm screens, then to stock thickener preliminary to dropping it into the bleacher. In view of the length of the fiber of the cotton stock the screens had to be by-passed and the stock pumped to

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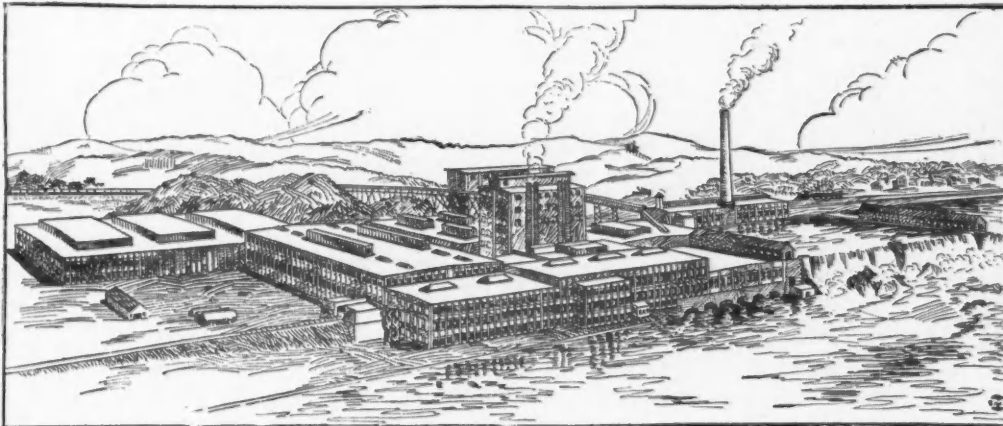
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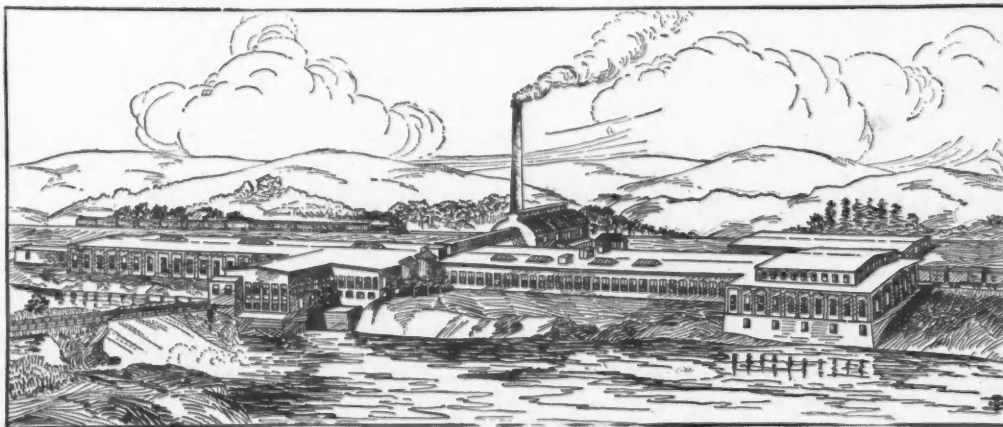
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the Bellmer in a very dilute condition. In view of this dilution an excess of bleach had to be used with heat and the addition of acid to bring the pulp to a high degree of white. There is no question that this bleaching treatment injured and weakened the fiber as was proved at the laboratory by comparison paper machine trials on pulp from Cook No. 1 bleached at the mill with pulp from Cook No. 2 bleached and aged in a drainer at the Madison laboratory.

**Paper Run**

Bleached cotton pulp from Run No. 1 was pumped to two 1,800 lb. beaters which were furnished as follows:

**Beater Furnish**

Cotton linters .....	60 per cent
Old papers .....	40 per cent
China clay .....	350 lbs.
Rosin size .....	35 lbs.
Starch .....	55 lbs.
Alum .....	80 lbs.

The stock after beating was run into lithograph paper, no difficulties being experienced on the paper machine or in supercalendering. As the cotton stock had been weakened by overbleaching and subsequently weakened by cutting rather than brushing in the beater no strength tests have been made on the paper pro-

Cooking chemical .....	9.73 lbs. NaOH
Per 100 lbs. raw linters .....	+
Cooking liquor per 100 lbs. raw linters .....	80.3 gals.
Maximum steam pressure lbs. per sq. inch .....	75
Time to pressure .....	2¼ hrs.
Time at pressure .....	5 hrs.
Ratio combined soda to total soda in black liquor .....	76.6
Yield of bone dry pulp .....	84.0
Bleach consumption, per cent .....	3

duced. The strength tests on the pulps made at the Mead Pulp and Paper Company are based on the paper runs made at the laboratory. As already mentioned, only one paper run was made at this trial which interfered seriously with the mill production.

**Trials Made at the Forest Products Laboratory**

Small samples of the unbleached pulp produced at the Mead mill were tested for bleach consumption, results indicating that the stock for Cook No. 1 could be bleached to a high white with 5 per cent of bleaching powder (35 per cent available chlorine) while pulp from Cook No. 2 required 4 per cent bleaching powder.

Microscopic examination for fiber length of unbleached pulp from Cook No. 2 gave for fifty determinations the following data:

Average fiber length .....	2.66 m.m.
Longest fiber length .....	7.68 m.m.
Shortest fiber .....	.64 m.m.

If measurements had been made on bleached and washed pulp we believe that on account of the removal of the smaller fragments by the drum washer the average fiber length would have exceeded 3 m.m.

Stock from Cook No. 1 which was bleached at the Mead mill and unbleached stock from Cook No. 2 bleached at the Madison laboratory were run over the experimental paper machine and some sheets of the paper made from Cook No. 2 were tub sized with glue. As can be noted from Table II under the heading "Points per Pound," the stock bleached at the laboratory has double the strength of the stock overbleached at the mill while the tub sized stock has practically three times the strength of the paper made from the pulp bleached at the mill.

It is to be noted that the points per pound are based on a 24 x 36/500 basis so that a test of .52 is equivalent to 1.19 points per pound on a 17 x 22/500 20 pound folio basis.

TABLE II  
STRENGTH TESTS ON PAPER MADE FROM COOKS NO. 1  
AND NO. 2

	Weight	Bursting	Points	Aver.	Aver.	Aver.	Stretch
	24x36/ 500						
	Lb.	Lb.	per	ing	length	strength	
			lb.	Meters	No.	Percent	
Stock bleached at Mead mill ...	40.5	7.	.176	2433	2.	1.84	
Stock bleached at Madison ...	43.5	14.6	.336	3419	20.5	3.20	
Stock bleached at Madison Tub size .....	45.5	23.6	.519	4381	51.6	2.79	

As it was impossible to obtain yield figures on either of the cooks made at the Mead mill trials were made at the laboratory on some of the raw stock typical of this shipment.

The general cooking conditions were as follows:

Cook 3.	Cook 4.	Cook 5.
9.73 lbs. NaOH	{ 8.83 lbs. NaOH + 1.80 lbs. Na <sub>2</sub> CO <sub>3</sub> 5.97 lbs. Mg(OH) <sub>2</sub> 11.03 lbs. CaCO <sub>3</sub>	{ 8.13 lbs. Ca(OH) <sub>2</sub> 5.74 lbs. Mg(OH) <sub>2</sub> 15.8 lbs. Sulphur
+		
80.3 gals.	80.3 gals.	80.3 gals.
75	95	75
2¼ hrs.	1¼ hrs.	1¼ hrs.
5 hrs.	5 hrs.	4 hrs.
76.6	91.9	.....
84.0	82.0 (a)	119.6 (b)
3	2	.....

**Cook No. 4**

Cook No. 4 was made with the object of determining whether it might be possible to use a mixture of lime and soda ash instead of using the more expensive caustic soda. By this procedure the fiber is probably not exposed at the beginning of the cook to the full strength of the caustic soda but as the digestion proceeds the soda ash is gradually causticized with formation of the active caustic soda. As can be noted from Table III the strength of the resulting pulp was increased while the stock was considerably hardened. Both Cooks No. 3 and 4 were completely pulped showing no hull fragments or dirt. Cook No. 4 on which a yield of 2 per cent of bone-dry pulp was obtained was bleached similar to Cook 3 in the beater and allowed to lie in the drainer for forty-eight hours to develop a high white color. After suitable beating it was run over the experimental machine showing a final yield of finished bone-dry paper of 73.4 per cent based on the bone-dry weight of the original fiber.

**Cook No. 5**

Cook No. 5 was made with a mixture of lime and sulphur in proportion to form calcium polysulphide. The resulting pulp showed some incompletely cooked hull fragments which did not bleach to a high degree of white.

\*The cooking liquor was prepared by adding 13.5 lb. Na<sub>2</sub>CO<sub>3</sub> and 10.3 lb. of lime to the digester (after slacking), the lime analyzing 60 per cent CaO and 40 per cent MgO. The cooking liquor as given for cook No. 4 was obtained during the cook by the causticization of the soda ash.

<sup>1</sup>About 20 pounds pressure in excess of steam pressure (as calculated from the temperature readings) was apparent throughout the cook which could not be blown down with a reasonable relief of the gas blow off line.

(a) Yield determined with bone dry weight sample which had lost some fine pulp in washing it free from lime residues. The yield figure is a trifle lower than it would have been if determined similarly to cook No. 3, yield of paper 73.4 per cent. Cook No. 3 practically duplicates cook No. 2 as made at the Mead mill.

(b) Pulp contained considerable insoluble matter later removed with drum washer. Yield of paper 90.3 per cent.

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TABLE III.

Cook No.	Treatment.	Weight Per Ream 24x36/500.		Thickness.	Bursting Strength.		Points Per Lb. 24x36/500.		Average Breaking Length.	Average Folding Strength.	Average Stretch.
		Lbs.	Inch.		Lbs. Sq. In.	Points	Meters.	Folds.			
3	Calendered	42.5	.0034	11.5	.271	2880	15	2.53			
4	Calendered	44.5	.0036	15.3	.342	3390	63	3.28			
4	Tub sized	38.5	.0036	29.4	.766	5070	258	5.27			
5	Uncalendered	55.5	.0050	23.0	.414	4020	185	4.83			
5	Calendered	43.9	.0032	16.5	.376	3550	144	3.84			

An attempt was made to pulp linters by the sulphite process to determine whether it would be possible to pulp out the hull fragments. The linters were given a very drastic pulping treatment in a semi-commercial 100 lb. sulphite digester, using a cooking liquor of 6.22 per cent total sulphur dioxide, 5.08 per cent free and 1.14 per cent combined sulphur dioxide. After the first hour of the cook heating was done by indirect steam and circulation insured by means of a pump. A temperature of 100° Cent. was reached in a little over one hour and 100 pounds pressure in three hours. The final temperature was 153° Cent. and the final pressure 70 pounds, leaving 10 pounds gas pressure in the digester at the time of blowing. The total time of cook was 7½ hours. On blowing the cook, over two-thirds of the charge remained in the digester while the portion blown had been so overcooked that it all passed through the perforated drainer bottom of the blow pit in the form of a fine mud. The hull fragments were not pulped and appeared unchanged under the microscope while the cotton fiber was destroyed and appeared as fine fragments that stained brown with Herzberg's reagent and would not stain red, similar to ordinary cotton stock with Herzberg's reagent. On reblowing the balance of the cook that remained in the digester it also broke down into a fine mud that passed through the perforated drainer bottom of the blow pit in the form of a mud carrying with it the unattached hull fragments. Bleaching trials indicated that the hull fragments had been unattached as they could not be lightened in color.

#### Conclusions

Second-cut cotton linters can be prepared free from all dirt, such as cinders, provided the proper precautions are taken in handling the seed and fiber at the oil mill. This is of extreme importance as foreign dirt like cinders if once mixed with the linters cannot be entirely removed by mechanical or chemical means and find their way into the finished pulp and appear in the paper as minute specks detracting from the appearance and value of the finished sheet. This dirt has to date been one of the decided drawbacks to the use of linters, which have usually been too dirty for use in paper manufacture.

Second-cut cotton linters similar to the shipment as made by the Interstate Cotton Seed Crushers Association can be pulped with the ordinary soda pulp equipment with an economical chemical consumption not to exceed 10 pounds of caustic soda per 100 pounds of bone-dry fiber. This represents less than half the chemical required in the reduction of wood.

Cotton linter pulp can be economically bleached with 2 per cent of 25 per cent available bleaching powder which is less than one-sixth the bleach required by the ordinary woodpulp.

Second cut cotton linters are far superior to cotton hull fiber for pulp and paper purposes,<sup>1</sup> the chief advantages being as follows:

1. Increased yield of pulp of from 15 to 20 per cent based on the weight of the bone-dry fiber. This increase in yield is caused by a much lower percentage of hull fragments and absence of a high percentage of small fibers that are destroyed by the pulping operation. An increased yield of 50 per cent of finished paper is obtained from second cut linters over the paper yield obtained from hull fiber pulp.

2. A saving of 50 per cent in caustic soda as the amount of

hull particles that must be removed by cooking is decidedly less for linters than for hull fiber.

3. A saving of 25 per cent in the bleach consumption.

4. Hull fiber pulp contains a considerable percentage of cooked hull fragments that with Herzberg's stain react similar to wood pulp and in an all-rig paper such fragments would appear and be considered as wood pulp. Further, if the pulp were used for chemical purposes such as the manufacture of viscose acetyl cellulose or for nitration for the production of celluloid or collodion. Such hull fragments, even though they bleach to a good white, would probably be detrimental to the value of the pulp. By carefully washing the hull fiber pulp with a drum washer it is possible to remove a large proportion of the hull fragments but a considerable quantity remains which has no felting power and decreases the strength of the paper. In the finished paper especially if it is supercalendered, such fragments are objectionable as they may produce "shiners" or specks of very high finish which are noticeable to the eye, or in bond papers are evidenced by their failure to take the ink properly when the paper is written on with a pen.

5. Cotton linter pulp will produce on account of its greater fiber length a stronger sheet of paper than hull fiber pulp. On account of greater fiber length and the relative mildness of the cooking treatment, it is possible to brush the stock harder in the beater without reducing the fiber length below that desired for paper making.

In previous papers on the pulping of cotton hull fiber we have described our ideas as to the proper handling of the stock in the mill from the beater to the paper machine, to which the reader is referred. In these reports is also given a general account of the various grades of paper in the manufacture of which cotton fiber might be used to advantage to substitute soft rag stocks made from thirds and blues or other similar grades of soft rags.

<sup>1</sup> See report by Otto Kress and Sidney D. Wells, "The Suitability of Second Cut Cotton Linters"—*Paper*, July 18, 1919, also report by Otto Kress, "Cooking Cotton Hull Fiber for Pulp"—*Paper*, Jan. 21 and 29, 1920.

#### PAPER CONSUMPTION IN CHINA

Because of the steady increase in the number of newspapers in China and also the use of handbills for advertising purposes, the market for paper has developed rapidly, the total imports of paper in recent years being in the neighborhood of \$12,000,000 annually. It is only recently that the American paper manufacturers have been able to establish themselves in the Chinese markets, but, in view of the conditions in Europe, it seems probable that the demand for American paper will increase steadily in the future.

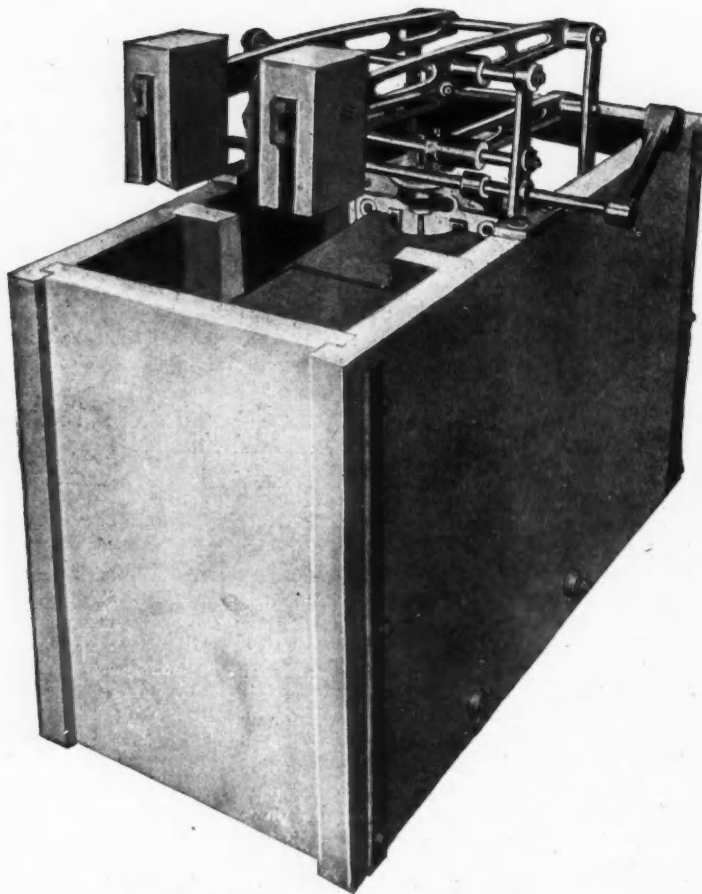
The biggest demand is for newsprint, which is not confined to the large ports, such as Shanghai, Hongkong and Tientsin, but comes from the interior cities as well. There is scarcely a provincial capital that has not one or more native newspapers. Few of these native papers have a sufficiently large circulation to permit their using paper in rolls, and for the most part the demand is for sheets 31 by 43 inches, 500 sheets to weigh 37 pounds. Many of the newspapers use machine glazed cap, the printing being on only one side of the sheet. It is also used for certain kinds of Chinese books, such as school books and cheap story books. It is a very thin paper and is highly glazed, so that the ink does not run. Norway, Sweden and to a certain extent Germany kept the Chinese market supplied with this commodity in former years.

Colored paper for posters, handbills and street advertising is used extensively also. Bright colors, such as yellow, green, red, blue, orange, purple and ox-blood, are in strong demand, the size being 25 by 44 inches and the weight from 35 to 44 pounds per 500 sheets. Highly glazed colored paper, embossed, colored tissue papers and bond, ledger and account book papers are also inquired for.

## STOCK REGULATION

**W**HEN it comes to a question of perfect stock regulation, ask any of the largest and best representative mills in the country and they will readily tell you the most satisfactory, in fact the **PROPER**, way to obtain the desired stock regulation is with the **FEENEY AUTOMATIC STUFF BOX**.

To those who are not now using this method of stock regulation, we wish to give the following



### FACTS:

☐ *With the "IMPROVED" FEENEY AUTOMATIC STUFF BOX, we claim to keep the weight of stock within 1%—Yes, we mean 1%.*

☐ *Can be installed in less than three hours' time—without changing your present line of piping.*

☐ *Construction is so simple that there are no adjustments to be made, and is so durable that it will last a life time.*

☐ *Can be successfully operated in connection with any kind of stock pump—Centrifugal or Plunger.*

☐ *Will work on any kind of stock.*

☐ *There are now over 500 of these boxes in successful operation.*

☐ **WHAT DO YOU THINK OF THIS ONE?** A 1500 pound Beater filled with water, dumped into a 4500 pound chest of stock, will not cause the weight to change a particle.

If you desire to have the efficiency of your stock regulation up to the standard of your successful competitors, write us today for descriptive matter and other particulars.

## Baker Manufacturing Corporation

Formerly Baker & Shevlin Co.

Sole Manufacturers

SARATOGA SPRINGS

NEW YORK, U. S. A.

## JOBBER'S IN ANNUAL CONVENTION

Ross P. Andrews, of Washington, D. C., Is Elected President  
of the National Paper Trade Association for the Ensuing Year

C. N. Bicknell Is Elected Vice-President in Charge of the Fine Paper Division and E. F. Herrlinger Is Re-elected Vice-President in Charge of the Coarse Paper Division—A. J. Corning Is Chosen Treasurer of the Association—Numerous Important Reports Are Made by the Various Officers of the Fine and Coarse Paper Divisions of the Association.

The annual meeting of the Coarse Paper Division of the National Paper Trade Association was called to order in the Astor gallery at the Waldorf-Astoria Hotel Tuesday afternoon at 2 o'clock by Vice-president Edward F. Herrlinger.

The Chairman: Gentlemen, this meeting is now in order. The first business before this meeting is the report of the assistant secretary.

### Report of Assistant Secretary Higgins

Assistant Secretary Charters K. Higgins read the following report:

With your permission I should like to give you a brief résumé of the activities of this division since the last annual meeting, held in February, 1919.

During April, Mr. Lyter, your former assistant secretary, was devoting a large part of his time to the preparation of drafting the forms to be used in collecting the data in regard to the purchase and shipment of paper, as outlined in the statistical plan.

On May 1 the Chicago office was moved from the First National Bank Building to its present quarters in the Conway Building, 111 West Washington street.

On May 13 the Executive Committee of the Coarse Paper Division held a meeting at the Blackstone Hotel. A Conference Committee, consisting of Messrs. Herrlinger, Platt, Beggs and Miller, was appointed to confer with the manufacturers whenever the occasion should arise.

After the first month, during which the statistical plan had been in operation, forty-three members were placed in class A.

The next meeting of the Executive Committee was held in New York City at the Waldorf-Astoria on November 11. Mr. C. K. Higgins, whose services had been retained as assistant secretary, was present at this meeting. It was moved and carried that

the assistant secretary issue the bulletins at his discretion until he felt himself sufficiently familiar with the paper industry to resume them weekly.

Mr. Lyter left for Albuquerque, New Mexico, and Mr. Higgins took charge of the Chicago office on December 4, 1919.

On December 17 the first bulletin was issued by the new assistant secretary, and the bulletins have been continued whenever, in his opinion, anything of importance occurred of interest to the members. The bulletin has been issued weekly since March 5, omitting one week, due to the assistant secretary's being in Boston on business.

At this point I would like to invite your attention to the new policy in regard to bulletins, and that is the practice of discussing business conditions and the financial outlook of the country at large rather than limiting it just to the paper industry. It is believed that the paper industry, as is, indeed, the case of every great industry, is intimately affected by the financial situation and the business in general being transacted in the markets of the world.

In this connection I might add that some of our members have been kind enough to express their approval of this new phase of the service, and I hope that all of our members will approve of the policy.

Every now and then I am asked whether or not I am a follower of Mr. Babson, whom I sometimes quote. My answer is, yes. I am a follower of Mr. Babson, but this does not mean that I exactly agree with his predictions. It is not the policy of our bulletin service to forecast coming events in the paper market, but rather to invite your attention to certain features and economic conditions which may enable you, perhaps, to do some forecasting of your own. Mr. Babson has frequently been wrong in his predictions; he has frequently been right, but we ask



ROSS P. ANDREWS, PRESIDENT.

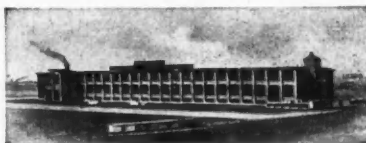
# Sanitary Paper Specialties

**Waterproof Paper Cuspidores**  
For Factory Use

**Waterproof Paper Sputum Cups**

**Paper Cake Baking Dishes**

**Paper Sundae Dish Liners**



Manufactured by

**STONE & FORSYTH CO.**

**BOSTON, MASS.**

Factory at Everett, Mass.

M. B. McClellan, President and Manager  
G. E. Bardeen, Treasurer

S. W. Simpson, Vice-President  
A. B. Thomas, Secretary and Asst. Manager

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## Mac Sim Bar Paper Company

"Mac Sim Bar Means Best"

OTSEGO, MICHIGAN

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## High Grade Box Boards

you to inquire more into the matter of what he bases his predictions upon rather than the predictions themselves.

Perhaps some of you would be interested to know the source of my information and the manner in which it is obtained. In brief, the news of the mills comes from many good friends among the mill representatives who seem always willing to let me in on the latest news from their respective organizations. In addition, we have a luncheon club in Chicago composed of both mill men and merchants who gather daily for the mid-day meal. The transactions which occur and the tonnage which is placed at this table is remarkable. This club is often augmented by the presence of paper salesmen who are passing through the city, as they know that they are always welcome. Hardly a day goes by that there are not at least three or four out-of-town salesmen or mill men present. Of course, the most difficult task in connection with this mass of information is to separate the wheat from the chaff and to publish facts and not idle rumors or fictitious transactions. When I hear of an interesting item of news, it is never published until I hear it confirmed from various sources.

In addition to this source of information, my duties take me to different sections of the country, and I always make it a point on these trips to try to meet the heads of the various paper firms and get their views on subjects allied with the paper industry.

In regard to the section of the bulletin devoted to General Business Conditions, my information again comes from varied sources. Our office is on the regular mailing list of the First National Bank of Boston, the National City Bank of New York, the J. S. Bache Review, Whaley-Eaton Service, all in addition to Babson's regular weekly reports. Each of the institutions issues monthly letters which often furnish interesting data for the merchant.

To further supplement this information, I have an interview weekly with some close personal friends who are affiliated in positions of responsibility with some of the big mercantile and industrial institutions of Chicago. One connection I might mention is with Carson, Pirie, Scott & Company, one of Chicago's largest department stores, through Mr. Pirie Carson, who was a friend of mine at college. Another is with the Inland Rubber Company, through their factory manager, who is also a friend dating back to college days. Another is through Mr. Julius O. Adler, vice-president of the *New York Times*. There are several others, all of whom contribute, but I will not take up your time with their enumeration.

The opinions of representative men such as these, all engaged in different enterprises, give one an idea of conditions which are pretty close to the truth.

All of these sources form the basis of the opinions expressed in the bulletin. When I say, as is the case now, that there seems to be a lessening of the retail demand (I mean by retail the ultimate consumer), it means I have interviewed men who are in direct relation with this demand, and that at least two or three of them have found that, in their opinion, the demand is less urgent than heretofore.

#### Direct Selling

In the paper business there seem to be certain evils which, like the poor, we have always with us. And perhaps chief among these could be classed under the heading "unfair direct selling." In the case of bags, it has been reported that wholesale grocers are being quoted the same price as paper merchants, and then again certain mills are supplying tablet concerns with kraft paper for wrapping purposes. It seems as if something could be done to discourage this practice, and I would add where our members have brought specific instances of this nature to our attention, letters have been promptly sent to the mills in question, asking for a statement of their views on the subject, and sometimes they seem to have plausible excuses, while at other times they have stated that it was an error.

In most instances the replies received from the offending mill

seem to indicate that they are willing to discontinue the practice and do not wish to go on record as doing anything which could be construed as being antagonistic to their legitimate distributors.

In one case I have observed what seemed to me to be an almost ideal relation between the merchant and the mill. That is where the mill looks upon the merchant as its own sales department, and the merchant, in turn, upon the mill as its production department. United, success is assured to both; alone, each courts disaster.

#### Paper Situation

So many paper men who have dropped in our Chicago office have asked me what my opinion was in regard to the paper market as a whole, and I am going to just briefly state the situation as it seems to me. First, the situation is unhealthy for two reasons; prices are too high, and the production is below normal in relation to the demand.

This situation may continue for some months, and prices may continue to soar under exceptional stimulus, as would be the case if a general lock-out or strike should occur as a result of the remarkable demands recently presented to the mills by the United Brotherhood of Paper Makers.

A possible remedy, it seems, would be in the policy of discouraging the ultimate consumer from dealing so extensively in futures; to stop placing orders months ahead for anticipated needs and confine orders to actual needs; to stop talking high prices and talk conservation of paper, and most emphatically I would like to bring home the fallacy of trying to supply not only your own legitimate customers, but your competitors' also. If each distributor would confine himself to the needs of his own legitimate customer alone, the next time he visits his favorite mill he would not meet his keenest competitor just leaving, after a vain attempt to induce the mill in question to give him sufficient tonnage to supply not only his own customer, but yours as well.

#### Condition of Stock

Just a word as to the condition of paper stocks. I think we will all agree without further ado that the mills have practically no stocks and the paper merchants have practically no stocks. There is, however, a question as to the condition of the retailer's stocks. The opinion seems to prevail among some of the paper men that the little buyer of paper who, perhaps, in normal times would have three or four reams of paper as his stock, now has fifteen or twenty reams which he has bought because of the fear that if he did not lay in this surplus stock he would be forced at a later date to pay much higher prices. If this condition is a fact, then when these retailers realize that the rising prices are due in a great measure to their efforts to buy for the future, the demand will suddenly cease.

Then there will be a period during which both the mills and merchants will try to build up their own long depleted stocks. Beyond this, I do not think any one could hazard anything more than a guess as to what the next big move would be.

#### News of the Associations

I am sure you would be interested to know that the Pacific States Paper Trade Association unanimously voted to retain its membership in the National Paper Trade Association and pay its full assessment. At one time there seemed to be some hesitancy on the part of the Wisconsin Association in regard to the assessment as levied. At the invitation of their president, Mr. Sielaff, I was present at their last meeting, and am glad to be able to report that it was unanimously voted to adopt the assessment as levied.

In New Orleans action was taken to consolidate the Gulf States and the Southeastern Associations into one coarse and fine paper association, to be known as the Southeastern Paper Association. This association will be composed of members who deal in both coarse and fine papers and, while they believe they will lose perhaps four or five members because of the increased

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If you are interested in obtaining real service in purchasing or disposing of paper mill property or equipment, we are exceptionally well qualified for the work.

Our concern has been in the paper mill machinery business for thirty years and has an enviable reputation, and a staff including:

One who has had an experience of thirty years purchasing, selling and dismantling paper mills and paper mill machinery, and who is acquainted with a majority of the mills of the country;

One who is a Technology graduate, has had ten years experience in some of the best paper mills and who was superintendent of a high grade mill for five years;

Two Technology graduates with engineering training.

**FRANK H. DAVIS COMPANY**  
175 Richdale Ave., Cambridge, Mass.

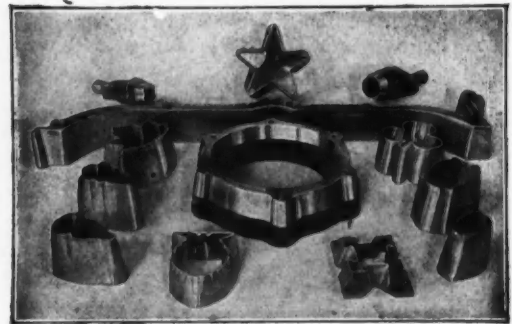
## CUTTING DIES

For Dieing Out Envelopes, Labels, Lithographs and Advertising Novelties, Boxes, Wrappers, Gasgets, Toys, Paper Napkins, Drinking Cups, etc., etc.



We use the best of steel stock, and manufacture strictly first-class dies.

All Work Warranted to Give Satisfaction



We shall be pleased to furnish prices for any style of dies on receipt of paper patterns. Please state whether they are to be used under a machine or with a mallet.

**THE HOGGSON & PETTIS MFG. CO., New Haven, Conn., U. S. A.**



assessment, it is our opinion that the new associations can be built up into a strong organization. The details of this consolidation have not as yet been worked out.

I wish to take this opportunity to thank the members of the Coarse Paper Division for their co-operation during the first six months of my affiliation with the Association, and if they will continue to co-operate in the future as they have in the past, I am sure that nothing further could be desired. Especially do I wish to express my appreciation of the cordial spirit of co-operation on the part of certain of our members from Chicago and Cincinnati, who have given me on many occasions unstintedly of their time as well as advice and helpful suggestions.

#### Vice-President Herringer Reviews Work

During the past fourteen months, the paper business, like many other industries, has passed through a series of readjustment changes, which were accompanied by serious evils affecting not only the paper trade, but its customers as well.

The Coarse Paper Merchants and the Manufacturers have labored harmoniously to obviate, as far as possible, the dangers incident to this troublesome situation; and the success which had attended their efforts must be regarded as a strong argument in favor of trade organization.

Immediately after our last annual meeting, a temporary decrease of demand brought about a recession in values, and general lethargy in the entire trade—happily characterized, however, by a notable freedom from that panicky feeling which usually accompanies a period of dull trade and falling prices.

This freedom from panic may be attributed to a distinct feeling of respect and confidence accorded by the business world, to the paper trade in general, and to the members of the paper trades associations in particular.

The intelligent buyer knew that cut-throat methods against the paper trade were neither justified nor advisable.

He realized that the paper trade was not organized for price-fixing or price-boosting purposes, and he perceived that cutting the heart out of paper prices would inevitably hurt the consumer of paper as well as the distributor and the producer.

In fact, the World War has taught the business man many things, and it has taught him among other things, that our so-called economic structure is in fact a delicate machine with many cogs and springs and balance-wheels, the disarrangement of which may not easily be remedied.

We all realize this, whether we be producers, distributors or consumers. None of us can reasonably expect to benefit by wide or sudden fluctuations of prices of commodities.

The period of stagnation was fortunately of short duration. The consumers soon manifested a desire to resume the normal method of purchasing their needs—thus enabling the wholesale dealer to place advance orders with the mills, with reasonable assurance that the stock could be disposed of at a fair margin of profit.

More recently the matter of placing orders with some assurance of a reasonably prompt delivery has become gradually a troublesome problem, until now, the question of obtaining the paper is seemingly more difficult than that of disposing of it.

The distributor who is constantly studying the general conditions in our industry, must have readily observed a sincere desire on the part of the manufacturers to keep our industry in a healthy state, by the prevention of price inflation.

Inflation of prices is easily attainable during the existence of certain trade conditions, but the modern industrial world has a right to demand that each industry refrain from fostering the conditions which lead to inflation.

Increased prices are legitimate, as well as unavoidable, if they are caused by increased cost or attended by increased values.

Inflated, or unduly expanded prices are something entirely different; and most of us understand that inflated prices are sure

to burst—sooner or later, injuring somebody or other with their escaping gases.

Large increases in the prices of paper are a detriment to the paper distributor who has been, for many years, figuring his profit on the basis of a stipulated amount per pound, because, he has been prone to accept either the same flat rate of profit or one only a trifle greater than he had been accepting when the cost of paper was about one third of the present schedule, and many paper distributors have already learned that the only fair way to figure their profit is on a percentage of the gross sale.

In other words, the profit should be figured on the same basis as the expense account, which is based on the cost to do business as compared with the gross sales.

With the increased cost of operation in the average wholesale paper warehouse, I cannot impress upon our members too seriously the necessity of figuring their profits on a percentage basis, which is in harmony with their cost of doing business, rather than a fixed profit per pound basis, which in the end is very deceiving.

This is not the time nor place to enter upon a dissertation on political economy, even were I qualified to give one—which I am not.

Sufficient to say, that organization within the paper industry has proved an efficient instrumentality for preventing inflation of prices in that industry.

The mill-owners, knowing that speculation in their products is dangerous, not only to them, but also to their customers, promptly and wisely determined to reduce the evils of such speculation to a minimum by adopting the monthly tonnage plan of distribution of their output.

Those who have studied conditions carefully during the past year must conclude that such an equitable and beneficial method of distribution as the monthly tonnage plan can only be secured by means of a thorough understanding of the conditions in the general industry, and that such understanding on the part of each manufacturer and each wholesale dealer can only be arrived at, through the agency of an organization functioning either within or without the industry.

Such an organization might be, and possibly would best be, a purely independent bureau of investigation, gathering information and compiling statistics.

For the want of such a bureau, we must have an organization of our own, and of course our organization must be responsible to us.

Hence, the best results under present conditions can only be secured through the agency of a separate organization for each branch of the industry—such as we now have.

In other words, just as the manufacturers require an organization which shall keep each member advised regarding the volume of business that is being placed with all manufacturers, so we, as distributors, require a similar organization whose members may know at a glance the volume of merchandise that is being distributed to the consumer.

This means statistics, and offers a good reason why we should have both a mill and a dealers organization, without giving credit to the benefits that must accrue through such other information that is distributed through organizations, and through personal contact brought about by occasional meetings, eliminating, as the latter usually does, that feeling of distrust existing through "strangership."

This division of our Association has had before it for serious consideration several other helpful suggestions in the marketing of coarse paper, but it has been deemed unwise to urge any radical changes at the present time.

The Coarse Paper Division has made substantial progress and improvement during the past year.

Not only does it continue to enjoy the loyal support of its members, but it has gained in membership, and its members are

# CONVENTION HEADQUARTERS WALDORF-ASTORIA

## Hercules Paper Corporation

EXECUTIVE AND SALES OFFICE

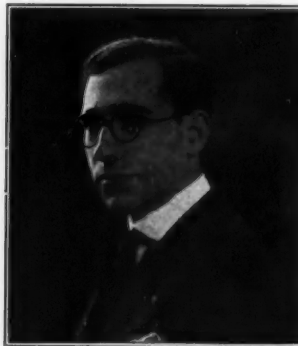
135 BROADWAY  
NEW YORK



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President and General Manager



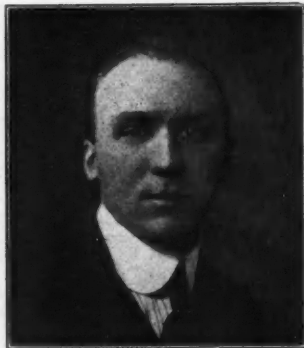
**H. I. PRANKARD**  
Vice-President  
Chief of Manufacture



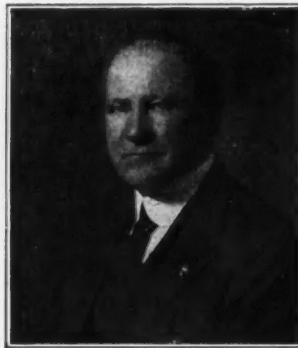
**WM. SMILEY**  
Auditor



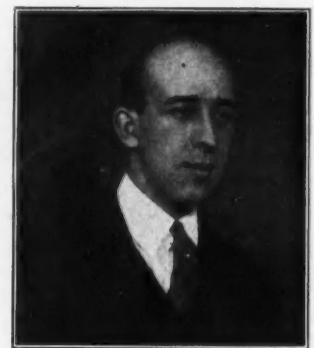
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Secretary  
Ass't to President



**H. L. KOELSCH**  
Comptroller



**J. F. CARROLL**  
Gen. Superintendent



**G. J. DUNPHY**  
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AND

## Frank Gilbert Paper Company (DIVISION)

CHAS. C. WALSEY, President and General Manager

Owning and Operating Mills at

COHOES, N. Y.

CORNWALL, N. Y.

WATERFORD, N. Y.

ROCK CITY FALLS, N. Y.

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Specialties, and a Complete Line of Colored Specialties

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## **The Smith & Winchester Mfg. Company**

**SOUTH WINDHAM, CONN.**

*Manufacturers of*

**PAPER MAKING MACHINERY**

Cylinder, Fourdrinier, Edwards' Fourdrinier, Wet Machines, Jordan Engines, Reels, Winders,  
Cutters, Pumps, etc.

The Celebrated "Rain-Storm" Shower Pipes

**PAPER BAG-MAKING MACHINERY**

Square, Flat and Satchel Bottom, Banana and Millinery Bag Machinery; Cement and Flour Sack  
Machinery.

Builders of Both the Tubing and Bottoming, also Combination Machines taking the paper from  
the roll and turning out the complete finished sack.

*Manufacturers of the Celebrated "Undercut Trimmer."*

**FULL INFORMATION WITH ILLUSTRATIONS AND PRICES UPON REQUEST**

exhibiting a keener interest in its affairs than ever before.

Their loyalty was substantially manifested by the promptness with which their National Committee indorsed the new assessment plan—a plan which, by placing the organization upon an assured income basis, will enable it to be of greater service than ever before to each of its members and to the industry as a whole.

The agency rating plan of assessment which was adopted, will very properly place the burden of cost where it can best be borne and at the same time satisfy those firms which object to revealing their total annual sales.

The Executive Committee Meetings of the Coarse Paper Division have been enthusiastic and well attended, and in general it has been evident that the Coarse Paper members have come to realize that the spirit of cooperation, so helpful to the Fine Paper Division for many years, should henceforth prevail among the Coarse Paper merchants as well.

#### Executive Committee Reports

The Chairman: The next in order is the report of the Executive Committee.

Assistant Secretary Higgins read the following report:

The meeting of the Executive Committee of the Coarse Paper Division was called to order at 4:14 P. M. by Vice-President Edward F. Herrlinger, immediately after the meeting of the Board of Directors of the National Paper Trade Association.

The following committeemen were present: W. R. Merston, Standard Paper Company, Milwaukee. A. J. Corning, Hubbs-Corning Company, Baltimore. Newton Schillinger, Bradley-Reese Company, Baltimore. Sidney Wellhouse, National Paper Company, Atlanta. F. W. Power, Carter-Rice & Co., Boston. J. A. Carpenter, Kansas City Paper House, Kansas City. George Tayloe, Tayloe Paper Company, Memphis. H. J. Severance, Hubbs & Howe Company, Buffalo. Walter Seinsheimer, Seinsheimer Paper Company, Cincinnati. F. A. O'Neill, Paper Manufacturers Company, Philadelphia. Mr. Whiting, Whiting-Pattison Company, Philadelphia. H. E. Dubey, Domestic Mills Paper Company, New York City. Harvey E. Platt, J. L. N. Smythe Company, Philadelphia, Members Ex-Officio.

The minutes of the previous meeting, held at the Waldorf-Astoria November 11, 1919, were read by the Secretary. A motion was made, seconded and carried that they be adopted as read.

A report was made by the Secretary, in which the policy of changing the blueprint chart from the tonnage basis to a percentage basis was discussed.

(The motion was made, seconded and carried that the report be received and approved.)

A discussion then arose as to the feasibility of changing the charts to read in percentage. The result was a motion that the charts be changed to a percentage basis, but that the weekly reports be continued on a tonnage basis.

#### More Contributing Members

The importance of securing a larger number of contributing members was then laid before the meeting. Mr. Dubey suggested that the charts be sent to the non-reporting members for three months, at the expiration of which they should be discontinued, unless the member agrees to become a Class A member and contribute his share of the statistics. Mr. Corning and Mr. Wellhouse endorsed the suggestion, and Mr. Wellhouse went on to emphasize the importance of "creating a desire" in the minds of the non-reporting members. A number of the Executive Committee expressed the thought that they considered the statistics of such importance that even though they were discontinued by the National Association, they would themselves continue them in their own business.

The motion was made, seconded and carried that the Secretary or the Statistician send the charts and the weekly reports to all

non-reporting members for a period of three months; and furthermore, that a letter be drafted in an attempt to enlist the support of the non-reporting members. The suggestion was made by Mr. Seinsheimer that this letter be referred to a committee.

(No action taken.)

#### Importance of Mailing List

Mr. Corning then spoke on the importance of securing a mailing list for the use of the Association, showing in the case of each member the head of the firm, the credit man and the man who handles association matters so far as coarse papers are concerned. Mr. Wellhouse suggested, and it seemed to be tacitly agreed, that ex-committeemen take upon themselves the responsibility of seeing that the Assistant Secretary's office receives this mailing list from each association.

The motion was made and duly carried that the Statistician send out a chart to the old Class A members, showing the purchases and shipments, without the addition of the 14 new Class A members who are included as of January 1st, 1920.

The action of the Board of Directors in transferring the statistics from Chicago to the New York office was discussed. Mr. Farrar, the recently retained statistician, was introduced by Mr. Herrlinger. Mr. Farrar and Mr. Higgins were directed to confer and arrange the date upon which the actual transfer of the reporting plan should become effective.

Mr. Platt spoke briefly on the cost accounting system being used by his organization, in which the various costs were all reduced to a cost per ton.

The policy of shipments f. o. b. mill was brought up, but the motion was duly made and carried that the subject be laid on the table.

Mr. Herrlinger presented some very interesting statistics in connection with increased costs and profits, with and without Federal Taxes, as compared with those in 1914 as a basis.

There being no further business to come before the Committee, the meeting adjourned at 5:45 P. M.

The Chairman: Gentlemen, if you would like to have any part of this report explained in detail, some of the members are here who attended that meeting. There were five or six very important matters that were taken up at that meeting and disposed of. If here are any questions you would like to ask in reference to what was done, I am sure your Secretary will be glad to explain them.

I brought this matter of expense up to try and urge on you to go back and figure out your own costs. Probably some of you will find that they are even greater than this record shows. I was in a concern in Brooklyn some years ago, a large manufacturing concern, and they told me they charged every department manager \$2.00 for the order blank on which he wrote the order, and I said, "Why, that appears to me to be ridiculous." They said, "That does not cover the cost." And I have found that at no time did it ever cover the cost in our business.

Mr. Newton Schillinger: May I ask you a question. How did you handle your returns? As orders filled? In other words, if you deliver an order and the customer refused it, did you consider that an order filled?

The Chairman: Only orders shipped. Requisitions that have actually been shipped. Is there any further discussion regarding the Executive Board's report?

Mr. Stevens: I move it be accepted and adopted.

(The motion prevailed.)

Mr. O'Neill: Did you ascertain what your average profit per order was?

The Chairman: No, we did not. I might say that it is safe to say it was considerably over the cost per order from the difference between the profit and the income tax, the profit without the income tax, and the actual profit with the income tax.



While we frankly admit that  
**Old Hampshire Bond**

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is still the standard paper for business stationery, we would call the attention of the trade to our other lines, all of which are splendid value in their respective grades.

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### Conditions in the Industry

The next in order is the question of the conditions in the industry, and the Chair would like to have a free and open discussion among the members here regarding conditions that prevail in different parts of the country, for the benefit of the members. We are here representing wholesale paper manufacturers from all parts of the United States and I know some of the members here would like to have some expressions from members from other parts of the country regarding the conditions that exist in those sections. There is the question of the labor situation, the news print situation, as it affects wrapping paper, and various other important matters that we might discuss very freely here today. I should like to call on Mr. Frank Power of Boston to tell us something of the New England conditions.

Mr. Frank Power: The condition in New England is most peculiar. We have been up against pretty hard problems all winter. We have been buried up with snow, could not get our shipments from the mill. All orders that were shipped have taken four or five weeks to get the cars, and I don't know how the conditions have been elsewhere, but I know we have been right up against it all this winter, and now we are up against it because we cannot buy any paper. That condition confronts all of us. I do not know that there is any thing more I can say, except that I think the association work at this time is going to mean a lot to all of us.

The Chairman: We might hear from Mr. Wellhouse, of the Southeastern Association.

Mr. Sidney Wellhouse: Mr. President and gentlemen: I do not know that I can enlarge on Mr. Power very much, except to say that his situation, although we are in the sunny South, applies in the South as much or more, because the greater part of the paper comes from his section of the country, and business was affected by the weather. He was closer to the source of supply than we were.

I do believe that this is the one place where the paper merchants get together, and they should open up and say what they think for the good of us all. I heard a discussion after I arrived in New York that I think is well for me to repeat. There was one paper merchant speaking of the tendency on the part of some of his competitors to sell goods by the so-called mail order business in his section at prices that were considerably below his regular figures in his regular district; in other words, where he had a sales organization expense and salesmen traveling, he maintained a set of figures which were higher than the prices which he would quote in districts where he had no selling organization, and where he had no expense other than the mill. This discussion is food for thought for all of us, because I think it more or less applies to each and every one, and this is the place where we discuss matters for the good of the industry as a whole, and for the good of each other, and I believe the discussion I heard in the lobby yesterday afternoon is one that should be enlarged upon. I believe if every one would give it thought in the right manner it would result to the good of the industry as a whole.

The conditions in the South, I think, are about the same as indicated in other sections. That is, a dearth of material, more than anything else.

The Chairman: Is there a member of the Northwestern Association from Minneapolis and St. Paul? Is there any member of that association here today?

Mr. H. W. Mathewson: Our condition up there is similar to all the rest of the market. We are close to our source of supply, but I do not know that we are any better off than our Southern friend who has just spoken. We may get our cars a little sooner after they leave the mill than he, but we cannot get them out of the mill as rapidly as we would like.

There is one thing that we merchants probably do that would help the situation if we did not do it. When we get an inquiry for paper and are unable to place it with our regular source of

supply, we immediately write to everybody that we think of or know of. Our competitors are doing the same thing, and the manufacturer thinks that there should be more business than there is. One inquiry may appear to be fifty inquiries, and if at this time we would not write those letters, but bring more pressure to bear upon our regular sources of supply, it might make the condition a little better for us a little later on, at least if not now; and if we will work along those lines, the manufacturers won't be under the impression that there is so much more business to place than there really is. That is food for thought for all of us. I do not know that there is anything more that I could say.

The Chairman: We have with us today a gentleman from the Pacific Coast Association, Mr. Higgins. We should like very much to hear from him.

Mr. Higgins: Mr. President, a gentleman told me to tell you we have no troubles on the Pacific Coast. Mr. Ridgway, who has been out there, will tell you we have no troubles out there at all. We all live together quietly like lambs. So far as I am concerned, I have no troubles.

Mr. B. N. Coffman: Mr. Chairman, I have known Mr. Higgins for some years, and I hate to expose him, but a gentleman has made a statement that would bear investigation. I have not told him anything. In the first place, I cannot say, like our New England friend, or our Eastern friend, that we have had any storms at all. We have not even had a brain storm. That is on account of our climate, of course. But we have had some troubles in a way, and while it is not applicable to us in the coarse paper trade as it is in the fine, it still applies. Can a physician be ethical in one town and advertise in the next. Can a paper merchant sell goods in his own town in his own community at a profit, and be a pirate in the next? That is all I have got to say, sir.

The Chairman: While we are hearing from this Pacific Coast Association, let us get it all. Let us call on Mr. Zellerbach and hear what he has to say.

Mr. I. Zellerbach: I cannot add much to what my partners here say, except to say we have no troubles out there on the Pacific Coast. We only want to be let alone. Mr. Wellhouse told about this mail order man selling paper so cheap in other sections, and getting such large profits. Mr. Herrlinger has just told us down in Cincinnati whenever he wants to enlarge his business a little he says, "How far can I go and do the least harm?" So he takes a map of this country and says the Pacific Coast is the best, and that is where we get all the prices that are not made in the East, and some of them are quite surprising. They always say that the field is greenest that is furthest away. They overlook some very green fields nearer home.

We have no troubles with the mills out there. We are working very harmoniously with them. The only difference is that the mills sell everybody out there. Every man who is getting butter and eggs and cheese or drugs, no matter what it is, they consider him a legitimate paper dealer and sell him a pound or a ton as readily as any large jobber.

We have great experience in watching the different divisions who work on the Pacific Coast, and seeing the workings of the different managements in the different cities. When you come to analyze it, you will find there is always some cause why one division will make money and the others won't. You will find people in the same line of business forgetting they are working for the corporation, and that the corporation comes first instead of themselves. We have a lot of people from the East who come out summering in our country, and spending their leisure time selling paper and making prices for legitimate paper dealers to compete with, which also affects the earnings of that particular division. But, take it all in all, we have a lovely climate out there. We have a division in Los Angeles, all along the Pacific Coast; it is a good organization. We believe in the national organization,

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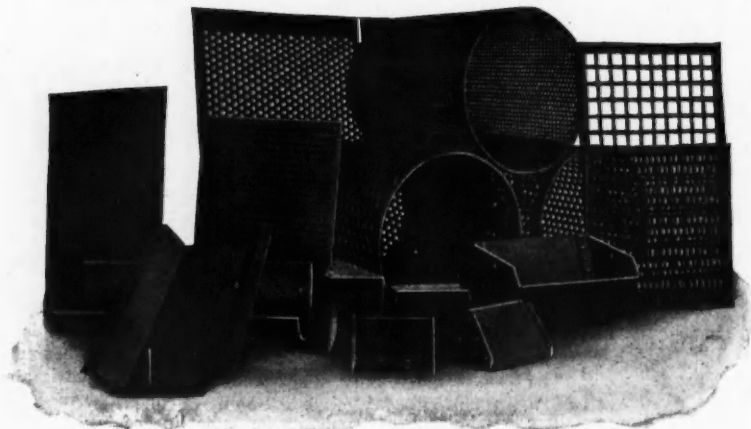
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also your secretary, and would like to have more visits from the secretary, like to have him come and enjoy a game of golf with us, and at the same time enjoy our climate. We have no troubles at all outside of the few I just told you of.

The Chairman: Mr. Zellerbach just told you that your chairman was out on the Pacific Coast last summer. I looked around Los Angeles for evidences of poverty, and I saw less about the Zellerbach Paper Company than any I had ever been to. I couldn't get in, because there were so many Pierce Arrows and Packards blocking the door.

Mr. Zellerbach: We believe in organization. The paper dealers have been driven to it, because we have got an immense country out there, with very few people, and when you come to think of it, we have only about six million people within 1,200 miles area from San Diego to Seattle; and west of Denver you know how sparsely it is settled, and we are driven to get along with each other and save what we can out of the wreck, and in that way I think we have kept the paper industry a little more healthy than you have in the East in the past.

The Chairman: We understand from that, of course, that Mr. Zellerbach does a little better than we do in Cincinnati. Now, is there a member here from the Western Paper Merchants' Association? Is Mr. Carpenter here?

Mr. J. A. Carpenter: What do you want to know?

The Chairman: What your troubles are.

Mr. J. A. Carpenter: We don't have any. Everybody has plenty of paper, and is getting a good price for it. The weather is fine. We play golf in the winter time, and everybody is happy and everything is elegant. The only trouble they have is paying their income tax. They have made the sales, and haven't got the money. I think conditions out there are fully as favorable as they are here. I don't think the great stress is as serious as it is in the eastern part of the country, although we haven't much paper out there, from the stories we hear. The way things are running along now it looks to me as if this was going to be as good a year as we had, except 1916.

The Chairman: Is there a representative of the Wisconsin Paper Merchants' Association here?

Mr. Walter Mershon: I am going to be honest (laughter). We have had lots of trouble. Our principal trouble has been in getting sufficient paper to supply the demand, and getting sufficient help to take care of what little we did get. We are having a great deal of trouble in labor there. We seem to have considerable shortage of labor in that district, and what help we do get is very unsatisfactory. They want to obtain the largest wages they can, and see how little work they can do. We don't have an opportunity to play golf, as it keeps us busy going around to the mills, getting what we can.

The Chairman: The Chair will call on Col. Tom Smith of Louisville. He always has something very interesting to say in these meetings.

Mr. Thomas L. Smith: Mr. Chairman, I am very sorry on this occasion I haven't anything very interesting to say. Likewise, I will tell the truth. As a matter of fact, we are not having—I am speaking now of the Coarse Paper Division—we are not having any serious trouble. We could sell more paper if we got it in some lines. In other lines we are getting all we can sell. I must admit that has largely been through ordering months ahead of time. There are two things I wanted to call your attention to. Possibly you know them, but it may help you.

I find that our salesmen are greatly handicapped by customers flashing a bill—an up-to-date bill at a price much lower than the market price, and using that as a club to make your salesmen come down, whereas that paper may have been bought six months ago. It may have been a delayed order. To overcome that, we have adopted this system for years. I don't exactly remember the words, but we use a rubber stamp, which reads something like this: "This is a delayed order, and the price does

not represent the present market price." Something to that effect. That is stamped right across the bill, and no customer can flash that on a salesman to break down his price, and you would be surprised at the thousands of dollars we all lose from that very thing. The salesman may know about it, but he may forget it, and I suggest you all have a rubber stamp made and instruct your bill clerks on every delayed order to stamp that right across it, and then you can never have that flashed on you to lower your price.

It is a good thing to warn your salesmen to look out for delayed shipments that were bought many months ago and are just coming in, and there are lots of it all over the country, and if we will tell our salesmen about those things it will prevent us from competing against ourselves just on that account. Outside of that, I think we are all getting on very nicely together. I don't see any trouble, and I don't think we are going to have any. I really believe, notwithstanding great demand for paper, I am inclined to believe that conditions, especially in wrapping paper, are going to get a little better. It all depends on the newspapers. If our friends in the Wrapping Paper Division are not tempted to run too much of their product in news print, we won't have any trouble at all.

The Chairman: Let us have an expression from the president of the Middle States Wrapping Paper Association, Mr. Floyd of Indianapolis.

Mr. F. E. Floyd: Mr. President and fellow members of the Ananias Club. Our greatest trouble, we believe, is within our own borders. I mean by that, within our own organization. The hardest thing we have to contend with is to sell the proposition to the salesmen themselves. As Colonel Smith just said, they are led by all kinds of arguments on the part of the buyer. Our situation out there as we see it is to the effect that our stocks are very unevenly balanced. We are long on some, short on others. And we in Indianapolis work very closely together. If we are long on one item and short on another, we—much to the dislike of some I have heard—do some trading. We don't sell direct to each other, but we do a great deal of trading for long and short stocks, and we find that it redounds to our own good.

The trouble as to obtaining our merchandise from the mills, I believe, is our own fault. We have not foreseen the cloud on the horizon long enough ahead.

I am mighty glad to know that this mail order business has drifted toward the west, because if ever there was a place of easy access by the number of railroads from all directions coming into it, Indianapolis seems to be it, from the mail order standpoint. But we have not been bothered with them very much recently. Our salesmen do not come in and complain as much as they did prior to all this excitement, but we believe that the whole thing rests with ourselves in selling the proposition to the men who represent us, letting them know that we are back of them, that we must get a price for the merchandise or keep it for awhile at least, because it is so hard to obtain. We believe that is the way to merchandise our product right at this time, especially from stock. Our drop shipments—you all know what that means—we don't get them, and when we do we are all eager to get out and sell them. On the other hand, we try and keep in touch with men very closely, and I believe that is the secret of merchandising your stocks, keeping your men well advised, so they will know when they run across a considerably lower price than they are asking, that the possibility is it has whiskers on it.

Mr. S. L. Schwarz: There is one point I want to make that has not been made. I think that most jobbers at least in our section in Chicago, where we are in such close proximity to our source of supply, are overdoing the matter of visiting the mills. It seems to me a lot of mill managers are so busy entertaining visiting jobbers they have not time to run their business. I do not believe we accomplish a great deal by visiting the mills. In

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Of fine Quality  
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*Sales Managers:*

**T. J. STEVENSON**

**GEO. E. CHALLES**

our immediate section it has been very much overdone. I think it gives the paper manufacturer a wrong impression of conditions.

The Chairman: Is there any gentleman here who cares to volunteer an opinion as to some improvements in the paper industry?

#### Salesmen on Tonnage Basis

Mr. Walter Seinsheimer: I thought perhaps you would call on me to tell some troubles. Some have intimated that everything told has not been the truth; so I am going to allow you to draw your own conclusions. Quite a few of them have told what their troubles are, but nobody has offered any suggestion as to what the relief is, and I would like to describe, for the benefit of those present, the stand that we have adopted to take care of our trade. As you know, most mills have put everybody on a tonnage basis, and since the first of January we have adopted the same plan with our salesmen. In other words, we see that it is folly to try and expand and do more business now than we have been doing in the past year or so, because you are unable to serve your customers properly, and we have taken all our salesmen who have been with us for any length of time and have a line on how much business they can legitimately do, and put them on a tonnage basis per month, and if they sell that tonnage in the first 15 days of the month they are done for the month. In other words, a customer who has been in the habit of buying one ton can have it, but he cannot have five. And if the salesman sees fit to sell that customer five tons, he cannot have it for the other customers, and in that way we find we are controlling the situation better.

We stay right there with them. We do not allow our salesmen to sell any more goods than we can get.

#### Tonnage Allotment By Mills

Mr. A. E. Dubey: Can New York have a word to say in this Association? We have had some talk here about telling the truth. I believe pretty nearly everybody here has told the truth.

But there is another matter I think should have been brought up, Mr. Chairman, and that is this question of the tonnage allotment which the mills have made us. We have all placed our business months ahead for our tonnage allotment, and it was brought up in the Directors' meeting, and I thought possibly Mr. Higgins would bring it out. When this market turns we none of us know

when it will be, some of these hereabouts will cancel their orders. Our tonnage allotments are very apt to be forced upon us, therefore I believe the merchant could so arrange with the mills that they should put them on a tonnage shipment allotment.

The Chairman: Is there any other gentleman here who cares to discuss this phase of the tonnage allotment plan? We shall be glad to hear from the gentleman from Spokane.

Mr. J. G. Ewing: I think we have very few troubles on the Pacific Coast. We have a good association and work harmoniously together and seem to stand in very well with the mills and get the paper.

Mr. H. E. Platt: It just occurs to me that it might be interesting, although the matter will be presented to the full meeting tomorrow afternoon, it might be interesting to us to hear something from Mr. Schoenbacher of the committee that was in consultation this morning.

Secretary Ridgeway: That committee is preparing a report for tomorrow afternoon. It seems to me you are only duplicating by having it now.

Mr. Dubey: I would like to have Mr. Platt tell us something about the conditions on the other side about paper.

Secretary Ridgeway: Two o'clock tomorrow afternoon.

Asst. Sec. Higgins: I would like to thank Mr. Coffman for the bulletins he sends me from the Pacific Coast, and I would like to suggest if you know of facts in your territory which are interesting to paper merchants that you send me a notice of it. The bulletin has been criticised on the ground that it treats too much of Chicago. This must necessarily be the case to a certain degree from the very nature of the source of my information. The members in Chicago would like to know what is going on out west or down south, and if you will just drop me a letter telling me of any interesting features it will help the bulletins a great deal, and I think all the members would be benefited.

On motion of Mr. Seinsheimer, the Secretary was authorized to send a telegram or letter to Mr. Curtis Lyter, informing him of the fact that the Association is meeting at this time, and that he is still in the thoughts of the members.

There being no further business to come before it, at 4:30 o'clock P. M. the Coarse Paper Division of the National Paper Trade Association, on motion adjourned.

## MEETING OF THE FINE PAPER DIVISION

The annual meeting of the Fine Paper Division of the National Paper Trade was called to order at 10.00 o'clock Wednesday morning by Vice-President R. P. Andrews.

The Chairman: The first order of business today is the report of your Vice-President. Now we have a great deal of very important business before us today. It is not necessary for me to say to you that we are facing more critical times in our business than ever was known before, and probably ever will be known of again in our lifetime. You all know that without my telling you. The Secretary's report will cover the activities of the Fine Paper Division for the past year, and if I were to make a report it would simply be a repetition of what the Secretary will give you, and not nearly so well done or so accurately, so I am going to pass up any report I might have at this time or in the future.

Some weeks ago I wrote to quite a large number of our members asking them to write what they thought was the most important question affecting our industry at the present time, and how it should be handled. The more important suggestions were taken up by the Executive Committee, and some of those will be presented by the Executive Committee for your consideration. Gentlemen, we will now have the Secretary's report.

Secretary Ridgeway read the following report:

#### Secretary's Report

The fourteen months since the last annual meeting of the Fine Paper Division have been full of troubles for the fine paper merchant but these have been amply compensated for in the fact that his business has been profitable. When last this division met, the industry was in the midst of the slump following the signing of the armistice, which slump continued until late spring and early summer but we are glad to be able to say that during all that trying period, the industry as a whole kept its head and emerged therefrom without having committed any serious blunders.

Relations between manufacturer and merchant have been maintained on a most satisfactory basis. Four meetings of the Conference committees representing this and the Writing and Cover Manufacturers Associations have been held. The conferences have undoubtedly resulted in each side having better understanding of the problems confronting the other.

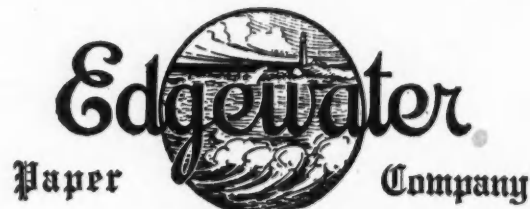
The Book Paper Conference Committee, after a number of conferences with a committee from the new Book Paper Manufacturers' Association approved a set of trade customs applying to both uncoated and coated book papers, which has been issued and is now in force.

The Committee having in charge trade customs covering Card-

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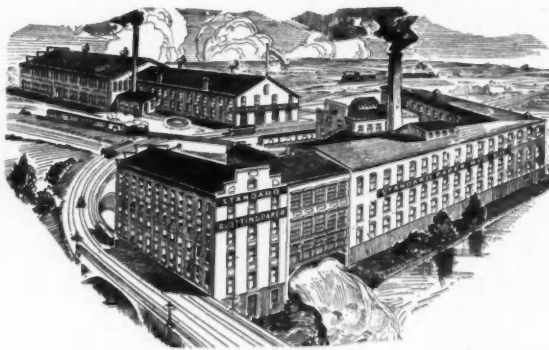


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boards and Index Bristols have had a number of conferences with the manufacturers of these lines. The cardboard trade customs, which were originally issued by the manufacturers without consultation with this Association, were modified in some respects at the suggestion of this Association but other suggested changes were not adopted and therefore, your committee withheld its approval of the customs.

A set of Index Bristol Customs was agreed upon by committees and was to have become effective January 1st. This date has been twice postponed but definite announcement is expected as the outcome of a meeting of the manufacturers' association held yesterday.

The Chairman of these committees will report more fully later at this meeting.

We are pleased to report that a number of manufacturers who had reduced their discounts from three to two per cent reinstated the three per cent discount when the reasons, from the merchants' standpoint for the maintenance of the old discount were presented to them. This evidence of the willingness of the manufacturer to conduct his business in a manner to meet the needs of the merchant is most gratifying. We regret to report a tendency on the part of a few manufacturers to ignore the views of the merchant on policies which vitally affect the merchandising branch of the industry. Changes in old methods of marketing paper may be desirable but a manufacturer contemplating any innovation can readily and promptly obtain the opinion of the distributor either from the merchants with whom he is doing business or from the conference committees of this Association and thereby run no risk of unintentionally incurring the disapproval of the distributors as a whole.

We refrain from reviewing a number of matters of importance as they will be presented to this meeting for discussion and action by the Report of the Executive Committee.

#### Book Paper Conference Committee

The Chairman: Gentlemen, we will hear the report of the Book Paper Conference Committee, Mr. Bicknell.

Mr. C. N. Bicknell: The manufacturers organized their association last Fall. They appointed a conference committee. We met with them. They submitted to us a schedule of new Trade Customs. There were several features that were not satisfactory to us, but in every instance they met our views. We adopted them and approved them on November 12th. They have a standing committee and will be ready to take up anything of interest to this association in the years to come.

#### Writing and Cover Committee.

The Chairman: Gentlemen, we will now listen to something very pleasant. We are going to listen to Mr. McQuillen's report on the conference meeting of the Writing and Cover Committee. (Applause.)

Mr. W. F. McQuillen: Mr. President and gentlemen. I regret that I am getting older. You men seem to be so versatile and active this morning in voting every way known to the calendar that I do not dare to make a report. But there is one thing I want to call your attention to that shows progress, and that is that our officers in arranging the seating capacity of this room had in view the future of this association. (Laughter.)

The conference committee cannot make an exact report, for the reason our meetings and conferences are merely marks of progress. We get so far and then we have a little row. But that enables us to start in at some known point. But the general average has been fine for everybody. We have got an atmosphere now created between the Fine Paper merchants and the manufacturers that certainly did not exist five or ten years ago. Last night at the meeting we brought in to this conference meeting some new members of our association. We rather rotate the members, so

that everyone can see what is going on, and those that attended that meeting for the first time certainly felt the influence of the work that has been going on for the past few years through that committee.

#### United Typothetae Reports

The Chairman: The next is the report of our representative on the Advisory Council of the United Typothetae of America.

Secretary Ridgway: I want to say that the United Typothetae in working out the three year plan, so-called, have an advisory council, and on that council we have a representative, Hr. Forest Hopkins. Other interests allied to the printing industry are also represented on that council. (Reading):

"It has been a privilege and a pleasure to attend the several meetings of the Advisory Board of the Executive Council of the United Typothetae of America since my appointment on this board by The National Paper Trade Association a little more than a year ago.

"As previously reported to the officers and secretary and directors of our Association it is my belief that the U. T. A. are carrying on a very important, helpful and constructive work. It is also my belief that the organization and its various activities are in the hands of very competent men, who are giving U. T. A. activities a lot of time, thought and energy. It is also my belief that their activities and accomplishments might easily be set up as a standard, or at least as an example, of what might be accomplished along similar lines by The National Paper Trade Association if our Association could secure for itself and from its members the same order of support that the U. T. A. are securing from their constituent associations and members.

"Now, for the purpose of making a more or less concrete report at this time of their activities, I feel that I cannot do better than to place before you a 'Résumé of Progress' of the United Typothetae, which was made to the representatives of the Allied Industries under date of January 23, 1920. As this report is of considerable length, instead of reading same to you at this time, I have had several hundred copies of the report made, and which will now be distributed by the secretary to all of our members who are present.

Respectfully submitted,  
FOREST HOPKINS."

The report was adopted.

The Chairman: The next business, gentlemen, is the report of the Executive Committee.

Secretary Ridgway: Gentlemen, the report of the Executive Committee is composed of a number of recommendations, and instead of reading the report as a whole, I think it would be well to take up each of the recommendations separately.

#### Executive Committee Resolution

Your Executive Committee recommends the adoption of the following resolution:

"Whereas, the American Writing Paper Company has undertaken by a series of advertisements in printing trade journals to present to the printer the economic position of the paper merchant in the printing industry, and

Whereas, in so doing the American Writing Paper Company is performing a service of value to the paper merchants, be it

Resolved, that the Fine Paper Division of the National Paper Trade Association in annual meeting assembled record its appreciation of the service rendered to its members by this advertising of the American Writing Paper Company, and that a copy of this resolution be sent to the Company."

A Member: I move the adoption.

(The question was called for and being put was unanimously adopted.)

# FALULAH PAPER COMPANY

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 RAILROADS

ORIGINAL AND LARGEST MANUFACTURERS OF  
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Secretary Ridgway: The Executive Committee recommends the passage of the following resolution:

"Resolved, That the Fine Paper Division hereby reaffirms the resolution passed at the last annual meeting, that it recommends to all constituent associations the adoption of a uniform cash discount of two per cent for fine papers, and of a uniform broken package differential of 25 per cent."

Mr. Sine: I move the adoption of that resolution. (The motion prevailed.)

The Chairman: I hope the gentlemen who voted yes will go back home and put that into practice.

Secretary Ridgway: The committee recommends the passage of the following resolution.

"Whereas, in its inception the Federal Trade Commission was originally appointed to care for the public interests in connection with business; to remedy injustices, and to bring about uniformity in methods of conducting business; and

Whereas, the business community as a whole welcomed this legislation as an adjunct to legitimate business, as holding out hope for relief from intolerable conditions; and

Whereas, this hope has not been realized, but the methods followed by the Commission have been inquisitorial, burdensome and antagonistic to the business community; be it therefore

Resolved, That the National Paper Trade Association record itself as being opposed to any extension by Congress of the powers of this body."

(The resolution was then adopted.)

Secretary Ridgway: All members are undoubtedly familiar with the decimal system as proposed by the Paper Section of the War Industry Board during the war. That system has again

come to life. The Executive Committee recommends the adoption of the following resolution:

"Whereas, the adoption of the so-called decimal system would be to the decided disadvantage of the merchants of this country, and

Whereas, it would be of advantage to the printing industry only in the ease in figuring;

Resolved, that this association is opposed to the adoption of this system by the paper industry.

Mr. Bonestell: I move its adoption.

(The motion prevailed.)

Secretary Ridgway: The committee recommends the adoption of the following:

"Resolved, that it is the sense of this meeting that a broken package, a full package, and an original unopened case are the logical units as a basis of price in merchandising fine papers."

(On motion the resolution was unanimously adopted.)

Secretary Ridgway: The committee also desires to report that it has discussed the problems of sidewalk delivery and returned merchandise, and concluded they were both local issues, and because of varying conditions should not be passed upon by this association.

That completes the report.

The Chairman: Gentlemen, that completes the report of your Executive Committee. The next is new business.

Has any member anything to propose under new business. If there is no further business, a motion to adjourn will be in order.

There being no further business to come before it, at 12:50 o'clock P. M. the Fine Paper Division of the National Paper Trade Association adjourned.

## MEETING OF THE GENERAL ASSOCIATION

The Seventeenth Annual Meeting of the National Paper Trade Association was called to order at 2:00 o'clock Wednesday in the Astor Gallery of the Waldorf-Astoria Hotel, New York, by President H. E. Platt.

The Chairman: The meeting will be in order. The first thing on the program is the report of the Secretary, Mr. Ridgway.

### Report of the Secretary

For sixteen years, the annual meeting of this association has been held in New York during the month of February. The Weather Man has always produced the worst weather of the Winter during Paper Week but if he had a particular grudge against the industry, he did not know of the postponement of the meeting this year, for during the week of last February, when the Paper Industry was accustomed to meet, the worst storm of a decade visited New York. We can congratulate ourselves that we are meeting during the first of the Spring months instead of at the usual time. The annual meeting was postponed to April to conform to the action of the American Paper & Pulp Association, in changing the time of its meetings from February to April, and in the belief that the members of this association would prefer to meet at the same time as that association. We hope the change will prove popular.

In the fourteen months since the last annual meeting, your secretary has spent seventy-one days away from New York on business of the association. He has attended meetings of every local association with the exception of the Missouri Valley and the Wisconsin Wrapping and the Northwestern Paper Merchants' Associations. The assistant secretary has attended meetings of the Missouri Valley and Wisconsin Wrapping Associations and a majority of the members of the North Western were in attendance at a joint Western meeting held in Chicago last May, at which the secretary was present. The secretary's travels have taken him

to Philadelphia four times, to both Washington and Chicago, three times, Boston, Lenox, Springfield, Cleveland, Syracuse and Baltimore once each, and he has made an extended trip, lasting a month, to the Pacific Coast, returning by way of New Orleans.

At the time of the last annual meeting, the association consisted of fourteen constituent organizations. At a meeting of the Board of Directors in May, the Paper Men's Club, composed of Wrapping Paper Merchants throughout the Southwest was elected to membership but the resignation of this association was accepted at a meeting of the Board held on Monday last. At a joint meeting, held in New Orleans in March, of the Southwestern Wrapping Paper and Gulf States Associations, action was taken to consolidate the two into one Coarse and Fine Paper Association. The present organization membership, therefore, is thirteen.

Until three years ago, the only employee was the secretary who furnished stenography, telephone, office equipment, etc., in part consideration for his salary. About three years ago, owing to the increase in correspondence, the association employed a stenographer and at about the same time created the office of assistant secretary with headquarters in Chicago. The Chicago office was opened in conjunction with the Middle States Wrapping Paper Association and later the Central States Paper Merchants Association also joined in its maintenance. Mr. Curtis E. Lyter, was the first assistant secretary, having in charge more particularly the business of the Coarse Paper Division. Because of ill health, Mr. Lyter tendered his resignation last Fall, which was accepted with regret. While with the association, he had developed the work of his office in a highly efficient manner and his resignation was a distinct loss to the association. We believe we voice every individual member in expressing the sincere hope that Mr. Lyter's health will soon be restored and that we may find it possible to obtain his services in the promotion of the extended activities of the National organization. Mr. Lyter was succeeded by Mr. C. K.

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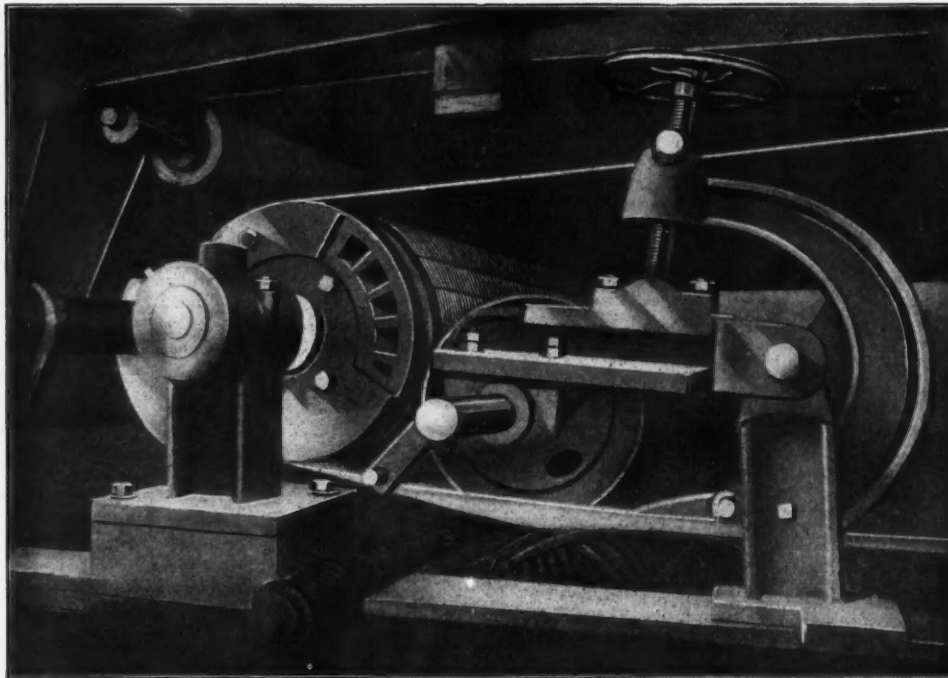
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Higgins, who has carried on the work of assistant secretary most satisfactorily.

As a first step in the enlargement of the scope of the association, the Board decided to open separate headquarters in New York, sufficiently large to accommodate an office force adequate to take care of the increased activities. Owing to the difficulty in obtaining space of any kind in New York, it was impossible to at once establish these headquarters, but a lease, beginning May 1st next, has been taken of an office in the same building in which the secretary is now located. While the space obtained is not ideal, it is adequate for the expansion along lines as now laid out, or as from time to time may become advisable. The Chicago office is located in the Conway Building and in addition to the assistant secretary, the force now consists of three stenographers, the expense of which is shared equally by the National, the Central States and the Middle States Associations.

The business of the expanded association will be departmentized as follows: Statistical, Accounting and a third, which for the lack of a better term, we will call Publicity and Information.

The Statistical Department has been, since February 1, in charge of W. M. Farrar, Jr., who has taken over complete supervision of statistics and will shortly assume charge of the Coarse Paper Statistics which have heretofore been in charge of the Chicago office. Modern business is demanding facts on which to base business policies and this department proposes to furnish them, not only as they may be obtained from report of purchases, sales, etc., from our own members and those of orders, production and shipment from the manufacturers with whom information is exchanged but also by the collection of data of other conditions which may have a bearing upon the paper industry.

The plan for gathering statistics from our own members has been sufficiently developed to produce facts which, if properly handled and graphically presented to the members, will be of the utmost assistance to them in the conduct of their business. It is not the purpose of this department at the present time to ask for any additional figures than now being obtained and we are sincere in our belief that no additional facts will be asked for in the future unless some urgent necessity develops which is unforeseen today. Statistics are of no value unless they are used by the members and one of the first purposes of this department will be to instruct the members in the reading of the Graphic Charts which are now being or which may hereafter be issued by the association. Mr. Farrar had no previous experience in the paper industry but is studying conditions and will be prepared shortly to take up this particular phase of the work.

Accounting Department: The necessity for better accounting has been realized by business men for some years past and we believe that every individual member of this association would be glad to improve his accounting system, provided he could be shown a system better than the one now in use, and provided it could be operated at no greatly increased cost. There has hardly been a meeting of this association in the past eight years at which this subject has not been discussed. About seven years ago, the association adopted a uniform cost system which was installed by five or six members and which was investigated by a number of others. This particular system, however, did not appeal to the rank and file for the reason that it seemed to be too complicated and to require an additional expenditure for bookkeeping not commensurate with the results to be obtained.

Last Fall, Col. B. A. Franklin of the Strathmore Paper Co. made it known that he had been giving considerable thought to a cost system for merchandising paper and offered to place the result of his work at the disposal of this association. After considerable correspondence with various members of the association interested in better cost accounting, Col. Franklin met a committee from this association yesterday for the discussion of this subject and the working out of details of such a system. (This committee will report further at this meeting.)

As soon as this or some other system which will meet requirements can be adopted, it is the purpose of the association to employ or retain an accountant who will attend meetings of local associations throughout the country to present to the meetings the system in detail. It is proposed that these meetings will be attended not only by the heads of the house but also by the head accountants who will have to do with its operation. The accountant will also assist members in the installation of the system and advise in accounting matters.

Publicity and Information Department: This department will be headed by a man familiar with publicity work. One of the weaknesses of the association in the past has been its failure to keep the members more fully informed as to the activities of the National association. Until about two years ago, a monthly Bulletin was issued but we confess to the fact that this Bulletin was not of a character to command the eager attention of the members. The new head of this department will take over the editorship of the Bulletin which will be as a medium to keep the members informed as to National Association activities and items of general information. It will not attempt to cover the news field but will present in readable form the facts and happenings which have a bearing on the industry.

This department will also gather data as to the kinds of paper manufactured in this country, and the sources of the supply. It is not the intention to supplant the present Paper Trade Directories but rather to supplement the information contained in them with details which are necessary to the paper merchant in seeking his requirements.

This department will keep the members informed of the installation of new paper making machinery, new uses to which paper is put and generally act as a clearing house for ideas to promote the business of the paper industry. Suggestions as to how this department can be developed will be welcomed.

The establishment of these departments will relieve the secretary and assistant secretary of considerable detail and will enable them to spend more time in attendance at meetings of local associations and in visiting the trade. We believe that it requires no argument to demonstrate the increased value, both to the members and to the association, of personal contact between the members and the secretaries.

The question of the increase of freight rates should and will have the attention of the National Association. It is possible that, because of conflicting interests of members located in different sections of the country, it will be impossible for the National Association to fully represent all members in the readjustment of freight rates which is coming, but until this situation develops the National Association will protect the interest of the paper merchant.

Shortly after the annual meeting last year, the Federal Trade Commission called a conference in Washington of the entire industry, to consider certain complaints that had been lodged with the commission that the public was being misled by the use of certain paper terminology.

Prior to the conference, a general committee representing the different branches of the industry met in New York and appointed a smaller committee to handle the matter. This committee was headed by Mr. Henry A. Wise, the attorney who had successfully handled the news print matter before the commission.

The history of the misbranding proceeding is well known to you all, and it is unnecessary to go into detail here except to state our positive conviction that, had the industry not been organized, the individuals would have been confronted with a serious situation and would not have obtained the results which were brought about by the concerted action of the entire industry.

We cannot resist the temptation to say something regarding present conditions before bringing this report to a close. Extend-



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ing over a period of nearly four years, the paper industry has enjoyed unprecedented prosperity. During this time there have been periods when the "high speed" has not been fully maintained, but the profits for the entire period have been greater than ever before realized for a like period in the history of the industry. Member after member at various times during this period has told us "last month we did the greatest business in our history," and this remark is quite common as applied to the business of the month of March just passed. While this is true in dollars and cents, we still maintain that the increase in tonnage has not been equal to the normal increase in the use of paper.

The best estimate that we can obtain indicates that the productive capacity of the paper mills has been increased only 5 per cent in the past year, while the normal increase in the demand for paper has always been estimated as somewhere between 8 to 12 per cent per annum. There is no doubt that during the war and since the signing of the armistice there have been periods when the demand was abnormal, based on the normal yearly increase. The National Advertising campaigns inaugurated since the introduction of the excess profits tax has contributed to an increased demand.

At the annual meeting three years ago we heard a number of members make statements to the general effect that, if during that year they broke even and cashed the profits of the previous year, they would be entirely satisfied. It was clearly recognized then that, sooner or later, the paper merchant would have to take a loss on his stock of merchandise. Time has proven that that day was farther off than then anticipated, but each year the fact of ultimate loss has been recognized, and today it is equally true. During this period there have been occasions when it looked to the competent observer as if the time of declining prices had arrived, and in some cases prices have declined slightly, only to rebound and reach higher levels before there was any necessity of the industry taking any real losses.

There seems to be absolutely nothing in the paper situation itself which would indicate lower prices in the near future; in fact, higher prices seem to be probable in the near future. The demand for paper of all kinds is strong, stronger, perhaps, than it has been at any time during the past three years. Stocks in the hands of the paper merchant and manufacturer are considerably below normal. Costs of raw materials are at the high point and labor has only recently obtained a further advance.

So far as we can see, the only black cloud on the horizon today is the general feeling prevailing, not only in the paper industry but in practically all industries, that present high prices must ultimately come down. The banking interests, as a whole, are pessimistic as to the future of business conditions. Credits have been and are being curtailed. The condition of the foreign exchange has had the effect of decreasing the exports.

General business in this country is good, and the factors at work which will ultimately bring about lower prices will, probably produce results gradually, and if they do, nothing could be more satisfactory to the paper industry. The fear of a panic seems to have passed and we can conceive of no better future than a gradual reduction in prices until the paper business reaches a more normal price level. There is one feature of the market to which we wish to call attention, and which is fraught with danger. The paper manufacturers of practically all grades have from three to nine months' business on their books, of which a very considerable portion is at prices prevailing at the time of shipment. As long as the present demand lasts, no difficulties will arise, but should this same condition exist when the inevitable break does come, either the merchant will find himself overstocked with high priced paper or the manufacturer will be left in possession of raw material which he cannot convert except at a loss.

If a serious break in price or a reasonable probability of a

break should come with these conditions existing, many merchants will seek to cancel on the ground that no contract actually exists where the price has not been agreed upon, and the manufacturer will, as many did after the signing of the armistice, strain every effort to deliver every possible pound before the break comes or widens. Such a situation would be bound to create strained relations between the manufacturing and distributing branches of the industry, and it is our sincere hope that this may be avoided.

Many of these orders have been placed with the understanding on both sides that they will not be filled for many months, and in such cases it should be definitely set out that shipment cannot be made prior to a stated time except with the consent of the purchaser. In such cases, the purchaser should in all justice be prepared to accept delivery at the market price prevailing at the time of such shipment. Real give and take co-operation between the individual merchant and his manufacturers is the only way by which the industry can escape what may be a deplorable situation. Such co-operation would spread the loss equitably.

The wise paper merchant has been setting aside actual cash reserves to take care of the depreciation in stocks which must come and, after three and a half years of prosperity, the industry is in most excellent condition to meet a shrinkage in values. The day for speculation in paper is past, and a large majority of the paper merchants today are conducting their business on the basis of stocks fully sufficient to serve their trade satisfactorily. Transportation facilities the past winter have made it impossible to maintain stocks in this condition, but with the coming of spring this situation will shortly be relieved. We believe that the calendar year 1920 will prove one of the most profitable in the history of the paper industry, even though during the year prices may start to seek a lower normal level.

#### Mr. Lyter Commended

Mr. John A. Church: Every one who knew him, and especially the members of the Central States Paper Association, appreciate the very fine reference made in the secretary's report to the character and services of Mr. Curtis E. Lyter, and I would like, Mr. President, if it is in order, to present a motion that this association send a telegram to this former secretary and our friend, expressing such sentiment.

The Chairman: Mr. Church, we will accept a motion of that kind at any time. Is that motion seconded?

(The motion was seconded, and the question being put, the motion was adopted.)

The Chairman: The report of the president is the next item.

#### Annual Report of the President

The details of the work of the Association during the past fifteen months are in the secretary's report.

One of the most important steps forward during the past year is the change in the dues and the adoption of a budget that is logical and commensurate with the size and importance of the work of this Association, and which makes possible its proper growth and development. In accordance with well thought out plans, the scope of both the New York and the Chicago office have been enlarged and a statistical department has been organized which should bring valuable results to our members. The details of these plans will be presented to you in the secretary's report.

It is with sincere regret that I have to announce that at its meeting last November your board of directors was compelled to accept the resignation of our assistant secretary, Mr. Curtis E. Lyter. Last fall Mr. Lyter, owing to continued ill health, was ordered to Albuquerque, New Mexico, for an indefinite period. The news of his ill health and consequent resignation and disruption of all of his plans was received by every member of the

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Association with sincere sympathy for Mr. Lyter and regret for the loss of his services and companionship. No man was held in higher esteem by the entire membership of the National Paper Trade Association and the manufacturers with whom he came in contact; and he will be missed not only by the Association but by his hosts of friends among both the merchants and manufacturers.

We are fortunate, however, in having secured as Mr. Lyter's successor Mr. Charles K. Higgins, who has been in charge of the Chicago office since November last, and we will, I am sure, give to Mr. Higgins the same loyal support and co-operation which were accorded to Mr. Lyter.

It has been suggested that a brief résumé of "Paper Conditions," as I found them while on a somewhat hurried trip to Europe, would not be entirely without interest to our members, and at the request of several, I have noted down some of my impressions and give them to you for what they are worth.

Paper conditions in Europe and, in fact, all over the world, are similar in that all grades are scarce and high in price, and the output is far below the demand. The extremely high prices in Europe and elsewhere are a result of the old story of supply and demand, the supply is short—below normal—and the demand is high above normal.

Discussing the supply or production side first: Production on the Continent of Europe is much curtailed for a different reason or reasons in each of the countries visited. In certain of the war countries paper machines were taken down and stripped of their copper, which was used for war purposes. These machines are now being returned and set up again, but it takes a long time to get it sorted out, repaired and running again, and the mills which suffered losses of this kind have only half of their machines running, and hence are running at less than 50 per cent capacity.

In other of the war countries the industry is suffering because of shortage of coal, chemicals and pulp, but particularly of coal. In fact, there is an acute shortage of coal all over Europe. Fortunately, it has been a very mild winter, or there would have been much greater suffering among the people; and particularly in Central Europe, many deaths would have resulted from the absolute lack of coal.

In Scandinavia the mills were running full, though with production below normal on account of labor conditions. New contracts with labor will have to be made May 1st, and trouble is expected; in fact, since our visit there, I am informed there have been several strikes in paper mills.

Many of the mills, if not a majority, are burning wood instead of coal, which is both scarce and high, and costs in Sweden \$30 to \$36 per ton. Wood is being used throughout Sweden and Norway in place of coal for heating and power purposes. Wood-burning locomotives were not an uncommon sight.

Labor conditions all over Europe are bad. Labor is scarce and high and too often inefficient. Sweden is a Socialistic monarchy, if one may use the term, and the government, in order to keep out Bolshevism, has been very liberal toward labor (one member of the cabinet, who was until recently, the leader of the government, is a strong labor leader). A law has recently been passed forbidding the employment of labor more than eight hours per day, thus making any "overtime" illegal; but not preventing a man from working eight hours for one concern and working for some one else as long as he pleases up to another eight hours. Some of the mills have, therefore, organized a repair company or another corporation of some sort, and shift their men at the end of the first eight-hour period. Manufacturers tell me this had led to much confusion and to a considerable lowering of production. The operation of the law has resulted in a substantial increase in wages both among piece-workers and week-workers, as labor insisted upon the same pay for eight hours as they formerly received for 10 or 12 hours'

work. In addition, of course, wages have advanced very materially, as they have all over Europe and in America and elsewhere.

As an indication of the unsettled conditions prevailing in Sweden, there was a lockout in the iron and steel and machinery industry, which started on February 1st, and was not settled until the end of March, and no one can predict what will happen in the paper industry when the present contracts with labor run out on April 30th.

Another element of no little importance which tends to widen the gap between production and demand, is the fact that owing to the war there has been little or no increase in machine capacity since 1914. Some few mills have had new construction in contemplation, and have plans and specifications all drawn up for new plants or for enlargement of the old, but they hesitate to go ahead, owing not only to the extreme high cost of all machinery and building construction, but owing also to the scarcity of raw materials and to the general unrest in labor and social conditions.

To sum up: On the Continent machine capacity has been cut down materially and production on the machines that are running is way below normal. In Scandinavia machine capacity has remained almost stationary and production has fallen considerably below normal.

As against the shortage in production there is the greatest demand for paper all over the world that has ever been known; and the gap between demand and production is very wide indeed. Quantities of paper are being exported from Scandinavia, particularly to England and the Far East. The "rush" seems to be on in England, and her merchants are keenly alive to the situation and are making every effort to regain the foreign trade which they lost to us and to others during the war. She is buying paper and pulp from Scandinavia (and giving Scandinavian coal in return), not only for home consumption but for export to her foreign markets and to the Dominions, and endeavoring by every means to supply the demands of her foreign customers.

American manufacturers and exporters should bear this in mind. We have secured a foothold in foreign markets, and it behooves us to watch these markets very closely, and do everything in our power toward supplying these wants, even though it may be necessary to curtail to some extent domestic business. The American manufacturer cannot sell in a foreign market one year and be too busy the next year with domestic business to do any exporting. We cannot do that and hold our foreign trade, and once we lose what we have gained in recent years in foreign trade we can get back only with the utmost difficulty, if at all. And there is a time coming sooner or later when our foreign trade will be one of the most valuable assets in our commercial life.

And it must be remembered that the Scandinavian exporters have all made good money during the war, and they have taken advantage of the opportunities offered to establish their own offices in various foreign countries, and they are now making every effort to get into foreign markets direct, exporting no small portion of their tonnage direct instead of through London and Hamburg as heretofore. They have even opened up their own steamship lines as well as their own offices, and are becoming formidable competitors of ours in foreign markets.

In conclusion, may I say a word about the Scandinavian Paper Manufacturers' Association. It represents practically 100 per cent of the mills, and is a strong and vigorous organization with a direct control over selling prices. They meet frequently and fix absolutely minimum selling prices, and that without any fear of government interference, for there is no Sherman law in Scandinavia, and no government regulations whatever in regard to "combinations in restraint of trade." For the expense of the association, mills are assessed according to their sales, and any mill breaking the agreed price must pay a heavy fine into the

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treasury. It will be interesting to see what will happen on a falling market.

During the war the association maintained a central selling office in Stockholm, which absolutely controlled all sales. During this period news print rose from 15 to 45 per kilo, and the newspapers appealed to the government to fix a price on news.

The government, unwilling to antagonize the press, fixed a price of 30 as the maximum, threatening to withdraw export license from any mill which refused to sell at that price. The mills claimed the price of 30 was below the cost of production, and the association got together and worked out an arrangement whereby certain mills worked only for domestic business and sold their news for 30, and other mills handled all the export business and divided their profits with the domestic mills, so that the gains were evenly balanced, and all mills made a profit.

The selling organization, which was also a combined purchasing office, has been discontinued, but the association is as strong and vigorous as ever; and, according to English buyers, is the cause of much profiteering on the part of the Scandinavian mills.

The Chairman: The next item on your program is the report of the report of the Board of Directors.

Secretary Ridgway:

#### Report of Board of Directors

Your board of directors has met three times since the last annual meeting, and you have been fully informed of its deliberations from time to time.

The extension of the scope of the activities of the Association as outlined in the secretary's report was approved by the board at its meeting on Monday.

The board recommends the adoption of the following resolution:

**RESOLVED:** That we urge upon Congress to promptly repeal the excess profits tax, the surtax, and all excise, special, and stamp taxes of the Revenue Act of 1918, and to substitute for those war taxes a gross sales, or turn-over tax, and a graduated income tax on personal incomes, with an increase of 'specific exemptions' on personal incomes; and be it

**FURTHER RESOLVED:** That copies of these resolutions be sent to the President of the United States, the Secretary of the Treasury, the members of Congress, and to the Chamber of Commerce of the United States.

The board appointed a committee to approve a standard telegraphic code for paper business, and to take such steps as may be desirable to bring about its use for manufacturers and merchants.

The board recommends as officers of the Association for the ensuing year the following names:

For president, Mr. R. P. Andrews.

For vice-president in charge of the Fine Paper Division, Mr. C. N. Bicknell.

For vice-president in charge of the Coarse Paper Division, Mr. E. F. Herrlinger.

For treasurer, Mr. A. J. Corning.

The Chairman: Gentlemen, do you care to have the resolution read again? If not, the Chair will be glad to entertain a motion for its adoption.

Mr. McQuillen: I move its adoption.

(The motion prevailed.)

#### Greetings from Canada

The Chairman: The secretary has a telegram of greeting, which I will ask him to read.

Secretary Ridgway: "May good judgment govern all actions and with decisions built upon justice, fairness, consideration and closer co-operation we prove the sincerity of our cause. The jungle policy of competition violates not only the law of brotherhood but the true principles of economics. Canadian Paper Trade

Association are deeply indebted to your Association. We are meeting with splendid success. Please accept our very best wishes for a happy and helpful meeting.

JOHN MARTIN, *President, Canadian Paper Trade Assn.*"

The Chairman: We are fortunate in having with us this afternoon, gentlemen, Mr. N. L. Martin, the secretary of the Canadian Paper Trade Association, which as you all know is the Merchants Association. We will be very glad to have a word from Mr. Martin.

Mr. N. L. Martin: Mr. Chairman and gentlemen. We are not all Martins in Canada. There just happen to be two of us, and we are not related. I only wish the other Martin was here to speak for the Canadian Paper Trade Association, because he can do it so much better than I.

Our Merchants' Association in Canada is only about two years old. We were very much helped and favored in the organization by the fact that the mills already had a very strong organization, and they have been supporting us in every possible way. When I say that the cost of running the Mill Association in Canada last year exceeded \$30,000, you can judge they have been doing some pretty broad work.

The paper industry in Canada has become the premier industry of Canada. When we hear of conditions that are prevailing in Europe and the conditions which are prevailing in the United States, and when we consider the fact that nature has blessed us with an unending supply of raw material for making pulp and making paper, it is not to be wondered at that that condition has arisen, and I believe it is going to be more so. We have new mills in prospect. Almost every time you pick up a trade magazine you read of some gigantic proposition to develop our water power and pulp.

I was very much interested in hearing your chairman speak of the Swedish Government having fixed the price of newsprint paper. That is exactly the state of affairs we have had in Canada. Our Government in its wisdom passed a law that our Canadian news mills had to sell newsprint to our Canadian newspapers at a certain price, that price being very considerably below what it cost to produce the paper. I am very much afraid that the Canadian news mills made up that loss by putting it on the export price.

Now in the two years that we have been organized we have been able to make some little progress. We have every paper merchant in Canada in the Association with the exception of two. I am speaking particularly of fine paper, that end of the business. We have established a Credit Bureau. We have got a record of all trade names used by merchants, so there won't be duplication. We are issuing a monthly bulletin to all our merchants.

Then we have adopted uniform terms all over the country, and I may say in the west they have adopted net cash. Our mills sell direct to merchants, net cash f. o. b. mill, and in Western Canada they are adopting net cash to their customers. They say that having adopted that they did not get a single complaint from any of their customers about the cash discount being cut off. We are not able to do that in the east as yet.

Mr. Murtha: What discounts do you give?

Mr. Martin: Two per cent all over.

Mr. Murtha: Not three?

Mr. Martin: Not three. I gather from what I have heard today that I am not going to be obliged to take back to the members of our association in Canada any fear of an immediate American invasion. It looks as though the merchants here were going to be pretty busy taking care of their own customers' requirements for awhile.

Another message I am going to take back is "For Heaven's sake start some more pulp." We will be glad to send you the pulp, all the pulp we can get across this imaginary line. The only

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thing is, we don't want to see it come back in the shape of paper. (Laughter).

I have been glad to be here. It seems as though outside of the strange faces and strange voices I were sitting in one of our own meetings, because I hear the same topics discussed. I appreciate your courtesy in allowing me to be here. (Applause).

Mr. McQuillen: I move you, sir, that we extend to the Canadian Paper Trade Association our compliments and thanks for the very kindly message to us. It is an inspiration. We shall be glad to follow with them, help and co-operate to our fullest extent. (Applause).

(The motion prevailed.)

Mr. Vernon: May I ask Mr. Martin how these gentlemen to whom he gives net terms pay? Do they take considerable time?

Mr. Martin: Under ordinary trade conditions I am afraid abolishing the cash discount would have a very bad effect on payments. Under present conditions it seems to have no effect at all. Everybody seems to have lots of money.

While I am on my feet I do want to say that our association owes a great debt of gratitude to Mr. Ridgway for his help. He has co-operated with me always. We have invited him to come to our annual meetings, but he is always so busy he cannot get away. But we are going to get him there in June if we have to send down a bandit crew and bring him up there by main force. (Applause)

The Chairman: I am sure we are indebted to Mr. Martin for this cheerful and optimistic message from the Canadian Association. We are very fortunate this year in having such a large delegation representing the Pacific Coast Paper Trade Association, and I am sure we will all be interested in having a word from Mr. Higgins, who up until very recently was president of that association. (Applause)

#### From the Pacific Coast

Mr. Higgins: Mr. Chairman. One of the fine things that I thought would be passed on to my successor or to the permanent secretary of the Association was the honor and pleasure of greeting you and your associates. One of his duties is to respond to all such matters as this.

I can only say for myself and all of us here we are very glad to be here. We have been greatly edified by what we have heard. We shall go back to the Pacific Coast much encouraged and strengthened to make the fight we have to.

I would like to have you call on the secretary, Mr. Coffman. We have an association out there started two or three years ago, known as the Pacific Coast Paper Association, in which is listed every paper merchant on the Pacific Coast, large or small. (Applause). We also have annual meetings. The last annual meeting was attended by your Mr. Ridgway, and I assure you that whether it was worth while for him to come, it was worth while for us that he did come. He explained a great many of the workings of the National Association to members who have not been familiar with it, and have not had the opportunity to come east, and he was of great service and benefit to us, and we thank the Association and you for his presence.

I was busy part of the time in showing Mr. Ridgway a little game out there they call golf. (Laughter). I had the honor of getting into the finals with him, so I am not so competent to tell you the workings of our society as our secretary, Mr. Coffman.

The Chairman: The chairman is very glad to note that Mr. Higgins endorses the program which he had outlined, because Mr. Coffman's name is the next on the list. It gives me a great deal of pleasure to call on Mr. Coffman, the secretary of the Pacific Coast Paper Trade Association.

Mr. B. N. Coffman: You would not call on Mr. Higgins at all if you had not been in Europe and therefore failed to read his telegram which he had me write and send, and all he said was "Make it hot." He addressed the national officers in a way which

I thought was disrespectful. Of course, as long as he wrote it I sent it, but Mr. Ridgway got the full benefit of it. It didn't bring any result except Mr. Ridgway came and led some of us to believe the brains of the Association was the president.

While Mr. Higgins taught Mr. Ridgway the game outside, I want to say that inside he learned African golf just as successfully. I was not the teacher, you understand. I have heard it stated since that somebody stole the bones.

Our little organization out there is flourishing. We have got to keep a watch on it. We have got to keep trailing them all the time. I don't mean it in any disrespectful sense. When they get together they will follow these pursuits. I guess if they lose enough money one way they have to make it up in another.

I don't know that there is anything we could say to enliven this meeting particularly. I hope they are making some money out there. They may not have been at one time, but I have an idea they are now. But they have their troubles, just as you do. We are just as near to you as we can get in the conception of co-operation. (Applause).

The Chairman: I don't think our meeting will be complete without just a word from Mr. Bonestell of the Pacific Coast. (Applause).

Mr. Bonestell: Mr. Chairman and gentlemen I am afraid you are getting rather an overdose of the Pacific Coast. I have been coming on to these meetings now for a good many years, and it is a great gratification to me, my livelihood being dependent upon the paper business, to see the growth of this Association method of transacting the business. It is a perfectly well-known fact to all of you that, beginning with the earliest civilization in the world, there were individual men who thought they could accomplish something if they only succeeded in getting enough to eat and a cave to live in, and it was only by coming together, first by tribes and later by communities, and finally into nations, that they were really able to accomplish anything in the way of true civilization. That same condition applies to the paper business. Individually we can get enough to eat and a cave to live in, but it is only by combined action, by co-operation, that we can really get into an intelligent basis of doing business. The merchant and the class of merchants in general civilization of the world has a distinct position. We hear at times a good deal of talk about the middleman, which the merchant is, being a barnacle, not a necessity. The fact is apparent to every intelligent person, that from the very earliest days it was the merchant who carried from one section to another those things which one section produced and another section required. And another fact is that wherever the merchant went civilization followed, and he has ever been the harbinger of a better condition among civilized people.

And so it is with us today. Even when the manufacturer is practically at the doorstep of the ultimate consumer, the dealer or the merchant, as we prefer to call ourselves, gathers from various sources these things which various manufacturers produce, places them in convenient localities for distribution, so that the ultimate consumer with the smallest expense and the least waste of time can procure those things which he requires, and I challenge anybody to show that is not a useful thing which the merchant is undertaking. Of course, the merchant must realize that he has only one place to fill and not many. The merchant does not manufacture the goods and the merchant does not make the price. The manufacturer makes the price. The merchant merely performs the service. But for that service the merchant is entitled to a fee and entitled to a proper fee. The difficulty with many merchants is that not realizing the actual cost of this service which he performs he does not exact the proper fee to which he is entitled. And so I am particularly interested in these cost methods that will be offered to us later on. I am convinced if any man knows what a thing costs him he will be very determined to exact the fee to which he is entitled for the service which he performs. Now the times in the way of profits are fairly easy.

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Competition is a thing that is not distressing us very much at the present time. But things of course will not always be so, and it has been very wisely said "In times of peace prepare for war," and when that time comes, gentlemen, the closer we are knit in organization the better we are each of us and all of us going to fare, and I don't care what asset a man may have in his business, whether it be a long established name, whether it be large opportunities, or whether it be big capital or a fine organization, the best asset that any man has in his business, gentlemen, is a good paper trade organization. (Applause).

The Chairman: Gentlemen, we had at our meeting yesterday Mr. Heilbronner of Manila, in the Philippine Islands. We shall be glad to have a word from him if he is here. Mr. Heilbronner is not here, so we will now proceed to the next business, which is the election of officers. I will ask the secretary to read the nominations made by the board of directors.

#### The New Officers

Secretary Ridgway: For president, Mr. R. P. Andrews

For vice-president in charge of the Fine Paper Division, Mr. C. N. Bicknell.

For vice-president in charge of the Coarse Paper Division, Mr. E. F. Herrlinger.

For treasurer, Mr. A. J. Corning.

Mr. McQuillen: Mr. President, for fear any member might think this is a cut and dried proposition, I move that the secretary be empowered to cast one ballot for the names read. (Laughter and applause).

The Chairman: It is moved and seconded that the secretary cast the ballot for the officers whose names have been read.

(The motion prevailed.)

The Chairman: The secretary has cast the ballot and declares the election of the president, Mr. R. P. Andrews.

#### President Elect Andrews Speaks

We will be glad to have a word from Mr. Andrews. (Applause.)

Mr. R. P. Andrews: Gentlemen of the National Paper Trade Association: I can only repeat what I said yesterday when this nomination was tendered to me, that the nomination—and I can say now, this election—fulfills the greatest ambition of my life. I can look back to the day when this Association was formed, and I am proud to say that I was one of the few then present. I think we met in a back room of an ice cream parlor. (Laughter.) That is what they would call it now, anyway, and it was pretty small, but what we lacked in numbers we made up in enthusiasm; and, as I said yesterday, I am glad that this honor has been tendered to me by you while I am still a very young man. (Applause.)

I am not going to make any promises, because promises are sometimes hard to keep. I am a thorough believer in that Rotarian creed that he profits most who serves best, and if I serve you best I believe in my heart that I shall profit most, not you. But I want to impress upon you that, as simply the presiding officer or the president of your organization, I can do but very little. I am only one man, and the success of the administration for the coming year depends upon every man in this room and not me, and I want you, and I expect you all to give me every assistance you can, and it will depend upon you whether the National Paper Trade Association will go along as it has gone, growing in importance, growing in numbers and growing in power.

Put a little more of yourselves into the association. Give a little bit more of your time to the association. Give a little bit more of yourselves to the association. If you will do this, it will mean greater things and more red-blooded things, and we will get somewhere and get better than we have been, and that is going some, at that.

Before I close I have one suggestion, one thing I would like to see carried through. A few years ago, you remember, we used to have summer meetings, a summer meeting of the Association. For some reason or other those were discontinued. I thought then, and I have thought ever since then, it was a mistake. Those summer meetings were get-together meetings. We had more time to rub elbows with each other and become better acquainted, and after the summer meeting was over there were about 75 per cent of us calling each other by our first names, and that means a great deal. I would like to see the summer meetings restored. I would like to see that, not a business meeting, but I would like to see it become a summer outing meeting of this National Paper Trade Association, and I would like to see the privilege extended to every merchant in this association, the privilege of inviting to that summer outing whoever he pleased of the manufacturers. Having in mind the wonderful good that has come from our conference meetings with the manufacturers. Now, if you can have conferences and meetings between this Association individually and collectively in the summer outing meeting with the manufacturers, I think the good that the conference meetings have done would simply be magnified by that summer outing meeting, and I hope that at this meeting, if you gentlemen agree with me, that a resolution will be passed providing for a summer meeting, and I would suggest that the meeting place be Niagara Falls, because we have just heard from the secretary of the Canadian Paper Trade Association, and that is getting near to them.

Mr. Martin: Better have it on the Ontario side. It is not so dry over there. (Applause.)

The Chairman: I will say to you gentlemen, personally I accept the amendment. (Laughter.) But I certainly would like to see a resolution to that effect put forth and carried, because I believe that it would be for the good of this entire association, and I believe great good would come of it. I am willing to serve this association to the best of my ability, and at the expense of my personal affairs, first, last and all the time. For the coming year this association shall have the very best that I can give it. I thank you.

Mr. Higgins: May I say a word on that line. The Pacific Coast Association invites, formally and informally, by letter and by word of mouth, every paper merchant to attend the annual meeting of the Pacific Coast Association, and to not only come himself but bring his wife, his daughters or his sweetheart. Gentlemen of the Coast Association who are married, take their wives with them. We have a business session in the morning and play golf in the afternoon, and a social evening in which the ladies participate. We don't talk business with the manufacturers. They don't feel any hesitancy in coming on that account. They have a general good time, and we have some very pleasing conversations with them on the side, and that has proved to be a great benefit, not only for the merchants but for the manufacturers. We carry that out actively.

Mr. McQuillen: Mr. President, I have heard of a new place. I want to put in nomination for a summer meeting Kelly Island. I understand it is within easy distance and has the backing of the Central States.

The Chairman: Gentlemen, you have heard the nomination of Kelly Island for a summer meeting place. Do I hear a resolution that we shall hold a summer meeting in 1920?

#### Summer Meet Suggested

Mr. Ward: I would like to make a motion that we have a summer meeting, the dates of which and the place to be left to the discretion of the board of directors.

Mr. McQuillen: I second the motion.

(The motion prevailed.)

Mr. McQuillen: In lieu of any other motion, and seeing you have taken the gavel, I move the thanks of this Association be

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extended for the very efficient work of the officers who have just passed out of office.

Mr. Miller: It pleases me very much to second that motion. They have given us, it seems to me, the best administration we have ever had.

Mr. Bonestell: I would like to make that a rising vote. (Motion unanimously carried.)

The Chairman (Mr. Platt): Any further business? If not, a motion to adjourn is in order.

Mr. McQuillen: May we not hear from the head of the White Paper Division? He is a young man in the business, with very little experience, and we would like to hear from him. (Laughter.)

The Chairman: My apologies to him for overlooking him.

Vice-President Bicknell: It looked to me for a minute as if I was going to get by. But I want to say to you I appreciate the honor. I will give it all the attention I can and the best effort I can, and I thank you. (Applause.)

The chairman: We should hear a word also from Mr. Herrlinger. (Applause.)

#### Mr. Herrlinger Speaks

Vice-President Herrlinger: Mr. Chairman and fellow members of the National Paper Trade Association: The incoming president has taken occasion to refer to his age and the long period of experience he had with this Association. You have had a chance to see him. You have also had a chance to see the vice-president in the Fine Paper Division. Both of them are nearly

seventy years of age, so they have elected a young man in the Coarse Paper Division, who will probably do some of the work. The only thing I can add to what I said at the executive committee meeting Monday is, that when I accepted this position a year ago I found it was an honor but not a sinecure, that it entails a good deal of work, and a considerable amount of time, and the only way to do the work is to be willing to neglect your business for the sake of the whole business. That I have done, last year, and I propose to do it again. If there is anything I can do for the Association as a whole or for the members individually of the National Paper Trade Association to make it a greater success, I only ask you to call on me.

A few years ago I was not an Association man. My experience in the Association has lasted about three or four years. I felt like a number of men in the paper trade, that the Association was superfluous, that it was not necessary. I found during the past three years that to be active in Association work was rather broadening, and it was one thing that every man should have, and I also found that unless a man took a real interest in the industry in which he was engaged he could not be a success individually. Now, I am going to give this Association all I can in the hope that a year from now it will be a bigger success than it is today, notwithstanding that it is a peach. (Applause.)

There being no further business to come before it, at 4.30 P. M. the Seventeenth Annual Meeting of the National Paper Trade Association adjourned.

## BOX TESTING MACHINE

The illustration presented herewith represents the "Drum Tester," or box testing machine which was recently installed at the Mellon Institute of Industrial Research, University of Pittsburgh, for the Container Club.

In a test for strength of shipping boxes, the object of which is a simulation of the rough knocks, bumps and jars of handling which a loaded box may encounter in railroad traffic, there has been designed a machine by which the railroad usage that a box may meet in a 2,000-mile haul can be duplicated in four or five minutes.

The first machine of this kind—known as the drum box testing machine, was designed by the U. S. Government Forest Products Laboratory at Madison, Wis. The Mellon Institute installation is an improvement over the original tester in that the inconvenience

of overhead pulleys and shafting has been done away with by the substitution of a reduction gear for cutting down the motor speed to the drum speed of 2 R.P.M.

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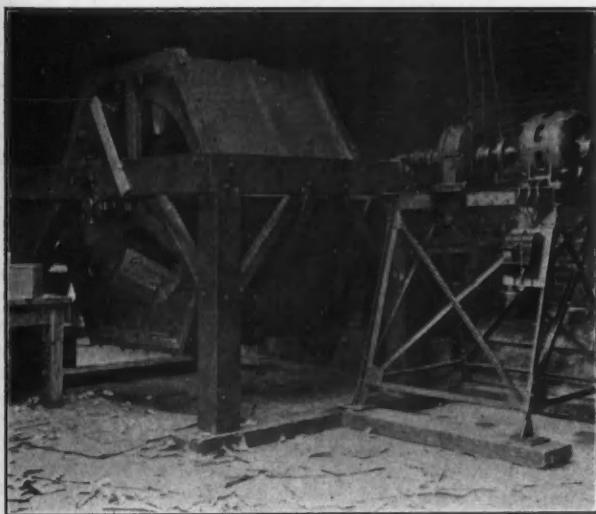
#### NO STRIKE IN NEWS PRINT PAPER MILLS

R. S. Kellogg, secretary of the News Print Service Bureau announces that officials of the unions representing pulp and paper mill workers in conference in New York, Wednesday, with the leading manufacturers of news print paper agreed to renew the existing agreements in the industry for the next year with a general advance of 20 per cent in wages.

Representatives of the following news print manufacturing companies took part in the conference:

De Grasse Paper Company, Finch Pruyn & Company, High Falls Pulp & Paper Company, International Paper Company, Minnesota & Ontario Paper Company, Northwest Paper Company, St. Regis Paper Company, Spanish River Pulp & Paper Mills, Taggart Paper Company, Tidewater Paper Mills Company, Union Bag and Paper Corporation.

These firms have a combined output of more than 3,000 tons of news print paper daily and all of them are running to the limit in order to supply the demands of their customers for news print paper.



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The forty-third annual banquet of the American Paper and Pulp Association was held at the Waldorf-Astoria Thursday evening, President George W. Sisson, Jr., presiding.

President Sisson: Gentlemen of the Paper Industry, and our Friends and Guests: If any demonstration of the increasingly important and dignified position our great industry, through your Association, is assuming in the industrial and social activities of our nation were needed; if any proof of the intelligent and sympathetic interest of our members in the pressing problems of our domestic and international situation were lacking, they might readily be found in this great gathering here tonight.

Here, laying aside for a time their personal affairs, this splendid body of over one thousand earnest, thoughtful business men sit in their larger capacity as sovereign American citizens. Here out of conference and discussion through interchange of view, where mind meets mind, where ideas are clarified, there may issue that organization of thought and conviction so essential to wise and effective action.

What of our domestic situation, and what of the temper of our time?

We have concentrated into the fury of the past five years a generation of eager experiences. It is probable that our own time is most largely differentiated from preceding ages by the swiftness with which changes may come, and the variety of views with which we are confronted. So widespread is this variety of outlook that many are appalled by its suggestiveness. There seems no single institution which, in its present form, has gone unchallenged, with the result that, to many, that hold-on certainty which makes life intelligible is largely gone.

Our present concept of civilization and orderly human relations seems threatened by all the forces of disorder. Civilization can of course meet force with force; being barbarously attacked it may wield against barbarians the developed weapons of civilization. From such combat civilization has but recently emerged, grievously wounded, but victorious; and in the very hour of victory we have left with us the problem, surpassing all others, "whether the fair product of human intelligence can survive the processes of that achievement."

No, we cannot leave force out of the reckoning in the defense of civilization, but everywhere moral forces must primarily be relied upon to remove the conditions that lead to disorder; but that must be done without weakening the means for controlling violence when it arises.

An innocent public is at this present moment experiencing an intolerable domestic situation, which is but the culmination of a policy of dalliance and compromise with un-American methods and un-American principles in the enactment and execution of law. Our forefathers' concept of a just and equal government by free men under general laws, freely made by their representatives; laws which all must obey and from the observance of which none are excepted, is today under grave pressure by organized threat and intimidation by special groups bent on demonstration of power and the acquirement by such methods of special privilege. This

issue must be no longer evaded, but we must settle squarely the question whether this nation is to be governed by the constitutional representatives of all the people or by the non-constitutional representatives of predatory groups.

And what of our international situation? But short months ago the nations of the world looked to America to lead and show the way to Utopia. Just now they may be in some such doubt as was the Philadelphia newsboy of whom Billy Sunday inquired the way to the post office. "Up one block and turn to the right," said the boy. "You seem to be a bright little fellow," said Sunday. "Do you know who I am?" "Nope!" "I'm Billy Sunday, and if you come to my meeting tonight I'll show you the way to heaven." "Aw, go on!" said the boy, "you don't even know the way to the post office."

Nothing is simpler to proclaim than that we are now called upon to assume the burden of sharing in the conduct of world affairs. The thought appeals to our inherent idealism and also to some strain of vanity and love of power from which we may not be free.

By virtue of our geographical position and the fullness of our empire within, rather than by any moral virtue we have maintained a state of relative innocence in the matter of foreign affairs. We dwelt pleasantly enough in our Garden of Eden. During the war we thought we could extend its blessings to the entire world. But the undisguised scramble after the armistice reminded us of the Fall of Man, and we hurried back into our paradise, though remaining on the lookout for remunerative investments in the outer world of sin and misery.

Still it is true that a policy of isolation and non-participation is impossible. It is not for us to choose. The dilemma is that, while our day of isolation is over, international affairs are still conducted upon a basis and by methods that were instituted before democracy was heard of as a political fact. Hence we engage in foreign policies only at the risk of harming even such imperfect internal democracy as we have already achieved.

It is easier to state the dilemma that isolation is impossible and participation dangerous than to state any solution.

Vast indeed is the canvas on which modern statesmen work, and its very vastness calls for correct perspective, proper balancing of light and shade, such tempering of the strokes and shading of the colors as shall finally present to our view a picture fair and true in all its proportions.

Such correct perspective, such intelligent attitude, such constructive statesmanship have characterized the part taken in the great work by our honored guest, Senator Lenroot, and we are honored in having him discuss with us tonight the tremendous issue to which he, as the representative of a great state and of our entire nation, is giving so devoted attention.

I have great pleasure in personally presenting to you the Honorable Irvine L. Lenroot, United States Senator from Wisconsin. (Applause.)

### Senator Irvine L. Lenroot Speaks

Mr. Toastmaster and Gentlemen: I was very glad to be able

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to accept your invitation tonight, and I very greatly appreciate your cordial welcome. During the past few months I always hesitated in accepting invitations to address any American audience, because from the letters that we received and the things that we read in the newspapers, we are not led to believe that the American Congress has any friends anywhere. (Laughter.)

Collectively, you—and by you, I mean the people of the country—denounce us because we do not reduce taxes, and then separately you denounce us because we do not increase appropriations for the particular interest that you happen to represent.

But perhaps the view of the people of the country is similar to that of the man who went to Washington for the first time with his little son, and after registering at the hotel, he was naturally anxious to see Congress in session, and he proceeded to the gallery of the House of Representatives just before the session opened, and you know the sessions of both houses are always opened with a prayer by a chaplain. The chaplain came out and opened the session with prayer. The next day they went to the Senate and they saw the same performance repeated. The third day they were back to the House again, and when the session had been opened the little boy said to his father, "Papa, why is it that the preacher comes out here every morning, looks over the Congressmen and then prays for them?" (Laughter.)

But the father said, "Why, son, that is not what the preacher does. The preacher comes out here every morning, looks over the Congressmen, and then he prays for the country." (Laughter and applause.)

However, I did not greatly hesitate in accepting your invitation because I remember some years ago that members of your industry also received some condemnation at the hands of the public. I hope we will get over it as quickly as you have.

But, seriously, gentlemen, never in our history has the nation confronted more serious perils or important problems than we have tonight. Great responsibility rests upon public officials, legislative and executive; but responsibility also rests upon the citizenship of this country for the solution of our problems.

I am going to discuss some of those tonight, but, before doing so, may I very briefly comment upon two subjects of a special concern to your own industry; and one of them is the conservation of our forests.

I had prepared some remarks upon that subject, but I was gratified to know, upon arriving here tonight, that you had anticipated everything that I had in mind saying; and all I can say to you in that regard is that I cordially indorse and congratulate the action that you have taken today, as I understand it. (Applause.) And I assure you that insofar as my power lies there will be the most complete and cordial cooperation on the part of the Congress of the United States in the plans that may be adopted. May I say just one word, however, concerning not the conservation of our own forests but the supply of forest products from Canada? You are familiar with the resolution recently passed by the Senate. Canada is our neighbor, Canada is our friend, and we desire to continue the most friendly relations with her. Of course, if Canada shall adopt the policy of keeping her forest products to herself because she needs them for the future, that will be Canada's right, but in that event it would also be our right to recognize the fact, because fact it is, that our oil shortage in this country is just as serious a menace to us and our industry as her pulp wood is to her, and if she shall say to us that her pulp wood cannot cross our line, it might be well for us to say, "Neighbor, if we cannot have your product in neighborly exchange, we think that we will have to keep our oil and fuel for our own needs here at home." (Applause.)

The other subjects that I want to refer to is the supply of print paper to the country newspapers of the nation, and my remarks here will be addressed particularly to those of you who are engaged in the print paper business. Complaints constantly come to us in Congress from the country papers that they cannot

secure a supply because the demand is so great from the metropolitan press that it is not necessary for the mills to seek or supply small papers. Gentlemen, it is your patriotic duty to fill the needs of the country press, and if any one must curtail their supply it should be the large city newspapers. Your prosperity, the prosperity of the country, aye, even the very existence of our institutions depend in large measure upon the maintenance of our country press. By country press, I include all newspapers in cities of under 100,000 in population.

There is a spirit of restlessness and discontent referred to by the toastmaster prevailing among our people today, and extreme radicals and demagogues are taking advantage of it to the fullest extent. Discontent is the bread of life to them, and not one of them desire to see that discontent removed. There are underlying causes for these conditions which should be remedied, but it is not necessary to tear down our whole structure in order to do so.

A healthy, prosperous country press is one of the strongest safeguards of our nation. With rare exceptions, they are patriotic, order loving and law-abiding. Where the foundations of our structure are weak, they help to strengthen them. They are independent and controlled by no interest. They seek to build up and not to destroy. Their efforts are constructive, not destructive. Gentlemen, even if their business costs you a little more than large contracts, you owe it to your country, you owe it to your own future prosperity to see to it that the country press shall receive supplies of paper upon reasonable terms.

I have said that there is a spirit of unrest and discontent in the country today. There may be many causes, some of them perhaps beyond our control, either in private life or in public life. So long as there is a demand much greater than the supply, we must look to increasing prices; and the remedy, the only remedy, for that part of it is increased production, so that production may equal the demand. There are, however, many other phases that have to do with this discontent that can and should be met. The high cost of living, due to some extent to profiteering, due to a larger extent, perhaps, to the high cost of Government—and that is one of the things which we should do to reduce the cost of living—reduce the cost of government—and we should do it as soon as possible.

Do you realize that this year the taxes imposed by the Government of the United States amount to more than \$250.00 for every family in the United States? And, strange to say, the administrative officials of this Government keep on asking for money, as if we had not whipped the Germans at all, and as if the war was still upon us. This Congress is cutting the estimates of the administrative officials one billion this year, and next year I hope we can get the cost of government down to a business basis, and set an example of economy to the rest of the nation. (Applause.)

Then there is another very serious situation which we all realize, and that is the relationship between capital and labor. We feel it tonight. But, gentlemen, merely stopping strikes by force will not offer any solution. We must find some means of settling disputes between Capital and Labor that will be fair to both Capital and Labor, without any strike intervening. If one man hits another over the head with a club, the law puts its heavy hand upon him and takes him in charge; and we have come to the point where if Capital says to Labor, "Accept our terms or starve," or if Labor says to Capital, "Accept our terms or go into bankruptcy," Governments, State or Federal, whichever has jurisdiction should say, "As the law of the jungle no longer holds in matters of personal safety, it shall no longer hold in relationship between men." And it is the business of government to furnish a fair tribunal which will adjust these cases fair alike to Capital and to Labor. (Applause.)

And another cause for our present abnormal condition is the fact that although it has been eighteen months since Germany

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was whipped, and surrendered her armies, nevertheless the United States is still technically at war; and we cannot hope for a normal condition so long as we have in this country the exercise of all the war powers of the Government, enacted and administered solely because under the Constitution that power was given to save the nation when engaged in war. And neither can we expect a normal condition of international relationships so long as the United States is technically at war with Germany, and under no kind of treaty arrangement with our associates in the late war.

And we want to spend a little time in the discussion of that subject because I believe that it underlies a very great deal of the situation that is so critical tonight. And the question naturally arises: "Why are we not at peace? Why did not the Senate ratify the treaty which President Wilson brought back from Versailles?"

The reason—and I speak from my standpoint, and I speak from the standpoint of the majority of the Republicans in the Senate and a majority of the Democrats in the Senate (applause), so you will understand I am not speaking of this from a partisan standpoint and because any man in any political party who would make political advantage out of this great international question is unworthy of a seat in the United States Senate. (Applause.)

But there is this fundamental difference between President Wilson and the Senate as to the causes of our entry into the war. I do not agree with President Wilson that we entered the war primarily because we had no grievance of our own, but for a high philanthropic purpose. That was involved. I am glad that the United States, in what we did, did bring freedom and democracy to millions of peoples across the sea. But at the same time, the fact is—and I was a member of the House at the time—I know my own motive in voting for the declaration and I think I know the motives of my colleagues. We voted for that declaration of war, by which all our boys offered their lives for the country, primarily because we felt that it was necessary to preserve liberty here in America and to keep that flag floating over this country; that the German eagle should never take its place. (Applause.)

And with that conception of the cause of our entry into the war, when we did so much and gave so freely, now having won the war, I do not believe that there rests any obligation on us now to assume the guardianship of the world. (Applause.)

And more than that, around that Peace Table at Paris, of all the nations gathered around that table, there was only one unselfish nation that sought no advantage for itself and that was the United States of America. (Applause.) Every other representative around that table, possibly because that had been their policy in all the years that had gone, sat around that table seeking each to get what it could for itself; and when they got through, all but the United States left with their pockets full of spoils.

And I can well imagine the discussion going around that table as to one of the Allies taking this, and the other that, and the other the other thing, and they finally inquiring among themselves, "Well, what are we going to give to Uncle Sam? He did so much for us." And I can imagine good old Clemenceau, the Tiger, "I'll tell you. Let us take the assets and we will give Uncle Sam the liabilities of this war." (Laughter and applause.)

And that is what we found in the Peace Treaty that was brought back to us from Versailles. I believe at the end of this terrible war that the United States ought to enter a society of nations and agree that it would no longer isolate itself from the affairs of the world; that whenever a matter came up in the future affecting the world's peace, the United States ought to be willing to sit in with the nations of the earth and consider that matter. But the United States, if it would be true to the ideals upon which it was founded, the ideals of Washington and Jefferson and Lincoln and all of the fathers of this Republic, the United States, if it would preserve its independence, will never enter into

an obligation beforehand to protect the other nations of the world in all of their boundaries that they may either have today or secure in the future. (Applause.)

And Article 10, which is the critical article of this Treaty and which causes the issue between us, obligates the United States to preserve the territorial integrity and political independence of every other member of the league. My friends, do you realize that if in 1776 there had been a League of Nations with this Article 10 in it, as we are asked to sign it, that there never would have been a United States of America? There never would have been the Stars and Stripes. Instead there would have floated over Manhattan Island tonight the Union Jack because under the provisions of Article 10 France would not have been permitted to come to the aid of the Revolutionists, but if she fought at all would have promised under that Article to have fought upon the side of King George and against the revolutionary fighters for freedom. And to go on down the years, we come to the Spanish-American War, and if we had this League of Nations with Article 10 in it at that time Cuba would tonight still be a colony of Spain because under the obligations of Article 10, if we fought at all, we would have been compelled under our obligations to have fought upon the side of Spain to continue her tyranny and her cruelty in Cuba.

Gentlemen, the American people have not yet come to the point where they will ever permit their representatives to obligate them and their children and their children's children to fight upon the side of tyranny and oppression anywhere. (Applause.)

Now, what is the reservation that we adopted by a very large majority? "The United States assumes no obligation to preserve the territorial integrity or political independence of any other country by the employment of its military or naval forces, its resources, or any form of economic discrimination, or to interfere in any controversy between the nations, including all controversies relating to territorial integrity and political independence whether members of the League or not." In other words, by this reservation your President Wilson said, "Nullify the Treaty." By this reservation we said, simply, we believe the people of the United States should be just as free and independent in the future as they have been in the past. We leave it for them to decide when and where and if they shall go to war and we shall not, nor permit any President of the United States, however great, to decide that question for them. (Applause.)

As you know, and there is one other matter, there were fifteen reservations, I can only speak of one more and that is the Monroe Doctrine, where they objected to the reservation declaring that the United States alone should be the interpreter of the Monroe Doctrine; whereas the President of the United States desired to have the League of Nations be the interpreter of the Monroe Doctrine. When and where has that policy ever attempted to be surrendered? Who has ever interpreted it but the United States, under Republican presidents and Democratic presidents alike? The last great crisis that we had concerning the Monroe Doctrine, as you know, was under Grover Cleveland, a Democrat, in the Venezuelan controversy and he asserted, as every other good American ought to assert, that that Doctrine shall be interpreted by the United States alone because it was announced and declared necessary for the defense and protection of the United States. (Applause.)

Gentlemen, those are the two reservations upon which the Senate split. We had come to an agreement upon practically all of the others, but President Wilson, and I speak respectfully, President Wilson would not permit his followers to vote for the Treaty with these reservations. He said in his Jackson Day letter that he desired a solemn referendum upon this matter to the American people. We are willing. Why was not this treaty accepted and let the country get into a state of peace, and then if President Wilson desired a referendum upon whether the United States Senate should approve of these further provisions of

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Article 10, or whether they should continue the reservation that would settle the only issue between us; but I am afraid that our good President fully well knew that if the issue was made upon whether there should be this reservation to Article 10 reserving the independence of the United States, that the League of Nations unconditionally would not have been very popular in that referendum in the United States.

Now, gentlemen, this is the issue. I know there are many business men who say that we should ratify that treaty, even though there are things which ought not to be accepted by the United States contained in it, because of the great necessity for getting the United States upon a peace basis as soon as possible. But, gentlemen, three years ago I stood for the first time at Valley Forge, as you well remember the headquarters of Washington and his little army in that long dark winter of the seven long winters of the Revolutionary War, and as I stood in that little stone house in the valley that was his headquarters, and as I climbed the hill and traced the earthworks still visible that his soldiers had thrown up, and along the crest of the hill saw the sentry houses still standing there erected by Washington's soldiers, and as I finally climbed the observation tower at the top and looked off toward Philadelphia, some twenty miles away, I tried to picture to myself Washington and that little band of ragged, hungry, freezing soldiers gazing off there day after day, watching and waiting to see whether General Howe and his British army should come out from Philadelphia to attack them. And as I pictured that before my mind, I wondered if Washington and those heroes who were with him could have ever dreamed of what the sacrifices would mean to the future of America and the benefit of mankind. (Applause.)

A couple of months later I stood for the first time on the field of Gettysburg, and I traced the first day's battle and the second day's battle and the third day's battle, and I finally came to that tablet which many of you have seen which is the high water mark, where Pickett and his charge were thrown back, the high water mark of the rebellion, because from that time on the Union cause won steadily triumphant, and as I stood at that spot, I wondered if those soldiers who on those three days gave their lives for their country could have realized even in a remote degree what the sacrifices they there made to keep this one country, one Union, one and inseparable, would mean for the future of America.

And tonight, my friends, I am thinking of 50,000 of our boys who lie sleeping across the sea under the sod of France. I do not know what the last thoughts of those boys were when they "went over the top," but I believe in that supreme moment they were thinking of the loved ones at home, of God and Native Land and of Old Glory; and so believing I dare not vote as a member of the United States Senate to surrender in a Peace Treaty that which those boys died to preserve. (Applause.)

The Treaty was sent back and it lies in the White House. But two or three weeks ago Congress determined to do what it could to secure an honorable peace, and it passed a Joint Resolution declaring a termination of the state of war and a peace status to exist between the United States and Germany, at the same time protecting all our rights and claims against Germany.

That passed by a majority of 92. It is now pending in the Senate. We expect to begin its consideration next week. Unless there be a filibuster it will pass. Whether it will be vetoed or no I do not know. But if it is vetoed, or if it shall be killed by a filibuster, we shall at least have done what we can to secure the peace of the United States with honor. (Applause.) And if we cannot secure peace now, perhaps we will have to wait until the Ides of March,—after there shall have been a solemn referendum in November. But, I assure you, gentlemen, that when it is ratified then, it will be ratified without any surrender of the independence of the United States (applause.)

Gentlemen, in conclusion, I want to close as I began,—I wish

that I could make every American citizen realize and feel as I feel the perils before us in the immediate future. If the American people can realize them, legislation will not be necessary; they would take care of themselves. If we could have a little of the same spirit tonight that we had while we were engaged in war, when everyone in this country was ready to serve and to sacrifice for his Country's good.

And I would remind you that we need the patriotism of peace just as much—aye, even in greater degree—than we need the patriotism of war. A duty devolves upon each one of us to uphold and support in every way the institutions that have made this country so great. If that shall be done there will be no danger that can confront us that will ever destroy us.

#### Confidence in Future of America

I have an abiding confidence in the future of the American Republic because I have an abiding confidence in the patriotism and the judgment of the American people; and, notwithstanding the perils that beset us,—notwithstanding that we seem to be tonight sailing through stormy seas, we still are able to say with the New England poet,

"Thou too sail on, Oh Ship of State  
Sail on, thou Union, strong and great,  
Humanity with all its fears, with all its hopes of future years,  
Is hanging breathless on thy fate.  
We know what Master laid thy keel:  
What workman wrought thy ribs of steel,  
Who made each mast and spar,  
What anvils rang and what a forge and what a heat  
That shaped the anchors of Thy hope.  
Fear not, each sudden sound and shock,  
Its of the wave and not the rock.  
Its but the flapping of the sails, and not a rent made by the gales.  
In spite of rock and tempests; roar,  
In spite of reefs that near the shore,  
Sail on, nor fear to breast the sea,  
Our hearts, our homes, our all with Thee:  
Our hearts, our hopes, our prayers, our tears,  
Our faith triumphant o'er our fears,  
Are all with Thee,  
Are all with Thee." (Applause.)

The Toastmaster:

Gentlemen, we have had a great treat, a great treat. And now, we shall turn a little from this serious consideration of subjects so admirably presented to a little lighter vein, not simply humor but philosophy, poetry, the heart of the poet of the woods will be opened before you tonight. I have the greatest pleasure in presenting to you Douglas Malloch of Chicago, the Poet of the Woods whom I shall turn loose to be his own introducer. (Applause.)

#### Rev. Jeremiah Boynton, D. D., Speaks

Mr. Toastmaster and my dear annual parishioners: It is not often that the team at a table like this happens to be made up of a statesman and a sinner and a skypilot.

I was edified by the eloquent remarks of the statesman. As a minister I was tremendously interested in the confessions of the sinner and especially in that remark of his about where he was when the War broke out; for the sinner and the skypilot were in the same city. I was in Paris the day the War broke out, and I hastened to my home. I did not meet the sinner on the road. I have an idea he might have been one of those husbands that was being torn away from those other individuals, their sweethearts (laughter). I should not dare call my brother from Chicago a sinner if he had not so named himself. Now we do not have that kind of manners in New York. Chicago has a brand of her own, for I know we have no sinner here in New York who would rise and advertise his own hair restorer when

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he was asked to speak concerning things "which were really lofty."

I was mightily interested in what he said about the hair restorer, but from the looks of his own hirsute appendage I believe he is the only customer that that hair restorer ever had.

Those men from Chicago always have strange experiences. You remember the man from Chicago who went to Heaven and he knocked at the gate and Peter came to the door and he said, "Who are you?"

The Chicago man replied, "My name is Smith."

"Where did you come from?" asked Peter.

"I came from Chicago."

"Well, I don't remember that anybody from Chicago ever came in here before," said Peter.

And the gentleman from Chicago straightened himself up and said, "Peter, Peter, I want you to understand that Chicago people go wherever they have a mind to."

"Do they?—just step in and take the elevator," said Peter. And there was a Union member running the elevator, and he had a pair of short horns sticking out, one on each side of his head, and the elevator started, and the man from Chicago got surprised, got startled and shouted out, "Peter! Peter!—this elevator is going down!"—and from the vocabulary of the sinner who has just spoken—I suspect—mind you, I only suspect, he was in that elevator. At least, I think the variety of his experiences entitles him to the confession he has made to us tonight.

And as a true skipper, Mr. Toastmaster, I think if we can get him to leave Chicago and come to New York, and go to my church for a year, that we can bring him to the next meeting of the Pulp and Paper Association absolutely a changed man. (Laughter and applause). I read a story the other day which gives me little courage just at this present moment. A man had hired a house by the side of a swiftly flowing stream, and he undertook to raise chickens in the cellar. Well, as the spring time came on, snows melted and the stream rose higher and higher, it got into the cellar and drowned all the chickens—very much to the discomfort of the man. He went to the proprietor or the landlord, we will say, and expressed his deep sorrow at the loss of his chickens and said, "I will give up the house."

Now the landlord, he was an optimistic sort of chap, and he said, "don't give it up so easily as that—try ducks." (Laughter.) So I am encouraged "to try ducks" tonight, for most of the chickens have been drowned by the dear gentlemen who have proceeded me.

I want to say one thing, which I believe will be universally accepted, and that is that the thing which characterizes America of today, as contrasted with America of twenty-five years ago, is that a new conception has arisen above our American life. From the very beginning, we have been thinking about ourselves, and have been developing our own resources, and have been attempting to find our place nationally in the world,—which was very proper. About twenty-five years ago we began to suspect, however, that there is no such thing as an integer among the nations of the world; and the word which we have taken for the inclusion of our ideal is that word "international." And today we have come to the position where a very large majority of the thinking people in America are aware of the fact that all our possessions here in America have assumed an international characteristic and must be dealt with, if they are to be dealt with successfully, in reference to the international idea.

You gentlemen are employers of labor, but haven't you found in your employment of labor that whereas at the best, twenty years ago, you had with relation to labor simply a national situation, that today you have an international situation, and that the great international meetings of the workmen from all the countries of the world which have recently been observed across the sea are of increasing interest to you as employers of labor here?

Maybe you are bankers; and certainly the bankers have found out in these last years that they cannot administer the finances of America simply in terms of America, because finance has become internationalized and they can only successfully fulfill their financial obligations in America today with an eye upon that great Internationale which has come to finance.

The same is true with relation to thought. It is true in my own profession as in any other. The minister who is up-to-date today does not pretend to interpret the interests of his church simply in national relationships. He has to scan the wider horizon and think internationally with relation to the statements of religious truth and the affirmations of religious truth and the services of religious truth.

There is not a single thing we have in America today on which we can put the stamp "Made in America" and deal with it as if there were no other people in the world except the people here in America.

Ten years ago, Nicholas Murray Butler stood up in this City of New York and began to plead with the American people to cultivate the international mind—and it was practically a new idea ten years ago. But today, it is the position of every man who thinks at all beyond the ward in which he lives or the factory where he earns his living. Immediately after that, Mr. Oscar Straus, one of our most respected American Jews, wrote and began to plead with the American people to cultivate the international conscience. And those two slogans have been growing side by side through our American life for the past ten years, especially quickened by the experience of the war, until we know today that you can only interpret anything which is dear to you in its element today, in international relations.

Of course, there are some people who do not care about it a bit. They are in the position of that woman over in England who had lived in great poverty and suddenly came into untold wealth, and the first thing she did was to hire a suite of rooms upon the largest steamer sailing over the sea for a trip to America. She took her son along with her and when they were in mid-ocean, the son came running into his mother's beautiful suite of rooms and he said, "Oh, mother, mother, mother, the ship is on fire. The ship is on fire!" And she said, "My boy, don't get excited. What do we care? We don't own it, do we?" But the ship was on fire, all the same.

There are some people who have the idea beyond their own ward or city, but they are bound in it today by America. They are saying that we today must absolutely take care of America willy-nilly and leave the international situation to take care of itself. It was not always so. That was not the thought of Abraham Lincoln. Have you seen Drinkwater's play of Abraham Lincoln? If you have, you will remember one line which I think you will agree with me has length of days for the honor of itself and for its great suggestion. One thing that will strike you funny and that is, of course, John Drinkwater is an Englishman, and Mrs. Lincoln is represented as pouring tea at four o'clock in the afternoon, a custom very much at home over in England, but not altogether prevalent in America in Lincoln's day. As Mrs. Lincoln was having a reception and as represents and suggests happiness in our own homes, Abraham Lincoln had come in at the close for a few moments just to show that there was a man around the house. (Laughter.) And Abraham Lincoln evidently hated it just as much as you and I do, but he had to do it. He went in to be introduced to Mrs. Blow. Mrs. Blow was a society damsel who had never had a real thought in her life, but only an ambition to make a conquest of every man whom she met in a social way, and she began on the president. She was not succeeding very well, and suddenly a telegram was placed in the President's hands, and as he read it his face assumed a very serious expression, and Mrs. Blow said to him, "Why, Mr. President, what is it? What is it? What can it be?" And the President said, "Madam, there has been a fearful battle. We have

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won, but twenty thousand of the Southern boys have died and eight thousand of our own." "Oh, Mr. Lincoln, you must not feel so badly as that. Mr. Lincoln, it is only eight thousand that count." And the great President of the United States, with the fire of his soul leaping out from his eye, looked at Mrs. Blow and withered her with the remark, "Madam the world is greater than your heart."

#### A Great Truth and a Great Warning

That is the line which I think is going to go upon its swinging way down the ages, a great truth and also a great warning; The truth that the world is greater than even our American heart, and the warning lest you and I, in a critical time, as has been referred to, like this, be not large enough in our appreciation and wide enough in our horizons to see our own relations and the relations of our country to the great international situation and then be brave enough to minister to it as the sons of the Pilgrim.

There are some people who have seen it. There was a New York banker, president of one of the largest banks in our city, who used to sit in his private office and in that office administer the finances of the world. He had every convenience to do his work, the stenographer here and the errand boy there, the swivel chair and the roll-top desk, and the wires, by virtue of which he could ask questions all over the world and he was resting in the smug conclusion that he understood the subject of finance and that there was nothing which could be taught him outside of this office in New York, in which he had trained himself and of which he was a splendid master. But one day it just occurred to that gentleman of great business finance that it might be a good idea for him to slip over the sea and put his own eye upon the situation, and so he took a staff of a half dozen young men to assist him in his investigations, and over he went. He had letters of introduction to the statesmen in all the countries over there, to the labor leaders, to the captains of industry and anybody whom he chose to see. He went to London, he went to Paris, he went to Vienna, he went to Berlin, he went to Rome, as a business man to see if anything could be taught him about finance by putting his eye upon those things with which he had hitherto dealt purely in an academic fashion. He had not been gone one month before he found these fundamental ideas were wrong, and had to be absolutely changed. And so, coming home, he wrote a little business man's book, especially for business men, absolutely innocent of rhetoric and of historical allusion, just like a business letter which one man would write to another, and his subject was "What Happened in Europe," and he tells what his preconceived ideas were before he went over there, and what he found that made him change his ideas while he was over there, and what he is now certain that America must do in order to save herself and to save the world.

Now, I cannot pass upon his conclusions, all of them, because I am not a man of finance but a man of faith. But the point I am making in this, that here is one of the shrewdest and one of the strongest and one of the most prominent financiers in America who woke one morning to the fact that his academic ideas with relation to finance and the world were wrong and found them wrong when he went and put his eye upon the exact situation over there. That man needs to be multiplied mightily in America today, for if anybody wants to talk about the faults of America I will tell you one of them, and that is that people who have never seen the situation as it exists today in France, and in Germany, and in Belgium, yes, and in England, and who have regarded themselves as absolutely competent academically to make the great conclusions, are very likely to be mistaken and that is one of the great perils of our American life in all our departments, it is one of the perils of our American church, it is one of the perils of our American business, I will say it with all respect, Senator, it is one of the perils of the Congress of the United States today, that so

many people who do not know the situation by personal investigation of it regard themselves as absolutely confident to legislate upon it. So that the first thing which is necessary for America today is vision. It is more important, with all respects to the Senator, it is more important than traditional ideas with relation to the Monroe Doctrine. It is more important than academic ideas about the contents of that tenth Article. The thing which America needs today more than anything else is international knowledge which is born of an international observation, and those of us who have been over there and have seen it are absolutely sure of that one thing and feel it necessary to bear our testimony upon every occasion and to make our plea that we be not content with little smug conclusions in any department of our American life, until we have measured those conclusions in the light of our own observation as we stand in the presence of the stark and dreadful facts of the situation. (Applause.)

And when one stands in the presence of those facts, as I have stood for three months, here is the thing which he asks in the drastic situation in which the world is today, in the presence of the confessed fact that there can be no industrial peace and no healthy business in any country of the world until all of the countries of the world stimulate production in order that there may be interchange of goods, that there may be interchange of money, so long as that situation lasts. How does it happen that America, disinterested, magnificently sacrificial for all these months, appears to have been withdrawn from the international situation and be making an over-done principle of her own national affairs? America, whom the fortunes of war have favored as no other nation in the world, half of all the gold in the world in the treasuries of the United States tonight and one-third of all the diamonds in the world glistening in the ears and on the bosoms of our women here in America; America, whose losses in war were so slight, so pathetic, for those that experienced them, sixty or seventy thousand beneath the daisies and the poppies in France and the two or three hundred thousand more maimed in one way and another, while England with her forty-five millions in Great Britain laid one million of the flower of her country beneath the poppies of Flanders and has had three million maimed in more or less degree for their whole life.

#### International Relations Neglected

How does it happen that the one thing in the world which comes out of this war in the most favored position, which has the strength of a giant today and a part such as never was given to any giant in the world before, how does it happen that we are content to think so little about our international relations and responsibility for all our departments of life and are thinking so very, very much about our own petty interests?

Now, I want to say to you men this: If any one thing is sure, it is this, that what happens in one part of the world affects vitally the other part of the world. Fifty years ago we were told that it made a terrific difference whether the Indian in the Rocky Mountains was in his tepee beating his wife or whether he was out hunting fur; for if he was not hunting fur in the Rocky Mountains, the price of fur was going to rise in the mountains of London, a place of which the Indian never heard. And it is God's own truth. Nothing can happen in one corner of the world that will not have its reactionary effect upon us.

We cannot take the position of "Little Jack Horner sitting in a corner, eating his Christmas pie; putting in his thumb and pulling out a plum and saying, 'What a good boy am I.'" (applause) and take the measure of our girth and the temperature of our bodies and talk about ourselves and just plan altogether about ourselves and think that everything is going to go on and that we are going to be increasingly in a position where, when there is trouble in some other part of the world, we can just simply extend our lordly dictum and the world will readjust



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itself according to our smug and insular ideas. That is not the way influence goes in the world today.

International, gentlemen! International! Say not,

'It matters not to me  
My brother's weal is his behoof  
For in this wondrous human web  
If your own life is warped,  
His life is woof.'

We have been given each those strands,  
And you and he are in one loom  
For good or bad,  
For glad or sad,  
And you must share common doom.

Don't I believe in the independence of my country? What do you suppose I put on my uniform for, as an old man and went to war if I didn't believe that? (Applause). Do you suppose I believe in the sovereignty of America? Yes! But the thing I have noticed is that England believes a bit in sovereignty too; and Japan believes a bit in sovereignty too.

Did you read that when the Japanese envoys went to the Emperor for permission to take their place in the Treaty of Peace, he asked them what the effect of that treaty would be on the sovereignty of Japan, and they said, "No effect at all."

Now I submit to you that with these remarks which I have made, calling attention to the giant strength of America against the weakness of our allied nations and enemies on account of the war, if America cannot afford, just from a prudential reason, to put her ideas of American sovereignty down by the side of the Britishers' idea of sovereignty and the Japanese ideas of sovereignty and take whatever risk there may be in the interest of a reunited world, in the confidence that she can care for herself, then there is something wrong about her strength and there will be something wrong about her future (applause).

International! Labor is internationalized, capital is internationalized. The church is internationalized. The governments of the world must be internationalized by some sort of an agreement among themselves in order that whoever would disturb the peace of him to reckon with—and he will take a good long thought before doing that. I shall say one thing as I sit down. There was an article published in the Atlantic Monthly the other day by a Russian, a Russian of world wide sympathy and horizon and knowledge; and he was giving his idea of what might pos-

sibly be the solution of this tremendous state of unrest, which is not peculiar to the United States of America at this particular moment, and he said that labor couldn't do it; can't. Capital couldn't do it; can't. Wars of force in the interests of civilization may be efficient.

They can't do it, of course. He says there is just one power left that possibly may do it, and then he makes a plea for what he calls the "Internationale of Gentlemen."

We have got the Internationale of labor. We have got the Internationale of capital, we have got the Internationale of the Church. Let us have the "Internationale of Gentlemen." And he is not thinking about those people who measure their gentleness by the polish on their shoes or by the size of their tailor's bill. He is thinking about the good old fashioned gentlemen who knew something about chivalry, who had a relationship with the right which was dearer to him than any other relationship in the world. He could see the strong points in his adversary, and after he and his adversary had settled their problem, was man enough to bury the small spirit of prejudice and of hate and treat his adversary like a gentleman. And he said that if in all the nations of the world today we could just cultivate the Internationalism of Gentlemen, men who believe in the biggest and the finest, in the good, the beautiful and the true. Men who are not mollycoddles, but men who put first in their relationship with their help, with their customers, with their country and with their world, those great ideals which have been the advancing powers since the world began, and which are always present at any real advance in civilization, that the International of Gentlemen might be able to save the world; that International of Gentlemen here in America will love their country as they love their life; they love her so much that they will demand that she shall take her fair share of the re-ordering of the World for the sake of which they have won such a wondrous victory; and they will find as the years go by, bands of light-minded gentlemen in the countries over the sea; and by making the good and the beautiful and the true the "previous question" in every relationship—financial, commercial, state-craft and all the rest, that they will bring in the day for which we are all longing, when the present unrest which causes us so much apprehension in our own city here tonight will be saved by our higher, nobler spirit, which is bound to find brotherhood in every well-meaning man, believes and prays the day will soon come when there shall be a real Federation of the World and a real Parliament of Men (applause).

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H. H. G. Ingalls  
T. Ireland

## J

R. H. Jackson  
C. H. Jaite  
Lee Warren James  
Arthur L. Janes  
L. C. Jeffress  
Howard Jenkins  
I. C. Jennings  
Robert John  
Bolling Arthur Johnson  
Edward Johnston  
Gustave P. Johnson  
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J. B. Jones  
Sydney Jones  
J. Jordan  
A. L. Joseph  
L. M. Josephthal  
Joseph Joyce  
Frank A. Juckett  
William D. Judd

## K

J. J. Keenan  
T. J. Keenan  
H. T. Kehew  
Harold W. Keil  
Frank Keiller  
M. J. Kelley  
R. S. Kellogg  
V. K. Kellogg  
Raymond Kelly  
C. H. Kent  
E. Kerr, Jr.  
F. E. Kessinger  
J. A. Kiessle  
Phillips Kimball  
J. Kindleberger  
Kenneth C. Kirtland  
G. Kjestrup  
C. H. Knight  
G. A. Knoche  
C. W. Knode  
George W. Knowlton  
Alexander E. Kohn  
E. Kuhe  
I. Kuhe

## L

E. J. Lachmann  
D. Lake  
F. I. Lake  
H. M. Lake  
Harry B. Lake  
Charles A. Lambie  
George B. LaMonte  
Dave Landau  
S. D. Lansing  
J. B. Larkin  
Robert Lasher  
August Laubscher  
F. A. Laubscher  
C. J. Lauer  
G. C. Lawton  
F. A. Leahy  
F. A. Leahy (Guest of)  
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J. T. Leal  
J. F. Ledeus  
C. Stewart Lee  
J. E. Lee  
J. J. Lee  
W. P. Leech  
L. F. Lehr  
John Leishman  
J. A. Lemmon

Senator Irvine L. Lenroot  
J. Loy Leonard  
John Leslie  
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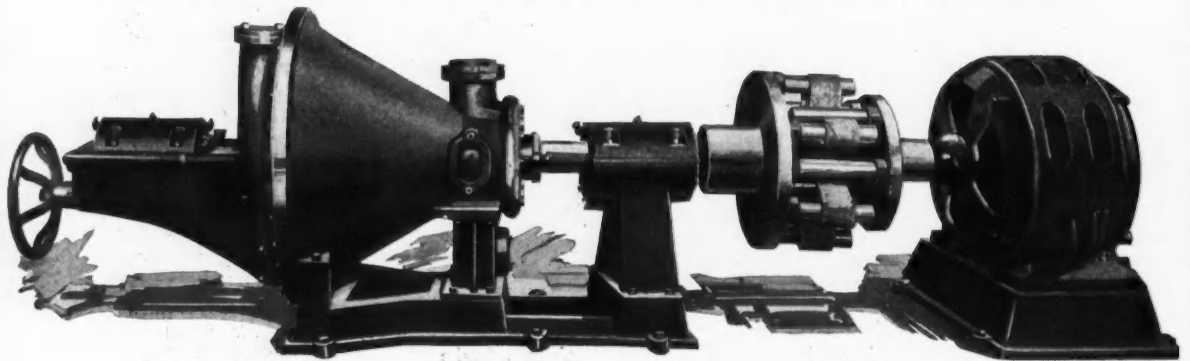
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 D. W. I. Mulord  
 J. A. Mullen

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 W. N. Munroe  
 K. Muraki  
 F. A. Murphy  
 E. B. Murray  
 James A. Murray  
 John C. Murray  
 A. B. Murtha  
 W. B. Murtha

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 F. Naegelis  
 J. B. Nash  
 L. E. Nash  
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 H. W. Taylor  
 W. H. Taylor  
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 Morgan H. Thomas  
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 Geo. F. Titus  
 G. R. Tolen  
 H. J. Toole  
 Dean J. W. Tourney  
 D. E. Town  
 O. B. Towne  
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 A. D. Unger  
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 E. C. Van Valkenberg  
 Chas. Vantrain  
 F. H. Von Ullrich  
 Chas. Vose

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 Stevenson E. Ward  
 Ervin Wardman  
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 S. B. Wardwell  
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 Wm. J. Warner  
 S. L. Warren  
 Speed Warren  
 T. E. Warren  
 Ridley Watts  
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 J. S. Watson  
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 Clayton White  
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 Adam Wilkinson  
 Charles Williams  
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 W. V. Williams  
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 E. E. Wright  
 E. M. Wright  
 Hugh Wright  
 W. Wright  
 J. F. Wuenschel

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Leon M. Yoerg  
 Edward H. York  
 Floyd Young

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G. Zeese  
 I. Zellerbach

**ASKS PRINT PAPER INQUIRY**

Attorney General Palmer would be directed by a resolution introduced Thursday by Representative Christopherson, Republican, of South Dakota, to conduct a "sweeping and thorough" investigation into the manufacture sale and distribution of print-paper and "to institute criminal proceedings against all who have violated the law or who are guilty of profiteering."

Chairman Porter of the House Foreign Affairs Committee also announced that a hearing would be held April 26 on the Senate resolution authorizing appointment of an American commission to confer with Canadian Government officials regarding restrictions placed on the export of pulp wood to the United States.

**GERMPROOF CUP CORP. INCORPORATES**

The Germproof Cup Corporation, Manhattan, has incorporated in New York with 100 shares Class A preferred stock, \$100 each; 1,350 shares Class B preferred, \$100 each, and 6,000 shares common, no par value. The active capital is placed at \$315,000. The incorporators mentioned are A. C. Wheeler, D. S. Baker and C. A. Weiant, 8 West 40th street, New York.

The Kennedy Paper Mills, Manhattan, have incorporated in New York with capital stock placed at \$40,000. The incorporators mentioned are W. C. Ridgway, I. Slotte and M. W. Ryers, 188 Gates avenue, Brooklyn.

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## National Paper Trade Association Dines

Annual Banquet of the Association Wednesday Evening Is an Unusually Brilliant Event—Unusually Large Number of Members and Guests Is Present and Thoroughly Enjoy the Excellent Entertainment Provided by the Committee of Arrangements—Dancing Until Late Hour Follows the Dinner—Those Present at the Banquet—No Speechmaking at the Dinner.

There is one event connected with the doings of the National Paper Trade Association which has the united support of the wives and sweethearts of its members, and that is the annual dinner. From far and wide, they journey to this annual event, their presence adding brilliancy to a gala occasion as well as affording the opportunity for renewing acquaintances formed at previous annual dinners. The tenth annual dinner held on Wednesday evening, April 14, at the Waldorf-Astoria undoubtedly surpassed previous affairs of this kind in point of attendance, entertainment and general good time. The large banquet hall found its splendor enhanced by the array of beautiful gowns worn by the ladies, and the radiance which is generated by the paper merchants whenever an occasion of this sort brings them in the company of the fair sex. The dispensing with after dinner speeches, adds much to the enjoyment of these occasions and is undoubtedly most pleasing to the ladies.

During the dinner the famous Henri Conrad's Orchestra played many operatic selections which were rendered vocally by a tri-

of exceptionally fine voices. The much anticipated vaudeville features were introduced at the close of the dinner by the following artists: Templeton, Temora & Linn, dancers; Georgie Price, one of the most popular single turns in impersonations of prominent actors; Farber Sisters, a singing act; Bailey, Cowan & Co., instrumentalists and vocalists; Nan Halperin, in her own inimitable characters, and Zomah, the most marvelous mind reader who has ever appeared on the stage. Without the suggestion of a word from her assistant, who passed through the audience, she accurately described coins, numbers, dates, and even gave dates of birth, age, etc. How does she do it was the the question on the lips of everyone, and though freely discussed the mystery remained unsolved. At the close of the vaudeville all adjourned to the large ballroom in the Astor Gallery where dancing was enjoyed until the wee hours, when the guests began to feel for the first time the fatigue of a strenuous though pleasant week.

Among those listed as participating in this most enjoyable of events were the following:

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Mr. and Mrs. Everett Addoms  
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Thos. Barrett  
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Lou Bittner  
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Alvin Bodemer  
B. F. Bond, Jr.  
Miss Mary E. Bond  
J. T. Bonham  
L. R. Boswell  
Mr. and Mrs. Jas. E. Bradley  
Laurence M. Brady  
Geo. Breeze  
Mr. and Mrs. B. C. Broderick  
D. K. Brown  
Walter Buchanan  
E. W. Burke  
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hardt  
Mr. and Mrs. Geo. R. Burk-  
hardt  
Paul Butler  
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Mr. and Mrs. Harry Caplin  
Mr. and Mrs. Jas. A. Carpenter  
I. W. Carpenter  
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J. H. Cowhill

George E. Crafts  
Mr. and Mrs. L. A. Crafts  
Mr. and Mrs. T. K. Cree  
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B. F. Crump  
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A. B. Daniels  
H. C. Davis  
C. W. Dearden  
Mrs. Jos. Degeorge  
Miss Isabel Degeorge  
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S. S. Dillard  
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O. A. Dolge  
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hue  
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A. E. Dubey, Jr.  
Miss Gertrude Dubey  
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T. W. Dunn  
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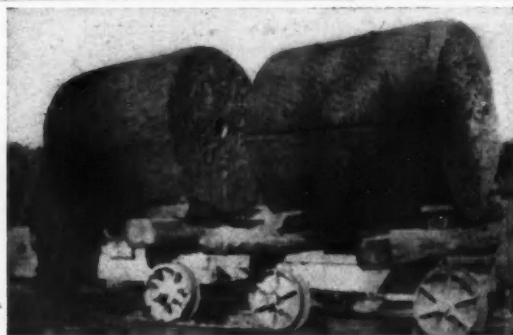
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**FOREST PAPER CORP. SOLD**

The Gibbs-Brower Company, paper and pulp mill brokers, 261 Broadway, New York, announces the sale for Robert McAllister Lloyd, 347 Madison avenue, New York, of his paper mill known as the Forest Castle Paper Corporation of Lucerne county, Pittston, Pa. This mill occupies a very picturesque site on a bend of the Allegheny River across from the city of Pittston and is in fact on the northern boundary of the part of the city which is known as West Pittston. The mill was formerly a brewery and was built of solid masonry construction and with its stone tower in front greatly resembles a fort or castle.

A few years ago J. C. Kenyon, former superintendent at the mill of the Hoffman-Youmen's Paper Company, of Baldwinsville, N. Y., with the backing of Mr. Lloyd, converted the old brewery, whose usefulness had fallen by the wayside with the prohibition amendment, into a paper mill which was known as the Kenyon Paper Corporation.

About a year ago Mr. Kenyon went to the Pacific Coast and

Mr. Lloyd took over the complete control and management of the mill from his New York office and it was changed to the Forest-Castle Paper Corporation. Many improvements were started in the mill during Mr. Kenyon's management, and these were completed and added to by Mr. Lloyd so that today the mill is in perfect condition from top to bottom and contains an excellent assortment of splendid paper-making machinery.

The mill is furnished with plenty of excellent water for manufacturing purposes and is operated by electricity which is purchased through the Public Service Corporation under State control and rates. The mill contains a wide Yankee Fourdrinier machine producing white or colored tissue, having a capacity of 6 to 8 tons per day of 24 hours.

The purchasers are the well-known successful manufacturers of New York, Newark, N. J., and Columbus, Ohio, namely William J. Eisner and S. J. Eisner. The mill will be known as the Pittston Paper Corporation. The output will be taken by the Newark Paraffine and Parchment Paper Company of Newark, N. J.

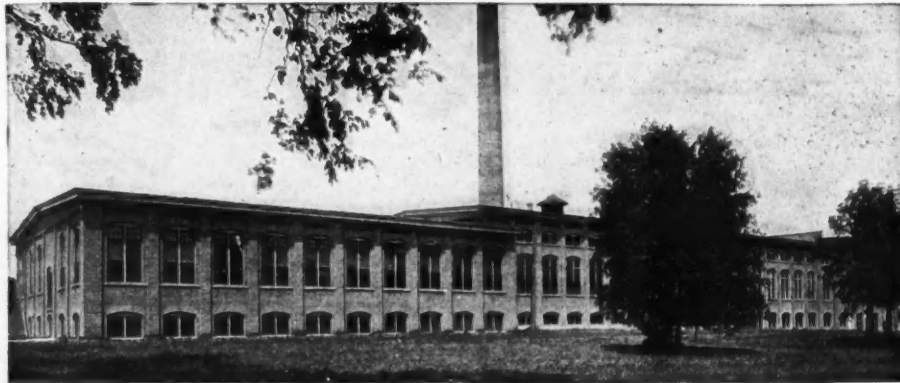
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## Technical Association Has Enjoyable Banquet

Annual Banquet at the Hotel Astor Is a Big Success in Every Respect—Judge Charles F. Moore Acts as Toastmaster in His Usually Efficient Manner—Thomas F. Keenan, Secretary of the Association, Complimented on the Success of the General Arrangements—Speaking Is of High Grade—Those Present at Banquet—Canada Well Represented Among the Speech Makers.

The annual banquet of the Technical Association of the Paper and Pulp Industry was held in the North Ball Room of the Hotel Astor Wednesday evening was attended by approximately 235 members. During the dinner a male vaudeville team rendered songs and instrumental numbers. These were supplemented by Evan Davies, of New York, professional entertainer, who wandered among the tables with the result that group after group broke forth in song until finally the ensemble joined in additional choruses.

### Excellent Arrangement

Thomas J. Keenan, secretary of the Technical Association of the Paper Industry, was solely responsible for the arrangement of the banquet and entertainment, and as he sat modestly at a far end of the guest table satisfactorily viewing his highly successful work, many privately congratulated him on his accomplishment.

The Honorable Joseph W. Fordney, chairman of the Ways and Means Committee, House of Representatives, Washington, D. C., sent word to President Hatch that he would be unable to attend the dinner because of pressing business in Washington. A letter from Herbert Hoover, received by Vice-president Robert B. Wolf, of New York, expressed the former's regrets that he could not attend the banquet of the Technical Association, owing to the needed attendance to affairs of state in Washington.

### Judge Moore Presides

Raymond S. Hatch, president of the Tappi, presented Judge Charles F. Moore, toastmaster of the evening, who spoke briefly on the necessity of scientific application to paper making, and emphasized the usefulness of such a technical association in connection with paper making in this country. After this talk, Evans Davies was introduced, who entertained with humorous stories of the South.

### Changes in Twenty Years

Toastmaster Moore then introduced Professor William H. Walker, of the Massachusetts Institute of Technology, Cambridge, Mass., who spoke of the changes in the paper industry during the last twenty years, when he was first introduced to it. It was Professor Walker's opinion that there is a great need for the pulp and paper manufacturers to utilize the knowledge which science has collected. He urged co-operation between the various divisions of students of the technical end of paper making, in order to facilitate the spreading and circularization of technical knowledge throughout the industry.

Professor Charles Baskerville, of the City College of New York, was then introduced and made a few remarks on the acute dearth of men who were trained to a managerial capacity. He stated that three things were essential to meet the demand for production and to relieve the executive strain, namely: men, material and money; and to his mind, education is the necessary lane through which this strain can be lessened.

At this point Evan Davies again entertained with impersonations of Harry Lauder in several of his famous Scotch song numbers.

### "Protects the Paper Industry"

The next speaker of the evening was Howard S. Neiman, of New York, whose version of the T. A. P. P. I. was "This Association Protects the Paper Industry." His remarks were directed chiefly to the younger generation of paper makers and technicians, whom he urged to place themselves mentally in the position of their employers, adding that with this procedure future labor troubles could be in a major portion prevented.

Toastmaster Moore then introduced George Carruthers, president of the Interlaken Tissue Mills, Ltd., Toronto, Canada, who opened his remarks with the opinion that 90 per cent. of the paper mill superintendents in Canada were American born. He also spoke of the importance of books on paper making in all branches now in the course of preparation by prominent paper authorities in the industry.

### Canada's Representatives

The next speaker was Roy Shipman, chairman of the Canadian Technical Section, who explained briefly the possibilities of Canadian resources and extended an invitation to members of the Tappi to attend their next meeting in Montreal. He was followed by John Stadler, of the Belgo Canadian Pulp and Paper Company, Ltd., Shawinigan Falls, Canada, who spoke of the necessity of considering the human as well as the material factor in the employment of labor and in dealing with men in general. He endorsed educational propaganda through the laboring classes, and stated that in Canada there exists a smaller percentage of uneducated labor than in the United States.

### Those in Attendance

Names of the members and guests present at the banquet of the Tappi follow:

William A. Aitken, John E. Alexander, William H. Artz, W. E. Byron Baker, Lawrence F. Barsaloux, D. K. Bartlett, F. J. Bartlett, Prof. Charles Baskerville, F. K. Becker, N. Folke Becker, O. L. Berger, William M. Bovard, Leo W. Bowmall, Burl Branch, John W. Brassington, Norman E. Brokaw, Ross Campbell, Charles M. Carrier, Henry P. Carruth, Edgar S. Catlin, Morris L. Caust, George Carruthers, O. T. Chalon, Chemical and Metallurgical Engineering, Frederick C. Clark, William Clark, Max Cline, Philip W. Codwise, Grellet N. Collins, S. B. Copeland, Fred Cornell, Justus A. B. Cowles, W. C. Cram, Frederick A. Curtis, Evan Davies, W. L. Davis, Jr., J. A. DeCew, J. A. DeCew, P. Delin, Phillips Dennett, Charles Dickinson, Arthur B. C. Drew, George F. Drew, Alexander C. Duncan, Vance P. Edwardes, R. H. B. Elkins, S. I. Escott, Robert W. Evans.



*It used to be hard for a paper-maker to match samples for color after four o'clock in the afternoon. In the laboratory and mills of the American Writing Paper Company a special kind of electric lamp is used which reproduces daylight conditions. Scientific accuracy is the only basis of fair dealing in the paper trade.*



## Scientific Research and the "Square Deal" in the Paper Industry

**W**HEN you buy an electric lamp, a little label on the glass tells you the voltage the lamp requires. The lamp has been standardized and classified.

So it is also with a telephone, a kodak, a stick of dynamite, a pure drug.

Yet when a Printer buys a ream of paper, he has few facts given by the manufacturer to guide him. The weight is specified, and that is about all. Does it tear easily? Will ink "run" on its surface? Will it turn yellow in sunlight? Will it stand erasing? The Printer has been denied access to the *facts*.

### *Abolishing unfairness in the paper industry*

The American Writing Paper Company has taken the lead in furnishing Printers with these facts by expanding its scientific research laboratory at a cost of \$225,000. The main purpose of this laboratory is to set up standards that shall prevail in every process of manufacture, to inspect raw materials as well as

# AMERICAN WRITING

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finished product, and to give to the Paper Merchant and the Printer *the facts about what they buy.*

A second, though no less important, purpose of the laboratory is to improve quality and to bring about economies that can be passed on to the trade and the consumer in better values.

Take the case of dirty wood-pulp. Dirty paper means poor quality. By examining wood-pulp for dirt the laboratory has saved as much as \$300 on a carload of this raw material.

Alum. The American Writing's laboratory has made it possible to save \$100,000 every year on this one item alone. And of course the less alum needed the better the paper.

Research of this sort is the one thing that can promote fair dealing in the paper industry. It is an old maxim that the buyer of goods must be on his guard. Yet without knowledge and information, the buyer is helpless under present conditions, because only the seller knows the exact qualities or value of the product.

Through its research laboratory, the American Writing Paper Company is throwing light into dark corners—is tearing down this time-worn maxim—"the buyer beware"—by educating the buyers in paper quality and characteristics, and assuming full responsibility for its own product.



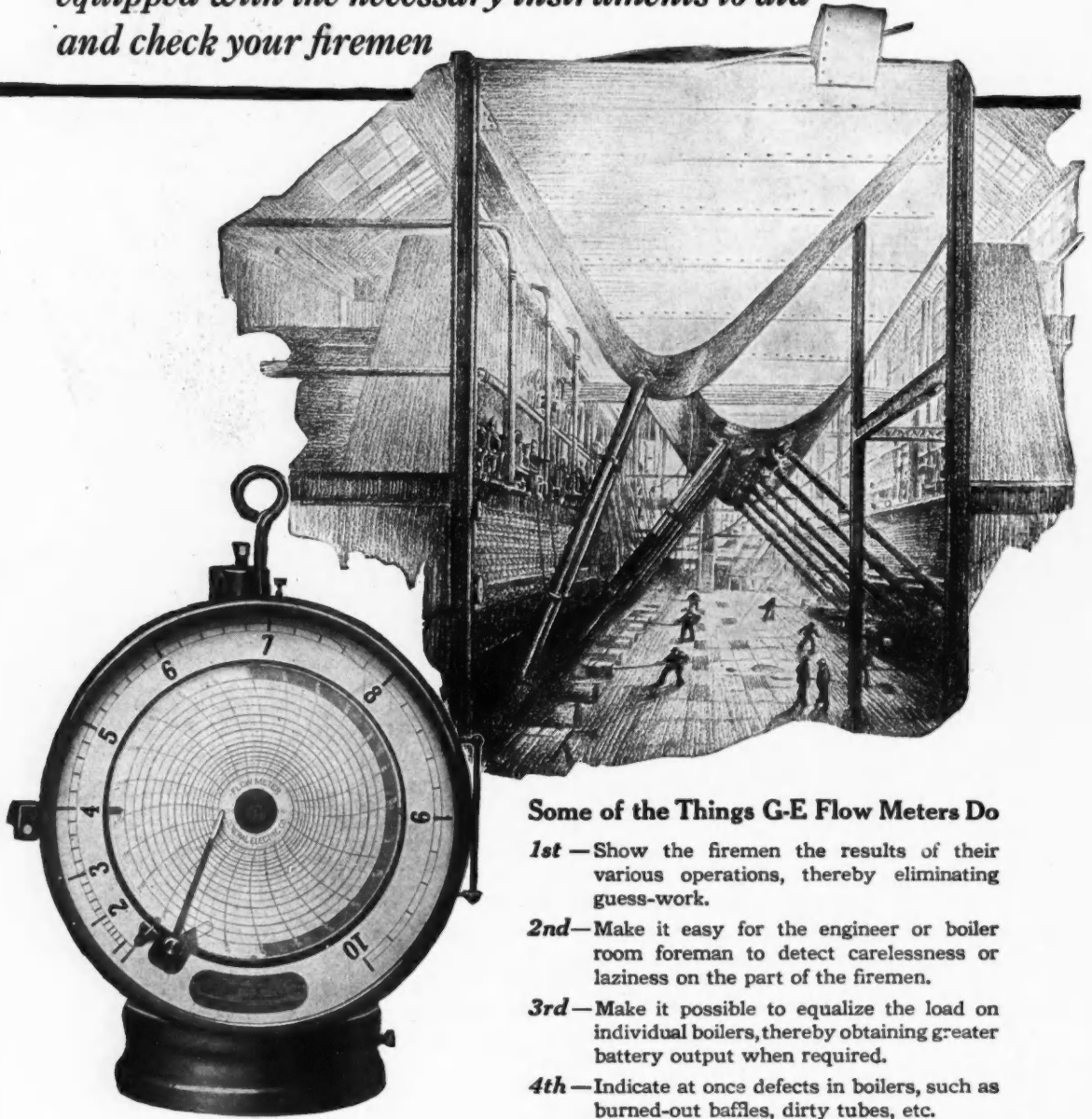
*How smooth is it? What is the finish? The Printer always asks these questions about a paper. But the eye and the sense of touch are not accurate, scientific gauges. In the laboratory of the American Writing Paper Company this scientific instrument is used to determine exactly the finish for a given purpose. Then it becomes possible to compare the paper produced in a mill with this standard adopted.*



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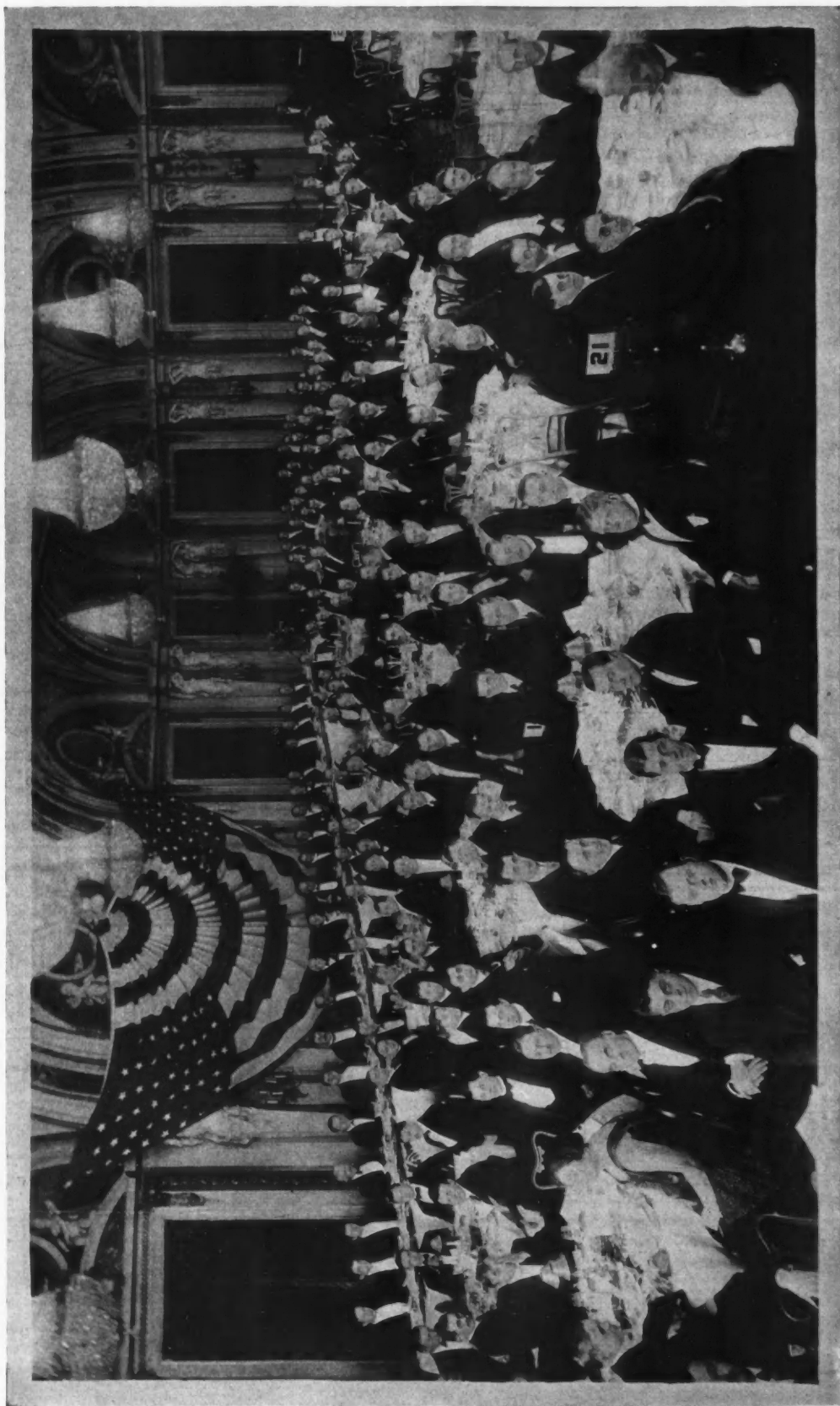
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WEDNESDAY EVENING, APRIL 14.

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## METROPOLITAN BAG JOBBERS ASSOCIATION DINE

The Metropolitan Bag & Paper Jobbers' Association held its third annual banquet in the Green Room of the Hotel McAlpin, New York City, at 7 o'clock on the evening of April 13. It was attended by 125 members belonging to the jobbing trade in the vicinity of New York and a number of their guests, together with some paper manufacturers and bag converters. An orchestra played pleasing numbers throughout the excellent dinner, and members of the orchestra rendered several song numbers which were received with enthusiasm by the banqueters.

Immediately following in the wake of the demi-tasse and cigars, A. T. Wolf, member of the firm of A. & L. Wolf, and president of the association, who presided as toastmaster, rose and made several remarks regarding the progress of the association during the past three years, and enumerated the advantages gained through membership in the organization as three, namely: 1—The friendly attitude between competitors as a result of personal contact through association activities; 2—The unification of trade customs; 3—The discussion of credits and consideration of trade discounts, and the advantages derived from the hearing of manufacturers' views on the supply situation.

### Dr. Campbell Speaks

After some elaboration on these points, Mr. Wolf introduced Dr. James Campbell, of the Dexter Sulphite Pulp & Paper Company, who, in connection with the value of personal contact with competitors, said that proper cooperation enables a trade to reach real facts and conditions existing in that trade, and stated statistically just how the manufacturer was finding conditions as regards the purchasing of his raw material at the higher prices. "Wrapping paper," he stated, "is at this time so scarce because of the many wrapping mills which turned their machines over to the manufacture of news print." He added that the cost of "pure labor" from the wood in the forest to the ultimate consumer amounted to approximately 75 per cent. of the cost of a pound of paper. It was apparent that the general shortage of material established in Dr. Campbell's mind, common ground for the jobber and the manufacturer on which to discuss and solve future business problems. He also added as a matter of interesting, if appalling, statistics that if freight waiting to be shipped at this

time were handled with the dispatch with which it was handled in 1914, it would require 800,000 more freight cars of all classes and 21,000 additional locomotives.

### Other Speakers

He was followed by Frank Floyd, secretary and general manager of the Crescent Paper Company, Indianapolis, Ind., and president of the Middle States Wrapping Paper Association, whose opening remarks dealt with the value of cooperation through jobbers' trade associations, which in turn should lead to a closer touch with the mills, and also the inestimable worth of statistical facts and charts of trade conditions in the immediate vicinity of the association. He closed with a congratulatory comment on the Metropolitan Bag & Paper Jobbers Association's membership and the character of its personnel.

A. E. Macadam, Sr., president of A. E. Macadam & Co. of Brooklyn, N. Y., and former president of the association, was then introduced and said a few weighty words on the value of trade organizations through the medium of trade associations.

The next speaker was Frank Parker, assistant sales manager of the Union Bag & Paper Company, who urged closer cooperation between manufacturers and jobbers, and then closed his brief talk with a joke or two which set the members in good spirits.

Following Mr. Parker there was an impromptu address by Walter Shuttleworth, of Shuttleworth-Kieler & Co. of New York. He placed particular stress on the need of a stock allotment system, whereby all customers would be taken care of, instead of allowing an unequal division of material and thus give cause to the hoarding of bags. At Mr. Shuttleworth's suggestion, President Wolf called on several bag manufacturers to deliver brief, to-the-point reviews on the bag situation as regards raw material, supplies, and the outlook for the future along these lines. As a result of this novel experiment, the manufacturers seemed of the opinion that no relief for the present conditions was in sight, that prices would probably advance and that materials would continue to be scarce owing to the labor troubles, enormous demand and inefficient transportation facilities. All seemed to share faith in trade organizations properly conducted.

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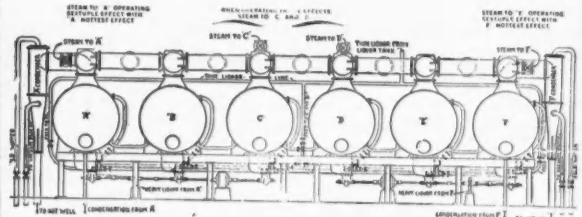
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The Lillie evaporator is not only the most efficient evaporator on the market, due to its exclusive use of film evaporation, mechanical circulation, reversibility, minimum incrustation troubles, enlargement feature, etc., but units usually can be added when desired, as illustrated above.

This drawing shows how two old-model triple Lillie effects were placed in line and converted into a Lillie vapor-reversing sextuple effect, which is now operated with steam in the hot effect at about 4 lb. pressure. It works practically without incrustation on the tubes.

Before this combination was made, the non-vapor reversing effect gave about the heaviest incrustations we have ever seen. Similar incrustations were obtained in a vertical tube double effect when evaporating the same liquors.

The absence of all hydrostatic head in the Lillie makes it possible to operate sextuple, octuple or more effects on low initial pressures.

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can be applied to any make of  
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ment will add to its efficiency—  
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Waterville, Maine

## PRACTICAL QUESTIONS AND ANSWERS FOR MILL MEN

**A Department for the Solution of the Troubles, Large and Small, That Are Encountered by the Workers in the Mills in the Course of Their Duties in Making Paper and Pulp—All Mill Men Are Invited to Send in Both Questions and Answers—A Free Exchange of Ideas Is Desired—By Active Co-operation This Department Can Be Made a General Clearing House for Information in Regard to Practical Paper Making.**

### Finishes on Printing Papers

Question No. 2505.—Will you please give detailed answers to the following questions:

(1) How many principal kinds of finishes are there on printing papers and what are they?

(2) How are these finishes obtained in the process of manufacture of paper; i.e., what must be the treatment of stock, formation, texture, drying, calendering, etc., in order to obtain each of the several finishes?

Answer No. 2505.—Super calender finish, high machine finish, low machine finish, and the intermediates between high and low machine finishes, rough machine finish, low to high coating finishes, and special linen finishes obtained by plating. Super calender finish is obtained by running the finished product through a stock of calenders consisting of alternate cotton and steel rolls or paper and steel rolls. The degree of finish depends upon the number of times that paper is run through, pressure applied, and composition of the paper.

The various degrees of high machine finish are dependent to a large extent upon the furnish, treatment of the stock, and the manipulation on the paper machine. The very high machine finishes must have a large percentage of loading and the stock must receive such treatment as will permit a very close formation on the machine wire. A close formation on the wire is one of the most essential requirements of a very high machine finish paper. The wet felts must be of a fine texture so as to allow heavy weighting of the presses without imprinting a felt mark in the paper. Three presses should be used and should be weighted as heavily as possible, but the weighting must be so distributed on the different presses that both surfaces of the paper will be alike, that is, one side must not be smoother than the other. The heavy weighting of the presses tends to felt the paper more compactly, thereby making it less liable to rupture during the drying operation. Another object attained by heavy weighting of the presses, is the removal of all the water possible from the sheet by pressure, thereby introducing the paper into the dryers with the least possible percentage of water.

The advantage of this is apparent because the drying of the paper must not be forced. Violently to force the water out causes miniature eruptions to occur in the fibres. Obviously this is very detrimental to a smooth surface requirement.

The paper must be dried to an exact degree before it enters the calenders; if overdried even slightly it will not take the high finish, if underdried it will blacken the sheet. Three stacks of calenders in addition to hot rolls and smoothing rolls are generally used for smoothing purposes.

The appearance of the surfaces of low machine finish and rough machine finish vary from a coarse grained appearance with lots of "tooth" to a fine even texture and flat, rough finish. This variation is due to the furnish, quality of stock used, treatment on the machine and in the beaters. Given the same furnish, the

treatment received could produce these two extremes in appearances. Given the same treatment as outlined as necessary for a very high machine finish, with the exception of calendering, would produce the fine, even textured low finish. On the other hand if the same stock was long, or poorly formed on the wire, or worked slow, causing forced drying, the resulting rough finish would have the coarse grained appearance. The variations between these two extremes would be in ratio to the condition of stock and manipulation on the machine. The intermediate finishes are more readily controlled by calendering, even if conditions of the sheet or stock do change.

### Pitch in News Print

Question No. 2506. Enclosed is a sample of what news print papermakers term pitch. It was collected from the wipe on the jacket. I would like to know if it does not also contain oil or grease substances.

Answer No. 2506. The sample of "pitch" does contain a small percentage of oil, and it also contains a large percentage of a black pigment which would seem to indicate that the substance is composed mostly of some material other than pitch.

### Straightening a Wire Seam

Question No. 2507. I would be obliged for any information in regard to the following questions: We are troubled with wire running slack on back side of machine and yet the seam of wire is straight. Only one wire we had on the seam was 2 inches behind on back side about 20 inches in and then the other part of seam was straight.

(2) Which is the best way to bring the seam of a wire straight providing the same is leading one side or the other.

Answer No. 2507. In all probability the only remedy for your trouble is a thorough overhauling of your Fourdrinier end. There is a very slight possibility that the fault might be due to defects in the wires, but it is a remote chance, especially if you are using different makes of wires. To overcome the difficulty mentioned in the first part of your question, I would recommend that you line up your wire rolls, very carefully. If you find them to be true, then go after the two couch rolls and the breast roll, and you will find one or more either sprung or out of round and the only remedy is to take them out and grind them. In the instance where the wire was behind 2 inches 20 inches in from the back side and the remainder of the seam straight. I have found this to be due to one of the couch rolls being small at that point, making it necessary to grind, or wear in the jacket at that point. Be very particular to see that your couch rolls are in line with each other.

Part two of your question. The fact that seam of the wire is not running straight, is an indication that some of your rolls are out of line, and the only proper way to straighten the seam out, and this is the best way, is to ascertain which roll or rolls are out and to put them right, then your seam will run straight. I could not recommend any other method for straightening a wire seam.



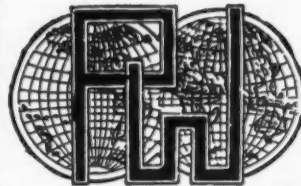
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Agents for Leading Paper Manufacturers, McNamee Clays, Etc.

None but the best grades.

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Seamless Felts for fast running

FELTS AND JACKETS FOR EVERY GRADE OF PAPER

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White and Tinted Bristols — White Blanks — Index Bristol and Specialties in Card Boards.

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MANUFACTURERS OF

HIGH GRADE FOURDRINIER TISSUE, SPECIAL WRAPPERS, FOLDER STOCK, TAG BOARD, BRISTOLS, ETC.

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Super Calenders  
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## New Warehouse of the D. L. Ward Co.

Is Thoroughly Up to Date in Every Respect and Has Numerous Features That Are Absolutely New—Various New Conveniences Insure Exceedingly Prompt Delivery and Reduce the Amount of Handling Which Keep to a Minimum the Possibilities of Stock Being Damaged—City Is Covered in Districts by Large Fleet of Automobiles—Other New Warehousing Features of the D. L. Ward Co.

The paper business requires in all probability more careful warehousing than any other business. The study of the atmospheric affect on the paper together with the proper housing makes it necessary that any paper warehouse be worked out on scientific lines. It requires many thousands of feet of floor space for the storage of this particular commodity.

A very interesting study was recently made of the results obtained by the D. L. Ward Company at Philadelphia in this interesting problem. To furnish a thoroughly fireproof warehouse located on the tracks of the Pennsylvania Railroad, situated close to all of the freight stations both incoming and outgoing, of the two railroads entering Philadelphia. Sidings provide for eight



No. 1. VIEWS OF THE NEW WAREHOUSE OF THE D. L. WARD CO., PHILADELPHIA

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To work by the Sun  
Means twice the work done.



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To a modern Paper Mill as its important inner equipment. "DAYLITE" means Nature's light without weather or condensation drip.

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The word co-operation is from the Latin word co-operari, meaning "to work with"—and quite apropos the largest part of the word means "to work." This agrees with our experience and is one of the secrets of our success in co-operating with our clients—just work—service. It's the work we do with them or the work we have done (experience) that satisfies them. Ask some of those we have co-operated with—our catalog contains a list.

## **SWENSON EVAPORATOR CO.**

Main Office—945 Monadnock Block, Chicago  
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tracks, permitting the loading or unloading of four cars at one time, making it possible to handle with ease and dispatch a minimum of two hundred tons of paper a day. The unloading platform is built flush with the floor of all standard box cars. This permits the contents of a freight car to be trucked out by ordinary hand trucks. On the opposite side of the warehouse from which cars are unloaded, there is provided a loading platform for the loading of the delivery teams.

**Unloading Freight Cars**

Illustration No. 1 shows quite clearly the possibilities of unloading the freight cars and the lower picture in the same photograph shows, on the opposite side, the various delivery units lined up waiting to receive their respective loads. It is not an uncommon thing for a large percentage of incoming stock to be trucked right from the freight car across the platform to the waiting trucks or teams. This insures exceedingly prompt delivery, reduces the amount of handling necessary which keeps to a minimum the possibility of stock being damaged in the handling thereof.

**Storage of Open Stock**

Careful scrutiny of the second floor picture indicates considerable study having been given to the storage of open stock and such lines as are generally sold in less than case lots. There have been provided racks as pictured in illustration No. 2 and such racks have been constructed to take care of the various sizes carried in stock. Each bin or rack is numbered and a chart or blueprint indicates the particular commodity and the quantity that should be carried in that bin. When this quantity



No. 2. RACKS FOR STORAGE OF OPEN STOCK

reaches the minimum full cases are ordered to replenish the open stock racks. Such papers as bond, ledger and writing are stored on the second floor which covers approximately twenty thousand square feet. On account of the layout of the

floor in isles and the charting of the bins, it is possible for anyone at the main office to know exactly in what spot in the warehouse is stored any particular line or size.

**Wrapping Paper Stock**

Illustration No. 3 gives a bird's-eye view of one section of the



No. 3. VARIOUS GRADES OF WRAPPING PAPER

third floor of this wonderful warehouse, in which is stored the various grades of wrapping paper stocked by the D. L. Ward Company. It will be noted that no bins are utilized as careful study has proven that this particular grade of paper can be stored and handled more economically by the methods shown in the photograph. The various sections for the different grades of paper are numbered on the chart as in other departments.

**Stock of News Rolls**

Illustration No. 4 shows the news rolls, the D. L. Ward Company's stock of which is probably the largest in Philadelphia, and the method of storage which reduces the handling and minimizes the risk of damage. One of the most interesting features in connection with this warehouse is the manner in which the firm handles and stores coated, book and similar papers. With approximately twenty-five thousand feet of floor space sufficient is provided to make possible the laying of cases flat. This insures the paper reaching the printer in the same condition in which it left the mill. All cases are stored flat and such open stock as is carried in the racks is kept in the original cases with only the top taken off. Portable elevators are used as shown in illustration No. 5. This permits the cases being taken from the pile in flat position, placed on the portable elevator, carried to position in front of the rack and elevated to the proper bin. The cross pieces in the bins which support the cases are adjustable in order to take care of the various widths of cases. These cross pieces are equipped with rollers which allow the case to be passed right from the elevator to its position in the bin, so that no strain is put upon the case, the result being that the open stock remains in its original condition.

**Thoroughly Modern and Up-to-Date**

By the methods used by the D. L. Ward Company it will be seen that all efforts are made to preserve the stock, reduce the expense of handling and permit a minimum handling thereof. This particular warehouse is one of the most modern. It has been constructed during the last three years. It is as fireproof as it can be made, containing solid concrete floors fifteen inches thick and solid concrete and brick walls eighteen inches thick. At



Daily Capacity of 600 Air-Dry Tons

The extent  
of our production of

High Grade  
**BLEACHED  
Sulphite Fibre**

insures uniform quality, prompt  
shipments and market prices

*Pulp Division*

**BROWN COMPANY**

*founded 1852*

PORTLAND MAINE



Mill Wrappers

*Bermico*  
*Sheathing Paper*

**NIBROC**  
**Kraft and Bond**

*Paper Division*

**BROWN COMPANY**

*founded 1852*

PORTLAND MAINE

**Maurice O. Messing Co.**  
New York

<p><b>PAPER</b></p> <p>News Bond Kraft Book Litho Manila Writing Label Fibre Coated Music Lining Ledger Embossed Cardboard</p> <p><b>TISSUES</b></p> <p>Interleaving Pattern Manila Carbon White Colors</p> <p><b>SPECIALTIES</b></p> <p>in Embossing and Hanging Stocks for Wall Paper Manufacturers</p> <p><b>MILL SUPPLIES</b></p> <p>Foreign and Domestic New Cuttings Bagging Old Rags Cotton Waste Wood Pulp Paper Stock Jute Waste Animal Sizing Flax Waste Gunny Old Rope Bagging</p>	<p style="font-size: 2em; font-weight: bold;">PAPER</p>	<p><b>FOREIGN BRANCHES</b></p> <p>Lima, Peru Barranquilla, Colombia Guayaquil, Ecuador Caracas, Venezuela Santiago, Chile Para, Brazil Rio de Janeiro, Brazil Ciudad de Guatemala, Guatemala Habana, Cuba Santo Domingo, R. D. Mayaguez, Porto Rico San Juan, Porto Rico Buenos Aires, Argentina Port au Prince, Haiti La Paz, Bolivia Bombay, India</p>
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WE EXPORT NOTHING BUT PAPER



every one hundred feet in the centre of the building are placed elevators twenty feet wide by fifteen feet deep. A large fleet of automobiles and equipment was obtained at considerable expense. This equipment consists of Autocars and Packards for the prompt delivery of customer's orders.

**City Covered in Districts**

The city is laid out in districts and which are covered by regular deliveries at certain times of the day, some districts being covered once and others four times, depending upon the requirements of the particular district. In obtaining delivery equipment the D. L. Ward Company has arranged to have sufficient delivery units to take care of the peak load at any time of the day. Horse-drawn wagons are used only for the delivery of news



No. 4. STOCK OF NEWS ROLLS



No. 5. PORTABLE ELEVATORS

rolls and outgoing freight. As the warehouse is located about one mile and a half from the sales department, at which point all of the orders originate, any loss of time in dispatching the orders from their origin to the stock room is overcome by such orders being telephoned direct to the warehouse. Young ladies are employed for this purpose, two who do the telephoning and two who receive the orders and take them direct to a typewriter. Time study has shown that the order is in the hands of the stock man four minutes after it has been received in the sales department and after it has been passed by the credit department and inventory record taken therefrom.

The whole study of the D. L. Ward Company's warehousing operations is very interesting and the firm is glad to show what it has accomplished to anyone desiring the opportunity.

**SUCCESSFUL JOINT SELLING ORGANIZATION**

I. S. Reynolds, former manager of the Nekoosa-Edwards Paper Company's Chicago office, in which capacity he served for over ten years, has been decidedly successful with the joint sales organization of the Claremont Paper Company, Inc., and the Groveton Paper Company, Inc., which was organized at 33 West 42 Street, December last.

This joint selling arrangement includes the production of the Claremont Paper Company mill at Bellows Falls, Vt. (which was bought two years ago from the Wyman Flint & Sons Company) of 20 tons a day of glazed anti-tarnish kraft, light weight kraft, and sulphate specialties; the Claremont Paper Company mill at Claremont, N. H., with 60 tons of kraft paper every twenty-four hours; and the Groveton Paper Company, Inc., formerly known as the Odell Manufacturing Company, whose daily production of 80 tons includes bleached fibre, high grade envelope manila, sulphite bond, textile wrappers, water finished butchers' paper, and wrapping manila.

The organization was formed after Mr. Reynolds had successfully handled the production of the Groveton Paper Company, Inc., for a year. With the additional lines of the Claremont Paper Company, Inc., at his disposal, his sales policy of "service as well as quality" remained unchanged, together with his sales plan of limiting his customers to large converters of paper, specialties manufacturers, and paper merchants.

Plans for the joint organization to handle the production of the Claremont Paper Company, Inc., and the Groveton Paper

Company, Inc., were originally evolved and laid by J. A. Bothwell, general sales manager of the Brompton Paper and Pulp Company, which owns and controls the Bellows Falls mills and the Claremont mills and supplies them with pulp for the manufacture of No. 1 sulphate kraft and paper specialties.

The advantage in consolidating these sales offices under the joint sales organization must be apparent in these times of paper shortage when the fact is considered that the organization serves the combined list of customers from a total daily production of approximately one hundred and sixty tons of paper, with the efficiency possible only in a perfectly attuned working force.

T. K. Davis is in charge of the New England office of the company at the International Trust Building, 45 Milk street, Boston, Mass., and the western branch office, which is to be opened in the near future, will be in charge of C. L. Winter at the Rookery Building, Chicago.

Members of the sales force are: J. J. Flanagan, W. F. Luking, I. S. Reynolds, C. L. Winter, T. K. Davis, G. M. Wetmore and J. R. Williams.

**MARTIN CANTINE CO. REORGANIZES**

The Martin Cantine Company, manufacturers of coated paper, Saugerties, N. Y., has filed notice with the Secretary of State at Albany, N. Y., of its reorganization. The preferred stock is placed at 500 shares, \$100 each, and the common shares 30,000, no par value. The firm will carry on business with \$200,000.

**THE WATERBURY FELT CO.**



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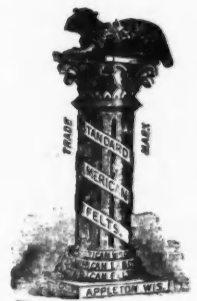
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## Accident Prevention in the Paper Industry

After Exhaustive Study Pulp and Paper Manufacturers Decided That Something More than the Guarding of Machinery Was Required if the Best Results Were to Be Obtained—Educational Campaign Was Undertaken Which Resulted in Reductions in Accidents, Reduction in Loss of Time to Injured and in Establishment of Bond and Union and Respect Between Employer and Employee.

By A. P. Costigane, Sec. and Eng. Ontario Pulp & Paper Makers' Safety Association

The following paper on "Accident Prevention in the Pulp and Paper Industry" was read by A. P. Costigane, Secretary and Engineer of the Ontario Pulp and Paper Makers' Safety Association at the annual meeting of the Ontario Safety League, April 13-15:

We have heard a lot about accident prevention during the last few years, and I hope we will hear a lot more very soon. What has led to this interest? Some people think it is an outgrowth of the European war, but this is hardly correct. Long before the war started an uneasy feeling arose in industry that all was not well, internally. Strikes and limitation of output were the order of the day. Strikes are oftentimes justified, but limitation of output never can, in my opinion, be justified. The uneasy feeling was not confined to employers, the same feeling was beginning to cause thinking employees to ask the question—Why all this distrust and disagreement? This questioning attitude creditable to both sides was fostered by leading articles in the newspapers pointing out the loss to the country as a whole caused by internal strife and emphasizing the benefit to be obtained from mutual trust and a give and take policy. About this time Workmen's Compensation came within the realm of practical politics, and the feeling already awakened helped the passage of the Workmen's Compensation Act through the legislature. The passing of this act was the first real step taken to clear up at least some of the misunderstandings between employer and employee, and marked the dawn of a better day in industry. The act may not be perfect as it stands today, but it is an honest effort to deal justly with both employer and employee.

### Compensation Under Common Law

Previous to the passing of this act all claims for compensation for accidents were made under common law and in serious cases the claims were usually opposed by insurance companies who had insured employers' risk. In the event of the insurance company being able to prove contributory negligence, little or no compensation was awarded the injured party. Besides being an expensive and uncertain method of procedure the ability to appeal on the part of the insurance companies, who had funds at their disposal, against the inability of the injured or his dependents to procure funds to cover legal expenses, resulted in many cases of gross injustice.

Many just claims for compensation for accidents, sometimes caused by unprotected machinery, never received compensation of any kind on the ground that such hazards were accepted by the employee on entering the services of the company. On the other hand many cases received compensation through the agency of shyster lawyers whose importunities often forced a payment from employers who would rather pay a species of blackmail than go to court. The Workmen's Compensation Act has done away with all injustices of this nature, and as the Government handles the business itself, insurance companies are eliminated. Under this act no matter how, when or where an employee is in-

jured while executing the duties of his employment, he is entitled to compensation. You are probably all familiar with the Workmen's Compensation Act so I will not dwell on it, further than to say that one provision at least appealed strongly to, and was early taken advantage of by the pulp and paper industry—I refer to the provision whereby the employers in any industry have the right to form themselves into an association and appoint an expert to carry on an active accident prevention campaign.

### More Than Guarding Machinery Required

Taking a broad view of the situation and after exhaustive study of the experience of other countries, the pulp and paper industry decided that something more than the guarding of machinery was required if the best results were to be obtained. A study of accident statistics showed that not more than 20 to 25 per cent of the accidents were due to unguarded machinery, and the question arose as to how to deal with the other 80 per cent. It was realized that while the employer could take care of accidents due to exposed gears, etc., little or no progress could be made along other lines without the whole hearted co-operation of the men in the mill. An organization has now been in operation for four years working educationally and has secured the co-operation of a large percentage of employees. The progress made has justified the early conception of the directors of the association and proved that the efforts of the association were along the right lines.

### First Year Devoted to Missionary Work

The first year was devoted to missionary work among the employers and with few exceptions the employers proved readily accessible and not difficult to convince when the full scope of the plan was explained. Missionary work among the men in the mill was also taken up and converts were made almost from the start, in spite of the fact that some of the younger element treated the whole idea as a huge joke. A few serious accidents made use of as object lessons soon dispelled the joke idea, but some still hung back. By judicious inquiries and conversations with men whose confidence had been secured, it became evident that the hanging back was caused by a feeling of distrust. This feeling of distrust, one might call it the residue of former strife, was the most difficult to overcome. One could feel when talking to the men that while they admitted a desire to cooperate, they hesitated because they were all the time looking for ulterior motives and wondering what new scheme was being put over them for the benefit of the management.

### Gain from Educational Campaign

The question naturally presents itself—what is to be gained by an educational campaign? I will try to answer the question. 1. Reduction in accidents. 2. Reduction in lost time due to injury. 3. Reduction in labor turnover. 4. And most important of all, the establishment of a bond of union and mutual respect between employer and employee.

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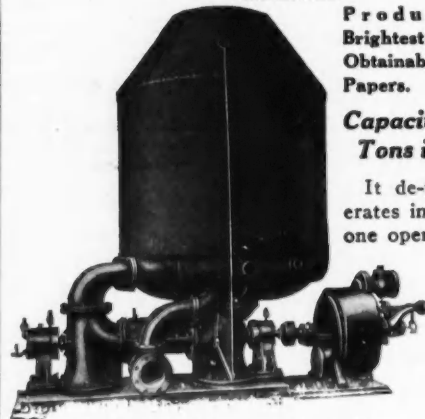
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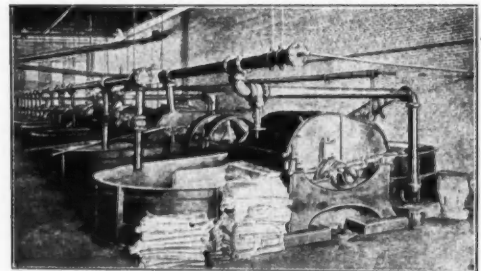


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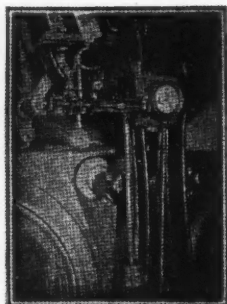
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### Reduction in Accidents

Statistics covering a period of years has conclusively proved that accidents can be reduced by organized effort. Our experience in the pulp and paper industry of Ontario bears this out, and I think similar results have been shown in mills located in other provinces. I have here a chart classifying all accidents that have taken place in the pulp and paper mills in Ontario during the years 1917, 1918 and 1919. The records for 1917, however, are not quite accurate, as many accidents were not reported, so that for comparison purposes we can only deal with 1918 and 1919. This chart includes all accidents involving lost time of one-half day or more, whether such accidents were compensatable or not. During 1918 each full year worker in the industry lost 2.63 days owing to disability resulting from accident. Last year this figure was reduced to 1.99 days or a reduction of 24.3 per cent.

### Reduction in Lost Time Due to Injury

Anyone who has been responsible for the practical management of a mill or factory will admit from personal experience that the lost time due to accidents is a factor to be studied and reduced. Where machinery is used, a minor accident means that the machine in question stands idle while the operator goes to the first aid room to report and have the injury dressed. This may seem a small item but at the end of the year the time thus lost makes quite a big figure. In the case of a major accident, where a man is incapacitated for some weeks, there is the loss due to training of a temporary man to fill his place. But the greatest loss of all is when an employee is fatally injured. In such a case there is bound to be almost a complete cessation of work by fellow employees in the immediate vicinity of the victim. A certain number will drop their work to give aid and will remain with the injured man until he is removed to the hospital—sometimes accompanied by one or two of his friends. After the removal of the victim, there will be further interruption to the work owing to the witnesses of the accident discussing among themselves and with others the details of the occurrence. Following this, much time and energy is expended officially in investigation, interviewing witnesses, examining conditions, etc., and in the event of an inquest the attendance of all officials directly or even remotely responsible for the occurrence. A value can be put on all these interruptions and when such figures are compiled the total will be astonishingly high even when the reduction of output is not taken into consideration.

Speaking of losses due to accidents, let me tell you of an incident that came under my own observation. Not long ago I met the superintendent of a plant in which a fatal accident took place. In the course of conversation I put the question: What do you consider this accident cost you, irrespective of compensation? (expecting him to name a sum of a few hundred dollars at the outside). Imagine my astonishment when he said, "About \$1,000." Asked to explain, he said the accident happened at 9 o'clock in the morning, and owing to the unsettling of the other employees, the output of the plant fell to practically nothing for that day. Two days later the plant shut down for the funeral, all wages being paid by the company as usual. Thus the services of 200 men for practically two whole days was the price this company paid for that one accident. The superintendent did not over-estimate when he placed the figure around \$1,000.

### Reduction in Labor Turnover

Safety organizing really means constructive work for industrial betterment, with the main purpose of promoting a sound body, a clear eye and brain, and a clean standard of living. Such a movement aims at preventing men from being injured, it precludes poverty, suffering and destitution in the families, it helps to prevent injury of one employee by another, by carelessness, or thoughtlessness, it emphasizes the necessity of guarding physical hazards, so that employees do not feel that their lives may be

snuffed out if they are not constantly on guard to keep away from moving belts, flywheels or open gearing. Employees are intensely human and will seek employment, will remain with and speak well of the companies offering the best employment conditions and showing the greatest interest in their welfare.

### Establishing Bond Between Employer and Employee

There has never been a movement in the history of industry that has done so much to bring employer and employee together on a common platform as has the safety movement. The formation of popularly elected committees has been one of the chief influences to bring this about. When representatives of the employees sit in committee with representatives of the management, each learns the viewpoint of the other. The feeling of restraint passes away and questions are discussed freely and openly. Meetings such as these quickly bring each side to realize that the other fellow is not such a bad sort after all.

The means adopted by the association must of necessity vary as the men employed are not all of the same class. The grades run from technically trained men to day laborers, and sometimes the latter are not even familiar with the language. The following are some of the principal means used to stimulate interest among employees:

- (1) Safeguarding physical hazards.
- (2) Teaching English to foreigners.
- (3) Improving lighting in buildings and yard.
- (4) Advocating pure drinking water in mills (individual cups or bubblers).
- (5) Issuing books containing safety instructions.
- (6) Placing of bulletin boards in each department, on which are posted regularly bulletins depicting the causes and results of accidents.
- (7) Exhibiting at meetings of employees specially prepared safety films, and giving short lectures on safety topics.
- (8) Arranging matinees for school children to see safety films, and encouraging essay competitions for prizes among the children on what the pictures taught them.
- (9) Designing and distributing safety calendars.
- (10) Education—encouraging attendance at night schools (text books).
- (11) Formation of safety committees.
- (12) Visits to all mills and by personal contact arousing interest of the management as well as the men.

As well as above, means are taken to stimulate interest among employers. I may say that in some cases the employers need the stimulant mixed just as hot and strong as the law allows.

1. Comparative monthly statistics showing the position of each mill in comparison with other mills in the province.
2. Chart issued annually classifying all accidents during the year.
3. Letters commenting on accidents which might have been avoided.

### Safeguarding Physical Hazards

I do not intend to elaborate all the methods I have mentioned, but merely to touch on some of the principal ones.

Safeguarding physical hazards, for instance, is important, and this must be the first step taken. There would be no use in asking men to be careful, if glaring cases of unguarded belts or gears were left to trap the unwary. Safeguarding of hazards must be done if for no other reason than to show sincerity on the part of the employer.

What has brought the best results so far has been the exhibiting of safety films to the employees. The usual procedure is to secure the use of picture theatre in a mill town, issue tickets to employees a week in advance for the evening show, and inviting the school children to a matinee. Men on the night shift often attend the

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matinee with the children. Meetings such as these are always well attended and safety films such as "The House that Jack Built," "The Man He Might Have Been," "The Crime of Carelessness," etc., are followed intently. An interval is arranged for during which a short talk on safety topics is given. Last year ten meetings were held at different points and invariably the accommodation was taxed to the limit. In some cases repeat shows had to be given to take care of those anxious to see the pictures, who had not, owing to the crowd, been able to secure admittance. After viewing pictures such as I have referred to, the audience is usually in a receptive frame of mind during the interval and listen attentively to anything said from the platform. These intervals are great opportunities for a speaker to push home forcefully the lessons depicted on the screen.

#### How the Plan Worked in Three Mills

As a result of some such meetings an intensive effort was made in three mills, employing on an average 2,250 people, to reduce accidents. A date was set for a "No accident week" during which every effort would be made to create a record of no accidents in each of the mills. The week selected was from August 4 to 9, the same date being set for all three mills in order to create a friendly rivalry between them. During the few weeks to elapse before the opening day of the fateful week arrived, various means were taken to secure publicity throughout the mills. The date was announced in every issue of the mill periodical, interesting articles were written bearing on the subject and putting it up to everyone in the mills to see that the mill, with which they were connected, passed through the week without an accident of any kind. Inside the mills, signs were placed in every department urging the men to be particularly careful for that week. Red colored triangles were given the employees to wear on their overalls as reminders of the "No accident week." Large cards were placed in each department, with space left for the names of those injured during the week. There was also a large sign printed on cotton placed above the entrance gate referring to the Safety Week, and asking the cooperation of everyone to make it a success.

The results were magnificent. At the close of the week two of the mills had a clean record, not having had an accident of any kind, but one employee in the third mill spoiled an otherwise perfect record. One of the employees playing ball in the machine room, in defiance of all rules and regulations, reached his hand into the winders to recover the ball which had lodged there. His fingers were caught and rather badly crushed, and he lost ten days as the result. That such an accident, caused by misbehavior, should have happened was very regrettable, but much more to be deplored was the callous indifference of this youth towards the success of the campaign in which his fellow employees showed so much interest. The remarkable success of the experiment in the mills referred to shows what can be accomplished in preventing accidents when all pull together.

#### Humor and Tragedy

In this serious business of accident prevention, one occasionally meets with an incident combining both humor and tragedy. After an exhibition of safety pictures at a safety rally held in one of the mill towns in Ontario, I was standing at the door watching the audience disperse and overheard a couple talking of the meeting. The wife remarked to the husband, "John you will need to be more careful now of the way you throw matches around, you might set the house on fire some day." "Yes," replied John, "I will be more careful, and you will need to stop lighting the fire with coal oil." "Indeed I won't," replied the lady. "I have been starting the fire with coal oil for twenty years and never had an accident yet." This woman was a convert to safety, as it affected the actions of other people, but as far as she was concerned,

it would probably take the setting of her clothes on fire to convince her.

#### Value of Bulletins

As a means of keeping alive the interest in accident prevention all the year around, a good word should be said of the excellent service of bulletins issued by the Ontario Safety League. In nearly every mill in Ontario a Bulletin Board in every department is looked on as essential, and when these boards are taken care of and the bulletins changed regularly, they are a constant source of interest. It is a very difficult matter to secure new material every week for such bulletins, and the members of the Ontario Safety League could with very little trouble to themselves be of great assistance to the league and other members thereof if they would send particulars or procure photographs of accidents that may have occurred in their plants. Photos, such as these when prepared in bulletin form, may be the means of preventing similar accidents in other plants.

The distribution of safety calendars at New Year time we have found to appeal strongly to both the men and the families, especially if the illustrations are of a practical nature and treated humorously. Calendars, such as I have described, are taken home and studied and create an interest in safety among the whole family. At the end of each month when a page is turned over a new lesson in safety is exposed to the gaze of members of the family, and so on from month to month. In all the mills when the calendar idea was taken up the demand far exceeded the supply. The calendar issued for 1920 brought in more letters of congratulation than anything we have produced in the past.

#### Educational Work

I would like to say a few words on education and what is being done along this line by the Canadian Pulp and Paper Association. The Pulp and Paper Association came to the conclusion some years ago that the better educated employees are, as a whole, the more efficient they will be, and the more efficient employees are the less liability to accident. Working along these lines a committee on education was appointed; this committee on investigation found there was not a text book in existence covering the pulp and paper industry as a whole. Realizing that little or nothing could be done without up-to-date text books, the committee recommended that a fund be started to cover the cost of the compiling of such text books. The association took up the matter and it speaks volumes for the industry, that all the mills in the association backed up the proposition and the money was immediately forthcoming. About this time, as a committee of the technical association in the United States was busy along the same lines, it was thought advisable that the two committees work together so that the method of education in the industry in Canada and the States would be the same, and as the field covered would be so much larger, the cost would be proportionately reduced. A fund of thirty thousand dollars has been raised from the mills in Canada and the United States to be used in the production of a set of text books. These books, when they are finished, will be suitable for class or correspondence instruction.

#### Plant Safety Organizing

I am a great believer in the maxim: "If you want anyone to take an interest in a movement, give him something to do." Therefore, I believe that the formation of plant committees popularly elected will do much to reduce the annual toll of accidents. In the large mills I advocate a committee in each department responsible for the conditions in their own department. Also a central committee composed of representatives of the management and the chairmen of the departmental committees. The chairmen of the departmental committees being members of the central committee, binds all the committees together. Inspections are made periodically of the whole plant, and the report is considered by

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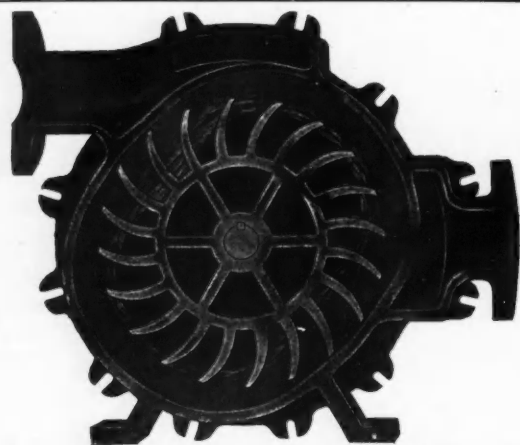
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the central committee, which has power, subject to the approval of the management, to order hazards to be safeguarded. All suggestions are passed on by the central committee, and adopted or discarded. In the event of a suggestion not being adopted a good and sufficient reason must be given, and a letter stating the objections sent to the employee making the suggestion. When a suggestion is adopted, a letter of commendation and thanks is sent to the employee responsible for the suggestion. This is merely the skeleton of a plan which we have found to work extremely well in the mills. Committeemen take real interest in the work and are sincere in their efforts to spread the gospel.

#### Study of Personnel

The whole success of safety work is bound up in the successful study of the personnel. The study of the personnel in any mill is most interesting and for the safety engineer absolutely essential.

#### A Good Story

Talking of studying men, I am put in mind of a story I heard recently at a dinner in Toronto. A well known senator at Washington appeared in the Senate one day, with a beautiful orchid in

his buttonhole. The flower raised the curiosity of a friend who inquired where he got it. The Senator explained that it had been presented to him by the head gardener of the government conservatories who was a Scotchman and a greater admirer of the national poet. By simulating an admiration and interest in the poet, he had got round the old man and secured the trophy. His friend determined to try the same game, so next morning he called at the conservatory and made a point of meeting the head gardener and entering into conversation with him. "I hear, Sandy, you are a great admirer of your national poet and I would like to tell you how I have studied his works, and what a great man he was," began the visitor. The Scot beamed, and the Senator feeling encouraged, proceeded to greater flights. "Yes, Sandy," said he, "the people of Scotland owe much to their poet and are rightly proud of having had such a great countryman as Willie Burns." The Scotchman turned a withering look on him and expressed his contempt by repeating "Willie Burns, Willie Burns! Huh, Johnny Washington, get out." One can imagine the great indignation of the Scotch gardener on hearing the national idol referred to as Willie Burns. Study men as an aid to arousing their loyalty, but be careful to humor their prejudices.

## KALAMAZOO PAPER MILL STOCKS ACTIVE

Unprecedented activity in paper stocks has featured the Kalamazoo securities market during the past three months. All stocks have ruled strong, with prices up and steadily advancing and the quota of prospective buyers far in excess of the offers.

This is due to the great prosperity enjoyed by the mills in the Kalamazoo district. Despite the advances in prices of all kinds of raw materials, coal and labor, the aggregate of lucrative orders on hand have more than made good the operating costs.

A summary of the first quarter of 1920 shows the following:

King Paper advanced from 15½ to 19½ bid and 20½ asked. Paying 3 per cent quarterly.

Bryant Paper Company is on a 12 per cent dividend basis, which with the extras are expected to boost the total for the year to 15 or 16 and possibly more. The stock now ranges 21 to 21¾.

Monarch Paper Company is on an 8 per cent basis. This company has just announced a capital increase from \$750,000 to \$1,500,000. The present stockholders will be offered one-third of this issue at \$10 a share. The new stock is already at 14 asked. The old stock carrying the rights is quoted at 15½ to 16.

Hawthorne Paper Company is on an 8 per cent basis and has advanced from 11 to 12½.

Rex stock is quoted at 16¼ to 17¼ and pays 3 per cent quarterly.

Western Board & Paper's last sale was at 24. It is now 25 bid and 30 asked. There is a rumor afloat that a big cash dividend will soon be declared by this concern.

Three months ago 13 was a good price for Kalamazoo Vegetable Parchment stock. It has gone on a 3 per cent quarterly basis and has jumped to 18 in value.

Kalamazoo Paper and Standard Paper are very closely held and few sales occur. The former is said to be on a 2 per cent monthly basis.

Watervliet Paper Company paid 24 per cent dividends in 1918 and 1919 and is now on a 2 per cent monthly basis.

The Eddy Paper Company has been paying one per cent a month and will soon declare its 4 for 1 stock dividend. Stock with rights is over 30 at all times.

Bardeen is very strong, with all buyers and no sellers. The stock is on a 6 per cent basis and pays that. It is rumored that this company will within the next year carry out its intention of building a modern two machine mill and possibly declare a big stock dividend.

The Michigan Paper Company with its extras paid 14 per cent in dividends during 1919.

During the past two years the Lee Paper company has paid up all back dividends on preferred stock and has been very prosperous. It is not an active stock and the range from 125 bid to 175 asked is a wide one.

The MacSimBar Paper Company for 11 years didn't pay a dividend and the stock had dropped to \$5 a share. The change came in 1916 and in 1917 alone this company paid 57 per cent. It is now on a safe 3 per cent quarterly basis, while an extra 2 per cent was given with the last payment. Fortunes have been made on this stock in the past 36 months.

#### STRIKE DISTURBS CHICAGO TRADE

The paper trade of Chicago was placed in a serious position by the strike of railroad switchmen last week. Embargoes on paper have been put into force by the railroads everywhere, because of their inability to handle the shipments after they reach the city. Carloads of paper, started from the mills to the city before the strike was called, are being reconsigned and held up awaiting the end of the trouble. The jam of freight on the outskirts of the city has become so great that it will require a week or ten days to get things straightened out after the trouble is settled. Local jobbers declare that there will be a paper famine here in less than two weeks unless the strike is brought to an immediate conclusion. The jobbers have been running with low stocks for many weeks, owing to their inability to get prompt shipments from the mills, and because of the heavy demand on the part of their customers.

The strike has been in effect for only a week, but the shortage of certain grades of white paper is being felt. The local jobbers are working hard to pick up paper by means of the "exchange" system, but the shortage is so general that it is not always possible to get the sort of paper wanted. Customers are therefore forced to wait.

The effect of the strike on the paper market is not yet seen, so far as prices are concerned. It is the general opinion of members of the local trade that prices are high enough, and that they should not be advanced to the trade, regardless of the conditions which prevail. With paper backing up on them the manufacturers will not have any motive to raise their prices.

P U L P  
**KRAFT-SULPHITE**  
 BLEACHED                      DOMESTIC  
 UNBLEACHED                  FOREIGN  
 —INQUIRIES SOLICITED—  
 SCANDINAVIAN-AMERICAN TRADING CO., 50 E. 42nd St. New York City

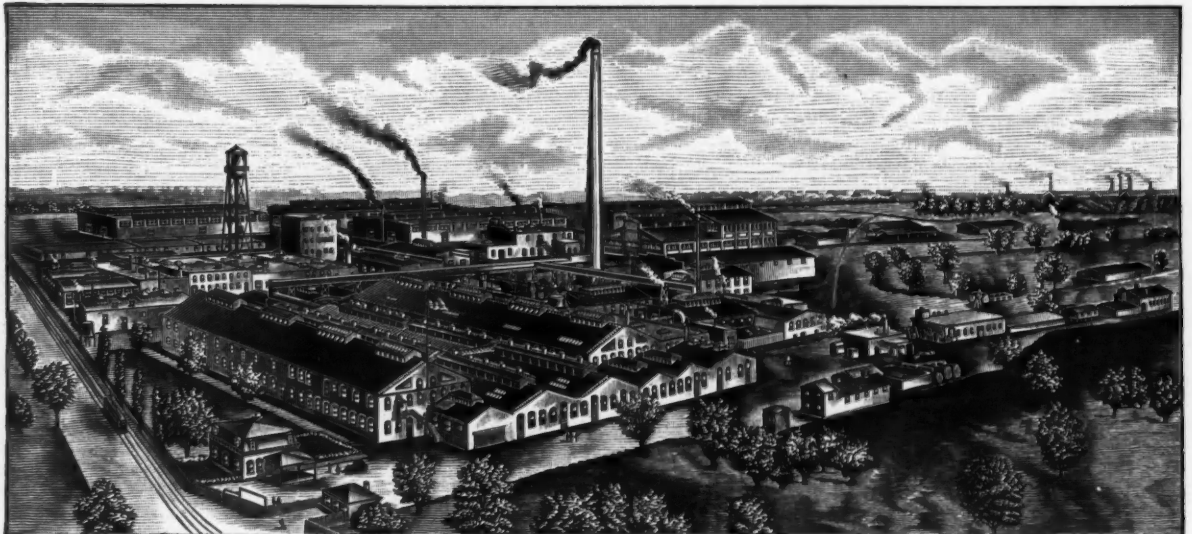
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Materials for PAPERMAKING

### Pearl Filler English China Clay

5 South Dearborn Street, CHICAGO, ILLINOIS

We Supply a Complete Line of  
**Colors for Papermakers**  
 OUR LABORATORIES ARE AT YOUR SERVICE



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## THE HELLER & MERZ CO.

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NEW YORK

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## MODEL PAPER WAREHOUSE AT READING, PA.

Written Especially for the Annual Number of the Paper Trade Journal

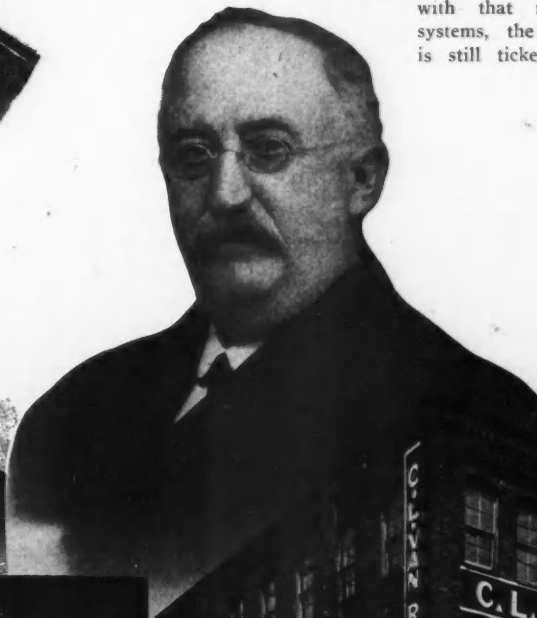
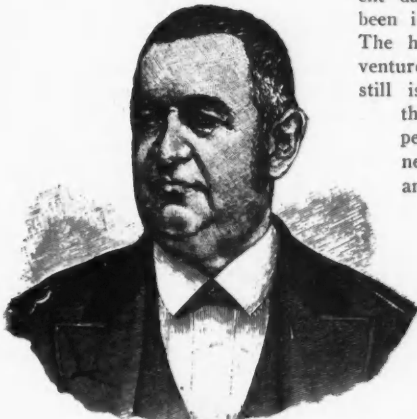
The paper business of Charles Van Reed, at Reed and Eastern streets, Reading, Pa., has an unusually interesting history.

From 1747 until the present day a Van Reed has been identified with paper. The home of the pioneer venture still is standing and still is being operated in the production of paper products. The business home of the fifth and the sixth genera-

tions is generally regarded as the most modern and best appointed paper warehouse to be found in Pennsylvania outside of Philadelphia, and, indeed, there are competent authorities who are of the opinion that in variety of stock, in manner of storage and display, and in arrangement for shipping goods, there are, while larger, no establishments in all Pennsylvania to surpass the Van Reed paper house.

### Many Interesting Aspects

In the office is the very chair used by a Van Reed three generations back; and yet right before the chair is the most modern Lamson pneumatic tube system for the prompt sending of orders to be filled from the office to the shipping department. In a far end of the office stands a piece of furniture dating back to Colonial days and nearby a twentieth century maiden is working with that most modern of book keeping systems, the Elliott-Fisher. Van Reed time is still ticked by a grandfather's clock with



PAPER WAREHOUSE OF C. L. VAN REED, AT READING, PA., AND OLD HEIDELBERG MILL BUILT BY HENRY VAN REED. HENRY Z. VAN REED, EXTREME TOP; CHARLES VAN REED, AT LEFT; CHARLES L. VAN REED, CENTER; C. RAYMOND VAN REED, RIGHT

## Wood Plugs



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

**O. L. BARTLETT**  
Mound City, Ill.

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**For Calender Rolls, Gears and Machinery of Every Description**

**M**ADE from a highly refined petroleum base. Contains no animal fats, acid, alkali, water nor any ingredient injurious to metals.

Thoroughly lubricates all bearings and parts; forms a film, adheres to and follows the gears, or surfaces, cushioning and protecting from friction and undue wear on points of contact.

Resists heat, steam, water and rust.

Is adhesive and cohesive; does not leak, drip, waste nor throw out, used in the proper consistency. Lubricates perfectly under extreme conditions.

Furnished in standard and special consistencies to meet every requirement.

*Sample and literature upon request.*

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**HART TRADING CO., Inc.,** Tribune Building  
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**Exporters and Importers Paper and Pulp**

*Exclusive Sales Agencies*

### DOMESTIC

**Westfield River Paper Company, Russell, Mass.—grease proof, parchment and glassine papers.**

**Hartje Paper Manufacturing Co., Pittsburgh, Pa., (Mills, Steubenville, Ohio) News and Kraft Paper.**

### FOREIGN

A/S Papirfabriken Brager, Drammen, Norway—M. G. sulphite papers.

A/S Phoenix Papirfabrik, Drammen, Norway—Light weight grease proof parchment and glassine papers.

A/B Klippans Finpappersbruk, Klippan, Sweden—India Bible.

Stromsnäs Bruks A/B, Stromsnäs Bruk, Sweden—kraft, sealings and sulphite papers (light weight and heavy in all finishes).

A/S Lillestroms Cellulosefabrik, Kristiania, Norway—sulphite pulp, strong and easy bleaching.

A/S Fladeby Cellulosefabrik, Kristiania, Norway—sulphate pulp, strong and easy bleaching.

*Western Office*  
Conway Building,  
Chicago, Ill.

Connections with the most important mills making all grades of paper pulp for domestic and foreign consumption. Foreign specialties in paper and pulp.

*Canadian Representative—M. S. Kilby,*  
Reg'd, 248 St. James St.  
Montreal, Canada

wooden works, going steadily along after having done duty for 115 years. But a modern 8-day clock keeps tap on the seconds required for loading and unloading, an operation which, by the way, is conducted in the basement of the Van Reed store, which has accommodations under the same floor that shelters stock awaiting shipment for two auto trucks and a horse team which can be driven in from the street level.

Two great railroad systems, the Pennsylvania and the Philadelphia and Reading, are available, and the latter railroad passes within a few feet of the Van Reed warehouse, and now that Government operation has ceased, it is expected that a siding will be run directly into the warehouse, giving shipping facilities which hardly can be surpassed anywhere.

#### Great Variety of Stock

In the big store is a variety of stock adequately to supply the needs of a city of most diversified industrial activities and of all the country around about. It is the boast of Reading people that there is no city in the United States in the 150,000 population class which has as many, as large, or as diversified industries as this bustling Berks County metropolis, and to meet its requirements there is in the Van Reed stock everything from a Blaisdell pencil to news in carload lots.

News, by the way, is a grade in which the present head of the firm, Charles L. Van Reed, has an especial interest, because time was when he personally made it out of rags in the old Heidelberg, now the Acme Mill, just outside Reading where the Cacoosing and the Tulpehocken creeks are in confluence, at a point which was selected back in 1747, by the first of the Van Reeds to come to this country from Holland, as an ideal one for a paper mill. His forbears operating the mill worked in it for only four days a week. But those olden time days were from 12 to 16 hours long each. When they were not busy at the mill, they were either trundling along the road in a great canvas-covered Conestoga wagon, taking paper up to the State Capital, Harrisburg, some 54 miles away, or were trundling back with the aforesaid Conestoga loaded with rags gathered from all the country side or assembled at certain points along the road to be there collected and brought to the mill.

#### Business Founded by John Van Reed

Foundation for the Van Reed paper connection was laid by John Van Reed, one of two brothers who migrated from Holland. The two set out from Philadelphia, traveling along the Schuylkill River until they came to what is now the outskirts of Reading. One decided to settle on the west side to farm, while the other, John Van Reed, who learned paper making in Holland, determined to settle on the east side, in what is now Spring

Township, at a point where the waters of the Cacoosing and the Tulpehocken mingle, and there he set up a little mill. He lived until the early years of the 19th century.

The Heidelberg mill, however, was developed principally by Henry Van Reed, his son, who was the great-grandfather of the present head of the Van Reed firm. He was succeeded in business by his son Charles in 1826, and the latter, in turn, by his son Henry Z. Van Reed in 1850.

Charles L. Van Reed became head of the business March 8, 1879. He continued to operate the mill until 1896, when he moved into Reading and opened a wholesale paper warehouse at 12 South Fifth street. In 1905 his son, C. Raymond Van Reed, entered the business and ever since has been associated with his father. Just three years ago, because of continuous growth, the Van Reeds purchased a textile mill at Reed and Elm streets, and converted it into a paper warehouse. It occupies a plot, 60 by 160 feet, and its four floors have over 28,000 square feet of area. The building has light on all four sides; has walls two feet thick at the base and 18 inches on the upper stories, with great thick floors capable of bearing almost any weight, so arranged as to show off stock to the best advantage from daylight-lit aisles easy of access.

#### Convenient Store Arrangement

In the basement is the shipping department, to which orders are sent by pneumatic tube. There is stored here, too, the stock of bags and wrapping papers, but there is still room enough for a driveway into which automobiles are run directly from the streets to be loaded, even in the stormiest weather, without possible damage to stock.

On the first floor of the executive offices, and the fine paper stock and printers' supplies, arranged on shelves in the most approved modern way. On the floor above are kept ice cream and oyster pails, wax, paper and specialties. The top floor is not at present occupied by the firm.

The location of the Van Reed warehouse has made it a distributing point for up state towns. The firm is sole distributor for Berks County for the Union Bag and Paper Corporation. It carries an especially large stock of the well-advertised Hammermill Bond, and of the Ideal Coated Paper Company's gummed papers; the Society rag; Certificate bond, as well as a general stock of book, news, wrapping, parchment, kraft containers and other specialties which are distributed by the Van Reed house through Berks, Lehigh, Dauphin, Schuylkill and Montgomery counties.

The old Van Reed mill is now being operated by the Acme Paper Company on box board, container board and specialties.

## PAPER JOBBERS MEET IN CHICAGO

Forty-eight paper dealers met in the Congress Hotel, Chicago, last week and discussed conditions in the trade. They were members of the Western Paper Merchants' Association, the Northwestern Paper Dealers' Association, and the Central States Paper Trade Association. The majority of the jobbers were on their way to New York, to attend the annual meetings of the National Paper Trade Association, of which all of them are members.

In accordance with the annual custom, they got together in Chicago in an informal manner, and talked things over. Frederick Forchheimer, of Chatfield & Woods, Cincinnati, presided at the meeting. He was assisted by W. N. Gillett, of the Chicago Paper Company.

The jobbers expressed the hope that no further advances would be made in the price of paper at the present time. The meeting went on record as being of the belief that there will be no recession in the demand for paper so long as the federal excess

profits tax encourages large advertisers to spend an unusual amount of money for publicity purposes requiring the use of white paper.

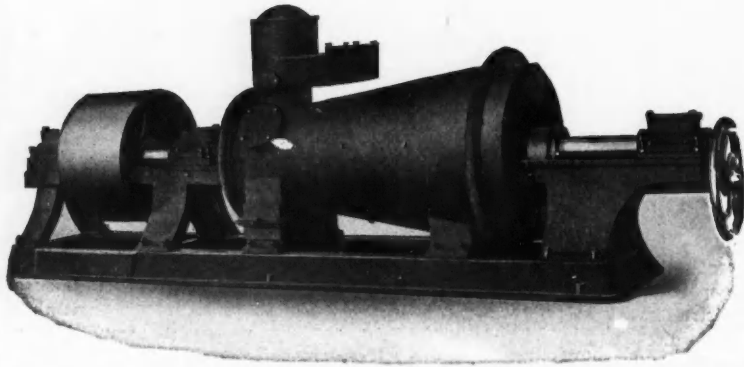
Some changes were made in the scientific plan of merchandising, as it is known.

Everybody sat down to luncheon together at 1.00 P. M., and shortly afterwards the meeting adjourned.

The visiting paper jobbers spent a good share of their remaining time in Chicago in visiting the mill representatives, and learning their prospects for getting orders filled.

On Sunday the Twentieth Century Limited on the Lake Shore contained so many paper men that it might well have been called a paper men's special. Ray Russell, local representative of Marathon Paper Mills, was active in getting up the crowd. While the paper men journeyed down to New York together, they planned to return by various routes, calling on mills, in many instances, while on their way.

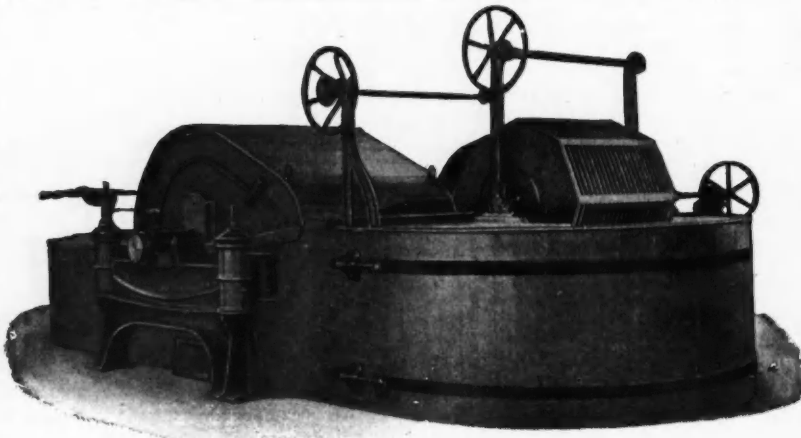
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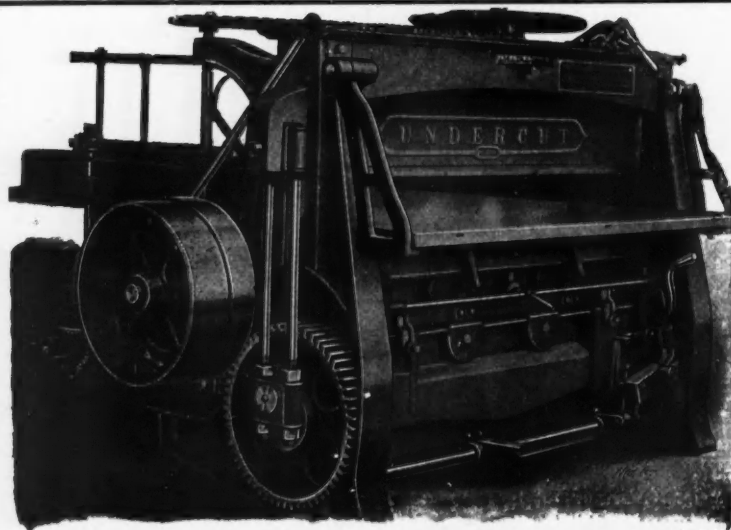
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Builders of Paper Mill Machinery  
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**Fourdrinier  
Machines**  
**Cylinder  
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**Pulp Machinery**

**Downingtown Mfg. Co.**  
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## The Undercut Trimmer

The Paper Mill Cutter, combining the highest degree of accuracy, speed and simplicity for the most exact trimming.

The clamping power of the Undercut is not equalled by any other cutter, and assures absolute accuracy in trimming. The safety in operating an Undercut is a very important fact to be considered, as well as simplicity of design and construction carried out in the best manner and workmanship possible.

The speed of the Undercut is such that more cuts can be utilized in the working of our machine than in the high-speed cutters, which not only consume power, but wear out rapidly.

Our Power Back Gauge Drive enables the operator to handle material quickly, easily, and more in quantity than can be secured in the use of other machines.

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Builders of High Grade Paper Mill  
Machinery and Paper Bag Machinery  
South Windham, Conn.



## REPORT OF VOCATIONAL EDUCATION COMMITTEE

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This, with the section on "Testing Materials for Pulp and Paper Making," completes the material for Vol. II which has been reported on recently. The absence of the author for sometime has delayed the final revision of the section on "Logging Operation" and at last report the section on "Sulphite Pulp" was going forward but rather slowly. The section on "Wood Preparation" was to have been in hand during the past month but has not yet been received.

The material for Vol. III is in good shape. A brief chapter on the "Collection and Grading of Rags" is in hand, the "Preparation of Rags and other Fibres" is about finished. The section on "Beating" has been partly examined. The section on "Engine Sizing" is being rewritten a second time and the section on "Loading" is going forward and progress is being made. The section on "Coloring" has been received and published in *Paper* and the *Pulp & Paper Magazine*. If there are any criticisms of this article the editor would appreciate receiving them as soon as possible, a suggestion which applies also to other material regarding

the textbooks which appears from time to time in our journals. The manuscript on the "Paper Machine" is being passed about for examination by men in various lines of paper manufacture so as to have this material cover the industry as completely as possible. The manuscript on the "Making of Handmade Papers" has also been received and passed on for additional examination. The sections just mentioned will make up Vol. III. Of the material to be included in Vol. IV which continues the manufacture of paper, the sections on "Finishing Operations," "Tub Sizing" and "Paper Coating" have been received and distributed for review. As mentioned in the last reports a part of the manuscript on "Pumps" has been received and a mill superintendent who is an authority on equipment calls it "very good." The author of the section on "Paper Testing" reports that his material will be complete within a few weeks.

There has been received manuscript for a proposed section on "Experimental Equipment" which many mills already have and which many more in the near future will doubtless install. This material will be published in the trade journals and the opinion of the industry regarding its value as a part of the textbook would be of great service to the committee. An outline of this section has already appeared in print.

In talking with many mill men there is a very pronounced desire to have included in the textbooks some explanation of the necessity of means for keeping proper account of costs of production. It seems decidedly worth while to include a brief chapter on this subject and the Cost Association of the paper industry is co-operating with the committee in this matter.

### Course to Begin in September

The editor and several of the gentlemen who are preparing the material for the course have visited a number of typical mill operations in order to get the benefit of practical suggestions and experience with respect to various types of machines and methods, and every opportunity is being taken to secure criticisms upon all sections of the textbooks from those best qualified to judge the material prepared.

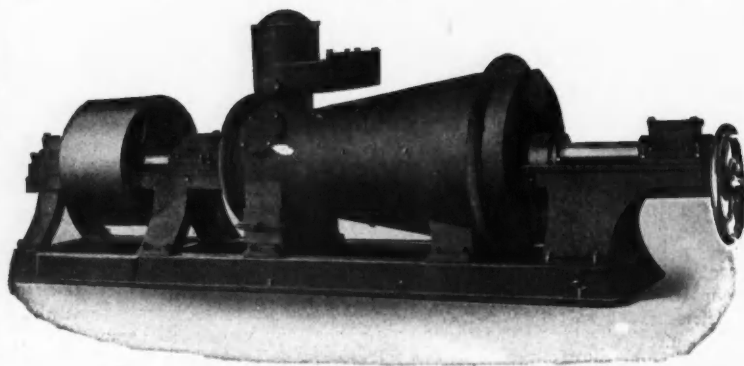
The first few pages of Vol. I have been set up and proved on three grades of paper for examination by the committee and approval by them of the character of the work and the style. These pages show all the type that will be used in the volume. When approved by the committee the publishers are ready to go ahead with the setting of the book. The committee will thus have an opportunity of examining the appearance of the type when printed on three different papers and it is hoped that a selection of the color and quality can be decided on shortly.

The committee is now proceeding with the preliminary arrangements for the offering of instruction beginning next September through the co-operation of Vocational Education Boards, University Extension Departments and other public agencies. It is expected that by next fall opportunity will be afforded for all who so desire to begin, through some of these means, the study of the first volume of the textbooks.

### TO APPOINT PULPWOOD COMMISSION

The House Committee on Foreign Affairs will hold a hearing on Monday, April 26 on the Underwood Resolution which provides for the appointment of a commission to take up the pulpwood situation with the Canadian Provincial Governments. It will be remembered that this resolution which was introduced by Senator Underwood of Alabama passed the upper house some time ago.

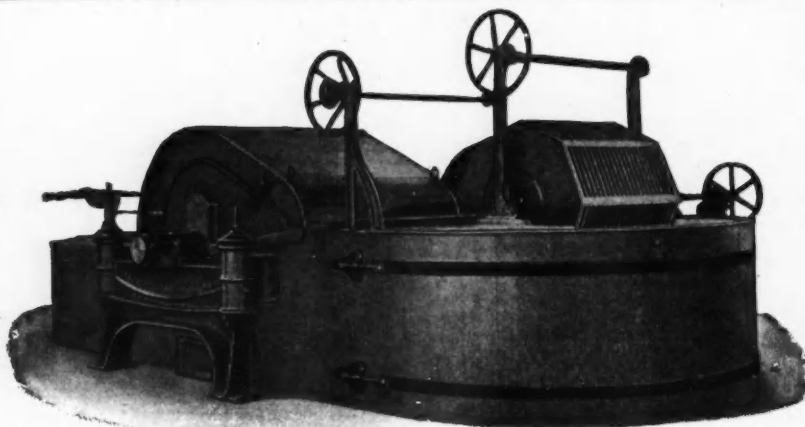
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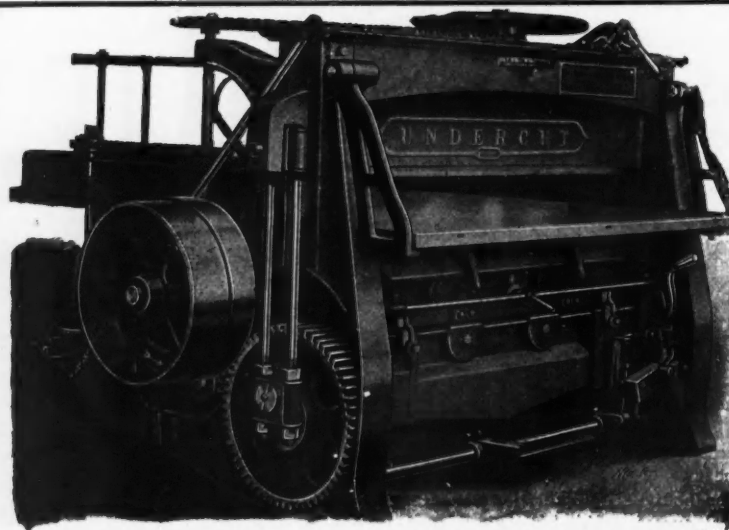
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This, with the section on "Testing Materials for Pulp and Paper Making," completes the material for Vol. II which has been reported on recently. The absence of the author for sometime has delayed the final revision of the section on "Logging Operation" and at last report the section on "Sulphite Pulp" was going forward but rather slowly. The section on "Wood Preparation" was to have been in hand during the past month but has not yet been received.

The material for Vol. III is in good shape. A brief chapter on the "Collection and Grading of Rags" is in hand, the "Preparation of Rags and other Fibres" is about finished. The section on "Beating" has been partly examined. The section on "Engine Sizing" is being rewritten a second time and the section on "Loading" is going forward and progress is being made. The section on "Coloring" has been received and published in *Paper* and the *Pulp & Paper Magazine*. If there are any criticisms of this article the editor would appreciate receiving them as soon as possible, a suggestion which applies also to other material regarding

the textbooks which appears from time to time in our journals. The manuscript on the "Paper Machine" is being passed about for examination by men in various lines of paper manufacture so as to have this material cover the industry as completely as possible. The manuscript on the "Making of Handmade Papers" has also been received and passed on for additional examination. The sections just mentioned will make up Vol. III. Of the material to be included in Vol. IV which continues the manufacture of paper, the sections on "Finishing Operations," "Tub Sizing" and "Paper Coating" have been received and distributed for review. As mentioned in the last reports a part of the manuscript on "Pumps" has been received and a mill superintendent who is an authority on equipment calls it "very good." The author of the section on "Paper Testing" reports that his material will be complete within a few weeks.

There has been received manuscript for a proposed section on "Experimental Equipment" which many mills already have and which many more in the near future will doubtless install. This material will be published in the trade journals and the opinion of the industry regarding its value as a part of the textbook would be of great service to the committee. An outline of this section has already appeared in print.

In talking with many mill men there is a very pronounced desire to have included in the textbooks some explanation of the necessity of means for keeping proper account of costs of production. It seems decidedly worth while to include a brief chapter on this subject and the Cost Association of the paper industry is co-operating with the committee in this matter.

### Course to Begin in September

The editor and several of the gentlemen who are preparing the material for the course have visited a number of typical mill operations in order to get the benefit of practical suggestions and experience with respect to various types of machines and methods, and every opportunity is being taken to secure criticisms upon all sections of the textbooks from those best qualified to judge the material prepared.

The first few pages of Vol. I have been set up and proved on three grades of paper for examination by the committee and approval by them of the character of the work and the style. These pages show all the type that will be used in the volume. When approved by the committee the publishers are ready to go ahead with the setting of the book. The committee will thus have an opportunity of examining the appearance of the type when printed on three different papers and it is hoped that a selection of the color and quality can be decided on shortly.

The committee is now proceeding with the preliminary arrangements for the offering of instruction beginning next September through the co-operation of Vocational Education Boards, University Extension Departments and other public agencies. It is expected that by next fall opportunity will be afforded for all who so desire to begin, through some of these means, the study of the first volume of the textbooks.

### TO APPOINT PULPWOOD COMMISSION

The House Committee on Foreign Affairs will hold a hearing on Monday, April 26 on the Underwood Resolution which provides for the appointment of a commission to take up the pulpwood situation with the Canadian Provincial Governments. It will be remembered that this resolution which was introduced by Senator Underwood of Alabama passed the upper house some time ago.



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## JOINT CONGRESSIONAL COMMITTEE REPORTS ON PAPER

The Joint Congressional Committee on Printing on Monday of this week submitted to Congress a very thorough and comprehensive report on government periodicals and printing. The committee, in its report, has the following to say on the subject of paper:

Owing to extraordinary market and manufacturing conditions brought about by the war, it has been almost impossible to obtain paper for the Government Printing Office by contract at anything like a reasonable price. The committee therefore directed the Public Printer to buy nearly all the vast quantities required for war printing in the open market at the lowest competitive prices quoted at the time for suitable stock. This procedure has greatly increased the detail work of the committee, as each proposed purchase has to be examined and passed upon. Such transactions number several thousand in the course of a year.

### Profitable for the Government

The judgment of the committee in refusing to enter into annual contracts for paper during the critical war period and in directing the Public Printer to buy his stock in the open market at current prices proved to be most profitable for the Government. When the committee opened the bids for one year during the war, it decided that the prices quoted for annual contracts were entirely too high and rejected all of the proposals at that time. As a result, paper for the year was bought in the open market from time to time, thereby effecting an actual saving to the Government of \$846,278.14, according to a comparison by the Public Printer with what the same paper would have cost had the bids for annual contracts been accepted by the committee.

By a careful supervision over the open market purchases, the committee has also been able to effect additional savings in the expenditures for paper. For example, in November, 1919, the committee disapproved the bids then submitted for some 4,000,000 pounds of print paper and directed the Public Printer to solicit new proposals. Much lower prices were then obtained and the paper was bought at a net saving of \$52,000 on this purchase alone.

### Printing Business Vitally Affected

As is well known, the scarcity of paper and its abnormal price have vitally affected the printing business during the war. Many times it has been almost impossible to get paper at any price. This situation, coupled with the enormous requirements for paper by the war activities of the Government and its extravagant use by the various publicity and propaganda bureaus, has made the work of the committee most difficult and trying, but it is believed the record proves that its efforts to effect economies have been highly successful even under such adverse conditions.

Further evidence of the economies that have resulted from the committee's supervision over the public printing and binding is contained in a comparative statement prepared by the Public Printer covering production in the Government Printing Office for the eight months of the fiscal years 1919 and 1920, bringing the comparison up to March 1, 1920.

### Decrease of Almost Million Dollars

This statement shows that the computed product of the Government Printing Office for the eight months of the present fiscal year decreased almost a million dollars. During the first eight months of the fiscal year 1919 the computed product amounted to \$8,060,169.95, while for the first eight months of the fiscal year 1920 the computed product amounted to \$7,065,373.08, or a decrease of \$994,796.87. The Public Printer states that this was due largely

to the material decrease in "edition" work, which is shown by the following figures comparing the first eight months of the fiscal year 1919 with the same period of the fiscal year 1920:

In 1919 the total number of sheets folded in pamphlet binding section was 180,373,682 as compared with 152,372,964 for 1920, or a decrease of 28,000,718. The number of signatures sewed, which indicates the edition work of the bindery, for the eight months of 1919 was 91,388,080 as compared with 67,993,510 for 1920, or a decrease of 23,394,570. The number of cases made, which indicates the number of books bound for the eight months of 1919 was 2,992,188 as compared with 1,612,870 for 1920, or a decrease of 1,379,318.

### Marked Decrease in Printing

There was a marked decrease also in the printing for the fiscal year 1919 from that done in the fiscal year 1918. In the fiscal year 1918 the Government Printing Office charged for a total of 8,509,053,764 printed pages, as compared with 6,932,259,276 for the fiscal year 1919, or a decrease for the year of 1,576,794,488. For the fiscal year 1918 the number of bound publications was 4,395,461, as compared with 3,465,229 in the fiscal year 1919, or a decrease in the bound publications for the year of 930,232.

This material decrease in the product of the Government Printing Office has had a marked effect also on the quantity of print paper used by that establishment. For the first eight months of the fiscal year 1920, ending March 1, 1920, the Public Printer reports charges for paper (including envelopes) entering into the product of the Government Printing Office at \$2,206,734.38, as compared with charges of \$3,114,919.10 for the first eight months of 1919. This shows a decrease of \$908,184.72 in the paper used for Government printing during the present fiscal year, although the price of paper has greatly increased during the same period.

For the eight months of 1919 paper represented 39 per cent of the total printing charges, while for the eight months of 1920 it represents only 33 per cent, or a decrease of six per cent. For the entire fiscal year 1919 the charges for paper going into the product of the Government Printing Office amounted to \$4,679,177.16, as compared with \$4,753,924.58 for the fiscal year 1918, which, due to war requirements, represented the largest quantity of paper ever used by the Government Printing Office in any year of its history. The decrease in 1919 from that of 1918 was \$74,747.42. The further decrease of \$900,000 for the first eight months of the present fiscal year indicates the progress that is being made by the Government in its economies in the use of paper.

### STRONG PAPER CO. BUYS BUILDING

The Strong Paper Company has bought the new brick factory building and land at 61 and 63 Hubbard street, Middletown, Conn. The deal involved about \$30,000. The building is now used by the Ambassador Stationery Company, which was recently taken over by the Strong Paper Company.

The land extends from a point on the west side of Hubbard street and runs south along the west side, taking in the new brick factory. The building, which is four stories high, was built some years ago by the Middletown Silver Company. When the Ambassador Stationery Company was organized it took a lease on the building, occupying the first three floors.

The Strong Paper Company was recently incorporated at the Secretary of State's office in Hartford. It is doing a business in stationery and manufacturers' stationery of all kinds and cardboard and paper material.

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### CRITICAL SITUATION IN PAPER

The following letter was sent by E. T. Meredith, secretary of the Department of Agriculture to President George W. Sisson, Jr., and read Thursday at the meeting of the American Paper and Pulp Association:

"The most critical pulp and paper situation in the history of the United States," was the way in which Secretary E. T. Meredith of the Department of Agriculture outlined the federal attitude toward the paper industry, in a letter to the American Paper and Pulp Association, read at the Thursday morning session of the convention by Carlile P. Winslow, director of the Federal Forest Products Laboratory at Madison, Wis., as his representative. He said in part:

"The news print situation is most serious. Our demand for news print increased uniformly from 569,000 tons in 1899 to 1,760,000 tons in 1919, approximately 200 per cent. Present demands, abnormal though they may seem, because of greatly increased advertising, are merely an incident in the rapidly growing demand for news print paper. The most disturbing phase of the matter is that ten years ago when the development of our industry stopped, the United States was practically self-supporting in news print production. Today we are dependent upon other countries for the equivalent of two-thirds of the pulp wood, pulp or news print which goes into American newspapers. Our news print industry is concentrated largely in New England, New York and the lake states. I am told that 60 per cent of the pulp and paper concerns in New York have no stumpage of their own, and that less than five have enough timberland for future continuous operation. The predicted life of the industry in the northeast states is alarmingly short. We have on the other hand, large quantities of suitable news print woods in the Pacific Northwest and in Alaska.

"A far greater degree of independence in news print manufacture can be accomplished by two measures, the development of the industry in the Pacific Northwest and in Alaska, and the large scale

growing of timber in New England and the Lake states. A fundamental question is the permanent supply of raw materials through the practice of forestry in both the east and west.

"The capacity of the Department of Agriculture to serve your industry, and, through it, the interests of the public rests fundamentally upon two things: first its ability to hold well-trained and experienced men under the compensation afforded by Congress; second its financial resources for undertaking or extending work of obvious importance. The present situation of the Federal departments in both of these respects is extremely critical."

### INCREASED PRODUCTION PROGRAM

The Preliminary program of the "Increased Production" Convention which is the Eighth Annual Meeting of the Chamber of Commerce of the U. S. A. to be held at Atlantic City, April 26 through April 29, has just been announced.

The convention days are divided into general sessions and group meetings. On April 26 the National Councillors will hold their conference; the first general session of the convention proper will be held on April 27 at which reports will be made. On the afternoon of the same day group meetings will be held, sub-divided into railroads, shipping, cost-accounting, foreign commerce, finance, domestic distribution, and the business press.

On the evening of April 27 a general session will be held when government in relation to production will be discussed, federal taxation and international finance in relation to world production. On April 28 a general session will be held in the morning followed by group meetings divided into highways, industrial production, civic development, and insurance, also continuing the discussion on shipping and cost accounting. On April 29 a general session will be held to be closed by the adoption of the resolutions of the convention. Preparations are being made which insure this convention being one of the largest which has ever been held by the National Chamber.

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## WISCONSIN PAPER MILLS MAKING IMPROVEMENTS,

Installation of a new paper machine in the plant of the Northern Paper Mills at Green Bay, Wis., completed last week, increases the company's output by nearly fifty per cent and makes it one of the largest toilet and toweling paper mills in the country. The mill now has a capacity of 80 tons a day. Six machines are in operation.

Extensive enlargements of the plant were necessary to house the new equipment. Welfare of the employees was considered when the additions were built and provision was made for a well arranged and modern clubroom. The addition was completed some time ago and installation of the machine had been in progress for several weeks.

The Northern Paper Mills has experienced a rather phenomenal growth. Organized in 1901, the company worried through the first year with a total business of \$25,000. Only one machine was in operation. Now the plant contains six machines and expects to do a business in excess of \$2,500,000 in 1920.

The company operates an 80-ton sulphite mill which not only supplies sufficient chemical pulp for the paper mill but provides a small quantity for other concerns. Most of the wood is purchased on the open market but the company has extensive timber holdings from which it can draw in case satisfactory purchases cannot be made. The ground wood pulp is purchased from outside plants, much of it coming from Canada.

The Northern Paper Mills has embarked on an extensive advertising campaign, buying space in several magazines of nationwide circulation.

### Fort Howard Paper Co. Prosperous

Green Bay's claim to being one of the largest tissue paper manufacturing centers in the world was given more weight when the newly organized Fort Howard Paper company began work on an addition to its new plant. The new structure will be 100 feet square, three stories high and of brick and concrete construction. It will be used for conversion of tissue paper manufactured in the machine room to napkins, towels and toilet papers. The upper floor will be used for core production and storage. The second floor will contain the rewinder rooms, paper folders and other special machinery which the company has purchased. A printing plant and warehouse will occupy the first floor.

A new paper machine has been ordered for delivery in June and it is expected to have it in operation by September 1. The present working force of 90 people will be doubled.

The plant is now running at capacity. A market has been found not only for the present production but for the increased output which the new building and machinery will make possible.

The Fort Howard Paper Company was incorporated in February, 1919, and started operations in its new mill January 1, 1920. The plant was hardly started when it was seen that more room would be needed at once and plans were made for enlarging the plant. The company's product consists of crepe toilet paper, paper napkins and towels. The company is financed almost entirely by Green Bay capital. At the annual meeting in February the stockholders issued \$100,000 worth of seven per cent preferred stock, the greater portion of which was immediately taken up by owners of common stock. While the company is the youngest in the Green Bay paper mill family, it has made much progress and faces an exceptionally bright future, according to paper mill men.

### Nekoosa-Edwards Co. Increases Wages

Salary increases were granted to between 800 and 900 men in

the Nekoosa-Edwards Paper Company mills at Nekoosa, Wis., and Port Edwards, Wis., when those two mills returned to the three tour system. The new scale provides for wages equal to those paid to similar classes of labor in Wisconsin paper mills. Outside men who have been paid a minimum of 44 cents an hour will receive 50 cents hereafter. Men employed on the tours will receive a minimum of 56 cents an hour under the new schedule.

The eight hour day plan has not been worked out in all departments as yet but will be put into operation as rapidly as possible. According to Franz Rosebush, employment manager, the first survey indicated that about 100 extra men would be required when the tour system was re-established but this number was reduced to a large extent because a large number of workers have since been employed. Transfer of several men from outside work to the tours has still further decreased the number of men needed.

### Will Not Adopt Daylight Saving

An effort was made at a meeting of superintendents and foremen of the two mills to adopt a daylight saving plan but it was agreed that considerable confusion would be caused unless other industries took the same action. It was decided to remain on the old schedule unless the Consolidated Water Power and Paper Company at Grand Rapids, near by, adopted the new plan.

Efforts to secure general approval of daylight saving in Stevens Point also failed. Several of the stores and a few of the industries are starting and quitting an hour earlier but the paper mills are operating on the old schedule. When the question was submitted to workers in the Whiting-Plover plant only two votes favored the change. The Wisconsin River Paper Company and the Stevens Point division of the Consolidated Company also opposed the new schedule.

### John Strange Paper Co. Sued

The John Strange Paper Company of Menasha, Wis., is defendant in a suit started by the Kieckhefer Box Company of Milwaukee, now on trial in circuit court at Oshkosh. The Milwaukee company is suing for \$275,000 damages arising from the alleged failure of the defendant company to carry out a contract whereby the latter was to install certain machinery, erect buildings and otherwise arrange to supply the former with certain kinds and qualities of paper board. The defendant company, in its answer, avers it is completely justified for the action it has taken in the matter.

Because of the many technicalities and the number of witnesses involved, it is believed the case will continue for several weeks. In order to familiarize himself with conditions at the defendant's plant, the judge made a personal inspection of the property shortly after the trial opened. Several of the most prominent attorneys in Wisconsin are participating in the case.

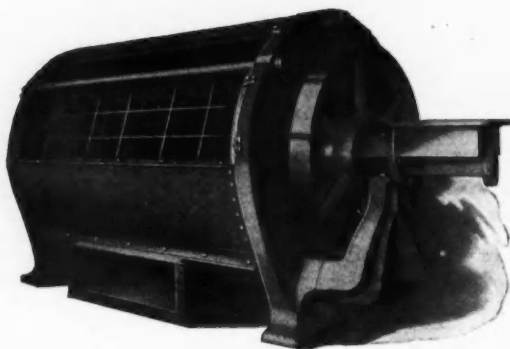
### D. R. Mead Resigns from Stevens Point Division

D. R. Mead, Grand Rapids, manager of the Stevens Point division mill of the Consolidated Water Power and Paper Company for the last two years, has resigned to become manager of the new Peshtigo Pulp and Paper Company's plant at Peshtigo, Wis. He has sold his residence in Grand Rapids and will make his home in Marinette hereafter.

Mr. Mead has announced that he has acquired stock in the new company. He has had considerable experience as a paper mill manager and had charge of constructing the Stevens Point mill. L. A. DeGuerre, engineer for the Consolidated company, designed the Peshtigo Company's plant and is the engineer in charge of construction.

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## Recent Incorporations

PROBST & SMITH, Manhattan, New York, paper products. Capital, \$20,000. Incorporators: C. A. Probst, W. Smith, H. Silver, 1226 46th street, Brooklyn.

J. MEYERS STATIONERY AND PRINTING COMPANY, Manhattan, New York. Capital, \$100,000. Incorporators: J. Meyers, L. H. Levy, A. J. Hirsh, 21 Convent avenue.

NATIONAL CITY PAPER CORPORATION, Manhattan, New York, 500 shares preferred stock, \$100 each; 200 shares common, no par value; active capital, \$51,000. Incorporators: H. Z. Schniewind, J. Danckwart, H. I. Fowler, 261 Broadway.

C. R. HOYME CORPORATION, Manhattan, New York, make articles of paper, wood and metals. Capital \$300,000. C. R. Hoyme, W. J. Elias, S. L. Schmucker, 150 West 57th street.

PROGRESSIVE CORRUGATED PAPER MACHINERY COMPANY, Brooklyn, New York. Capital, \$10,000. Incorporators: L. H. and W. F. Schroeder, J. Linskila, 37 Bartlett street, Brooklyn.

CAPITOL FOLDING PAPER BOX COMPANY, Manhattan, New York. Capital, \$20,000. Incorporators: H. and B. Tabachnikoff, W. Kanovitz, 818 Hart street, Brooklyn.

### NO NEWS PRINT PAPER IN SOUTH RUSSIA

Owing to the almost complete exhaustion of paper stocks in South Russia, the newspapers of that country have been compelled to shut up shop. Only a few are still running, and these are printed on heavy brown wrapping paper that is doled out to them from the government stock, and contain only notices and orders from the military authorities to the civil population. A few still maintain their blackboard bulletins, but the sources of news are so inaccurate, and the news itself so late in arriving, that they are worse than useless.

As a result of this situation, with no definite information ob-

tainable, the people live on rumors. Into one town, where there is a serious housing shortage, will come a rumor that a nearby city has plenty of empty houses. At once there is a whole exodus. But the Promised Land proves to have denied its promise, for when the people get there they find that the rumor was false. Again it may be news of cheap bread, or large quantities of shoes in another district. The entire population is continually on the move, the prey of every unconfirmed bit of gossip. And dozens of cities have been captured by the simple expedient of sending in a few secret agents to spread the rumor that a large hostile army is advancing. Everyone flees in panic, leaving the gates open to any band of marauders that may happen to take a fancy to enter.

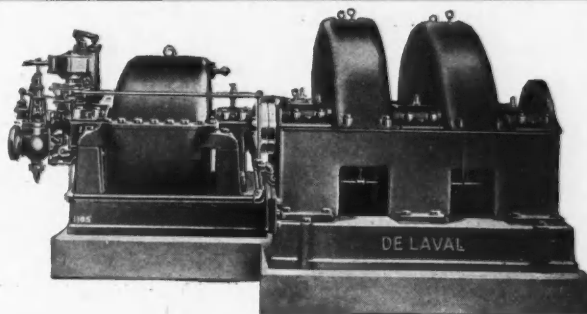
The American Red Cross mission to South Russia has been obliged to keep its own observer at the front so as to have accurate knowledge of what is really going on. Many districts which were to receive medical aid and supplies of food and clothing are now in the hands of the Bolsheviks. In a country where news travels only by word of mouth and varies according to the whim of the teller, the Red Cross found it absolutely necessary to have its own news gatherer.

### UNION BAG & PAPER CORP. TO INCREASE STOCK

The directors of Union Bag and Paper Corporation, at a meeting held Tuesday, resolved that it was advisable to capitalize \$5,000,000 of their surplus and ordered a stockholders' meeting called for the purpose of increasing the authorized capital stock from \$10,000,000 to \$20,000,000.

A stock dividend of 50 per cent. was declared from this increased stock when authorized, and the balance will be held in the treasury for lawful corporate purposes. In the opinion of the directors there is nothing in the present situation which would lead them to believe that the company will not be able to continue their present 8 per cent. per annum rate of dividend.

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The De Laval Double-Helical Gear makes a highly efficient turbine drive possible and is not a new or experimental development as many De Laval geared turbines have been in use for more than 25 years.

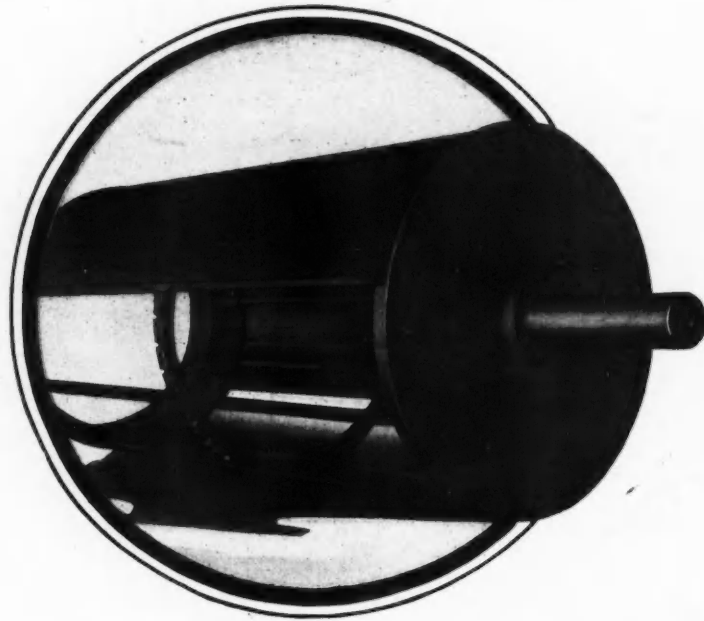
They are produced in a shop devoted exclusively to precision manufacture on a limit-gage, interchangeable basis. Conservative tooth pressures and velocities are adhered to in their design, which, with the best materials and workmanship, results in smooth, quiet running and long life.

Regardless of what you require power for, whether it be driving ships' propellers, steel mills, paper mills, centrifugal pumps and blowers, electrical machinery, or mill shafting, the De Laval turbine can be adapted to show the most economical results.

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Rather is it due to a healthy appreciation of what they are helping to accomplish.

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They fill a long-felt need for a large-capacity, long-service Rotary Screen. Write us for Catalog IA which details the many advantages of Bird Screens.

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88-107

# BIRD INWARD ROTARY FLOW SCREEN

## A MODEL PAPER MILL IN MEXICO

On the occasion recently of the visit of the American delegates to the San Rafael mill of the Compañia de las Fabricas de Papel de San Rafael y Anexas, S. A., Mexico, a handsome booklet describing the property of the concern was published from which the following description of the San Rafael mill is taken:

The San Rafael Mill is the largest of the plants which are owned by the Compañia de Fabricas de San Rafael y Anexas, S. A. It is located at the foothill of the beautiful snow crown mountain Ixtlacihuatl, in the Chalco District, State of Mexico.

The factory is equipped with seven machines: No. 1, an American machine used for news paper manufacture, with a daily capacity of 40,000 kilos. This machine is able to supply the whole country with this kind of paper as it produces more paper than the Republic can consume.

The first department of the paper factory is the "Beating Department" with 24 beaters.

From the balcony of this department is seen the great room containing the seven paper machines.

Next are the "Supercalenders," after which one may see the large room in which is housed the "Cutting and Reeling Department." Continuing one finds the "Sorting and Finishing Room." Under these are the magnificent store rooms for the paper with the adjoining "Packing and Shipping Department."

In front of the factory there is a road used especially for the shipment of paper with a huge dock on which may be placed at one time enough paper to fill ten cars. The front of the building is made up of doors and windows which may be opened simultaneously to discharge large bulks of paper.



PLANT OF COMPAÑIA FABRICAS DE PAPEL DE SAN RAFAEL Y ANEXAS, S. A.

The company has, besides, other American machines with a capacity for 24,000 kilos daily, also for news paper.

On the five remaining machines paper of all kinds is made, including wrapping, manilas, cardboard, poster and colored papers.

The production capacity is now of 100,000 kilos daily; yet the factory is ready to double this amount with no other expenses than those of machinery.

The San Rafael Company has also a very up-to-date factory: "El Progreso Industrial," for the manufacture of fine paper, writing papers, bond papers, coated papers, litho enamel, book papers and covers.

The San Rafael factory produces also mechanical ground wood pulp made in 11 grinders and sulphite pulp, in five digesters. It has also a complete plant with three digesters and five beaters to produce ordinary pulp. These plants are under course of reconstruction and at the end of the present year they will be able to supply more than 100,000 kilos of paper daily, making unnecessary the introduction of foreign pulp.

The factory also has an elegant mechanical department with an iron foundry, brass foundry and forges which are used to repair the machinery. A supply shop is also maintained where missing machinery parts may be obtained.

The factory has two groups of steam boilers, eight in each group. In the old group all factory wastes are burned, the new group burning petroleum to supply which the factory maintains two large tanks of 10,000 barrels capacity each. There is also a special railway switch where tank cars may discharge fuel oil into the depositories.

One of the notable details of the San Rafael factory is its method of obtaining power supply. Although the company receives power from two states—Veracruz and Puebla—over a special line extending more than sixty miles, it has besides its own power plants, five in number, with a water supply of 3,280 cubic feet. The water from these falls comes from the melting of the snow on the mountain Ixtlacihuatl and is very pure. The first falls has 1,300 feet, the second 1,000, the third 160 feet, the fourth

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490 feet (the factory is located at this point) and the fifth 330 feet, terminating below the station of Zavaleta, near the San Rafael and Atlixco railroad where the company has another factory, the "Mechanical Ground Wood Pulp."

From such a height of 3,280 feet each litre of water accordingly can produce work equal to ten horsepower in the five waterfalls.

#### Has Picturesque Location

The factory has a most picturesque location, surrounded by mountains and dominating a view of a valley from which may be seen the beautiful Valley of Mexico and the extinguished volcanoes which are below the aforementioned factory.

The factory is surrounded by a beautiful cedar forest designed especially for the workmen, each of whom is furnished living quarters gratis. There is also a beautiful residence for the fore-

man with a hotel, restaurant and quarters for the bachelor employees.

The town with all its expenses and incomes, to which the company makes ample contribution, is administered by a Council of Workers and Employees which has complete control and is elected annually by the votes of the workmen, women being granted the suffrage.

It is a model of organization which is an honor to San Rafael.

The factory is situated 60 miles from Mexico City and has magnificent grounds of more than 25,000 acres at the foot of the volcano Popocatepetl.

The San Rafael & Atlixco railroad, one of whose first stockholders was the Company of San Rafael, joins these magnificent mountains of Popocatepetl with the factory and with the City of Mexico. The factory is situated more than 8,000 feet above the level of the sea.

## BOSTON DOING BUSINESS UNDER DIFFICULTIES

Illustration of the difficulties under which the paper trade of Boston is doing business under the prevailing law of supply and demand is furnished by the fact that during the past week several of the larger wholesalers have employed fleets of auto trucks to do the long and short hauling in which the railroads have failed them. One firm, the Stone & Andrew Company, has drafted no less than ten trucks to relieve the curtailed traffic situation between this city and New York, insofar as it affects its business, and other firms are employing the same means to a greater or lesser extent to supply the needs of the small concerns and the country and weekly publishers throughout New England who are dependent upon them in the issuance of their periodicals.

"The worst of the situation, so far as these 'little fellows' are concerned," said Max Frank of the John Carter & Co. to a PAPER TRADE JOURNAL representative, "appears to be that unless there is a speedy and material improvement not only in the matter of production but in the facilities for moving the same, they will have to suspend publication. The under production of news and magazine papers has been a menace to the publishing business ever since before the war in spite of the fact that it is even now far above the normal production of five years ago. The increased demand since the war is due not only to the great number of publication enterprises which have been launched since that time but to the vastly amplified activities along all lines of commercial endeavor that has resulted in thousands of tons of additional stock being used for advertising purposes.

"I doubt if the proposed legislation cutting down the percentage of stock used by the big dailies in order that the small publisher may not be shut off altogether is ever put in force and if it is do not believe it will have the desired effect. The question has come to be one of a survival of the fittest.

"Of course the labor and traffic situation that has been created this winter, and still exists, has added immeasurably to the embarrassment of the jobber. Those who have had stock enough on hand to cover delayed shipments and thereby been able to take care of the small publishers depending upon them are about 'all in' so far as surplus stock is concerned. The result of a further curtailment of facilities for moving even the stock that is manufactured would seem to spell inevitable disaster in the directions that I have mentioned."

W. B. Stevenson, of the A. Storrs & Bement Company, attributes much of the responsibility for the present paper troubles of the United States to a short sighted policy during the war when the markets of the world, turning to this country and Canada for a tonnage previously secured from European sources, were allowed to bleed domestic sources of supply to the whiteness of the paper they demanded—and secured.

Then, in Mr. Stevenson's opinion, would have been the time for conservation. During the war, with many of the print mills de-

voted entirely to Government production, the others were soon badly crippled through the unusual demands upon their capacities and today are generally from five to ten months behind in their tonnage orders. The only way they will ever catch up will be through the renewal of equipment, and under present conditions it will take five years to accomplish this renewal. To what plane the paper trade will be reduced meantime Mr. Stevenson declines to prophecy.

In spite, however, of the pessimistic point of view of many of the leaders in the Boston jobbing trade it is agreed that never before have there been so many announcements of enlargements of paper making plants as are now being made almost daily.

#### GIVE UP CANADIAN NEWS PRINT CONTROL

Control over news print is to be relinquished, the Board of Commerce has announced, at Ottawa, Ont.

The announcement follows the decision of the Supreme Court in the Price Brothers' case that news print paper was not a necessary of life within the meaning of that expression as used in the Combines and Fair Prices act and that the powers exercised by the Board of Commerce as news print controller were without jurisdiction and inoperative in law.

The board points out that the effect of the Supreme Court's decision is to render inoperative the orders-in-council constituting the Board of Commerce controller of news print paper in Canada and for this reason the board announces its intention of abandoning the control of news print, unless the board is subsequently invested, if that be legally possible, with competently granted power.

The board's announcement adds that the Supreme Court's decision does not involve the general powers of the Board of Commerce except in so far as it, to some extent, limits the interpretation which the board might place on the expression "necessary of life." The general powers, it is added, will be pronounced upon by a subsequent decision of the court.

This decision will follow a rehearing in the Supreme Court on May 4 next of certain points in the recent argument heard in the court to test the powers of the Board of Commerce as a price fixing tribunal.

#### FORM WASTE WOOD COMPANY

The Wallace-Bird Pine Products, Inc., has been organized under New York laws. It has acquired patents and processes for utilization of waste wood in the manufacture of chemical fibre, turpentine, pine, oil and rosin, and is based on experimental work in laboratory and mill, carried on for the last fifteen years by Joseph H. Wallace & Co., industrial engineers of New York, and other chemists and engineers in the pulp and paper industry.

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## INDUSTRIAL UNREST—SOME REMEDIES

Address by Hon. Joseph T. Robinson, U. S. Senator from Arkansas, Before the National Association of Waste Material Dealers

The American people stand hesitating and confused in contemplation of the new and complexing problems of reconstruction. Throughout the great war they were united in thought and in purpose. The United States, organized, equipped and transported to the front in record-breaking time an army which turned the tide of conflict and assured victory for the Allies. The harmony of spirit which made this possible has not been displayed since hostilities ceased. Unrest in industry and dissension in politics have well nigh deprived the United States of the fruits of victory. While the conflict continued, our wisest statesmen seemed unconscious of the processes of change, and revolutions and counter revolutions in progress. The transportation systems passed from private operation to government control; the industrial institutions were, in a measure, socialized, and our system of federal taxation was completely revolutionized. All post-war periods in our country's history have been marked by social and industrial disturbances. It was not to be expected that the transformation from war to peace could be accomplished without difficulty. It must have been foreseen that the return of peace would be accompanied by the cessation of many industries highly profitable during a state of war. It did not require prescience to anticipate the labor problem certain to arise because of the return of four million soldiers to peaceful pursuits. Many present industrial troubles are the natural consequences of conditions which are recognized as temporary. They will be solved or gradually will disappear as those conditions pass and the country returns to a normal state.

It is undeniable that discontent, deep-seated and malignant, finding expression in open threats of revolution, exists, particularly among some organizations of wage earners.

We are told that if the Government establishes a tribunal, however, liberal and fair, to settle between railroads and their employes, that a universal railroad strike will be called in indignant protest against denial by law of the rights to strike. Nationwide strikes are threatened, not only for the enforcement of wage demands and improved working conditions, but also for the purpose of democratizing industry. Labor organizations regard as sacred the right to strike, and insist that the Government has no right of interference even to prevent suffering, misery and death.

If one could suggest a safe and certain remedy for the widespread industrial unrest prevailing, he would perform a patriotic service of incalculable value. Considering the varied causes which now combine to stimulate discontent, it is not surprising that the world is threatened with industrial revolutions. Our labor problems, important as they are, do not compare in difficulty with those which menace the British Empire. The apparent insolence and the manifest ill temper of the effort to Sovietize America have reacted strongly. Public sentiment has little patience with revolutionary labor organizations or with their unreasonable demands. Public sentiment in the United States, as I gather it from every available source, uncompromisingly favors preserving both personal liberty and private property. Labor organizations must recognize government authority as supreme. The American people will not tolerate a Soviet government. They want no autocracy dominated by class prejudice or selfish interest.

Analysis of the causes of the present unrest warrants the hope that prudent conduct on the part of our citizens and intelligent action by our statesmen quickly will relieve the existing tension and restore as complete repose in industrial affairs as may be consistent with progress.

Post-war standards of living must be accepted. This means

advancement, not retrogression. While the labor problem is a progressive problem and, therefore, cannot be completely settled, publicity concerning the causes of strike between employer and employe will aid in promoting an intelligent solution.

### Causes of Present Unrest

Among the easily recognized causes which have provoked industrial unrest may be mentioned the prevalence of hysteria, resulting from emotion excitement caused by the war; the alleged disproportion between increases in the cost of the necessities of life and in wage increases—propaganda deliberately conducted to provoke discontentment and the confusion and uncertainty resulting from the failure of the Senate to ratify the Treaty of Peace.

### Hysterical State of the Public Mind

The war not only exacted enormous toll in lives and treasure, but it also created an abnormal condition among our people characterized by many forms of nervousness. Every mind was concentrated on events at the front; on the fortitude required of soldiers in the trenches, the daring and risk of advances, the sacrifices incident to combat. Millions of men and women were exhausting every energy to render useful service in support of our armies. Millions spent their days in terror and their nights in prayer, constantly mindful of the dangers that threatened their beloved—dangers from battle planes, from liquid fire, poisonous gas, and all the infernal agencies of destruction. Neuresthenia, in a sense, became universal. This condition of nervous excitement could not be immediately calmed. It still continues in some degree. It will pass in a few months, and with it will go into the "limbo of exploded heresies" many absurd industrial schemes and treasonable political conspiracies which never could have received serious consideration but for the overwrought nervous condition of the public.

Who has not been amazed at the advance in prices? The necessities of life, food and clothing, have increased since 1913 in varying degrees from 100 to 300 per cent. While there has been a slight general decline, some commodities—particularly shirts, seem to be going higher.

Landlords apparently arrive at rent charges by multiplying expenses by the janitor's age!

This increase in prices undoubtedly has been due in part to the diminution in production caused by the withdrawal of millions from productive pursuits to perform military service, and to the increased demand for many war conditions.

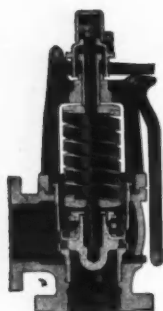
Inflation has also performed an important part in promoting higher prices. Our circulating money consists of approximately five billion six hundred million dollars. One-half of this amount in Federal Reserve notes. The United States debt increased from less than one billion dollars in the early part of 1917 to approximately twenty-five billion dollars at the beginning of this year. The appropriations during the present year will aggregate almost seven billion five hundred million dollars. At least three billion more will be required during the current year to absorb the balance of certificates of indebtedness and to meet allotments to our allies.

Considering the diminution in production, the enlarged demand for war commodities and this rapid inflation, it is not remarkable that profiteering should have followed, with its disgusting and distressing consequences. Government price fixing as to a few commodities has resulted in compelling their producers to sell in a regulated market and to buy what they require in an unregu-

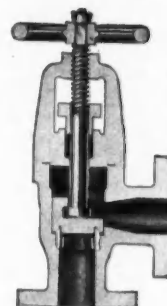
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that comply with the

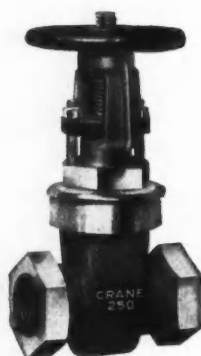
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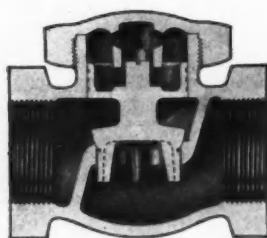


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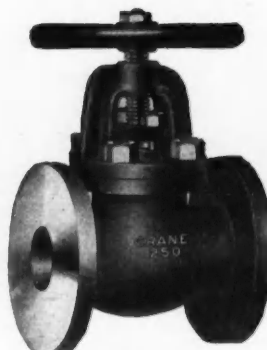
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lated market—a condition calculated to sow the seeds of resentment in the souls of men!

High prices prove most oppressive to wage earners and salaried employes. The wage earners have struggled to secure advances in compensation commensurate with the increases in prices of commodities. Throughout the country astonishing advances in wages have been made. A few illustrations will suffice.

The average monthly compensation per employe for all railroad employes has increased since 1917 approximately forty-three per cent; since 1913, forty-eight and five-tenths per cent.

In the steel industry the average rate of wages per hour has increased since 1913, 116 per cent.

In the packing industry labor per hour has increased since 1914 on the average 115 per cent.

The silk textile industry shows an average increase for the six principal occupations of more than 102 per cent.

The ship-building industry, in the Delaware River district, in 25 of the occupations, shows an average increase of more than 208 per cent. On the Pacific Coast the increase has been less than 90 per cent.

While these figures do not tell the whole story, they are illustrative of the increase in compensation to laborers since the war in Europe began. Notwithstanding these increases, we hear on every hand threats of strikes to enforce demands for further increases. We have recently experienced the policemen's strike, the steel strike and the miners' strike. The steel strike was directed against the open shop and was not intended primarily to affect wages. The miner's demand for a five-day week, a six-hour day, and 60 per cent increase was in violation of existing contracts and in reckless disregard of the public interest.

While German miners were working ten hours a day and every day in the week to restore the fatherland, American miners were insisting upon shorter hours and greatly increased wages. Shorter hours to offset lack of constant employment; increased compensation to meet the increased cost of living.

We are face to face with a railroad strike which threatens to become ruinous. Contrary to the general belief, the wages paid to railroad employes as a whole have not increased comparably with those paid to laborers in other industries. While there are exceptional classes to whom unreasonable and undeserved advances have been made, the increases to railroad employes, on the whole, during federal control was justified.

#### Propaganda

The hysterical condition of the people, coupled with the high cost of living, have furnished fallow ground for harmful propaganda.

Freedom of speech, the right to advocate changes in our laws and institutions, is inseparable from that wholesome liberty which is indispensable to progress. I do not care what a man believes, what changes he seeks to bring about, so long as he proceeds by lawful and constitutional means to accomplish his ends. But when any individual or organization secretly or openly promotes insurrection or revolution, it becomes an outlaw and an enemy to law and the orderly processes of government.

Propaganda conducted within the law, advocacy of the enactment or repeal of measures or amendment of the constitution by the processes recognized in that instrument can be counteracted only by exposing the fallacies which underly them. But efforts to accomplish changes by force are criminal acts and must be dealt with accordingly.

Radicalism threatened for a time to secure a foothold in the United States. The sober judgment of the people already has begun a reaction which will destroy revolutionary organizations whether political or industrial. Insofar as the unrest in this country is one due to artificial causes, false or treasonable propaganda, it has already spent its force. Persons or organizations which advocate force, anarchy, direct action, or the resort to

sabotage to accomplish their purposes, must be outlawed. There is no room in this country for the I. W. W. or kindred associations which seek to destroy American institutions.

#### Remedies

Let me try to present briefly and with little argument some things which may prove helpful in quieting industrial unrest.

1. Let the Treaty of Peace be ratified, the Senate has quibbled long enough about reservation.

Conditions will not be normal while a technical state of war lasts. The Senate is not justified in making a political issue of the treaty. Ninety per cent of the people of the United States want the treaty ratified. Many want it ratified without reservations. Others favor interpretative reservations, while others still advocate reservations in the nature of amendments. A compromise, therefore, is unavoidable if the treaty is to be ratified at all. Proceedings in the Senate during the last few days indicate that the treaty will be carried into the approaching elections. This is regrettable indeed.

2. The restoration of the railroads to their owners, with legal assurance of adequate returns, while at the same time protecting the public from excessive charges, already is having a wholesome effect by stabilizing railroad credits and labor conditions.

3. Practice economy in governmental expenditures, repeal vexatious taxes, and reduce the remainder as rapidly as conditions permit.

4. Gradually contract the currency by calling in the Federal Reserve notes. This will cause a decline in prices.

5. Expose and punish unreasonable propogandists, deport anarchists and put Soviet agitators to work.

6. Provide fair tribunals and empower them to hear and determine disputes between laborers and their employers.

This will require both State and Federal legislation. So long as no official method of determining labor controversies is provided, strikes and other industrial disturbances will frequently occur. The right to strike cannot be abridged and the laborer left wholly at the mercy of his employer. He must have a tribunal where his case may be heard and decided.

It is a mistaken policy for laborers to insist that the right to strike is unlimited inherent in free men. There are some relationships inconsistent with the right to strike. Parents, teachers, public officers, particularly guardians of the public peace, soldiers and ministers have no right to combine and suspend the performance of their duties for reasons sounding in profit in personal interest. The right to strike has usually been conceded to laborers engaged in production, storage, manufacture, transportation and exchange, for the reason that no lawful methods of determining their demands have been established, railroad employes have no moral right to conspire to stop all commerce in order to compel increase in compensation.

The interest of labor as well as the public welfare require that commerce continue, and this can be assured only by substituting settlement of controversies throughout orderly processes in place of strike. This country cannot survive a prolonged and universal railroad strike. The horrors and sacrifices of warfare are trivial compared with the misery, suffering and loss of property and life necessarily incident to such a strike.

The moral right to strike exists only where our government has provided no tribunal for settlement of labor disputes. There exists no inherent right of the laborer to determine his own case or to supply his own remedy. Both state and federal tribunals for acting on labor disputes so as to avoid strikes in the fundamental industries must be devised. I have already referred to the stabilizing effect of the new railroad law. Let us consider this in more detail.

The two important provisions designed to permanently stabilize railroad credits are, first, federal control of issuance of stocks and bonds by carriers engaged in interstate commerce, and second,



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the rate-making provisions. Hereafter, no railroad engaged in interstate commerce can issue any stocks or bonds without the approval of the Interstate Commerce Commission. This feature of the measure has been worked out very carefully. Its principal purpose is to prevent over-capitalization and to establish a uniform system of capitalization.

By far the most important provisions in the bill relating to railroad finances is that which requires the Interstate Commerce Commission to so adjust or modify rates that the carriers considered as a whole or in rate-making groups when honestly and economically managed, may have a fair return on the value of their property held and used for transportation.

This fair return is fixed by Congress at 5½ per cent for a period of two years. At the expiration of that time, the commission may raise or lower the rates as the conditions may justify or require.

This has been improperly characterized as a guaranty. It has the elements of a government guaranty; as a matter of fact, it is merely an expressed declaration of law of the principal which the Interstate Commerce Commission has heretofore tried to follow in fixing rates. It is a practical impossibility to adjust rate schedules solely with reference to the value of the service performed in each particular instance. There is no way to ascertain the cost of transporting a passenger from Little Rock to Washington, for instance, or of shipping a commodity from one point to another point.

Another common mistake with reference to the rate making provisions in the new law is that it has been alleged to validate watered stock. This is literally untrue. The rate making provisions have no relation to capitalization, either stocks or bonds. The rate-making provisions are based entirely upon the actual value of the properties determined as the constitution requires.

This feature of the law has already had a wholesome effect. Without it or something similar, the leading railroad authorities in the country, including Interstate Commerce Commissioner Clarke, Judge Crotty, and the Director General of Railroads, Walker D. Hines, believe financial chaos would be inevitable.

#### Labor Provisions

The labor provisions of the bill have met with serious criticisms from the leaders representing labor unions. Their attitude is not justified, and the public will come to know this if indeed doubt respecting the subject now exists. Let me explain briefly the labor provisions in the new law.

There is no expressed prohibition against strikes. A government tribunal, known as the labor board, composed of three representatives each of the public, the laborers and the carriers, is authorized to hear and determine disputes as to wages, if the disputes are likely to result in the suspension of commerce. This board is also empowered to decide questions relating to working conditions, including grievances, if those questions are not determined by voluntary tribunals established by agreement of the carriers and their employes and known as the Boards of Adjustment.

The carriers and the employes are left free; indeed, it is declared by the law to be their duty, to voluntarily settle if they can do so, every dispute which may arise, but in the case of such voluntary settlement of a wage question which the board thinks will require an increase in railroad rates, the board may review and decide the controversy itself for the protection of the public against unreasonable and unnecessary advance in rates.

All decisions by the labor board must be by a majority, and if the decision affects wages, at least one representative of the public must concur.

There are two principal criticisms against these labor provisions. First, that unorganized employes have the right to be heard. Second, that the board is unfairly constituted and should consist only of an equal number of representatives of the carriers and the employes.

With respect to the first objection, while I regard the labor unions as necessary and beneficial, I can never bring myself to deny a citizen who has a complaint the right of hearing before a public tribunal merely because he does not belong to a union of his fellow workers, or cannot secure membership in the same. Under the law of justice, we have no right to deprive a laborer who is not a member of the union of the right to have his case heard and decided. I have not the slightest doubt that such a criticism will be repudiated as unworthy by the American people.

With respect to the second objection, I admit that my experience may show the desirability of modifying the tribunal created by this law, but I also maintain that there is nothing unfair to either the railroads or the laborers, in giving the public representation on the board. The public are interested both in the amounts which they pay for transportation and having transportation uninterrupted.

Throughout the last few years we have heard repeated threats of a nation-wide railroad strike. Such strikes would cause indescribable misery and suffering. It is both proper and necessary that tribunals be established for the settlement of disputes likely to result in railroad strikes, and when these tribunals have been established there will be no necessity for strikes, and it is hoped that they will not be resorted to even though the law does not expressly prohibit them.

#### Loyalty to American Institutions

A revival of patriotism is needed more than anything else to quicken and intensify loyalty to our country and its institutions. In this time of chaos and confusion, who has wondered whether everything worth while among American institutions is not in danger? Who has not asked whether anything can survive the revolutions now in progress? Yet, when we reflect, our confidence is restored. Our people know, in spite of mistakes and prejudices, that ours is the best government human minds have conceived; that our flag is as truly the symbol of liberty and justice in this day as it was when first uplifted into life, that personal liberty and private property are secure in the intelligent loyalty of our citizens to the constitution. In spite of unrest and agitation, in spite of conspiracies and threatened revolutions, our government will stand safe against all enemies, foreign and domestic. Neither socialism, anarchy nor sovietism can seriously endanger a government which preserves and protects the rights and liberties of the citizens and assures to all the enjoyment of equal opportunities.

#### INLAND EMPIRE PAPER CO. BUYS WHITE FIR

The Inland Empire Paper Co. which operates a plant at Millwood, Wash., just east of Spokane, has closed a contract with the Potlatch Lumber Company for all the white fir, cut in 16 foot logs, that the latter company can deliver to the paper firm. "The paper mill uses about 30,000 cords of white fir a year and we will take all that the Potlatch people will supply," stated W. G. McNaughton, general manager of the Inland Empire Paper Company. "It may be that they will deliver 5,000 cords a year, possibly 10,000. We do not know and they do not, but they figure they will be several years in working out their supply of white fir. "White fir has always been used by us as pulp wood in paper manufacture. We operate our own camps in northern Idaho and have two in British Columbia. The price of white fir delivered is \$9 and \$10 a cord, which is higher than it has been in the past."

There are said to be millions of feet of white fir in Latah county, in northern Idaho, and the Potlatch Lumber Company, of which A. W. Laird is general manager, owns most of it. The lumber company has always regarded the white fir as of little value and a fire menace. It does not make a good lumber. The lumber company will establish headquarters for the new industry at Deary, Ida., and commence work immediately.

PAPER

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## THE USE OF CASEIN IN THE PAPER INDUSTRY

Address by H. L. Derby, President of the Kalbfleisch Corp., Before the American Pulp and Paper Mill Superintendents' Association

Webster defines casein: "A proteid compound found variously in the animal economy, but especially in milk, of which it is a principal ingredient. When coagulated by acids or rennet it forms the principal ingredient in cheese."

There are many kinds and qualities of "commercial casein," the term being used to describe practically every compound in which casein is the base. It may be of interest to some of you to know the usual method of extracting casein from skimmed milk, and I therefore will outline the two principal methods briefly, and without regard for technical accuracy.

The first method is that relating to the manufacture of acid casein which is most commonly produced in this country. Fresh skimmed milk is run into a wooden vat and heated to approximately 120 degrees Fahrenheit. Commercial acid, either sulphuric or muriatic, is added at the rate of approximately one pint to each 1,000 pounds of milk, and the mixture stirred thoroughly, the acid being diluted before it is added to the milk. The curd or casein is thereby separated from the whey, and the whey is drawn off, after which the curd is washed. The curd is then pressed to extract the water, and after being mangled or shredded, is spread on trays and dried in a tunnel dryer, after which it is ground and bolted.

The other method, the lactic or natural soured, or "French," process, which is used principally in Argentine and very little in this country, owing to its high cost, differs from the muriatic and sulphuric acid process in that the skimmed milk is allowed to curdle by the formation of lactic acid and without agitation. The curd thus manufactured by naturally souring the skimmed milk is handled as easily as that precipitated with sulphuric or muriatic acid and is not nearly so tough, nor so difficult to manipulate, or hard to grind.

Natural soured casein shows better strength and dissolves more readily and has better working qualities than the acid cooked casein, which when it cools has a heavy, short, viscous body and tendency to congeal. Acid cooked casein loses its fluidity, making it very difficult to mix well with color solutions when cold.

The Department of Agriculture determined by a series of tests that seven out of eight experiments showed casein made by the natural soured process to have the greatest strength, while the other test showed no noticeable difference. This view was adopted by the Bureau of Aircraft Production during the war, and accordingly during the period of embargo of imports quantities of casein were admitted from the Argentine Republic to be used in the manufacture of aeroplane glue.

There is present approximately three pounds of casein in each one hundred pounds of skimmed milk, or to be more accurate, an amount varying from 2.9 per cent to 3½ per cent, depending upon the composition of the skimmed milk and the method of manufacturing and the extent of drying. There are a great number of uses for casein and there is not sufficient time to deal with the various grades and qualities used in different lines of industry or the various formulae and alkali required for different results. You gentlemen are principally interested in the use of casein in paper making, and I shall confine my discussion to that industry.

I know of no other commodity which may vary in quality so greatly without detection to the average user. The appearance will not enable even an expert to determine with any degree of accuracy the quality or strength of casein. It is an easy matter to ascertain the solubility of casein, but then again solubility does

not necessarily indicate the strength or value of casein. The intrinsic worth of casein to the paper coater depends almost entirely upon the actual strength of the casein, and it requires elaborate tests to ascertain the strength. The user must therefore rely somewhat upon his source of supply to deliver casein adaptable to his use, and having as nearly a theoretical 100 per cent in quality and strength as is obtainable.

It is possible, with the laboratory apparatus in some of the paper mills, to make tests determining the relative strength of casein, but all mills do not have this facility. The general plan to ascertain the quality of casein is by its actual use on a coating machine. The requirements of the paper industry are more severe than almost any other line into which casein enters, and casein suitable for many lines of work, such as composition, paint, etc., would be wholly unsuited for paper coating. You all know that if an *insufficient* quantity of casein is used in your coating solution of clay, satin white, color, etc., the coating "picks" and does not adhere to the paper. If the usual quantity is used, and this casein does not possess the ordinary strength, the same unsatisfactory results occur. You are familiar with the laboratory method of testing the strength or adhesiveness of your coating. As a matter of information to those uninformed, I am taking the liberty of presenting to you the adhesive or strength test for casein recommended by Mr. Arnold O. Dahlberg, of the Dairy Division, United States Department of Agriculture:

"Fifty grams of casein ground fine enough to pass through a screen with 20 meshes to the inch is weighed into a casserole whose weight is known, 100 cubic centimeters of cold distilled water is added, the two mixed well and allowed to stand for a short time, when 90 cubic centimeters more of distilled water is added in which 5 grams of borax has been dissolved. Distilled water is then added until the mixture weighs 250 grams, and the casserole placed in a water bath having a temperature not to exceed 149 degrees F. (65 degrees C.) and stirred until the casein is dissolved. When the casein is completely dissolved, more water must be added to take the place of that lost by evaporation, so that each 5 grams of the solution will represent one of casein.

One hundred grams of china clay or kaolin, previously dried at the temperature of boiling water for one hour, is weighed into a heavy casserole, and 70 cubic centimeters of distilled water added in which 5 grams of borax has been dissolved. Distilled up any lumps that may settle to the bottom. After weighing the casserole with its contents of clay paste, 30 grams of the casein solution, representing 6 grams of casein, is added to it and thoroughly mixed with the paste. A stiff brush is helpful in getting a good mixture. A thin coating of the mixture is then applied to several small sheets of test paper by means of a thin brass scraper or camel's-hair brush, using care to spread uniformly. The casserole is again balanced and 5 additional grams of the casein solution added, the solution well mixed and another set of test sheets coated, continuing the procedure of adding 5 grams of the casein solution and making a set of test sheets until sufficient casein has been added to hold the coating mixture properly to the paper. Best results were obtained by using the brass scraper, which requires that the paper be placed on a perfectly flat surface, such as a piece of smooth plate glass. When using a brush the coating mixture should be painted on very quickly, first lengthwise and then crosswise.

When the sets of test papers having an increase of one gram



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in casein for each succeeding set are perfectly dry, a short stick of sealing wax softened by heating at one end is applied with a fairly firm pressure to various points where the coating is uniform, and allowed to cool. The paper is then held down firmly by placing the fingers on each side of the wax and the latter pulled away with a steady pull. In case of an insufficient quantity of casein the wax will pull only the clay mixture, but when sufficient casein has been used it will pull the paper fibers strongly to the edge of the wax, showing that the coating material has actually become a part of the paper. Usually a transition point is found when the center of the stick of wax will pull the paper fibers partially, while the next set having 1 gram more of casein will pull all the fibers to the extreme edge of the wax. A good grade of casein should not require more than 8 or 9 grams to hold strongly.

#### Actual Results Best Test

"The strength of the casein as shown by this laboratory test bears some direct relation to the quantity of casein necessary to use in the practical coating work, and for that reason was used in determining the influence of the various factors observed upon the strength of the casein."

A simple test for the solubility of casein is the following:

Sample of casein taken shall be ground so it will pass through a 22-inch sieve. Of this ground casein 100 parts shall be mixed with 400 parts of water and 12 parts of crystal boro phosphate, or 15 parts of commercial borax; the mixture heated by means of a jacketed kettle to about 160 degrees Fahrenheit, and stirred for 10 minutes. A perfect solution should be obtained by this method.

The actual results in the coating mill, after all, are the last analysis of the value of casein. In other words, the paper mill endeavors to buy the greatest quantity of adhesive strength in the smallest number of pounds of casein, and when it is considered that the price of casein sometimes exceeds 20 cents per pound it can be readily understood how important the quality of casein is in the cost of the finished paper.

A user of casein may be misled in a casein solution which appears to have a good body and be high in viscosity; it may lack proper strength.

The working qualities of casein are dependent in no small degree upon the character of the solvent used. In order to obtain the greatest possible strength from casein it has been found that certain compounded solvents are more efficient than such solvents as borax, ammonia, soda ash, etc.

This has created a great demand for such casein solvent as crystal boro phosphate and other compounded casein solvents, which not only completely dissolve the casein, but at the same time free out the solutions, and impart to the adhesive a long fibre, thereby eliminating brush marks and pin holes, sometimes found on surface coated paper.

Manufacturers of the high grades of coated paper in which satin white is used frequently encounter difficulty due to the coating solution coagulating. This sometimes is caused by the combination of sulphuric casein with the satin white, the base of satin white being sulphate of alumina, which is a sulphuric acid product. While satin white may be neutral and work perfectly with natural soured casein, if the sulphuric casein is used and the acid has not been properly washed from the casein, the excess of sulphuric acid present, when the casein is in solution, combined with satin white and coagulation results. Additional alkali is required to overcome this condition.

#### Not Simple to Obtain Uniform Grade

It is by no means a simple task to manufacture a uniform grade of good acid casein. There is the possibility of the intro-

duction of excess acid or failure to properly wash the curd, and in the manufacture of any casein, except the Argentine sun dried casein, there is always the danger in drying, that too great a degree of heat will be applied and the casein scorched, in which event it becomes insoluble. Such imperfect casein is worthless in the manufacture of coated paper and is almost impossible of detection if it is ground to a fine powder and mixed with good casein. As the manufacture of casein, like other products, is dependent on the human element, it is safe to say that no creamery manufactures crude casein which is 100 per cent standard. There are bound to be inferior batches containing excess acid, or others which are subjected to excessive heat, or insufficient heat in drying, and if this inferior casein is not graded out, the purchaser will receive casein unsuited for his use. Some dealers having facilities for testing, grading, classifying casein have a market for casein which is unsuited for coating, and thereby are able to furnish a coating plant with the selected casein. Buying crude casein direct from a creamery is like buying "run-of-mine" coal, as compared to hand picked coal, and paying the same price for the selected fuel as the fuel containing dirt, slate, etc. I believe you gentlemen are competent to protect your companies against the purchase of inferior casein, although in the operation of a coating mill it is difficult and expensive to carefully examine and test every sack of casein consumed. Due to the shortage of casein during the European war many were attracted by the high prices prevailing in the casein market, and without possessing the required knowledge or experience, entered the business. Several have lost heavily, and the industry, as a whole, has suffered to some extent in loss of confidence on the part of the consumer. In the casein business, as in any other business, honesty of purpose and expertness count for a great deal, and there is an increasing necessity for the casein producer and dealer to sell in addition to a specified number of pounds of casein, service, which includes protection to the user against the purchase of an inferior product. It is surprising to note the number of users of casein who have no conception of the relative value of different qualities, and it is not infrequent that a grade of casein not worth within 5 cents per pound of the market price can be sold at half a cent per pound below the prevailing price of standard goods. This is due to the fact, no doubt, that many concerns have failed to show proper interest in the study of the subject, so far as it relates to their business, and have been unwilling to spend money for the education of employes charged with the responsibility of the production of a standard grade of paper.

#### Best Materials Give Best Results

Of greatest benefit are associations and meetings of this character, where men in the same line of business may assemble and compare notes and discuss subjects important to the trade. It is indeed a simple matter to sell a standard article at a fair market price to those who know how to accurately determine the actual value of a standard article as compared to the value of an inferior product, and associations such as this are beneficial, not alone to the industry directly concerned, but are likewise helpful to the trades supplying the industry with raw material. Efficiency in manufacture of paper is regulated, first, by the qualities of raw materials available, and I think I may say advisedly, by the expertness with which those raw materials are employed. You men, no matter how expert you may be in your line, cannot obtain the maximum results with inferior products. You may secure unusually good results with inferior goods, but it is obvious perfect results cannot be obtained with imperfect materials. I believe that there is no commodity entering into the manufacture of coated paper having greater importance than casein in the cost per pound of the paper, and I maintain that inferior quality of casein is not economical, no matter at what price it may be purchased, nor on what grade of paper it may be employed.

# Editorial

Vol. LXX. New York, April 15, 1920 No. 16

FORTY-EIGHTH YEAR

## A Critical Period in Paper

The country is experiencing the biggest shortage of paper since the introduction of ground wood, more than half a century ago, greatly lessened the cost of production and apparently insured a plentiful supply of raw material for paper making for all time. Conditions produced by the war are, of course, directly responsible for the present shortage, although more remotely the reciprocity fiasco with Canada that was perpetrated during the Taft administration, is also, in a considerable measure, responsible for the extreme dearth of news print.

The war caused a demand for larger newspapers and more frequent editions and consumed news print faster than the most speculatively inclined in the industry had ever foreseen. In a lesser measure, the war also caused an increased demand for most other varieties of paper. Due to war regulations, however, lack of labor, high cost of material, poor freight facilities, inadequate supplies of raw material and numerous other inconveniences, paper mills, although speeded up to their highest capacities, and actually producing more paper than could reasonably be expected under such conditions, were unable to meet the demands on them and the so-called "invisible supply" was cleaned up more thoroughly than has ever been the case before in the history of the industry.

In consequence of this condition, when the heavy demand again started for paper after the lull that immediately followed the Armistice, there were practically no stocks to draw upon. In other words, consumption was just on the heels of production and from the numerous reviews of conditions in the industry, printed elsewhere in this issue, it will be seen that this is the condition to-day in practically every branch of the paper making business.

As already intimated, and as is common knowledge, the situation is most distressing in the news print branch of the industry. Publishers are sorely taxed to get sufficient supplies of this absolutely essential commodity in their business. While all the larger news print manufacturers are furnishing their customers roll news print on contract at 5 cents per pound or thereabout, spot supplies are being sold at exorbitant rates, reports which, however, are unconfirmed, stating that prices have reached as high as 18 cents per pound.

This distressing situation has actually caused some newspapers to suspend and has caused all of them to adopt extreme measures to meet the exigency. The *New York Times*, as this is written, announces that 66 columns of advertising have been omitted from its issue of this morning, because of the shortage of news print, and the *Chicago Tribune* last week advised prospective readers to borrow, not to buy the *Tribune* in order to co-operate with it in saving news print paper.

A considerable number of machines heretofore making other

varieties of paper have, in the past few months been turned over to making news print and machines already on this variety of paper have been speeded up as greatly as possible. But this increase in the production has not brought very much relief. Numerous new news print mills are being projected in Canada and additional machines are being added to going mills. This is true to a lesser extent in the United States but, even under these circumstances, it will be some time before very much relief can be expected from this new tonnage coming on the market.

In this connection it is interesting to note that the only news print mill to be built in the United States since the building of the news print mill for the Northwest Paper Company at Brainerd, Minn., in 1916, was the news print mill of the Manistique Pulp and Paper Company, at Manistique, Mich., which is just about to begin operation. The mill of the Northwest Paper Company, just referred to, was about the only mill, if our memory serves correctly, to be built after the Taft reciprocity fiasco put a quietus on the expansion of the industry in this country. But for this absurd arrangement, the industry would have continued to grow and publishers, to whose greed for cheaper news print the passage of the measure was largely due, would not find themselves in their present unenviable position as regards their supplies of paper.

Book paper, fine paper, wrapping paper, tissue paper, boards and other varieties of paper also are extremely scarce and are selling at exceptionally high prices. Fortunately, in most cases, however, the manufacturing expansions that are being provided for, may be expected to take care of the heavy demand in these varieties of paper at an earlier date than in news print paper.

Due to the severe winter and its attendant handicaps, coupled with the abnormal demand, all varieties of raw materials for paper making also have become exceedingly scarce and are selling at record prices. A great deal of solicitude especially is expressed about the future supplies of pulpwood and much attention is being given to policies of conservation. Interest in reforestation is increasing constantly and attention is being given to new sources of supply, especially in the Pacific Northwest and Alaska, where abundant wood of a suitable character is to be had but which, until now, has not been of very great interest for paper making purposes because of the remote distance from the paper mills.

Attention also is increasingly being given to various fibers, to serve in part as a substitute for pulpwood. Interesting among these are cotton linters, on which the Forest Products Laboratory at Madison, Wis., has been doing some helpful research work. Several mills have been erected or are in process of construction in the South to utilize this material and samples of pulp from at least one of them have just been received in New York.

As may be observed from an interesting article in this issue, flax straw also is being urged as a paper making material. Interest is again being revived in the possibility of bagasse for paper making and the advisability even of bringing Esparto grass from Algiers is being considered in some directions, in the endeavor to bring some measure of relief to what even the most hopeful are willing to admit is a critical period in the pulp and paper making industry.

### Successful Paper Week

Paper week in New York, during which the American Paper and Pulp Association and its affiliated associations held important meetings, was a big success. The attendance, because of the railroad strike which unfortunately occurred at this time, was perhaps somewhat less than otherwise would have been the case, but in spite of this the attendance was satisfactory and in all other respects the week undoubtedly fully met the expectations of those who planned the programs for the various activities.

The convention emphasized the thought brought out in the interesting address of President Sisson that the importance of the paper industry has grown greatly of late in the public eye. The consumption of paper has never been nearly as large as today and manufacturers and distributors find themselves simply overwhelmed by the demands made upon them for supplies. The conventions furnished an excellent opportunity for all the factors in the business to discuss the situation and learn how all could cooperate for the common good.

As may be seen from the reports in this issue all of the associations have closed active and profitable years and have planned considerable constructive work for the year just ahead. The American Pulp and Paper Association especially has mapped out a more ambitious program than probably it has ever attempted.

Mr. Sisson's excellent record during the past two years as the war president of the association gives every assurance that the hardly less important work of the reconstruction period during his third term, on which he now enters, will be well done, while the fact that a gentleman of Dr. Baker's exceptional fitness for the position of secretary of the association furnishes decidedly additional cause for believing that the industry may continue to look for some really helpful activity from the American Paper and Pulp Association.

### Canadian Exports Grow

The exports of Canadian pulp and paper for January just sent out by the Canadian Pulp and Paper Association showed a big gain as compared with January of last year. The figures for this year amounted to \$9,151,266 and for January, 1919, amounted to \$6,885,319, or a gain of \$6,885,319.

These figures included paper and manufactures of paper, \$5,519,718 for 1920 as compared with \$4,429,803 for 1919; chemical pulp \$2,658,974 for 1920 as compared with \$2,193,194 for 1919, and ground wood \$972,574 for 1920 as compared with \$262,322 for 1919.

The paper exports during the month included 1,152,508 cwt. of news print, valued at \$4,471,799; paper boards, valued at \$459,935; 32,761 cwts. of kraft wrapping, valued at \$258,745, and roofing paper valued at \$89,645.

Paper and wood pulp exports for the first ten months of the fiscal year reached a total value of \$83,576,178, compared with \$67,403,247 for the corresponding period in 1918, and \$51,923,419 in 1919; a gain of \$16,172,931 over 1919, and of \$31,652,759 in 1918, as follows:

Paper and manufactures of paper \$49,717,824 for 1920 as compared with \$37,099,163 for 1919 and \$30,295,563 for 1918; chemical

pulp \$26,509,626 for 1920 as compared with \$26,268,144 for 1919 and \$15,963,707 for 1918; ground wood, \$7,348,728 for 1920 as compared with \$4,035,940 for 1919 and \$5,664,149 for 1918.

The exports of unmanufactured pulpwood amounted to 59,789 cords, valued at \$615,101 in January, 1920, compared with 97,915 cords, valued at \$972,129 in January, 1919. The exports of pulpwood for the ten months period were as follows: 738,477 cords, valued at \$7,417,390 for 1920; 1,303,370 cords, valued at \$12,567,357 for 1919 and 907,131 cords, valued at \$7,419,272 for 1918.

### NEWTON FALLS PAPER CO. SOLD

The Newton Falls Paper Company has just been sold. Officials of the company are withholding the consideration involved in the transfer as well as the name of the buyer, but it is expected that these facts will be made known in the near future.

It is understood that a highly satisfactory deal, so far as the owners of the business for the past many years are concerned, has been closed. The sale includes the entire holdings of the company, including vast timber lands in the Adirondacks which are enhancing in value daily as pulp wood becomes more scarce. In fact the plant and power facilities at Newton Falls, N. Y., have rapidly appreciated in value during the past few years, and the price obtained in the sale reflects these conditions.

While some of the local stockholders and officers will retire under the transfer, President Frank L. Moore will continue as general manager under the new owners, and it is probable that Miss Florence T. Helmer, treasurer, and others in the local offices, will remain with the new company.

A new concrete and steel mill for the machine room at Newton Falls was recently announced. It is designed to take the place of the old wooden structure, which has about served its usefulness. The new owners will proceed with the carrying to completion of these plans.

The officers of the company are: F. L. Moore, president and general manager; Stewart D. Lansing, vice-president; F. T. Helmer, treasurer; Loren Bushnell, assistant treasurer, and Virgil K. Kellogg, secretary.

The mill is equipped with six 1,500-pound beating machines and three Jordan engines, one 90-inch and one 113-inch Four-drier paper machine. The widest trimmed sheet is 104 inches. The mill has a capacity of 68,000 pounds of paper each 24 hours. The pulp mill has two grinders, three digesters and eight wet machines. It has a capacity of 14,000 pounds of ground wood and 80,000 pounds of sulphite fibre daily.

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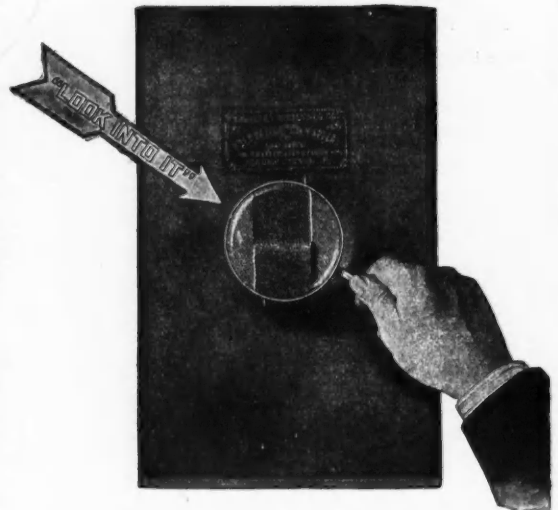
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## INTERNATIONAL PAPER CO. HAS GOOD YEAR

Increase in the cost of labor, materials and transportation find reflection in the report of the International Paper Company for 1919, which has just been issued. The report shows a net income for the year after the deduction of charges and Federal taxes amounting to \$4,121,494. This after the deduction of \$1,500,000 in preferred dividends was equal to \$13.24 a share earned on the \$19,803,920 common stock outstanding, as compared with \$18.45 earned on the \$19,764,008 common stock outstanding in the preceding year.

### What the Balance Sheet Shows

The balance sheet as of December 31, 1919, shows properties owned and operated by the several companies valued at \$43,326,136 as compared with \$37,829,601 in 1918. Current assets were \$32,182,900 and current liabilities \$10,402,817, leaving a net working capital of \$21,780,083 as compared with \$16,249,795 in the year before.

Some of the outstanding items in the company's income account and balance sheet follow:

	1919.	1918.
Total income .....	\$7,833,274	\$8,194,885
Net income .....	4,319,295	5,152,578
Surplus .....	2,819,295	3,652,578
Bonds outstanding .....	6,981,500	7,189,000
Reserve for contingencies .....	1,630,110	952,192
Cash .....	2,740,832	1,206,733

### President Dodge on Labor Situation

President Dodge said regarding the labor situation:

"There has been a steadily increasing cost of production, due to the increasing cost of labor, material, transportation and of all other factors involved in manufacturing. In the newsprint mills the cost of labor per ton has advanced from about \$8 per ton 1913 to above \$20 at the present time—a percentage of increase far beyond the percentage of increase in the cost of living to the workmen. Notwithstanding this fact, it has been found necessary to make a new arrangement with the various unions representing a further increase of 20 per cent over the present wage, to take effect on the 1st of May, 1920.

"Every reasonable effort is being made to maintain friendly relations with those in the service of the company, and to show reasonable consideration in the matter of wages and conditions under which they work. Unfortunately, there is no legal, and apparently little moral, responsibility on the part of certain of the unions and their leaders. There is no way in which their agreements can be enforced, and in which the employer can obtain compensation for the losses due to the failure of the men to keep their agreements.

"On two occasions in recent days, after agreements had been reached, once through arbitration, and after the unions had solemnly entered into written agreements as to wages for a limited period of time, they repudiated or ignored their agreements, and, while they were still in force caused the closing of the mills, with great loss to the company.

"In theory collective bargaining is advantageous to all parties. As administered, however, it generally means autocratic control of the properties by labor and the exclusion of men willing to work unless they become members of, and subject to the absolute control of, the organization.

"The only sane system—the only system under which men may prosper and advance—is the one under which the individual is induced to produce as much as possible, and under which he can be paid in proportion to his production. In any industry in which rigid unionism prevails, the production per capita and the average wage paid are lower than that obtaining in well conducted open shops.

"Great difficulties have been experienced due to the lack of transportation facilities and to the eccentric and arbitrary action of officials while the roads were under Government control. Mills were repeatedly hampered in their operations and a stoppage of machines was not an uncommon occurrence. The delivery of paper produced in the mills was frequently delayed for considerable periods with inconvenience and loss alike to the producer and consumer. There continues at the present time a daily shortage of 300 railway cars. The shipment of contract tonnage to valued export customers of long standing has also been hampered and curtailed by serious dock strikes.

### U. S. Paper Mills Treated Unfairly

"The paper mills of the United States in general are being treated most unfairly and are suffering a great disadvantage because they are prohibited by the Canadian Provinces from bringing into the United States pulpwood from the lands which were leased by your company and others from the Provinces with the distinct understanding that the wood should be brought to United States mills. Wood was permitted to come in for several years without objection, when suddenly further exportation from crown lands was prohibited and the supply of certain of the United States mills, mainly dependent thereon, was cut off; and this although the Publishers' Association of the United States, newsprint paper had been placed on the free list. In other words, the Government of the United States gave free entry to the manufactured product from the Canadian mills, encouraged and aided by the Canadian Government, and at the same time permitted the Canadians to deprive the United States mills of raw material."

### PLAN TO SUPPLY NEWS PRINT TO PUBLISHERS

At a conference at the News Print Service Bureau held last week at the headquarters of the bureau, a plan to supply news print to publishers who are facing suspension of their publications because of inability to obtain a supply in the spot market, was decided upon. This information was given out by Willard E. Carpenter, publisher of the *Courier-Herald*, of Lincoln, Ill., and chairman of the board of directors of the Inland Daily Press Association, who came to New York especially to attend this meeting, and said that a national organization would be built up to supply publishers in need, and that sufficient support had already been obtained to insure success of the plan.

The International Paper Company and George H. Mead, of Dayton, Ohio, have already written to their customers asking the latter to release 1 or 2 per cent. of the amount of paper called for in their contracts, during the months of April, May and June. Mr. Carpenter is reported to have said in part: "The amount of paper which will be produced this year in the United States and Canada will be 10 per cent. greater than the amount produced last year. The shortage of news print this year will probably be about 7 per cent. of the amount demanded."



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**E.W.N.-D.B.-G.W.-K.L.M.**

## FOREIGN MARKETS FOR PAPER AND PAPER PRODUCTS

The following reviews under the caption of "Foreign Markets for Paper and Paper Product" has just been printed in Commercial Reports:

### Australia

Prior to the war, says Consul Lucien N. Sullivan, Newcastle, New South Wales, the bulk of news print imported into New South Wales came from Sweden and Canada; and during the war Canada was the chief source of supply, while for M. F. printing, bond, and other writing papers, the United States was the chief country of origin. It is expected that Norway and Sweden will be the biggest competitors of the United States in the Australian trade when trade assumes normal conditions. Japan will be strongly in the market for straw boards, Canada for news print, and Sweden and Norway for grease proofs, bonds, M. F. printing, brown wrapping and sulphite papers. It goes without saying that the trade will buy in the market which can furnish the best goods at the lowest price.

The only paper mills in Australasia are located in Sydney and Melbourne. At those mills only brown and wrapping papers, paper boards, straw boards are manufactured, no sulphite cap or writing papers being made by them. The Cumberland Paper Mills at Lane Cove, Sydney, make Manila boards which sell much cheaper than the imported article.

There have been imported from the United States a few tons of glazed casing paper, also flint glazed and bag papers, but the local mills supply most all other wrappings. On account of the war there have been largely increased importations of printing and writing papers from the United States, in spite of the cost having advanced in some cases 100 per cent over the price which prevailed before the war. Continued high prices in the United States will no doubt have a tendency to increase the trade of Norway and Sweden.

### British East Africa

It is estimated, writes Consul S. W. Eels, Nairobi, that one-third of the paper imported into British East Africa is news print paper, one-third wrapping paper, one-fourth book and writing paper, and the remainder is of other grades. About 85 per cent of paper of all kinds comes from the United Kingdom, 10 per cent from Sweden, and 5 per cent from the United States. In 1918 one of the foremost newspapers in the Nairobi district sent an order to the United States for 2,000 reams of news print, and the management was so pleased with the quality that it took into consideration the advisability of ordering all paper hereafter from that source, provided the terms should prove to be satisfactory.

During 1918 paper bags were imported to the value of \$10,831, and news print paper to the value of \$34,002. All other classes of paper (except books) are included under the item "stationery," and such imports were valued at \$46,831.

### Competition in Hankow District

Imports of paper of all kinds and from all sources into Hankow, according to Consul General Edwin S. Cunningham Hankow, China, are valued at about \$1,000,000 annually. In 1917 and 1918 the trade was almost equally divided between foreign imports and imports from other parts of China. The importation of paper into Hankow will henceforth meet with considerable competition. There is a small up-to-date plant in Hankow owned and operated by the Central Government. It is equipped with American machinery and produces about 82,000 reams annually. In other parts of China are almost innumerable native mills located near the raw products from which the paper is manufactured. There are also a number of other modern mills besides the one in Hankow. Probably almost every city of any consequence in China has at least one

small native plant making an inferior quality of paper, but in quantities which go far to meet local requirements in certain lines.

It is extremely difficult for American manufacturers of paper to obtain much business through the established importing houses. The firms handling this line in China are British and naturally favor their own home product. To compete in the trade to the best advantage an agency should be placed with an American firm in Shanghai, which will maintain stocks and sell directly to local Chinese dealers.

### Paper Sold Tientsin District

The total value of the imports of foreign-made paper into Tientsin, China, in 1918, says Consul General P. S. Heintzleman, Tientsin, was \$1,493,737, according to the maritime customs. This included the following items:

Bank notes .....	\$90,973
Printing paper, calendered and sized.....	14,948
Printing paper, calendered and sized, Japanese.....	28,552
Printing paper, uncalendered and unsized.....	40,826
Printing paper, uncalendered and unsized, Japanese.....	655,929
Wall paper .....	24,641
Writing paper .....	41,666
Other kinds .....	596,202

There are 4 foreign newspapers in English printed in Tientsin, 1 in French and 1 in Japanese. There are about 20 Chinese newspapers. Peking has 3 foreign and about 15 Chinese newspapers. The paper used is generally of low grade and comes from Japan and Europe. The European paper originates in Sweden, Norway and Denmark, but is imported mostly through British houses, which in turn sell to the Chinese paper dealers for local consumption and for shipment into the interior. This paper comes to Tientsin in bales of 12 reams, 500 sheets to the ream, the most common size being 31 by 43 inches. The bale is wrapped in canvas and battened at the ends.

Foreign-made wrapping paper is used to some extent, but the domestic product serves the bulk of the trade. There is a fair demand for European and American cover papers. The sales of writing paper are confined mostly to the foreign communities in Tientsin and Peking, and the demand is largely supplied through British houses whose representatives call on the stationery shops at regular intervals. There is a good trade in strawboard, but it is supplied almost entirely by Japan.

### India

A very poor grade of coarse paper is manufactured in India for packing purposes, some of which found other uses during the paper shortage brought about by the war, says Consul Stuart Lipton, Bombay. Imports of paper during the fiscal year ended March 31, 1919, the values being given in rupees (rupee equals \$0.3244, normal exchange), which have been subject to exchange fluctuations:

PACKING PAPER.	
Countries of Origin.	Rupees.
United Kingdom .....	136,090
Sweden .....	28,788
Norway .....	50,962
Other .....	29,561
PRINTING PAPER.	
United Kingdom .....	1,674,077
Sweden .....	352,533
Norway .....	1,718,531
Japan .....	155,890
United States .....	354,328
Other .....	80,994



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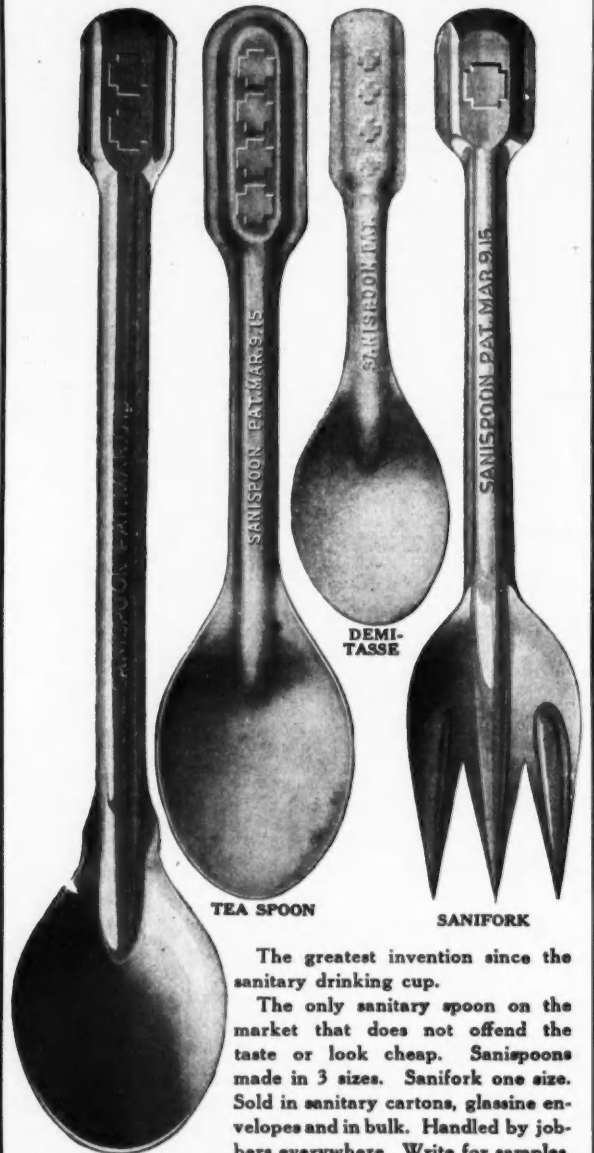
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Sanitary Products Corporation of America

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NEW YORK CITY



WRITING PAPER AND ENVELOPES

Great Britain .....	1,337,559
Norway .....	388,771
Holland .....	35,105
Switzerland .....	98,081
Japan .....	81,732
United States .....	339,447
Other .....	14,252

The trend here is naturally toward British goods. Some time ago several American manufacturers established branches or agencies in Bombay. Some of their efforts were defeated, however, due to careless packing of paper for shipment.

South Africa

South Africa is entirely dependent upon foreign sources for its paper supply, writes Consul Fred D. Fisher, Johannesburg, Transvaal. Finished products of paper are manufactured to a limited extent, but the locally made envelopes, cardboard boxes, etc., do not interfere greatly with the import trade. The chief countries of origin in the paper trade are Great Britain, Sweden, United States, Canada and Norway. The following table shows the value of paper imports of the principal classifications for the years 1914, 1917 and 1918:

WRAPPING PAPER

Countries of Origin.	1914.	1917.	1918.
United Kingdom .....	\$80,847	\$278,626	\$298,652
Canada .....	2,540	168,113	269,429
Belgium .....	9,655	1,017	1,085
Germany .....	35,116	.....	.....
Holland .....	949	17,159	827
Italy .....	88	21,222	58
Norway .....	57,069	50,514	240,585
Sweden .....	110,898	251,865	611,481
Japan .....	117	939	6,789
United States .....	5,290	50,645	145,659
Other .....	4,195	530	5,962
<b>Total .....</b>	<b>306,764</b>	<b>840,630</b>	<b>1,580,527</b>

PAPER BAGS

United Kingdom .....	150,433	256,002	265,049
Canada .....	.....	7,799	7,620
Sweden .....	555	6,219	5,596
United States .....	21,841	131,629	70,320
Other .....	3,426	1,260	11,081
<b>Total .....</b>	<b>176,255</b>	<b>402,809</b>	<b>359,666</b>

WALL PAPER

United Kingdom .....	116,727	90,848	152,905
Canada .....	340	2,472	8,356
Germany .....	11,358	.....	.....
United States .....	423	803	1,226
Otherwise .....	3,297	2,170	798
<b>Total .....</b>	<b>132,145</b>	<b>96,293</b>	<b>163,285</b>

PRINTING PAPER

United Kingdom .....	439,566	606,142	639,624
Canada .....	288,394	365,809	250,503
Norway .....	3,280	113,199	269,759
Sweden .....	54,903	382,347	699,710
United States .....	45,234	225,095	511,839
Other .....	128,967	62,024	25,671
<b>Total .....</b>	<b>960,344</b>	<b>1,754,616</b>	<b>2,397,106</b>

The total value of all paper imports from the United States in 1918 was \$729,044, as compared with \$1,356,230 for Great Britain, \$1,316,787 for Sweden, \$535,908 for Canada, and \$510,344 for Norway. The rise in total values for 1918 as compared with 1917 and 1914, is accounted for chiefly by the increased price of paper,

freight, etc., rather than by increased quantities of paper imported.

Straits Settlements

The United States and Japan furnish the bulk of the paper used in the Straits Settlements, says Consul General Edwin S. Gunsaulus, Singapore. There are no domestic paper mills to compete in the trade. A great deal of the business is in British hands, and the United Kingdom is concentrating its efforts on this market. It is only natural that the British import firms should favor the home mills unless they can obtain better terms elsewhere. The imports of paper into Singapore in 1917 were valued at \$607,382, and were divided as follows: United Kingdom, \$97,239; India and Burma, \$5,007; Federated Malay States, \$1,720; Canada, \$3,443; Hongkong, \$499,045; other British possessions, \$928. The Hongkong trade consisted of transshipments of paper manufactured in Japan and the United States.

Switzerland

Swiss paper factories, writes Consul Philip Holland, Basel, supply the domestic demand in most of the medium and coarser grades of paper, such as commercial writing, book, wrapping, and newspapers; Germany, England and Italy supply the finer grades of papers. The supply, however, owing to the difficulties due to the war and the inability of the Swiss mills to obtain their pre-war quantities of pulp, has not been equal to the demand, and paper, especially for newspaper consumption, was for a time rationed by the Government.

The forests of Switzerland do not yield sufficient wood for the mills, which depend principally upon Germany for white pine and aspen, although aspen and magnolia have been imported from the United States. Rags found in Basel and its vicinity are used to make high-class papers, and large quantities of old papers are recovered and made into wrapping paper and cardboard.

There is a demand for the best grade papers of all classes, which the Swiss manufacturers are endeavoring to fill by increasing their plants and improving their grades. But it will still require time to produce the same quantities as are imported from Germany, England and Italy. The Swiss mills make book paper, news print, wrapping paper, blotting paper, tissue paper, waterproof paper, cover paper, cardboard, parchment, drawing paper, twine and cordage.

The sale of American-made papers has not progressed in the Basel district—a fact which may be attributed to the proximity of the German manufacturers, whose agents canvass the field, ascertain the requirements of the market, and then deliver the goods exactly as wanted, and also pay freight from Germany to Basel.

Paper tape has been made in Basel for more than 50 years. This being the centre of the silk ribbon industry, and the tape having been made for rolling silk ribbons, the paper cutters readily adjusted their machines to the cutting of tape for the use of adding machines and cash registers. The prices in the local market for cash register and adding machine tape are \$2.50 per 75-foot roll of 12-inch width (\$2.90 for 15-inch width) and \$7.50 for 75-foot roll of 13½-inch width for checks (\$7.90 for 16-inch width).

Up to the present time machines for holding, moistening and cutting gummed paper rolls have been imported from England. The Progress sealing machine is the best known in this market. At present Austria is offering gummed sealing tape at 5 crowns (about \$0.05 at present exchange) for a roll of 720 feet; the printing thereon in Switzerland costs about \$0.20 a roll. For the present this price practically excludes other tapes in rolls of the same kinds; but, like all other materials temporarily lowered on account of favorable exchange, prices will soon adjust themselves for international trade.

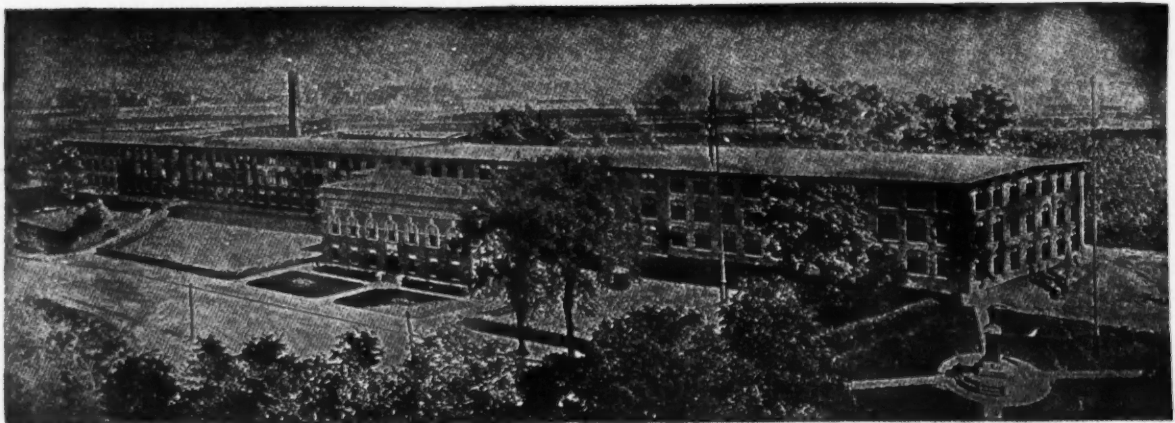
The paper bags used in Basel are chiefly of Swiss manufacture.

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**Manufacturers of Kenwood Felts and Jackets for all kinds of Paper and Pulp**  
**Seamless Felts both for high speed machines and fine papers**

## NATIONAL PAPER PRODUCTS CO. IMPROVEMENTS

Written Especially for the Annual Number of The Paper Trade Journal by G. R. De Vore.

The National Paper Products Company, which has had a remarkable growth since its inception a few years ago, is excavating for the foundations of its addition to the big boxboard mill in Stockton, Cal. The plant is to be doubled in capacity. When the work is completed the various structures will compose, practically, one building covering a ground space of 450 x 800 feet. Although the new Beloit Iron Works paper machine, which has been ordered, will not be delivered before May, 1921, the beaters, engines, etc., will be installed this fall, when the new buildings are finished. The new paper machine is an exact duplicate of the one now in use and is expected to produce about 90 tons of board a day. It trims 114 inches and has 85 dryers and three stacks of calendars. When the new machine is in operation, by the fall of 1921, the capacity of the plant will be increased to about 175 tons of box board and container board daily. The paper machines are steam-driven, but electric power is used for much of the auxiliary machinery. All of the beaters are driven by individual motors. The converting plant, for the manufacture of fibre containers will, also, be doubled.

A. E. Mandel, general manager of the Stockton Division, is very enthusiastic over the prospects of having increased capacity for taking care of the growth of business. His assistant, H. E. Nye, acts as engineer for the erection of the new buildings.

### San Francisco Division

The San Francisco plant of the National Paper Products Company, on the corner of Francisco and Montgomery streets, occupies a seven story building, giving floor space of 140,000 square feet. The plant is a very modern type, three sides being of the latest window construction, which allows plenty of fresh air and light. An employees' restaurant is conducted by the company as well as a fully equipped First Aid Department, which is in charge of a competent graduate nurse. A certain portion of the building is also set aside for rest rooms and recreation halls. Spiral chutes and conveyors make it possible for merchandise to be delivered from any floor, direct to the cars or trucks at loading platforms under the same roof. Four freight elevators and electric hoists facilitate the work of storing raw materials and finished products. A special gravity chute conveys paper waste from the upper floors to the first floor, where it is baled, loaded into cars and shipped to the Stockton mill of the National Paper Products Company.

This plant is given over to the manufacture of "Public Service," "Utility" and "Sunset" brands of paper towels, corrugated shipping cases and corrugated specialties, the manufacture of which is carried on by the latest type of improved machinery. Cut-cards, envelopes, confetti, serpentine, drug and coffee cans and all other paper cans, mailing cases, telescope tubes and other paper tubes in all dimensions and lengths are also manufactured here.

### Corrugated Department

The corrugated department occupies the fifth and sixth floors of the factory. The boxboard comes from the National Paper Products Company's mill in Stockton and the strawboard is shipped from the East. The corrugating machines, of the most improved type, together with the bottle carton machines, occupy the sixth floor. Here all corrugated papers, including single-faced corrugated rolls are manufactured. The stock used in the manufacture of the various types of containers is transferred to

the fifth floor where it passes through the various high speed scoring and slotting machines. Then it goes to the taping department, where each box is carefully taped by hand.

### Shipping Department Busy

During the past year vast numbers of corrugated cartons supplied by this company were shipped out of the state of California, packed with many millions of pounds of canned and bottled products, etc. Five special machines operate on creped paper and turn out great numbers of "Public Service" paper towels. The daily output is over 150 cases, each containing 7,500 towels. Special machinery is used to manufacture paper jars for milk, etc., with an ingenious device for crimping the edges. The shipping department is on the first floor; the paper tube and paper can departments on the second and third floors; envelope department on the fourth floor, and paper towel department on the seventh.

The plant of the San Francisco Division of the National Paper Products Company has reached a state of high efficiency under the skillful direction of A. L. Bobrick, general manager, who never misses an opportunity to make improvements in the equipment and output.

### Started About Five Years Ago

The nucleus of the National Paper Products Company was started, about five years ago in a small building at 622 Battery Street, San Francisco, as the manufacturing department of the Zellerbach Paper Company. Envelopes, paper tubes and cans were manufactured. Later, the manufacturing of paper towels was commenced and the National Paper Products Company was incorporated. In 1916, a modern factory was erected, at Francisco and Montgomery Streets, and a corrugated case plant was installed. About three years ago, in order to take care of Eastern towel business, the Carthage Paper Tissue Mills, in Carthage, N. Y., was purchased and enlarged. Crepe tissue and toilet papers are manufactured. Next, a large board mill and fibre container factory was built in Stockton, Cal., which was started up in December, 1918. Large quantities of container board, corrugated board and other materials for the use of the factories are produced, and the plant is to be doubled in capacity during the coming year.

### Officers of the Company

The National Paper Products Company gives employment to about two thousand persons in its plants in the East and West. M. R. Higgins is president of the company; I. Zellerbach and J. D. Zellerbach, vice-presidents, and A. I. Ellis, secretary. All of the stock of the company is owned by the Zellerbach Paper Company, which has a paid up capital of \$4,000,000 common stock; \$2,500,000 preferred stock, and a surplus of \$2,500,000. The combined stock and surplus of the two companies is about \$9,000,000.

### GOES WITH FLOWER CITY TISSUE MILLS CO.

William Roach, superintendent of the Skaneateles Paper Company for the past seven years, resigned his position last Saturday to take a similar one with the Flower City Tissue Mills Company at Scottsville, N. Y. The employees of the mill presented Mr. Roach with a Turkish rocker and smoking stand before leaving. Mr. Roach is succeeded as superintendent by Harry O'Neil of Mottville, who has been assistant superintendent. Jack Clark succeeds Mr. O'Neil as assistant superintendent.

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## BALTIMORE ROOFING & ASBESTOS CO.'S PLANT SOLD

At a receiver's sale held on March 25 the extensive manufacturing plant of the Baltimore Roofing and Asbestos Manufacturing Company, at Asbestos, Md., was purchased by the Congoleum Company, Inc., of Philadelphia. After remodeling, it will be operated as the dry-felt plant of the Congoleum Company, Inc., manufacturer of the well-known Congoleum Gold-Seal Art-Rugs and Floor-Coverings.

The plant at present consists of 11 buildings on about 20 acres of land in the village of Asbestos, and lying between the railroad and the Patapsco River, 24 miles from Baltimore.

The buildings are of substantial concrete construction, comprising a main building 867 by 54 feet, large warehouse, office building, power house, machine shop, storage and laboratory equipped with modern machinery, electric plant and other efficient labor-saving devices. Two sidings give direct access to the railroad and there is ample room for future expansion.

Although the plant is already able to turn out large quantities of dry felt, its capacity is far below the requirements of the Congoleum Company and orders have been already placed for new machines capable of a largely increased output.

With these additions the equipment will comprise one 112-inch four-cylinder and one 86-inch single cylinder paper machine, 18 direct motor-driven beaters, 21 120-inch dryers and other accessories which will give a total manufacturing capacity of about 15,000 tons of dry felt a year.

The rapid increase of the Congoleum Company's business has obliged it for some time to be on the lookout for increased manufacturing facilities, and it is fortunate in being able to secure a plant so suitable and so conveniently located with reference to its main factory.

The acquisition of this additional factory is another indication of the progressiveness of the Congoleum organization, which has grown tremendously in the last few years.

### SOUTH COVENTRY PAPER CO. SOLD

The South Coventry Paper Company of South Coventry, Conn., has arranged through the office of Gibbs-Brower Company, paper and pulp mill brokers, 261 Broadway, New York City, to have its paper mill property taken over by Charles E. Clute and John M. Bell, of Somerville, Mass., and Samuel N. Cohen, of Boston, Mass., and extensive changes and improvements are now being made at the plant. These gentlemen are arranging to incorporate under the name South Coventry Paper Mills, Inc.

The officers of the company will be Charles E. Clute, president; Samuel N. Cohen, treasurer; John M. Bell, secretary; Horace I. Wood, assistant treasurer.

It is the purpose of the company to manufacture a fine line of boards, consisting of fibre, counter, leather, heel, shank, inner sole, suit case, trunk, insulating, button, album, binder's, chair seat and mat boards, as conditions may warrant.

Arrangements have been provided so that spur track connections direct to the mill, and a large storehouse immediately adjoining the railroad can be built.

The company's office and salesroom will be at 7 Water street, Rooms 404-405, Boston, Mass., where all communications, orders, remittances, etc., are to be sent. Telephone Fort Hill 1801.

### AMERICAN WRITING PAPER CONFERENCE

During the convention the American Writing Paper Company maintained headquarters in room 114 at the Waldorf-Astoria, to be used as an appointment room for the convenience and accommodation of convention attendants. The decision to maintain such headquarters was not arrived at until the week preceding

the convention, and the announcement was therefore too late for space in the American Paper and Pulp Association's official program.

The headquarters were in charge of W. J. Norton, secretary of the sales planning division. A number of the company's branch managers and salesmen from its sales offices throughout the country, attended the convention, and on Friday morning left the city on a specially reserved Pullman for Holyoke, where the American Writing Paper Company held its sales conference through Friday and Saturday of last week.

The program of the conference follows:

Friday—3:00 P. M. Opening talk—C. E. Lincoln, General Sales Manager. Discussion—"Getting Jobber Distribution for Eagle A Mill Lines." Market Conditions—M. L. Cramer, General Purchasing Agent. Dinner at Hotel Nonotuck 6:30 P. M. Chairman, B. E. Hutchinson, Treasurer, Advertising and Sales Promotion—Robert E. Ramsay, Director of Advertising. Manufacturing Development—Herman R. Harrigan, Production Engineer. Experimental Machine—Fred Clark, Director Department of Technical Control. Forecasting—George A. Galliver, President.

Saturday 9:00 A. M. Branch Managers' Conference.

### NAVIGATION OF FOX RIVER OPENED

Navigation of the Fox River and Lake Winnebago was formally opened Monday, April 12, by the United States engineering department but it will be several weeks before boats make use of the river unless the water subsides rapidly. The Fox River Navigation Company, made up of papermill owners in Appleton, Kaukauna, Neenah and Menasha, is making plans for early transportation of coal by barge from the docks at Green Bay to their yards. River transportation proved its value last year when member companies were able to operate during the strike of railroad men which shut off the coal supply of several Fox River valley industries.

Paper mills at Brokaw, Wis., and Rothschild, Wis., were again compelled to curtail operations when the Wisconsin River returned to flood stage. After the water had subsided sufficiently to permit the mills to resume operation after the first flood, a heavy rain set in and in a few hours the river had returned to flood stage. The Wausau Paper Mills were forced to close down entirely but the Marathon Paper Mills at Rothschild continued to operate two departments. The water receded rapidly, however, after the rain and the mills are again running.

### GOVERNMENT PAPER BIDS AND AWARDS

The purchasing officer of the Government Printing Office has received the following bids for 3,700 lbs. of blue and white 24 x 32 No. 36 ledger paper: Southworth Company at 40 cents and 42 cents per lb.; R. P. Andrews Paper Company at 425 and 435 cents; and American Writing Paper Company at 41 and 42 cents.

The American Writing Paper Company has been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 8,750 pounds of 21 x 32½ No. 48 blue commercial ledger paper at \$.2975 per pound. Bids for this paper were opened on March 29.

The Southworth Company has been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 3,700 pounds of 23 x 22 No. 36 blue and white ledger paper at 40 and 42 cents per pound. Bids for this paper were opened on April 5.

Bids will be opened at the Printing Office on April 19 for 1,000,000 pounds of U. S. postal card cream bristol board in 44½ inch rolls, basis 22 x 28 100.



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Add to this Caldwell methods of construction, and you have a tank that cannot be excelled in length of life and service.

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## PHILADELPHIA PAPER TRADE DISTURBED

Conditions in the paper market of Philadelphia are certainly most chaotic and by many are regarded as unhealthy. The sale of a considerable quantity of news at 13½ cents was reported in trade circles during the week. A jobber who found it almost imperative to supply a consumer with five tons of kraft found after a canvass that the best price he could get for an immediate delivery was 11½ cents, necessitating a charge by him of 16 cents to come out with a reasonable profit after overhead and other handling expenses were charged off.

These two concrete illustrations of the condition of affairs are not isolated; they are really typical. Everywhere one hears the story of exhausted stock, of consumers clamoring for deliveries without regard to price, of virtually pandemonium in the jobbing business. Demand for all kinds of paper seems actually to be increasing daily while the hope for relief through freer supplies is vanishing. Embargoes which the trade expected weeks ago were about to be taken off, still exist while restrictions almost as effective as embargoes, have been placed on shipments because of the labor troubles on the railroads.

There is this satisfying feature to the situation however; the consumer seems fully to realize the obstacles in the way and to be willing to go half way or more to meet them.

### Stock Sales Strengthen

In the paper stock market the week developed a heavy increase in demand. The tide turned from a week or two back when stock was sent here from New York because it could not be forwarded to the New England consuming centers; now New York is looking to this market to supply stock and as a consequence there have been advances on many lines principally on No. 2 soft white, No. 1 old manilas, container manilas, over issue news, No. 1 mixed and commons. Rag stock continues in good demand but there have been no further advances from those made just a week ago.

### Smythe Back from Australia

The one delightful happening of the week was the return to the city from the other end of the world of J. L. N. Smythe, president of J. L. N. Smythe & Co. He reached Philadelphia from Australia on April 5 and on a birthday—but which one he smiling declines to say, after an absence of seven months. On Friday last National President of the National Paper Trade Association Harvey N. Platt, who for several months has been touring northern Europe, also returned to the city.

President Smythe was as bronzed as if he had been sunning himself in Florida. He left this city September 15 last, spent a few weeks in the Rockies and in early October set sail from Vancouver, stopping off for a hundred mile drive through Hawaii and calling at the Fiji Islands. Then he proceeded to Australia. Said he, "I spent most of my time in Sydney but visited Melbourne, Adelaide and other centers. In Adelaide the temperature while I was there stood at 160 degrees in the sun and 107 in the shade. But the air was so dry that the heat was less uncomfortable than 98 degrees are in Philadelphia.

"The trip was made partly for pleasure but largely for the development of export business and I am quite satisfied with the results secured. We of the United States must realize however that there are obstacles to be overcome before we can develop a large relationship with Australia. Many merchants there are inclined to look upon us as a race of money makers. I heard it said that the U. S. stayed out of the war to make money and then entered it to make more. There is also some feeling against us because of the part we played in Paris. The Australians are most loyal to England and perhaps cannot understand why England at the end of the Great war is not occupying the position England always has

in the past, of being the chief factor in settling conditions. And finally there is also some feeling because American paper manufacturers, about the time there was a slump here just after the Armistice, seemed to be dumping all the goods they could get together into Australia. Their warehouses were filled to overflowing. I saw paper stacked up on the open prairie and protected only by a covering of tarpaulin. Before I left Australia however the paper stocks had been pretty well exhausted and fears were entertained that there would develop a great shortage now that the market in the States was an attractive one for the mills and because of the shortage of production compared to consumption."

Mr. Smythe had intended sailing from Sydney December 28 but at the last minute changed his plans; when he did sail March 1 it was on the same steamer he had intended to take in December. The boat had been tied up in the interval because of labor troubles.

### Keystone Mill Resumes

The Keystone Mill at Upper Darby has resumed operation. As reported in these columns the mill, reconstructed after the explosion in the boiler room two months ago, caught fire just a week ago and for a time was threatened with destruction. The flames broke out under the platform used to receive stock, spread to the machine and finishing rooms, burning through the roof and destroying a considerable quantity of sulphite and much soda pulp, lime, soda ash and rag stock. The loss was inventoried during the week at between \$28,000 and \$30,000 covered by insurance. Permanent repairs were made so speedily that on Tuesday last operations were resumed.

### W. A. Hentz Returns from the South

W. A. Hentz, Sales Promotion manager for the D. L. Ward Company returned to the city during the week after a visit, accompanying President George W. Ward, to the Ward Company branch houses in Baltimore, Washington and Richmond. President Ward then journeyed on to Hot Springs from which he will return in time to attend the convention in New York this week. Mr. Hentz believes that the South will offer in the next decade a greater opportunity for business than any section of the United States and that so far as the Ward Company is concerned, sales will be limited only by the tonnage which it has available.

### Papermen for Daylight Saving

There was forwarded to Mayor Moore during the week, a resolution adopted by the Fine Paper Division of the Philadelphia Paper Trade Association setting forth that it favored adoption of the daylight saving program and that it will gladly join in the movement for daylight saving if a majority of the business interests of the city favor the beginning and ending of the day's work an hour earlier than at present. Councilman Simon Walter, head of the paperhouse bearing his name, is taking a deep interest in the daylight saving movement and has been in conference with Mayor Moore and officials of the Chamber of Commerce and the Board of Trade in its behalf.

### Notes of the Trade

C. H. Peoples, newly elected vice-president of the States Paper Company, returned to the city during the week after a visit to Baltimore where he attended the wedding of John C. Burke, secretary and treasurer of the company.

President Norbert A. Considine of the Paper House of Pennsylvania is back from a tour through the New England paper mills. He reported that as a rule none of the mills would take business for delivery until next year.

The Thomas M. Royal Bag Company, Bryn Mawr, converters and manufacturers of paper bags, is making extensive additions to its plant and is contemplating going on a night force basis.

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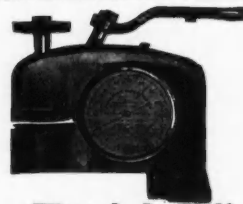
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## Canadian Government and the News Print Industry

**Press Wielded Big Club and Forced Government to Restrictive Measures—Both Controller and Government Anxious to Drop Control—Manufacturers Challenge Jurisdiction and Controller Admits He Doubts It—Papers Suspend Through Shortage—The Complications of Canadian Pulpwood Embargo—Underwood Resolution, Recently Introduced in the United States Senate Has Complicated Matters.**

Written Especially for the Annual Number of the Paper Trade Journal

As far as the relations between the Government and the news print manufacturers are concerned the year that is past has been the stormiest in the history of the news print industry, and the end is not yet.

The whole trouble has arisen out of the action taken by the Government under the War Measures Act to regulate the selling price of news print in Canada. Just as the power of the press has been evidenced on many occasions in the United States in forcing the Government to action in connection with the supply of news print, and notably in putting news print on the free list, so the power of the press forced the Government to regulate the selling price of news print in Canada, although no such drastic action was taken in connection with any other commodity.

### Newspapers Wielded Big Stick

The Canadian newspapers wielded the big stick with a vengeance, and it is probably true to say that had not the Government taken the action it did, it would have been under such a storm of criticism all along the line that it would have been impossible for it to have continued in office. And any Government which succeeded it would have been subject to the same influence.

When the year began this restriction on the price of news print had been in force for some considerable time. In September of 1918 the Paper Controller had fixed an interim price of \$69 per ton for all newsprint sold in Canada in rolls. In June of last year he issued an order maintaining this price, after having made exhaustive inquiries as to costs of production, and so on. The newspaper manufacturers appealed to the Paper Control Tribunal against this order, maintaining that the price was not high enough, and the publishers also appealed to the court, maintaining that it was too high.

The matter was argued before the court at considerable length, and last September the Paper Control Tribunal handed down a judgment fixing a price of \$66 per ton for the period between July 1 and December 1 of the year 1918, and ordering the news print manufacturers to make a refund to the publishers of \$3 per ton on all news print supplied them in that period. The evidence as to costs on which this decision was based had relation to the low-cost months of June, July and August. The manufacturers asked for permission to introduce evidence as to costs during the winter months, but this was refused. The price of \$69 per ton, however, remained in effect from December 1, 1918, onwards.

### Anxious to Drop Control

Negotiations continued for several months relative to the demand of the manufacturers for further increase in the price of news print. Negotiations concluded with a hearing in Montreal at which it was intimated at the news print enquiry yesterday, by Commissioner Pringle at the Windsor Hotel that he and the Government were anxious to drop Government control of the industry and the fixing of prices but that this could not be done at the time without

producing a chaotic state of affairs. Mr. Pringle refused to issue any order fixing prices, but stated he would make suggestions as to price to the Government, and leave it up to them to settle the matter and take the responsibility remarking if he were to fix the price it would be not less than \$75 a ton. He further intimated that he was preparing to drop the work and would clear up the matters now before him, after which his business with the inquiry would cease.

Sharp criticisms of the paper control were made during the meeting, Aime Geofrion, K. C., for Price Bros. & Co., Quebec, challenging the jurisdiction of the Government in such matters and intimating that his clients would refuse to obey any orders issued. A more modified challenge was made by Mr. Henderson, K. C., Ottawa, for J. R. Booth, who also doubted the Government's jurisdiction. Both argued that since the war is ended action under the War Measures Act has ceased.

J. F. Orde, K. C., for the E. B. Eddy Co., objected to the price fixing, and said his firm would cut off a large proportion of the 150 smaller Canadian publishers they are supplying, leaving them to get paper where they can, and turn their energies to more profitable fields, with the higher prices outside Canada.

Many other interested parties appeared, objecting to price fixing now the war is ended, and demanding that the laws of supply and demand be permitted to operate on prices.

### Controller Doubts His Jurisdiction

Commissioner Pringle closed the general discussion by saying that he did not propose making any order.

"I purpose making a recommendation to the Government," he said, "and if they see fit to make an order and take the responsibility, it is theirs, not mine. I have doubts as to my jurisdiction or how long it will last, and when I am asked to make an order for six months I have grave doubts as to whether my jurisdiction would last for that period. Therefore, it seems to me the responsibility rests with the Government."

As to supply, that had been very difficult during the past three months, probably due to the scarcity of paper in the United States, and the willingness of publishers there to pay practically any price for their supplies. Two months ago the Government had advised him that this paper control must cease, and that expenditures must end, which resulted in a stoppage of the accountancy work for keeping track of prices. He had felt that the original price of \$50 a ton was too low, and later increased it to \$57, and then to \$69, to level up prices so as to cover previous losses. This was appealed against, and the Paper Control fixed the price at \$66, considering only actual conditions. He understood now that both manufacturers and publishers were dissatisfied with the price of \$69.

### Would Fix Price at \$75.00

"If I were fixing a price," said the Commissioner, "I would fix not less than \$75 a ton, knowing conditions as they are, and I am satisfied the larger publishers would be satisfied to pay that



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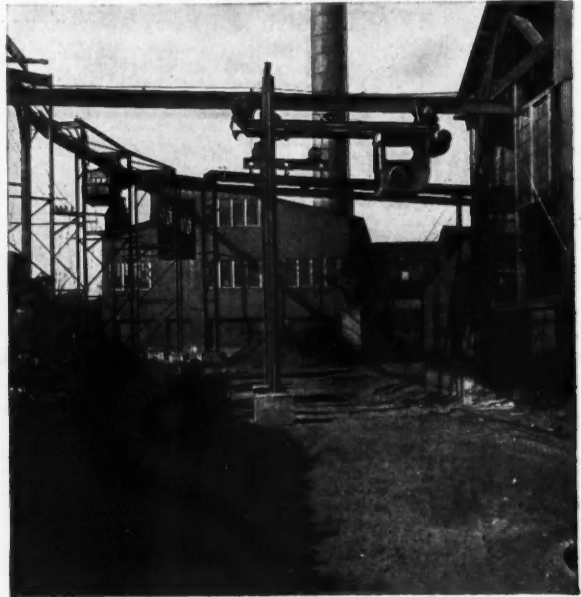
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if they were absolutely sure of their supply. I would suggest to the Government to get away from questions of actual cost and reasonable profit and fix what they consider a reasonable price under the circumstances.

"A good deal has been said about the continuance of this control. That is not for me to discuss. I know the Government want to get away from it as soon as they can."

The control had been established for war conditions, but everybody knew normal conditions had not yet returned, and if the paper control were precipitately dropped publishers would get into a chaotic state, therefore, especially in view of recent conditions, the Government did not see its way to drop the paper control at present.

"My position is not an enviable one," said Commissioner Pringle. "It has been suggested that this control be continued by some other board, and I am going to suggest to the Government that it be continued by another board which can look after it, as I have other things more agreeable to engage my attention than issuing orders against the manufacturers of this country."

#### A Tentative Agreement on \$80 a Ton

Following this meeting a delegation of both the news print manufacturers and the publishers went to Ottawa and had an interview with Sir Henry Drayton, Minister of Finance, who received them on behalf of the Government. Both parties presented their case, and before the interview ended, both sides agreed to a price of \$80 per ton for six months, beginning January 1, 1920. It was further agreed that at the end of the six months during which the \$80 price would prevail, the control of news print in Canada should cease and that thereafter the lowest export price is to prevail in Canada. This price will be based on the published figures of the International Paper Company, the Canadian Export Company, and the George F. Mead Company. It was left to Sir Henry Drayton to put this agreement through in the form of an order-in-council.

This was regarded as being in the nature of an amicable settlement of the whole controversy and both publishers and manufacturers breathed more freely. But a new complication arose, owing to the fact that Price Brothers & Co. declined to be party to this agreement, while the Ft. Frances Pulp and Paper Company, which had been supplying more than its quota in Canada, owing to its mills being much nearer Western Canada than any of the others, decided to limit the supply to 15 per cent of its output, which was all the Government order called for from the industry in general.

As soon as the Ft. Frances company limited its supply for Canada to around 15 per cent, the western papers began to feel the effects and a crisis was the prospect, which resulted in the suspension of the Winnipeg and other western papers for a week or ten days. The Canadian Government ordered the Company to continue to supply all the requirements of the western papers and, by the arrangement of the Eastern manufacturers of news print, undertook to make up the deficiency thereby caused in the supply of news print by the Ft. Frances company to the American publishers. The company refused to accept anything but absolute bona fide delivery of this paper from eastern mills and there was a clash between the company and the Government which resulted in the company sending its representatives to Ft. Frances to commandeer supplies. Ultimately the arrangement was patched up by which the western papers got supplies, but ever since that time they have been short at intervals and on several occasions have had to cut out all advertisements and publish miniature editions. As regards Price Brothers & Co., Sir William Price, the head of the firm, issued a statement outlining the position of his company. He said: "During the war we have, like all other good citizens, bowed before all orders issued by the Government of Canada and by its commissions, although in many cases we were advised that these orders went beyond the power of those issuing

them, but now that the war is over and no question of patriotism or want of loyalty to the state can be raised, we are determined to resist what we think are arbitrary, oppressive, unreasonable and unlawful commands.

"As business men, the whole question for us is as to whether we, manufacturers of paper, of all other producers, are to be restricted in our constitutional right of dealing with whom we choose and of retaining our right of freedom of contract.

"We base our refusal upon the total absence of jurisdiction in the Ottawa authorities and in the paper controller in the premises and we will seek, by all legal means at our disposal to resist the carrying out of the orders given. Our views in this connection were laid before Mr. Pringle by our counsel prior to the rendering of the disputed order. Of course, the Government of Canada has the use of powerful weapons, such as the closing of the frontier to our products or the threats of levying an unjust and discriminative taxation upon our business to bring about a compliance with its orders, and the courts do not give us an adequate measure of relief as the Government cannot be sued without its consent. But, nevertheless, we will resist to the utmost of our power so that our own, as well as the industrial and commercial liberties of others may be protected against vexations and arbitrariness."

#### A Clash with the Government

Meanwhile, the clash between the paper controller, the Dominion Government, and the Ft. Frances Company had brought about the resignation of Mr. Pringle, who had resigned the function of paper controller since the institution of that office and ultimately the work of paper control was transferred to the Board of Commerce, a commission which had been appointed some time previous by the Government for the purpose of regulating the cost and distribution of the necessities of life. This Board made an order on Price Brothers & Co. to supply paper to the Montreal *Star*, the Montreal *Herald*, and *Le Samedi*. The company refused upon the grounds already stated, and after prolonged negotiations during which several Montreal publishers came near to suspension, owing to lack of news print, the company was informed that it would not be allowed to appeal to the Superior Court against the jurisdiction of the Board of Commerce unless it first complied with the order of the Board and shipped supplies of news print to the Montreal publishers whom they were ordered to supply. The Company then agreed to ship the required news print at the fixed price of \$80 per ton, a condition of the agreement being that the difference between this price and the lowest contract price for export, namely \$90 per ton, should be paid into a trust fund, pending a decision of the Superior Court, and in addition to this ten dollars per ton paid into a trust fund, a further charge of 13¼ per cent representing the premium on United States funds, was also to be paid into the trust fund. Before this agreement had been reached, Judge Robson, the head of the Board of Commerce, resigned, declaring that he was out of sympathy with the law he was called upon to enforce.

Following this solution of the difficulties in Eastern Canada, the news print situation in Western Canada again became acute. The western papers, notably those of Winnipeg, complained that supplies of news print were not coming forward in sufficient quantity, and ultimately it was arranged that instead of calling upon the Ft. Frances mills for practically the whole of the supplies, a portion of the supplies should be shipped to the western papers from eastern mills.

#### Government Heartily Sick of Control

The stand taken by Price Brothers & Co. and by the Ft. Frances Pulp and Paper Company undoubtedly reflected the feelings of the majority of the news print manufacturers, who submitted to the Board's orders for the sale of news print in Canada at \$80 per ton only under protest. The general feeling was that all price restrictions ought to be removed, and the Government

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Save two-thirds the cost and three-quarters of the expense of putting on brass and bronze wires by using our nickel alloy wires.

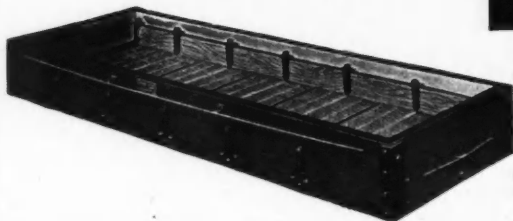
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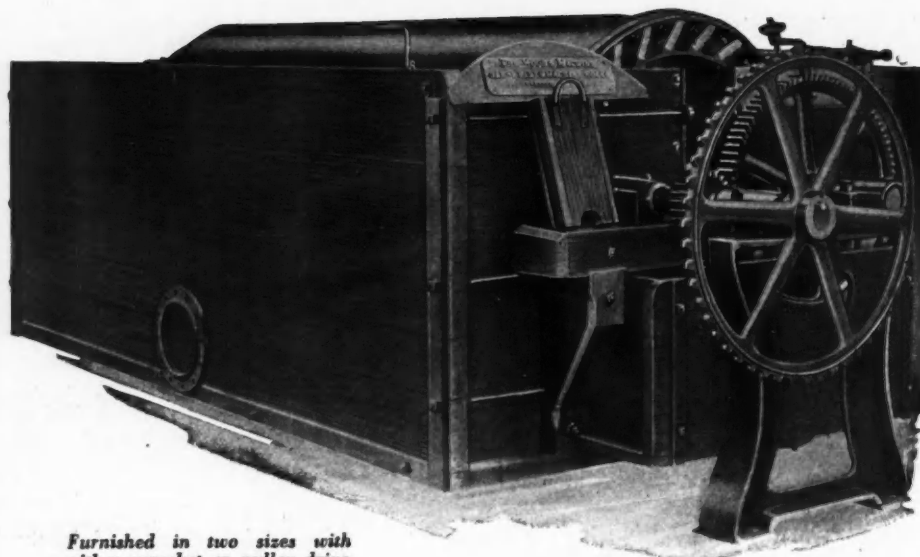
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had to acquiesce in this view by making the price of \$80 only for the first six months of the present year, it being expressly stated that after that period the lowest export price was to prevail in Canada. There can be no doubt that the Government was heartily sick of the whole matter, and the opinion is that the whole attempt on price restriction will be dropped at the earliest opportunity, unless the publishing interests are again able to intimidate the Government.

Another complication of the matter is that other countries outside the United States doing business with Canada have strongly objected against being charged higher prices for news print than prevails in Canada. For instance, the publishers of New Zealand have made representations to the New Zealand Government demanding that if this discrimination continues, the preference given to Canadian paper should be removed.

#### Canadian Government and United States Trade

The development of relations between Canada and the United States over the question of news print furnishes one of the most interesting topics of speculation in the industry. There are two possibilities that appear to be outstanding at the present time. One is that the United States will press for the removal of the embargo on pulpwood which has now been enforced for some years past by the various provinces of Canada; the other is that Canada may put an export tax on pulp, pulpwood, and news print. Tentative suggestions along these lines have already been made. For instance, it was learned some time ago that the Canadian Government was contemplating an export tax of ten dollars per ton on news print and a tax on pulp and pulpwood. This matter was given publicity and the Government denied that it had any immediate intention of imposing such a tax. The possibility, however, remains.

The Underwood resolution put forward at Washington for bringing pressure to bear on the Canadian Government to lift the embargo on pulpwood on Crown Lands has complicated matters. It may be explained that although large areas of timber limits are the freehold property of private interests, by far the

largest proportion of the timber lands of the various provinces are vested in the Crown. When Mr. Underwood first introduced his resolution, it was stated that the Dominion Government had no power in the matter of the embargo which had been instituted by the various provinces upon the pulpwood cut upon all Crown Lands. It was stated that the Dominion Government had no power in the matter of this embargo, as the various provinces retained the power, under the British-North American Act, of controlling their own natural resources.

#### Provinces Have No Power of Embargo

Legal authorities hold that this is not a strictly correct interpretation of the matter. They say that the Dominion Government alone has power to exercise the function of instituting an embargo and that all the various provinces have done is to insert a clause in all permits, or leases, appertaining to Crown timber lands, requiring that the pulpwood cut under the terms of the permit, or lease, be manufactured before being exported. Therefore it would seem that while the action of the Provincial Government in the matter is in effect an embargo on pulpwood, it is not an embargo in the strict sense of the word and this explains why no restriction has so far been put upon the export of pulpwood from freehold timber lands.

If the question becomes one of international negotiation it will result in some interesting complications for the provinces are extremely jealous of any action of the Dominion Government which would in any way restrict their absolute control of their own natural resources. As far as the provinces are concerned, the institution of this restriction on the export of pulpwood has been of immense benefit in establishing new industries and building up new centres in population and they are absolutely determined to keep the present restrictions in effect.

[NOTE: Since the foregoing was written the Supreme Court has decided that the powers exercised by the Board of Commerce as news print controller were without jurisdiction and inoperative in law, and the board has announced that it will relinquish control.—EDITOR.]

## RED RIVER PAPER MILLS TO START SOON

The Red River Paper Mills, Ltd., will soon have in operation its new plant on the Red River near Winnipeg, Canada. The venture is described as follows in the *Winnipeg Community Builder*, the official organ of the Winnipeg Board of Trade:

"Soon Winnipeg will have in full operation one of the best equipped paper mills in Canada. Remarkable success has attended the efforts of the new company in organization work, and prospects are extremely bright for capacity business this year.

"The mill will manufacture new paper from waste-paper now being destroyed and burned, or disposed of to American mills for remilling. Thousands of tons of paper wasted every year in Winnipeg will find its way back into the raw product through this mill.

"A valuable site for the mill has been purchased on the Red River with 350 feet water frontage, allowing at a later date for ample expansion of the mill, as business develops. Water connections have all been made with the river, safeguarding the mill from any water shortage, but the Shoal Lake water will be used for manufacturing purposes at all times, its softness making it specially adaptable for paper-making. Huge heating and pulping engines, refiners, paper machines and all modern equipment are now being installed, and all will be driven by electrical power. Steam will only be used for the purpose of heating drying cylinders of the paper machines and for heating the mill during the winter. The installation of machinery is in the hands of J. S. Hughes, late of Nova Scotia, and who has had a life-long experience in paper making."

The board of directors of the company is as follows:

J. J. Kilgour, retired; D. A. Clark, president Clark Bros. & Company, whole stationers; A. K. Ferguson, secretary-treasurer Kilgour-Rimer Company; George Wilson, director Clark Bros. & Company; Chas. F. Gray, mayor of Winnipeg; Fletcher Sparling, general manager Hudson Bay Company; J. A. Banfield, president Retail Merchants' Association of Canada.

#### HIGHER COAL FOR MICHIGAN PAPER MILLS

To use a common sporting expression, the paper manufacturers of the Kalamazoo Valley district and immediate territory in southwestern Michigan have been handed a fine wallop on the jaw.

This came last week in the announcement that the prices of all grades of bituminous coal would be advanced immediately. This notice followed the granting of a 27 per cent wage increase to the miners and demonstrated the ability of the coal operators to skillfully pass the buck to the other fellow.

Illinois coal went up 55 cents a ton at the mines. Little of this is used in Kalamazoo. Kentucky and West Virginia showed an even greater advance, in many cases as much as \$1.50 to \$2 a ton.

Paper mills in southwestern Michigan use from 425,000 to 450,000 tons of coal annually. Most of this is contracted for, the contracts running into this month and May. Despite the existence of these contracts, many of the mills have been forced to buy in the open market, paying prices well in advance of that stipulated twelve months ago.

"Some Papers to be all three!"

**GOOD Papers**  
**KVP**

**BETTER Wet than Dry**  
**KVP**

**BEST! Brands**  
**KVP**

KVP Vegetable Parchment is a GOOD strong, pure paper for wrapping and packing foods and other products—BETTER wet than dry—the BEST in the world for its purpose.

KALAMAZOO VEGETABLE PARCHMENT COMPANY,  
KALAMAZOO, MICHIGAN,  
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Spruce and Poplar Ground  
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*Domestic*

*Export*

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ESTABLISHED 1893

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WAX PAPER

CORRUGATED PAPER      ENVELOPES

Scallop Strips for Candy Boxes

GUMMING MACHINES

For COLD or HOT GLUES

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Consult us if you are looking  
for Foreign Rags

PAPER MAKERS' SUPPLIES

## MICHIGAN DIVISION SUPERINTENDENTS' ASSOCIATION

Written Especially for the Annual Number of The Paper Trade Journal

An organization that has attracted favorable attention in the Kalamazoo Valley district and accomplished much good for its collective and individual membership, is the Michigan division of the American Pulp and Paper Mill Superintendents' Association. Formed during the past year this organization now has an enrollment numbering 47 and includes representatives of 29 mills located in Michigan and northern Indiana.

Meetings, accompanied by dinners and smokers, are held regularly each month and numerous out of the city speakers have appeared at these gatherings. The programmes have been interesting and instructive.

E. T. A. Coughlin, superintendent of the coating division of the Monarch Paper Company, is president, while the duties of

perintendent, and A. E. Camp, Assistant Superintendent, Michigan Paper Company, Otsego; C. W. Ullrich, General Superintendent, Bardeen Paper Company, Otsego; Albert H. Parker, Bardeen Paper Company, Otsego; C. W. Ulrich, General Superintendent, Wolverine Paper Company, Otsego; Mr. Sprang, General Superintendent, MacSimBar Paper Company, Otsego; Harry Urick, Superintendent, and W. R. McPherson, Superintendent, Eddy Paper Company, White Pigeon; Ed. Preston, General Superintendent, American Coating Mills, Elkhart, Ind.; Mr. Hamilton, Mengel Box Company, Elkhart, Ind.; E. A. Hibbard, General Superintendent, French Paper Company, Niles; N. M. Brisbois, General Superintendent Sutherland Paper Company, Kalamazoo; W. H. Wightman, General Superintendent Lee Paper Company, Vicks-



EDWARD T. A. COUGHLIN, PRESIDENT

secretary-treasurer devolve on G. H. Pountain, general superintendent of the Monarch Paper Company. Luther A. Parker, superintendent of the coating division of the Bryant Paper Company, is vice-president.

The membership of the organization follows:

E. H. Gilman, Bryant Division; Alfred E. Bryant, Milham Division; Charles Keelan, Superior Division, and Luther A. Parker, Imperial Division, Bryant Paper Company, Kalamazoo; J. J. O. Connell, General Superintendent, F. Johnson, Assistant Superintendent, and J. Kuss, Coating Division, King Paper Company, Kalamazoo; M. Redmond, General Superintendent, Con Redmond, No. 1 Mill Superintendent, William Reynolds, No. 2 Mill Superintendent, David Beveridge, Riverview Division, J. Kress, Coating Division, and Peter Denner, Coating Division, Kalamazoo Paper Company, Kalamazoo; E. T. A. Coughlin, Coating Division, and G. H. Pountain, General Superintendent, Monarch Paper Company, Kalamazoo; A. G. Wightman, General Superintendent, Hawthorne Paper Company, Kalamazoo; C. Harter, General Superintendent, Rex Paper Company, Kalamazoo; E. Yahnke, General Superintendent, and J. Breyfogle, Standard Paper Company, Kalamazoo; Jacob Parent, General Superintendent, Western Board & Paper Company, Kalamazoo; N. J. Nicks, Kalamazoo Vegetable Parchment Company, Kalamazoo; William Thomas, General Su-



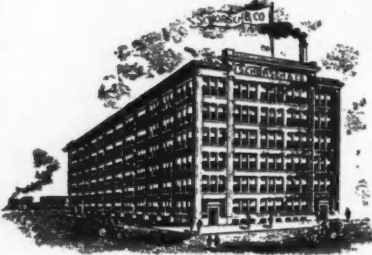
GEORGE H. POUNTAIN, SECRETARY-TREASURER

burg; C. W. McAlpine, General Superintendent LaSalle Paper Company, South Bend, Ind.; John E. Daley, General Superintendent, Port Huron Sulphite and Paper Company, Port Huron; Max Oberdorfer, General Superintendent, Filer Fibre Company, Filer City; Fred A. Smith, General Superintendent Mullen Brothers Paper Company, Benton Harbor; John P. Cooney, General Superintendent Peninsular Paper Company, Ypsilanti; Dave Prevost, General Superintendent Fletcher Paper Company, Alpena; Walter E. Sooy, General Superintendent, Michigan Carton Company, Battle Creek; T. W. Dunn, General Superintendent Detroit Sulphite Pulp & Paper Company, Detroit; Mr. Bithner, General Superintendent American Box Board Company, Grand Rapids; Clarence Thorne, General Superintendent, Lew Weber, Assistant General Superintendent, and Frank Kress, Coating Division Superintendent, Watervliet Paper Company, Watervliet; William Carroll, Assistant Superintendent Berdeen Paper Company, Otsego.

### BLOSSVALE PAPER MILL SOLD

The Foley Paper Mills, Inc., have purchased the tissue mill at Blossvale, N. Y., from the Blossvale Paper Company. The new company will continue to manufacture manila and No. 2 white tissue. T. J. Foley, of Rochester, formerly manager of the Mumford Paper Mills, Inc., is president and manager.

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Writing, Book and Tissue Papers

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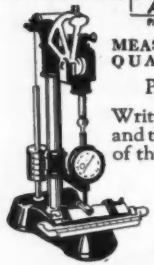
EDWIN J. DEWEY, Manager Pulp Sales  
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MEASURES EVERY PHYSICAL QUALITY IN MATERIAL  
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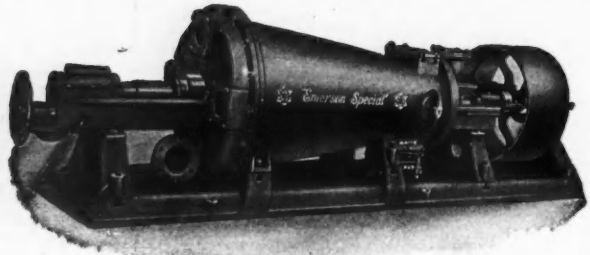
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**DIAMOND GRADE FOR PAPER MAKERS**  
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**EMERSON BEATING ENGINES**  
They seldom wear out and are never thrown out. PERFECT CIRCULATION. NO "PADDLING."  
The "EMERSON" JORDAN does its work with half the power required by others of no greater capacity. WRITE FOR DETAILS



## New York Market Review

Office of the PAPER TRADE JOURNAL,  
WEDNESDAY, April 14, 1920.

New York is threatened with a paper famine unless the railroad situation loosens up very soon. The New York Central and New York, New Haven & Hartford railroads are unloading their cars at Harlem, the uptown New York station, from where city truckmen are charging exorbitant rates for drayage to warehouses and outgoing trains. Boat lines—with the exception of some traffic on the Hudson River—are tied up as well as the all-rail routes, and even tug boat operators are reported as having recently joined in a walkout. The opinion was expressed by an authority recently, that if present transportation conditions continue for another week, there will be no paper available in any quantity in this city, and that existing conditions are extremely serious.

With transportation conditions as they are, it must readily be seen that the daily publications are about to suffer greatly for want of paper. The seriousness of the news print situation has been evident right along, and now with last week's strike of 40,000 rail men in New York, the situation takes on a really critical turn. It is thought that news print mills, though having labored for some time past with the scarcity of pulp at high prices, will now probably accumulate a large portion of their production owing to their inability to make shipments, and when the present labor trouble is settled, vast quantities of non contract stock will move at even higher figures than before. It was rumored last week that several kraft mills have discontinued the manufacture of that grade of paper, and are turning their machines over to the production of news print, though this rumor could not be confirmed.

Book paper stocks are depleted throughout the jobbers' market. Mills manufacturing book paper are being put further behind in their deliveries due to the railroad embargoes and strikes and a complete dearth of stocks is threatened in the near future unless the transportation problem is soon solved.

Trading in the tissue market continued active during the past week, and orders were far in excess of available material. Mills are working to capacity, and the market might well be termed a sellers' market. Demands from foreign countries continue to pour in, and the filling of a large number of these orders is in large measure responsible for the dearth of stocks on hand for domestic consumption.

Supplies are far behind the demand in the board market. Consumers are not getting adequate supplies and the recent railroad trouble is making conditions in this market worse than before. Box manufacturers' stocks are low, and it was reported that many have discontinued taking further orders with board at its present level, not knowing when the break might come, and doubtful as to whether or not they can sell their products at the advanced prices. Box users, on the other hand, are packing more merchandise to the box in an attempt to economize and at the same time prevent a shortage.

### Mechanical Pulp

There has been no improvement in the wood pulp market during the past week. The demand continues heavy and steady, and price seems to be the least consideration with the paper mills as long as they can get their raw material. Snow in the north was reported last week as melting gradually and advices from the pulp region state that a normal production will be under way within thirty days, if present conditions continue. There have been no heavy rains to thaw the ice too quickly, except in Wisconsin, where it was said that floods have closed down several pulp and paper mills.

### Chemical Pulp

Last week brought no relief to the chemical pulp situation. Demand continued in unabated volume and supplies were available in small lots which brought fancy prices on the bidding market. Importations were few and far between due to the frozen Baltic, and supplies are not expected to reach this country from Scandinavia until sometime in May.

### Domestic and Foreign Rags

The rag market picked up slightly during the past week. Freight embargoes and the recent railroad tie-up have been the chief hindrances to normal trading and stocks are accumulating to some extent because of the packers' inability to ship at this time.

Small shipments of foreign rags have been arriving from time to time, but not in large enough volume to greatly influence the domestic market.

### Old Rope and Bagging

Demand for manila rope continued strong during the past week and supplies are seemingly adequate in spite of the fact that collections are not particularly brisk. There is practically no call for bagging and packers and dealers are stocked to the roofs with the accumulations of this material which began and has continued ever since jute butts were first imported from India.

### Waste Paper

There is a strong call for waste paper and plenty of the stock is on hand, but there has been and is no adequate means to transfer it to the paper mills. With the dealers' disposition to dispose of the accumulated tonnage, low bids from paper manufacturer have been countenanced lately, but with the railroads in their present condition, even this stock sold at the lower level cannot be moved. With an improvement in transportation facilities, a higher level is looked for by the local waste paper dealers.

### Twine

There have been no quotable changes in the twine market during the past week, although demand continued brisk. It is problematical among the dealers in this commodity whether raw material will advance again in the near future, but in any event the present shortage in the spot market is not expected to permit a lower level for some time to come.

### J. R. BOOTH 93 YEARS OLD

John Rudolphus Booth, Ottawa's "grand old man," and an outstanding national figure in Canada, was 93 years of age Monday of last week. He was born in Shefford County, Quebec, on April 5, 1827. His hundreds of friends will rejoice to learn that he is in excellent health and spirits. As has been the custom for many years, the office staff and superintendents sent a bouquet of roses to Mr. Booth's home on Metcalfe street. Mr. Booth remained at his home until shortly before noon, when he went to his office to enter into the daily routine. Mr. Booth possesses a very keen memory and there is not one small detail of the pulp, paper and lumber business with which he is not familiar. The aged "lumber king" has kept in close touch with the business and very rarely remains away from his office. Mr. Booth is receiving many messages of congratulations. According to his custom for many years, he had his picture taken on his birthday.

Mr. Booth came to Ottawa in 1857 and built a small sawmill from which the present mammoth plant has developed. For some years the average number of hands on the payroll of the firm which bears Mr. Booth's name has been between 2,500 and 3,000, and the monthly payroll in the vicinity of \$200,000.

Despite his advanced years, Mr. Booth is in particularly good health. Always interested in sport, he attended the Ottawa-Seattle Stanley Cup Hockey series. He faced the puck for the players and was roundly applauded when he appeared on the ice at the last game.

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Strong Unbleached Sulphite

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We are also representatives in the U. S. A. of the HELLEFORS BRUKS AKTIEBOLAG including LAXA and HELLEFORS Easy-Bleaching Sulphite and HELLEFORS and FREDRIKSBERG STRONG KRAFT Pulp.

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### Envelope Machines

and special paper handling machinery  
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Contains instructions on setting all types of boiler furnaces and brass and metal furnaces. Gives full directions on how to build and maintain tight furnace linings.

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Trade Mark  
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Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations April 7, 1920.

Table of Paper Company Securities with columns for Stock, Bid, and Asked prices.

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

Paper

Table of Paper products including Bonds, Ledgers, Writing, News, Kraft, and various types of paper with prices.

Table of Cottons according to grades including Blue Overall, New Blue, and New Black Soft.

Table of White, No. 1 and No. 2 papers, including Repacked and Miscellaneous grades.

Table of Foreign Rags including New Light Silesias, Light Flannelettes, and various other rag types.

Mechanical Pulp

Table of Mechanical Pulp products like No. 1, f. o. b. Mill.

Chemical Pulp

Table of Chemical Pulp products including Sulphite (Foreign) and Sulphite (Domestic).

Domestic Rags

Table of Domestic Rags including Shirt Cuttings and various rag types.

Table of Finished Jute, Tube Rope, Paper Makers Twine, and Sisal Hay Rope.

Old Waste Papers

Table of Old Waste Papers including Shavings, Flat Stock, and News.

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Table of Paper products in Chicago including Rag Bond, Sulphite, and various writing papers.

Old Papers

Table of Old Papers including No. 1 Soft, No. 2 Mixed, and various other paper grades.

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Table of Paper products in Philadelphia including Bonds, Ledgers, and various writing papers.

Bagging

Table of Bagging products including Gunny No. 1 and various other bagging types.

Old Papers

Table of Old Papers in Philadelphia including Shavings and various paper grades.

(Continued on page 387)

EFFICIENCY ENGINEERING BY EFFICIENT ENGINEERS

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## NEW YORK IMPORTS

WEEK ENDING APRIL 10, 1920.

### SUMMARY.

Cigarette paper, 1,470 cs.  
Wall paper, 164 bls., 7 cs.  
Paper hangings, 102 bls.  
Printing Paper, 19 cs.  
Tissue, 10 bls.  
Drawing, 9 cs.  
Filter, 77 cs.  
Wrapping, 256 bls., 46 cs.  
News Print, 3,111 recls.  
Miscellaneous Paper, 49 cs., 29 bls.

### CIGARETTE PAPER.

P. J. Schweitzer, G. Verdi, Genoa, 41 cs.  
American Tobacco Co., Lafayette, Havre, 114 cs.  
Liggett & Myers Tobacco Co., Philadelphia, Southampton, 12 cs.  
Liggett & Myers Tobacco Co., Oscoda, Brest, 128 cs.  
American Tobacco Co., by same, 800 cs.  
R. J. Reynolds, by same, 375 cs.

### WALL PAPER.

American Shipping Co., Vennonia, London, 6 bls.  
A. Murphy & Co., Belgic, Liverpool, 12 bls.  
F. J. Emmerich, Lafayette, Havre, 1 bl.  
W. H. S. Lloyd & Co., Minnekahola, London, 145 bls.  
W. H. S. Lloyd & Co., by same, 7 cases.  
R. F. Downing & Co., by same, 16 bls.

### PAPERHANGINGS.

A. C. Dodman, Jr., Carmania, Liverpool, 58 bls.  
W. H. S. Lloyd & Co., by same, 29 bls.  
A. C. Dodman, Jr., Manitou, Liverpool, 15 bls.

### PRINTING PAPER.

Meyercord Co., by same, 8 cs.  
B. F. Drakenfeld & Co., Carmania, Liverpool, 11 cs.

### TISSUE PAPER.

Meadows, Wye & Co., Belgic, Liverpool, 10 bls.

### DRAWING PAPER.

Favor, Ruhl & Co., Minnekahda, London, 4 cs.  
Reeve, Angel & Co., Manhattan, London, 5 cs.

### FILTER PAPER.

Reeve, Angel & Co., by same, 13 cs.  
American Express Co., Oscoda, Brest, 64 cs.

### WRAPPING PAPER.

Blauvelt, Wiley Paper Mfg. Co., Columbia, Glasgow, 256 bds.  
J. Andersen & Co., Oregon, Copenhagen, 4 cs.

### NEWS PRINT PAPER.

N. Y. American, Gustafsholm, Stockholm, 2,265 recls.  
Bank of New York, Bergensfjord, Kristiania, 540 recls.  
New York Overseas Co., Inc., Monana, Kristiania, 306 recls.

### PAPER.

T. R. Arnold, Manhattan, London, 2 cs.  
J. W. Hampton, Jr., & Co., Oscoda, Brest, 20 cs.  
Japan Paper Co., Lafayette, Havre, 12 cs.  
Reeve, Angel & Co., Minnekahda, London, 15 cs.  
American Shipping Co., Mongolia, Hamburg, 23 bls.  
Hart Trading Co., Gustafsholm, Gothenburg, 6 bls.

### RAGS, BAGGING, ETC.

Arrowhead Mills, Vennonia, London, 50 bls. bagging.

Arrowhead Mills, Vennonia, London, 153 bls. rags.

W. Hughes & Co., by same, 144 bls. waste paper.

E. Naumburg & Co., Manitou, Liverpool, 51 bls. rags.

Albion Trading Co., by same, 20 bls. rags.

E. J. Keller & Co., Belgic, Liverpool, 60 bls. bagging.

Salomon Bros., & Co., by same, 96 bls. rags.

E. J. Keller & Co., Oregon, Copenhagen, 113 bls. bagging.

E. J. Keller & Co., by same, 190 bls. rags.

Albion Trading Co., by same, 178 bls. rags.

W. H. Cummings & Son, by same, 4 bls. rags.

Castle, Gottheil & Overton, by same, 205 bls. rags.

Castle, Gottheil & Overton, by same, 36 bls. waste paper.

B. D. Kaplan, Gustafsholm, Gothenburg, 61 bls. rags.

Goteborg Sack Import Co., by same, 9 bls. rags.

R. F. Downing & Co., City of Winchester, Manchester, 113 bls. paper stock.

E. J. Keller Co., by same, 59 bls. bagging.

L. H. Abenheimer & Co., by same, 9 bls. bagging.

Castle, Gottheil & Overton, by same, 76 bls. paper stock.

Salomon Bros. & Co., by same, 100 bls. paper stock.

E. Butterworth & Co., by same, 49 bls. rags.

Irving National Bank, Trojan Prince, Leith, 33 bls. rags.

Equitable Trust Co., by same, 216 bls. waste paper.

Southerland International Dispatch, by same, 162 bls. paper stock.

A. Salomon, Inc., Oscoda, Brest, 1,490 bls. rags.

Castle, Gottheil & Overton, by same, 322 bls. rags.

National City Bank, by same, 189 bls. rags.

National City Bank, by same, 305 bls. bagging.

M. O'Meara, by same, 153 bls. rags.

Ladenburg, Thalman & Co., City of Florence, Hull, 111 bls. bagging.

N. E. Bergen, by same, 150 bls. rags.

Wilkinson Bros. & Co., by same, 86 bls. rags.

D. M. Hicks, Inc., by same, 24 bls. rags.

E. J. Keller Co., Carmania, Liverpool, 97 bls. bagging.

Parsons & Whittemore, Manhattan, London, 327 bls. rags.

Albion Trading Co., Manhattan, London, 538 bls. rags.

G. W. Millar & Co., by same, 173 bls. rags.

National City Bank, by same, 40 bls. rags.

R. Goldstein, Royal Prince, Havre, 289 bls. rags.

R. Goldstein, by same, 117 bls. bagging.

Standard Bank of South Africa, by same, 82 bls. bagging.

Castle, Gottheil & Overton, by same, 372 bls. bagging.

National City Bank, by same, 637 bls. bagging.

Citizens National Bank, by same, 69 bls. bagging.

W. Schall & Co., by same, 312 bls. bagging.

A. Salomon, Inc., by same, 106 bls. bagging.

American Foreign Bkg. Corp., by same, 88 bls. rags.

G. W. Millar & Co., by same, 78 bls. rags.

E. J. Keller Co., by same, 49 bls. rags.

E. J. Keller Co., by same, 222 bls. bagging.

Equitable Trust Co., by same, 91 bls. bagging.

Equitable Trust Co., by same, 72 bls. rags.

Brown Bros. & Co., by same, 158 bls. rags.

Stone Bros., by same, 52 bls. rags.

A. Katzenstein, by same, 58 bls. rags.

J. W. Hannay, Anglo Mexican, Glasgow, 119 bls. rags.

E. J. Keller Co., by same, 96 bls. paper stock.

Irving National Bank, by same, Glasgow, 16 bls. new cuttings.

D. M. Hicks, Inc., Columbia, Glasgow, 50 bls. bagging.

Guaranty Trust Co., by same, 149 bls. rags.

G. W. Millar & Co., by same, 134 bls. paper stock.

S. Silberman, by same, 107 bls. paper stock.

Castle, Gottheil & Overton, Tongrier, 6 bls. rags.

Castle, Gottheil & Overton, Manhattan, 225 bls. waste paper.

Castle, Gottheil & Overton, by same, 40 bls. rags.

### OLD ROPE.

M. O'Meara, Oscar II., Copenhagen, 120 coils.

Arrowhead Mills, Vennonia, London, 47 coils.

E. J. Keller Co., Oregon, Copenhagen, 122 coils.

International Purchasing Co., Gustafsholm, Stockholm, 107 coils.

International Purchasing Co., City of Florence, Hull, 156 bales.

International Purchasing Co., by same, 444 coils.

Ladenburg, Thalman & Co., by same, 250 coils.

Bemis Bros. Bag Co., by same, 72 coils.

N. E. Berzen, by same, 114 coils.

E. J. Keller Co., by same, 72 bales.

Upson, Welton Co., Carmania, Liverpool, 147 coils.

Bemis Bros. Bag Co., Royal Prince, Havre, 189 coils.

Irving National Bank, Trojan Prince, Leith, 90 coils.

### WOOD PULP.

J. Andersen & Co., Oregon, Copenhagen, 3,375 bales.

Scandinavian-American Trading Co., Gustafsholm, Narrkoping, 1,500 bales.

### CHINA CLAY.

J. W. Higman & Co., Inc., H. M. Whitney Forvey, 1,534 tons, 19 cwt.

J. Richardson Co., Lake Frugality, Bristol, 410 tons, 10 cwt.

Baring Bros. Co., Ltd., by same, 598 tons, 8 cwt.

### CASEIN.

Parsons & Whittemore, Manhattan, London, 450 bags.

Davies, Turner & Co., Port Lincoln, London, 2,000 bags.

Davies, Turner & Co., W. Harcuvar, London, 500 bags.

## BOSTON IMPORTS

WEEK ENDING APRIL 10, 1920.

Irving National Bank, Anglo-Mexican, Glasgow, 63 cts. rope.

First National Bank, Boston, by same, 84 bls. flax waste.

Paper Makers' Chemical Co., H. M. Whitney, Forvey, 959 tons, 14 cwt., china clay.

## BALTIMORE IMPORTS

WEEK ENDING APRIL 10, 1920.

J. Andersen & Co., Oregon, Copenhagen, 1,750 bls. wood pulp.

## PHILADELPHIA IMPORTS

WEEK ENDING APRIL 10, 1920.

E. M. Sergeant Co., Oregon, Copenhagen, 1,200 bls. wood pulp.

New York Overseas Co., Inc., by same, 800 bls. wood pulp.

Castle, Gottheil & Overton, Northwestern, Hiller, 125 bls. rags.

Castle, Gottheil & Overton, Northwestern, Hiller, 150 bls. bagging.

# The Mathieson Alkali Works (Inc.)

General Offices

25 West 43rd Street

Works  
Niagara Falls, N. Y.

New York City

Works  
Saltville, Va.

---

## “EAGLE THISTLE” BRAND OF PRODUCTS

---

### Bleaching Powder

Highest Test Manufactured

Packed in Steel Drums, air tight, insuring full strength at point of consumption.

Special wooden lined drums for export.

### Liquid Chlorine

100% pure, anhydrous, in improved 100 lb.—150 lb.—2,000 lb. containers.

### Soda Ash

58 per cent, both light and dense shipped in bulk—Bags and Barrels  
Special packages for export.

### Caustic Soda

Solid—Ground—Flaked

60%—70%—72%—74%—76%—78% Grades.

The electrolytic 78% Grade, analyzing 99.70% Hydrate of Soda, purest caustic made.

### Bicarbonate of Soda

Packed in Cases—Bags—Barrels—Kegs

If you have a problem to solve write us and get the advantage of our  
Technical Department.

### Market Quotations

(Continued from page 383)

No. 1 Soft White	5.25	@	5.36
No. 2 Soft White	3.25	@	3.50
No. 1 Mixed	2.25	@	2.50
No. 2 Mixed	1.75	@	1.80
Solid Ledger Stock	3.50	@	3.60
Writing Paper	3.25	@	3.40
No. 1 Books, heavy	3.50	@	3.60
No. 2 Books, light	2.50	@	2.75
No. 1 New Manila	3.00	@	3.25
No. 1 Old Manila	2.25	@	2.30
Container Manila	2.00	@	2.10
Old Kraft	3.00	@	3.25
Overissue News	2.00	@	2.25
Old Newspaper	1.50	@	1.75
No. 1 Mixed Paper	1.65	@	1.70
Common Paper	1.40	@	1.50
Straw Board Chip	1.25	@	1.40
Binders' Bd. Chip	1.25	@	1.45
Domestic Rags—New			
Price to Mill, f. o. b. Phila.			
Shirt Cuttings—			
New White, No. 1	19	@	19 1/4
New White, No. 2	12 1/2	@	13
Siliasias, No. 1	12.25	@	12.75
New unbleached	15.25	@	16.25
Washables	10.75	@	11.00
Fancy	12.25	@	13.00

Cottons—according to grades—			
Blue Overall	11.25	@	12.25
New Blue	8.50	@	9.00
New Black Soft	6.75	@	7.00
New Light Sec-			
onds	7.00	@	7.25
Khaki Cuttings	7.25	@	7.75
Corduroy	6.75	@	7.25
New Canvas	14	@	14.50
New Black Mixed	5.25	@	5.75
Old			
White, No. 1—			
Repacked	13.00	@	13.50
Miscellaneous	10.00	@	10.25
White, No. 2—			
Repacked	7.00	@	7.50
Miscellaneous	6.00	@	6.50
Thirds and Blues—			
Repacked	5.25	@	5.50
Miscellaneous	10.00	@	10.25
Black stockings	4.87	@	5.00
Roofing Stock—			
No. 1	3.25	@	3.50
No. 2	3.15	@	3.40
No. 3	2.25	@	2.50
No. 4	3.00	@	3.25
No. 5A	3.00	@	3.25
B.	2.75	@	3.00
C.	1.50	@	1.60

### Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,  
WEDNESDAY, APRIL 14, 1920.

**ALUM.**—Demand for this product remains fairly active, but there is somewhat of a shortage owing to the recent heavy exports which took large stocks from the domestic market, which paper makers now need. Prices are: lump 4 cents, ground 4.25 cents and powdered 4.60 cents.

**BLANC FIXE.**—Labor trouble and a shortage of coal which has prevailed in this market for the past six months have been the chief factors in causing the present scarcity of this commodity. Railroads in the south are under water due to recent heavy rains. Last week's prices were: dry, \$90@95 and pulp \$75@80.

**BLEACHING POWDER.**—The heavy demand continues in this market with supplies short. Cars are scarce and prevalent embargoes on the railroad lines have tended to make shipment in desirable quantities impossible. Prices for the past week were: 3@5 cents f.o.b. works.

**BRIMSTONE.**—No change has been reported in this market during the past week, and prospects point to a continuance of a steady market for some months. Present demand is good with prices at \$18@20 the ton.

**CASEIN.**—Demand is extremely heavy in the casein market. The big Argentine milk production is not expected until May, and in the meantime casein production will continue to fall short of the paper mills' needs. Last week's quotations were 14@15.50.

**CAUSTIC SODA.**—Paper mills are not getting by far the amount of this product needed at present, and the market is accordingly filled with orders which at the present time it is a physical impossibility to fill. The main reason for this shortage has been given as the tremendous imports of this commodity. Quotations last week ranged from 4.50@5.50 cents f.o.b. works.

**CHINA CLAY.**—Demand is heavy in this market and shipments fair, considering the late tornado which flooded to some extent the mines and railroads in the South. Last week's prices for the Georgia product were \$10@11, and for the South Carolina article \$8@9.

**ROSIN.**—There has been little or no change in the rosin market during the past week. The longshoremen's strike is still on with the result that supplies of this commodity are scarce in the north. Quotations remain unchanged, namely: grade E, \$18.70; grade F, \$18.75, and grade G, \$18.80, in carload lots, f.o.b. New York.

**SATIN WHITE.**—Demand in this field is reported in excess of possible production. Railroad conditions also enter into the causes of the present dearth. Prices for the past week were 2.25@2.50 cents.

**SODA ASH.**—Excessive exporting has been given as the main cause of the dearth of this commodity in the domestic market. The freight car situation, too, has played no small part in withholding supplies from the paper mills, and prices during last week again showed a rising tendency, sales being recorded at 3.75@4.25 cents.

**STARCH.**—The demands of the paper mills for starch continued comparatively light. Quotations given by dealers, freight prepaid to New York, in carload lots, per 100 pounds, are: Pearl starch in bags, \$4.97, in barrels, \$5.29; powdered starch in bags, \$5.12, in barrels, \$5.44; and Crystal T. B. starch, No. 90 fluidity, machine packed, in bags, \$6.02, in barrels, \$6.38.

**SULPHATE OF ALUMINA.**—Demand is reported as having picked up greatly within the last week, and this market is becoming one of the most active, owing to the heavier demands by the paper mills for this chemical. Last week's quotations were 2 cents for the commercial grade and 3 cents for the iron free.

**TALC.**—Talc is still in great demand, and the car shortage seems to be the chief difficulty of dealers. Production at the mines is progressing fairly well. There have been no quotable changes in price, last week's prices remaining at \$16@18 the ton.

### BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Paper			
Bonds	.15	@	—
Ledgers	.18	@	—
Writings—			
Superfine	.20	@	—
Fine	.20	@	—
Books S. & S. C.	.13	@	—
Book, M. F.	.12 1/2	@	—
Book, Coated	.14	@	—
Label	.14 1/2	@	—
News Sheets	.09 1/2	@	.09
News Rolls	.08	@	.08 1/2
Manila—			
No. 1 Manila	.09	@	.09 1/2
No. 1 Fibre	.08	@	.08 1/2
No. 1 Jute	.14	@	.14 1/2
Kraft Wrapping	.12	@	.13
Common Bogus	.04 1/2	@	.05
These prices are f. o. b. mill.			
Chip Board (ton)	102.50	@	—
Straw Board (ton)	—	@	—
News Board (ton)	107.50	@	122.50
Wood Pulp Board	—	@	—
Old Papers			
Shavings—			
No. 1 Hard White	6.50	@	7.00
No. 1 Soft White	5.50	@	5.75
No. 1 Mixed	2	@	2 1/4
Ledger and Writ-			
ings	3.50	@	4.00
Solid Books	3.50	@	4.00
Blanks	2 1/2	@	2 3/4
No. 2 Books, light	2.75	@	3.00
No. 1 Manila	2.50	@	—
No. 1 Manila	2.00	@	2.50
Folded News (over-			
issues)	2.50	@	3.00
Old Newspapers	1 1/4	@	2
Mixed Paper	1.60	@	1.75
Gunny Bagging	3.50	@	4.00
Manila Rope	7.50	@	7.75

### TORONTO

[FROM OUR REGULAR CORRESPONDENT]

Paper			
(Mill Prices to Jobbers)			
Bond	15 1/4	@	—
Sulphite	16 1/4	@	—
Light tinted	18	@	—
Dark tinted	18	@	—
Ledgers	18	@	—
Writing	13 1/4	@	—
News, f. o. b. Mills—			
Rolls (carloads)	4.00	@	—
Sheets (carload)	4.60	@	—
Sheets (l. c. l.)	4.75	@	—
Book—			
No. 1 M. F. (car-	11.00	@	—
loads)			
No. 2 M. F. (car-	10.85	@	—
loads)			
No. 3 M. F. (car-	9.75	@	—
loads)			
No. 1 S. C. (car-	11.50	@	—
loads)			
No. 2 S. C. (car-	11.25	@	—
loads)			
No. 1 Coated and	13.75	@	—
litho.			
No. 2 Coated and	12.75	@	—
litho.			
No. 3 Coated and	12.00	@	—
litho.			
Coated and litho.,	14.00	@	18.00
colored			
Wrapping—			
Grey	7.00	@	—
"B" Manila	7.25	@	—
No. 1 Manila	9.00	@	—
Fibre	9.00	@	—
Kraft, M. F. or			
M. G.	11.00	@	—
Pulp			
(F. o. b. Mill)			
Ground Wood	65	@	—
Sulphite, easy bleach-			
ing	110.00	@	115.00
Sulphite, news grade	85.00	@	90.00
Sulphite, bleached	130.00	@	145.00
Sulphate	115.00	@	125.00
Old Waste Papers			
(In carload lots, f. o. b. Toronto)			
Shavings—			
White Env. Cut	5.00	@	—
Soft White Book			
Shavings	5.00	@	—
White Bk News	3.00	@	—
Book and Ledger—			
Flat Magazine and			
Book Stock (old)	3.75	@	—
Light and Crum-			
pled Book Stock	2.75	@	—
Ledgers and Writ-			
ings	3.50	@	—
Solid Ledgers	3.00	@	—
Manila—			
New Manila Cut	3.25	@	—
Printed Manilas	1.75	@	—
Kraft	3.50	@	—
News and Scrap—			
Strictly Overissue	1.30	@	—
Folded New	2.00	@	—
No. 1 Mixed Pa-			
pers	1.75	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto.			
Per lb.			
No. 1 White shirt cuttings	.19 1/2	@	—
No. 2 White shirt cuttings	.13 1/2	@	—
Fancy shirt cuttings	.11	@	—
No. 1 Old whites	10	@	11
Thirds and blues	.05 1/2	@	—
Per cwt.			
Black stockings	4.50	@	—
Roofing stock No. 1	4.25	@	—
Roofing stock No. 2	4.00	@	—
Gunny bagging	4.00	@	—
Manila rope	7.50	@	—

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Furnished Complete, with Electric Motor Lift,  
Hydraulic Lift or Ratchet Lift.  
All Operated from Floor.

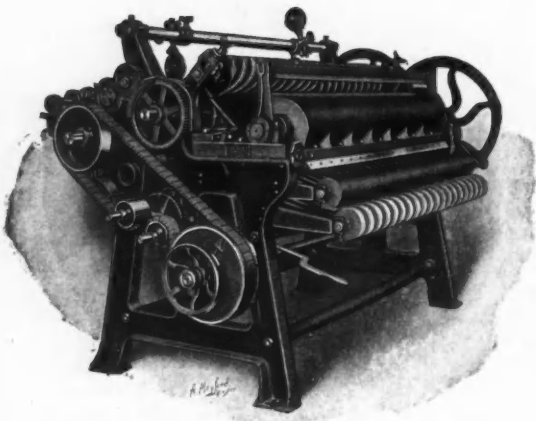
Grinding Machines for  
Rolls of all sizes.



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## Paper Cutters

Single, Duplex and Diagonal



Cutter Knives      Patent Top Slitters

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We specialize in all kinds of Paper and Cardboard  
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We solicit accounts of mills desirous of being repre-  
sented in this territory.

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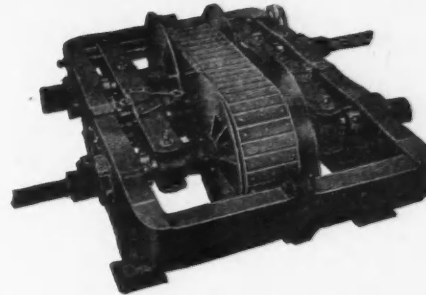
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REEVES PULLEY CO. COLUMBUS, IND.

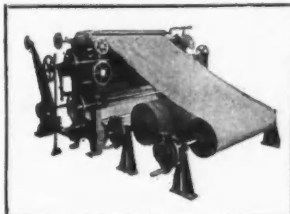
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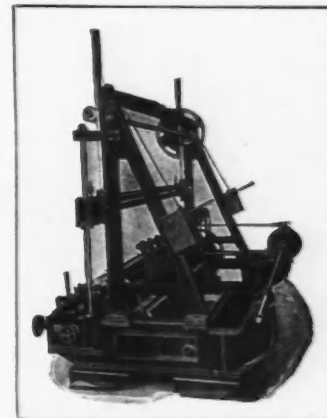
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## Paper Slitting and Rewinding Machines

Machines for cutting and rewinding rolls of paper. We build all width machines to handle any weight or thickness paper and any size rolls.



## Corrugated Paper Shipping Case Machinery

We build all the machinery necessary to make paper shipping boxes or cases such as are now replacing wooden boxes in the United States.

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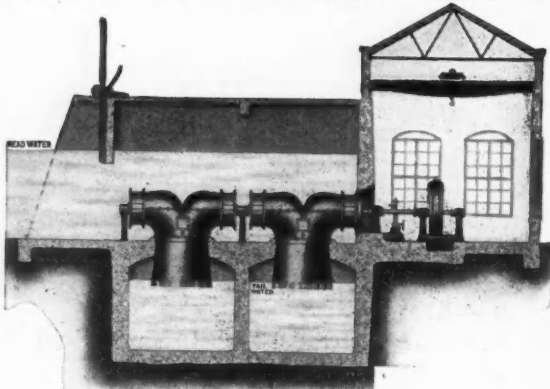
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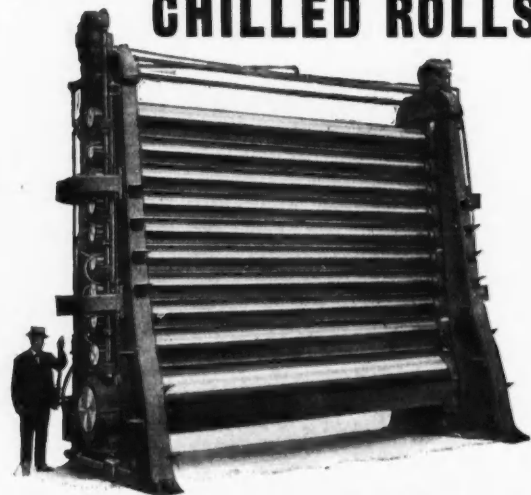
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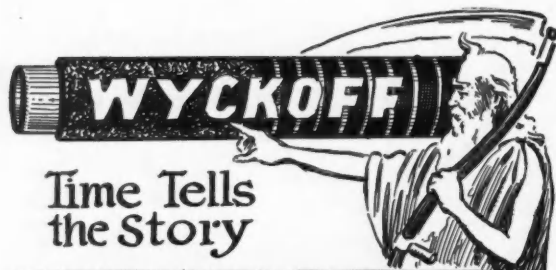
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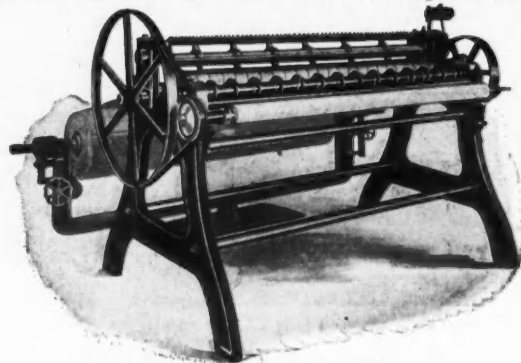
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Manufacturers

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# ALUM

# ALUM

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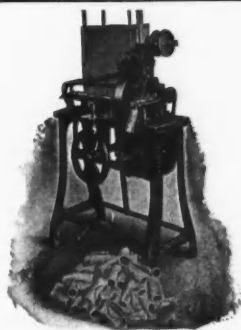
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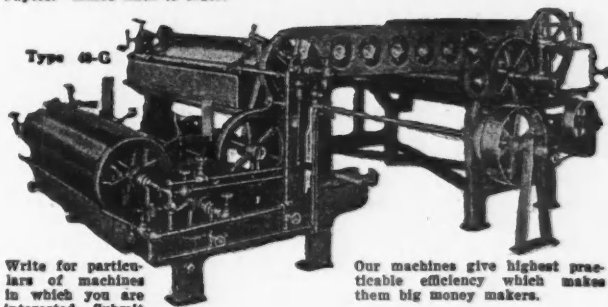
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GRISSINGER MACHINE WORKS  
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for making Carbon, Waxed, Oiled, Glued, Gummed, Asphalt and Veneered Papers. Allied lines to order.

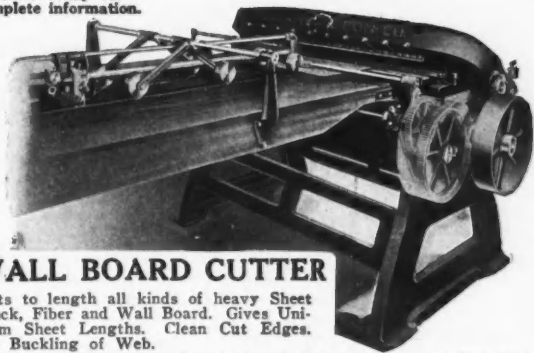


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Cuts to length all kinds of heavy Sheet Stock, Fiber and Wall Board. Gives Uniform Sheet Lengths. Clean Cut Edges. No Buckling of Web.

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(INCORPORATED)

WOOD PULP, RAGS AND PAPER  
STOCK, FRENCH CASEINE

145 NASSAU STREET (POTTER BLDG) NEW YORK

PAUL C. ZÜHLKE

320 BROADWAY

EXPORT

NEW YORK, N. Y.

## Federal Paper

Stock Co. St. Louis, Mo.

Graders and  
Packers of

# Rags and Waste Paper

## "TYLER"

## Fourdrinier Wires

In all widths up to 250 inches

CYLINDER FACES

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In Brass, Bronze and Phosphor Bronze

The W. S. Tyler Company  
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# Specify "BIGGS" Rotaries



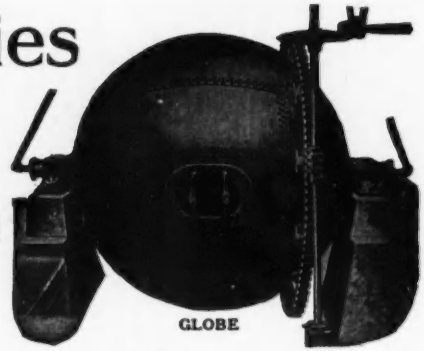
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in "your" next  
installation!

*There's a Reason*

Steel pressure and  
storage tanks for  
every purpose

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GLOBE

The Biggs Boiler Works Company : Akron, Ohio, U. S. A.

## THE C. L. LABOITEAUX COMPANY

We call the attention of the Jobbing Trade to our unequalled facilities for prompt shipment of

Mill Blanks, Bogus Bristols, Marble Grained Jute Boards, Clay Coated Box  
Boards, Binders' Board, Paper Box Board, Pasted  
Boards, and Paper Board Specialties

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Write for our new Blue Book, just issued, containing valuable information in regard to Box Boards, Paper and Specialties.

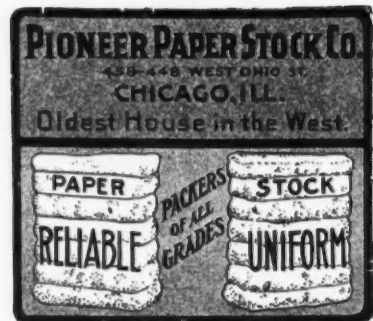


WESTERN PAPER STOCK CO.,  
1452-1458 Indiana Ave. Chicago, Ill.

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Or have you some  
machinery you would  
like to dispose of?

Try the Want Pages  
of the  
Paper Trade Journal



For reliable running and average long life

### Lindsay Fourdrinier Wires

ARE UNSURPASSED

We make them for the largest and fastest machines.  
Cylinder Wires all sizes.

The Lindsay Wire Weaving Co.  
COLLINWOOD STA. CLEVELAND, OHIO.

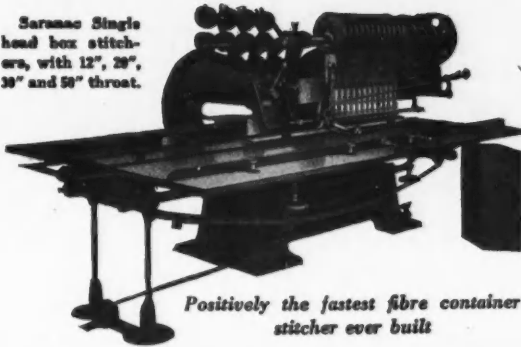
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Beater Valves and Hydrants

Dayton Beater & Hoist Co.  
Dayton, Ohio

25 to 40 shipping containers per minute can be made on a  
**Saranac Automatic Multiple Head Stitcher**

Saranac Single head box stitchers, with 12", 28", 38" and 50" throat.



*Positively the fastest fibre container stitcher ever built*

IT is equipped with twelve stitching head so that any number from 1 to 12 staples can be driven at one time. Either a single or double row of staples, or single row with the tie stitch are automatically driven. It takes less than five minutes to change from the largest to smallest size containers.

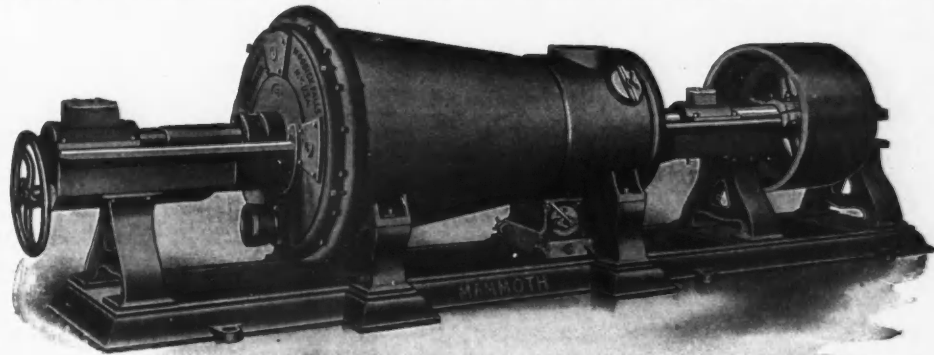
*Write for Full Particulars*

We also manufacture Bottom Sealing Machines.

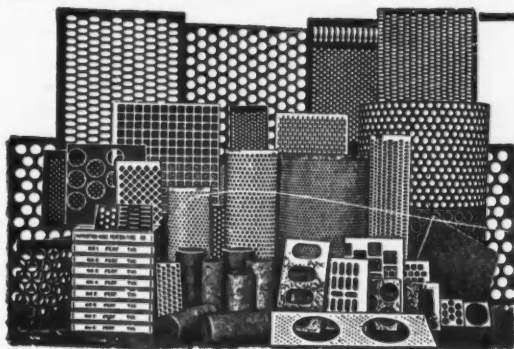
**Saranac Machine Company**  
 Benton Harbor, Michigan

**WE MAKE  
 BEATERS AND  
 JORDANS OF  
 QUALITY**

**SIX SIZES OF  
 JORDANS,  
 BEATERS,  
 FROM 3/4 LBS.  
 TO 3000 LBS.**



**The Noble & Wood Machine Co., Hoosick Falls, N. Y.**



**PERFORATED  
 METALS**

**Paper and Pulp Mill Screens**  
**STEEL, IRON, COPPER, BRASS, BRONZE**

FOR

Centrifugal and Rotary Screens—Drainer—Bottoms—Filter Plates—Pulp Washers, etc. All sizes and shapes of holes in many thicknesses and dimensions of sheets. Accuracy in all details and excellence of quality at lowest consistent prices.

**THE HARRINGTON & KING PERFORATING CO.**

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### Job Lots, Rejections, Side Rolls Wanted

SPOT CASH paid for jobs in bond paper, white or colors, any grade that will cut down to 11 x 17, any weight. Send samples, with lowest spot cash prices. No lot too small, and none too large.  
MIDWEST PAPER CO., 712 Federal St., Chicago, Ill.



Special Shaped Carbon, Black Diamond POINTS FOR TURNING Paper, Cotton, Chilled Iron and Hardened Steel Calendar Rolls, Hard Rubber, Fibre, etc.

Manufactured by **THOS. L. DICKINSON**, 64 NASSAU STREET NEW YORK  
Successor to John Dickinson, Established 1796.  
Agents for Great Britain, C. W. BURTON, @RIFFITHS & CO., Ludgate Square, London.

A well made product, backed by honest advertising, is a winner.

The columns of The Paper Trade Journal are open to you.

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Newark, Wayne Co., New York State

*Paper Specialties Factory*

*Paper Board Mill*

Egg Cartons Oyster Pails  
Ice Cream Pails

FOREIGN and DOMESTIC

Paper Stock  
New Cuttings  
and Rags

Jute Stock  
Sizing, Sulphite  
and Soda Pulps

200 FIFTH AVE. NEW YORK

**CASTLE, GOTTHEIL & OVERTON**

## VERA ROSIN SIZE

Guaranteed to Be Absolutely Clean and Pure  
**SHIPPED IN BARRELS and TANK CARS**  
OUR VERA PAPER SIZE

is the purest, strongest and highest free rosin size made. We can furnish you with an ideal rosin size and patented apparatus to use same.

OUR VERA MILL SIZE

is the best soluble paper makers' rosin size made. Ready to use in cold or warm water in the ordinary way without apparatus. Gives better satisfaction and is more economical than mill made size.

OUR VERA BEATER SIZE

Especially prepared to be dumped direct from the barrels into the Beater, without first dissolving it.

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## "DRAPER" FELTS

*For Any Grade of Paper or Pulp*

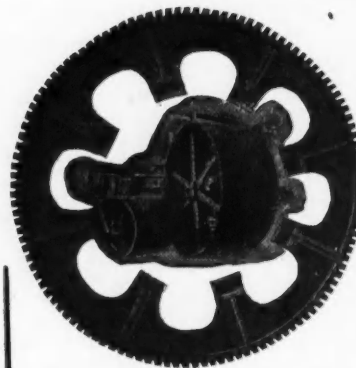
**ARE GUARANTEED**

*To Give Entire Satisfaction*

MANUFACTURED BY

**DRAPER BROS. CO., CANTON, MASS.**

## Power-Transmitting Machinery



We cast and finish Sheaves (with English or American grooves), Pulleys, Band Wheels, Fly Wheels, Gears, Sprocket Wheels, &c.

We design and manufacture complete rope drives. Our machine-molded sheaves are perfect in balance, accurately

finished and free from flaws injurious to the rope. Rope drives designed by us are successful. Write us.

**H. W. Caldwell & Son Co.**

Chicago, Western Ave., 17th-18th St.  
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Dallas, Texas, 711 Main St.

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# DILLON & BARNES

*Paper Mill Products and Supplies*  
 52 VANDERBILT AVENUE NEW YORK  
 Telephone, 7353 Murray Hill

# Salomon Bros. & Co.

IMPORTERS OF

All Grades of Rags and Paper Stock  
 200 Fifth Avenue, NEW YORK  
 Cotton Waste : Linters : Ramie

ESTABLISHED 1851

IRA L. BEEBE

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## IRA L. BEEBE & CO.

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IMPORTERS & DEALERS IN



## WOOD PULP

That IRON SPECK  
 or RUST SPOT  
 can be removed  
 with our extractor.

Sent on approval



The Roland T. Oakes Co.

Electrical Contractors and Engineers  
 HOLYOKE :: MASS.

R. J. Marx,  
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The West Virginia Pulp & Paper Co., Mechanicville, N. Y.,  
 having six machines are now 100% equipped with the FEENEY  
 AUTOMATIC STUFF BOX, as here illustrated, shipments to  
 them being as follows:

1.....Nov. 27, 1914	1.....Feb. 29, 1916
1.....July 2, 1915	1.....Dec. 9, 1916
1.....July 14, 1915.	1.....July 18, 1919

Isn't this sufficiently convincing of the desirability of this  
 device? Manufactured exclusively by

**BAKER MANUFACTURING CORPORATION**  
 Formerly BAKER & SHEVLIN COMPANY  
 SARATOGA SPRINGS, N. Y.

# Bleached Sulphite Pulp

**RIORDON SALES COMPANY, Ltd., Montreal**

Sell 300 tons per day of Bleached Sulphite Fibre made  
 from choicest Quebec Spruce wood, produced at  
 Hawkesbury, Merritton and Kipawa Mills.

Your patronage will be welcome.

**T. J. STEVENSON & GEO. E. CHARLES, SALES MANAGERS**

## Dry Rosin Size



Brittle and easily soluble. Cheapest size out. Cheaper than mill made size. Also our hot and cold water sizes; standard quality. Cleaner, more uniform and economical than either mill made sizes or those offered by our competitors. Also Arabol Paper Size, Splicing Gums, Condensed Paste Powder, Paper Makers' Starches.

**Arabol Manufacturing Co.**  
100 William Street : NEW YORK

### WHEN PLANNING DRIVES

Before Buying Pulleys and Belting Ascertain HOW "MORSE" Drives will SAVE, CONSERVE POWER AND INCREASE PRODUCTION

Consult Our Engineering Service, Assistance Free

<b>MORSE CHAIN CO.,</b>		<b>ITHACA, N. Y.</b>	
Atlanta	Cleveland	Montreal	Pittsburgh
Baltimore	Detroit	New York	San Francisco
Boston	Greensboro, N. C.	Philadelphia	St. Louis
Chicago	Minneapolis		



Don't Guess at Important Matters  
**BOWSHER'S SPEED or MOTION INDICATOR**  
IS INDISPENSABLE

In obtaining a UNIFORM speed of machinery, and is one of the most PROFITABLE little devices ever put in a mill. Will pay for itself in 30 days. Dial 12 in. in diam. Weight, 10 lbs. The N. F. Bowsher Co., South Bend, Ind.

## UNION TALC COMPANY

Fines Grades of Agalite

132 Nassau Street New York

# PULP STONES

of absolutely the finest quality

**LOMBARD & CO.**

Importers and Dealers

236-238 A Street : BOSTON, MASS.

Branch at Montreal, Canada

## BLEACHING POWDER

Manufactured by the

**NIAGARA ALKALI CO.**

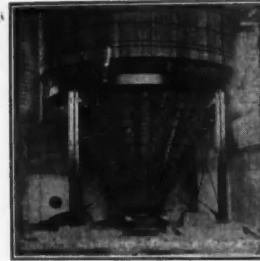
**J. L. & D. S. RIKER, Inc.**

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## NEW ENGLAND TANK & TOWER CO.



**WOOD TANKS  
FOR ALL  
PURPOSES**

Everett Station, Boston, Mass.

Manufacturers  
of  
All Special  
Small Roll  
Products



Adding  
Machine,  
Cash Register,  
Die Wiping,  
Hand Rolls,  
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PAPER MANUFACTURERS CO., Inc., Phila., Pa.

## AGALITE FILLER

UNITED STATES TALC CO.

GOUVERNEUR : NEW YORK

## Why Waste Good Stock?

When You Can Save It at a Small Expense by Using Our

### SCREENING GRINDER "SUCCESS"

Will successfully reclaim and grind sulphite and ground wood screenings into a marketable pulp, which can be sold at a profit.

WRITE FOR INFORMATION

APPLETON MACHINE CO., Appleton, Wis.

## STEARNS TANKS

BLOW-PIPES, STORAGE  
TANKS, ACID TOWERS, ETC.,  
OF WOOD.

HEAVY PAPER MILL WORK  
IS OUR SPECIALTY.

70 YEARS EXPERIENCE.

Enquire for quotations  
Have you our catalogue?

THE A. T. STEARNS LUMBER COMPANY  
125 Taylor St., Neponset, Boston, Mass.







**EXPORT ONLY** All Grades of PAPER and BOARDS

**A. M. Capen's Sons, Inc.**  
Established 1870  
60 Pearl Street, New York City

**THE WM. CABLE  
EXCELSIOR WIRE MFG. CO.**



Established 1848  
Incorporated 1870-1896

Manufacturers of  
Superior Fourdrinier  
Wires  
Cylinder Wires  
Brass, Copper and  
Iron Wire Cloth of  
Every Description.  
Best Quality of  
Wire Rope



Write for Price List

74-90 Ainslie St. BROOKLYN, N. Y.

**The Longest Runs**

are always made with the "Hamilton Felt"—absolutely the best results are obtained from its use. No wrinkling, no slack edges, "no blowing"—runs equally well on fast or slow machines. Send us a trial order now, with particulars as to stock used, quality of paper made and speed of machine.

**SHULER &  
BENNINGHOFEN**  
Hamilton, Ohio



**NATRONA POROUS  
ALUM**

MANUFACTURED BY  
**PENNSYLVANIA SALT MFG. COMPANY**  
PHILADELPHIA

**C. K. WILLIAMS & CO., EASTON PA.**



Proprietors of the Penna. Dry Paint and Color Works and the Helios Dry Color, Chemical and Copperas Works of Allentown, Pa.

Manufacturers, Miners and Importers of Coloring Materials, such as Venetian Reds, Red, Brown, Black, Yellow, Oxides, Chrome and other Colors, also Paper Fillers—as Agalites, Mineral Pulp, Talc, China and other Clays

**COLORS FOR PAPER  
MANUFACTURERS' USE**

**Facts About Gumbinsky Bros. Co.**

*Largest dealers in paper stock and rags  
in the world*

**CHICAGO, ILL.**

Occupy more than six acres of a sprinkled floor space, equipped with six electric freight elevators, twenty-two large electric power presses, private switch tracks and platforms for forty cars at one time; over 300 employees grading and packing Rags and Waste Paper; best service on any grade, any quantity and at any time.

**GET IN TOUCH WITH US**



**FOURDRINIER  
CYLINDER  
WASHER**

**WIRES**

50 years' experience as wire makers  
insures highest quality of product

**"Appleton Wires  
Are Good Wires"**

Appleton Wire Works

Appleton, Wis.

# WANT AND FOR SALE ADVERTISEMENTS

## HELP WANTED

### CLASSIFIED RATES

Minimum rate for advertisements of 35 words or less, first insertion \$1.00. Situation Wanted, 4 cents a word for first insertion and 3 cents a word for each subsequent insertion of same ad. No ad of less than 25 words accepted.

Help and Miscellaneous Wants, and small For Sale Ads, 4 cents a word for each and every insertion. No ad of less than 25 words accepted.

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

Answers can be forwarded care Paper Trade Journal, and will be promptly forwarded without extra charge. All should be sent to the New York office, 10 East 29th street. And all should be addressed as the advertisement directs in every case and not simply to the paper.

**WANTED**—Salesman and executive to take charge of Eastern Office of coarse paper house. One having good knowledge of mill shipment business on Kraft, Glassines and coarse papers in general. A fine opportunity for the right man. Applications considered strictly confidential. Address, Box 2054, care Paper Trade Journal. tr

**WANTED**—A first class cylinder machine tender to run high grade tissue in three machine mill, paying good wages and where living expenses are far below the average. Moving expenses paid. Address, Box 2133, care Paper Trade Journal. A-15

**WANTED**—A first-class cylinder machine tender to run high grade tissues in three machine mill, paying good wages where living expenses are far below the average. Moving expenses paid. Address, Box 2130, care Paper Trade Journal. A-22

**WANTED**—At once in New York State, two first class Kraft Beater Engineers; only those having extensive and practical experience need apply. This is a good job; three shifts; good wages. Address, Box 2145, care Paper Trade Journal. A-22

**WANTED**—For two tour mill. Machine Tender for Cylinder Machine; Mill located near large town. High wages. Address, Box 2147, care Paper Trade Journal. A-15

**WANTED**—Machine Tender on Double Cylinder Machine, running on all rope, heavy weights, all slow running, and no changing of size. Good wages and location. Middle aged man preferred. Address, Box 2148, care Paper Trade Journal. A-22

**WANTED**—Three first class Board Machine tenders for 64" and 81" machines, making News and Chip Board. Must be able to show good record. Eight hour shift. Address, Box 2151, care Paper Trade Journal. A-15

**WANTED**—Two First class Cylinder Machine Tenders, Three Back Tenders, Three Finishers, and Two head Beatermen. Best wages paid. Eight hour shifts. Running all kinds of Paperboard, also Test Board. Only first class men need apply. Address, Box 2152, care Paper Trade Journal. A-15

**WANTED**—First class Millwright, experienced in paper mill work. Two machine Cylinder Mill. Steady position and good wages to first class man. Apply, Bemis Bros. Bag Co., Peoria, Illinois. A-22

**WET MACHINE TENDER WANTED**—60c per hour. All day work, five days per week. Address, B. Vallmont, Stratford, Conn. A-15

**WANTED**—For two machine mill, New York State, making tissue, a live wire, practical working foreman. Good chance for one who can handle help and get production. Address, Box 2165, care Paper Trade Journal. A-29

## HELP WANTED

**WANTED**—One first class Beaterman on Book, Writing and Ledger papers, beating for two machines; production about twenty to twenty-five tons per twenty-four hours. Near large town. Good schools. Wages, 70 cents per hour, eight hour day. Address, Box 2166, care Paper Trade Journal. A-22

**WANTED**—Two tissue Machine Tenders for Cylinder Tissue Machines. Good wages. Address, Box 2167, care Paper Trade Journal. eow2 mo.

**WANTED**—Boss Finisher on Tissue. Must be experienced on sheeting and folding machine. Good wages. Address, Box 2168, care Paper Trade Journal. eow-2 mo.

**WANTED**—Machine Tender for small Board Mill, western part of state, good healthy town near large centers. Also back tender who has ambition to run machine, an excellent chance. Address, Box 2170, care Paper Trade Journal. M 6

**WANTED**—Two third hands and two fourth hands for Fourdrinier Machines. Eight hour tour. Fifty-one cents and forty-six cents per hour. Will consider only steady dependable men who want to grow. Address, Box 2171, care Paper Trade Journal. Ap 29

**WANTED**—Assistant sales Manager. Young man conversant with Wrapping Paper and twines. State age, experience and salary desired in confidence. Address, Box 2172, care Paper Trade Journal. Ap 15

**WANTED**—Machine Tenders of Roofing Felt in mill in East working three tours, highest wages paid. Americans only wanted. Give last employment and full particulars. Address, Box 2173, care Paper Trade Journal. Ap 22

**WANTED**—Three Paper Finishers in Specialty Mill. Married men preferred. State wages desired. Address, Box 2174, care Paper Trade Journal. Ap 22

**WANTED**—Back Tenders on 90" Fourdrinier machines making Bond and Writing papers. Three tours, good pay. Mill located in large city in central state. Address, Box 2175, care Paper Trade Journal. Ap 29

**WANTED**—Master Mechanic for two machine Writing Paper mill. Apply to Box 2176, care Paper Trade Journal. Ap 29

**CRACKERJACK Machine Tender Wanted**—a large fast running book mill wants an unusually good paper machine tender. The man wanted should be looking for a permanent steady job that his ability and past experience enables him to fill. He must have held a similar position for a considerable time and have proved that he is a stickler who is looking for a chance only to better his position. The highest wages will be paid and the opening offers a good chance with a good company. The working conditions are exceptionally fine but the man must know his job and be able to produce results. Give full particulars of age and employment in confidence. Address, Box 2178, care Paper Trade Journal. Ap 22

### YOUR OPPORTUNITY

**Wanted—TWO FIRST CLASS SALESMEN. MUST BE ABLE TO SELL PAPER BAGS AND TOILET PAPER. One with Headquarters at Chicago and one to travel Eastern Territory. Salary commensurate with your ABILITY. H. Norwood Ewing Co., Woolworth Building, New York City.**

## HELP WANTED

**WANTED**—Capable Back Tender—a good back tender who is strong, active and has had experience on fast running book machine is wanted by large mill. Only man who is steady, capable and able to handle the job through actual experience need apply. To the man looking for a better position and highest wage with a good company, this is an opportunity. Write details of age and experience confidentially. Box 2179, care Paper Trade Journal. Ap 22

**WANTED**—One good paper mill Millwright familiar with Sulphite and paper mill work, also rope splicing. Seventy-two cents per hour. Address, Box 2180, care Paper Trade Journal. Ap 29

**WANTED**—Machine tender with experience running cylinder machine on Crepe and Waxine Tissues. Good wages and opportunity for right man. Address, Box 2181, care Paper Trade Journal. Ap 29

## SITUATIONS WANTED

**PAPER SALESMAN, NEW YORK CITY,** can produce large volume of business. Wishes connection with Mill Agency Company or Mill. Substantial drawing account on commission basis. Address, Box 1916, care Paper Trade Journal. F-12

**SUPERINTENDENT** desires to make a change. Am well up-to-date on all grades of board. Can handle help and get production. Can arrange for quick change. Address, Box 2088, care Paper Trade Journal. A-18

**POSITION WANTED**—Superintendent, experienced in every detail of construction and operation of Ground Wood Mills. Capable of assuming full charge. Best references. Address, Box 2073, care Paper Trade Journal. June

**YOUNG MAN, 27,** who has had unusual experience in the manufacture, finishing and sale of Glassine and Greaseproof Papers, desires position with mill contemplating manufacture of the above grades, or now making. Address, Box 2022, care Paper Trade Journal. tr

**SITUATION WANTED**—Superintendent wishes to make a change, 14 years' experience as Superintendent of a loft dried mill on weddings, bonds, ledgers and index bristles. Best of references. Address, Box 2108, care Paper Trade Journal. A-15

**COATING MILL SUPERINTENDENT,** now Employed, wishes to make a change. Twenty-two years of practical experience on all grades of coated papers. Reply to Box 2115, care Paper Trade Journal. A-22

**SITUATIONS WANTED**—Experienced paper and envelope salesman, age 33, trade in New York and New Jersey, wants position first class house; commission with drawing account preferred. Employed. Address, Box 2114, care Paper Trade Journal. M-25

**POSITION WANTED**—As Master Mechanic and Chief Engineer in charge of steam and electrical and mechanical equipment. No job too big. I am thoroughly acquainted with paper mill work and can bring plant up to the highest efficiency, and produce the largest amount of finished product per unit. Address, Box 1978, care Paper Trade Journal. F-24

**THE UNITED STATES GYPSUM COMPANY** is increasing the capacity of their mill at Gypsum, Ohio, from 30 tons to 60 tons per day. Machine Tenders, Beatermen and stock men are wanted at once. This is an up-to-date Chip Paper Mill. Address, G. L. Hann, Supt. Gypsum, Ottawa County, Ohio. Mch-lyr

**COATED PAPERS**—Boss Finisher, experienced, Book and Litho, Glazed and Surface Coated Specialties. Would like position. Understand friction and super calenders. Address, Box 2138, care Paper Trade Journal. A-15

**SITUATIONS WANTED**

**WANTED**—Position as superintendent of Board Mill. At present employed. Experienced on all grades of Boards. Progressive; can obtain maximum results at minimum cost, always maintaining labor harmony. Best references. Address, Box 2139, care Paper Trade Journal.

**YOUNG MAN** (26) experienced salesman of paper, cardboard and envelopes, desires to make connection with a concern in New York City. Will consider an inside office position on a selling proposition on a salary or commission basis. Address, Box 2153, care Paper Trade Journal. A-22

**CONNECTIONS** wanted with mills manufacturing Wrappings, all grades Tissues, Paper Bags and Toilet Paper, who desires to market goods to jobbers in Philadelphia, Baltimore and surrounding territory. Twelve years' experience. Best references. Address, Box 2154, care Paper Trade Journal. A-22

**SUPERINTENDENT** now engaged, wishes to make change. Would like to correspond with some reliable concern. Address, Box 2155, care Paper Trade Journal. A-15

**A PRACTICAL SUPERINTENDENT** would like to make change. Have had eighteen years' experience on Bond, Writing, Book, Envelope, News, Manila, Bag, Kraft, Fibre and Water Finish. Address, Box 2156, care Paper Trade Journal. June

**MANAGER**—If you require a competent up-to-date manager who has had 20 years' practical experience, in the manufacture of most kinds of paper, is an executive and salesman, who can introduce new grades and highly profitable specialties, remodel your mill, I am prepared to take the position on a purely profit sharing basis without any salary as a guarantee to good results. Address, Box 2158, which will be treated confidential. A-15

**FOR SALE**

**BEATERS**—One 61"x48", five Jones, one Downingtown, two Horne, one 60"x60", several 73"x44", two Claflin Refining Engines.  
**BED PLATES**—Circled to diameter of roll.  
**CALENDERS**—One 7 roll stack 72" face, two 9 roll stacks 72" face, one 9 roll 63" face, one 9 roll 84" face.  
**COATERS**—Two 56" Waldron coaters.  
**CUTTERS**—Two 45" Finlay cutters newly rebuilt with brand new Hamblet expansion pulley drive, 36" Sanborn cutter, 38" guillotine cutter.  
**CYLINDER MOULDS**—One 30"x54", one 30"x64", both rebuilt, ready for quick shipment. One new 30"x92".  
**DRIVES**—One Reeves No. 4, Class E, one Reeves No. 9, Class E, one Moore & White No. 10.  
**DRYERS**—4 36"x54", 8 36"x63", 7 48"x108", 3 36"x66", 1 36"x76", 1 24"x130", also twenty brand new shells 48"x96", and ten new shells 48"x102".  
**EVENERS**—Two Mellor eveners.  
**JORDANS**—1 Mammoth Jr., several Emerson and Horne type Jordans.  
**MACHINES**—One 2 cylinder machine for 56" trim, 23" dryers. One 72" Harper four-drier.  
**PULLEYS**—One 87" dia., 34" face, double arm, modern pulley. One set cone pulleys, 40"x31"x33" face. One set cone pulleys, 40"x31"x78" face. Also large stock of iron pulleys including some cone pulleys for Marshall drives. New wood pulleys with friction clutches.  
**PUMPS**—One dry suction pump, single vacuum, 12x22x18 Knowles, one 1,000 gallon Blake tank pump, several 7" and 8" Lawrence Machine Company, Class A, high duty pumps; fan pumps, new stock pumps, single and double.  
**PRESS ROLLS**—Large number of different sizes on hand. Some suitable for rubber covering.  
**ROTARIES**—One 14" Globe, one 44"x22" horizontal in good condition, ready for immediate shipment.

**MILLS MACHINE COMPANY**  
 LAWRENCE, MA 98.

**SITUATIONS WANTED**

**SUPERINTENDENT - MANAGER** desires change. Specialist on high grade Four-drier Tissues, also colors, glassine, grease-proof, M. G. rope, insulating, twisting; Capable of taking full charge. Address, Box 2157, care Paper Trade Journal. A-15

**RAGS-HOLLAND**.—Dutchman conversant with English, French and German for over twenty years in the wholesale business of Rags, Ropes and Metals and with a thorough knowledge of this class of business, seeks connection with American house to establish export business in above lines. Apply No. 4933, Max R. Nunes, Central Advertising Agency, Amsterdam, Holland. A-29

**POSITION WANTED** as Manager, Assistant Manager or similar executive position or selling. Thoroughly experienced in manufacturing and the office, including buying, production, schedules and handling of sales. Wood Papers, Sulphite Bonds, and Specialties. Superintendent's position not desired. The best of references. Address, Box 2039, care Paper Trade Journal. M-25

**MANAGING SUPERINTENDENT** desires position; fifteen years practical experience on tissues and all grades, specializing in specialties. A No. 1 on colors. My experience has been wide in construction and remodeling mills for increased tonnage. Best of references furnished on request. Address, Box 2169, care Paper Trade Journal. Ap 22

**CYLINDER MACHINE TENDER** is open for a position. Experienced on all grades of Boards, News, Chip, Test Container, Bristol and Tag or all grades made on Cylinder Machines from 2 to 7 cylinders. Best references. Married and steady. Address, Box 2187, care Paper Trade Journal. Ap 15

**GENERAL SUPERINTENDENT** open to consider position May first. Mill engineer and practical paper maker on cylinder products. Best references. Address, Box 2183, care Paper Trade Journal. M 6

**EXPERIENCED PAPER SALESMAN**, age 21, trade in New York and New Jersey. Excellent knowledge Glassine, Greaseproof and Wax papers wants position with reliable house. Address, Box 2184, care Paper Trade Journal. Ap 15

**SULPHITE SUPERINTENDENT** desires to make a change. Have had eight years' experience in acid making and cooking, and have been superintendent of Sulphite mills for twelve years. At present employed as superintendent of mill making 100 tons of Sulphite and 75 tons of Bleach Pulp daily. Can furnish best references. Address, Box 2185, care Paper Trade Journal. M 6

**WANTED**—Positions by two machine tenders, experienced on all grades of Box Boards. Always worked together in same mill, but no objection to positions in different localities. Best references. Address, Box 2186, care Paper Trade Journal. Ap 22

**EXCELLENT OPPORTUNITY FOR A PAPER MILL**

The undersigned company makes continuously 130 cords of wood waste per day from Spruce, Hemlock and Fir. The greater part of this material is suitable for chemical pulp production. Free water, cheap sawdust fuel and very reasonable electric power rates available. Excellent shipping facilities to all parts of the world. Write for further information to

**WESTERN COOPERAGE CO.,**  
 Portland, Oregon. tf

**FOR SALE**

**FOR SALE**—No. 1 Emerson Jordan and two small Horne Jordans without fillings. Address, John T. Andrews & Co., Inc., Penn Yan, N. Y. Ap 23

**FOR SALE**—One No. 22 Mitts & Merrill Hog. First class condition, only in operation a short time. Address, The Fox Payer Company, Lockland, Ohio. M 6

The  
**Paper Trade Journal's**  
**WANT COLUMN**

will get rid of that surplus material you have on hand. Others have tried it with great success.

**WHY NOT YOU?**

**FOR SALE**

**FOURDRINER PARTS:** One 72" with Pusey & Jones U shake.  
**DRYERS:** Three 48"x149"; four 48"x111"; nine 48"x96"; eight 36"x82" (two copper); five 36"x30"; two 36"x54"; four 28"x62".  
**MACHINE CALENDERS:** One 108" four roll; two 82" nine roll; one 74" five roll; one 72" seven roll; one 68" five roll; one 48" five roll; one 37" five roll.  
**SUPER CALENDERS:** One 62" Norwood; two 45" Holyoke; two 42" Holyoke; one 38" Holyoke (five iron rolls).  
**SLITTERS & WINDERS:** 2 142" Pusey & Jones two drum; 1 127" Kidder; 1 90" Pusey & Jones dingle drum; 1 84" Langston (new); 1 74" Pusey & Jones two drum; 1 40" Langston.  
**PAPER SHEET CUTTERS:** 1 108" Horne; 1 104" Horne; 1 84" Beloit; 1 72" Clark; 1 60" Finlay; 1 50" Hamblet; 3 48" Finlay; 2 45" Finlay; 2 42" Finlay.  
**REAM CUTTERS:** 1 55" Seybold 20th Century; 2 60" Sheridan; 1 36" Sheridan.  
**BEATERS:** 2 72"x54" Dillon; 2 60"x60" Downingtown iron tub; 2 50"x52" Downingtown iron tub; 1 52"x52" Emerson; 1 48" x 66" Umpherston; 4 48"x40" Boston; 1 32"x34" Emerson.  
**JORDANS:** 1 Dillon No. 1; 1 Horne Standard; 1 Smith & Winchester Standard; 1 Emerson Pony.  
**PUMPS:** Stuff; 1 Goulds 9"x12" triplex; 1 Deane 8"x8" triplex; 2 R. B. & F. 6"x13" Fan; 2 8" Lawrence Vortex; Centrifugal; 2 10" Worthington; 2 8" Wood.  
**SCREENS:** 1 14 plate Packer with plates; 2 12 plate packer; 1 Moore & White Rotary with aux.; 1 Voith; 3 Baker & Shevlin Centrifugal.  
**WET MACHINES:** 4 Sandy Hill 64"; 1 Bagley & Sewall 72" hydraulic; 2 62" Black & Clawson.  
**CYLINDER MOLDS:** 1 48"x102"; 1 38"x119"; 1 30"x84"; 1 36"x76"; 1 36"x75"; 3 30"x74"; 2 30"x49"; 2 30"x42".  
**ENGINES:** 1 200 H.P. Ball Variable Speed late type; 2 Ball 16"x20"; 2 Ball 13"x18"; 1 Fishkill Corliss 18"x42"; 1 Harris Corliss 16"x24"; 2 Ball 10"x10".  
 1 10" Sheet Pasting outfit with press.  
 1 Hydraulic Press, platens 60"x36", 13" ram.  
 1 Board Calender Horne 18"x48".  
 1 No. 8 and 1 No. 9 Reeves Drive.  
**FRANK H. DAVIS COMPANY,**  
 175 Richdale Ave. Cambridge, Mass.

**MISCELLANEOUS**

**WANTED**—Ten 36" x 72" Dryers complete with or without frames, gears and stuffing boxes. In answering please say what you have and state price and other details. Address, Box 2069, care Paper Trade Journal. tf

**FORMER SALES MANAGER** would represent reliable mill on a commission basis. Also buying experience. Unquestionable references. P. O. Box 1145, City Hall Station, New York City. A-22

**CLARK MFG. CO.**, 79 Merrick Ave., Holyoke, Mass., Manufacturers of Cylinder Molds, Dandy Rolls, all kinds of water marks, Wood Felt Rolls, Wood Press Rolls, Tube Rolls, Shower Pipes. We cover your Cylinders at the mill on short notice, or in our shop. We put them on tight.

**PAPER MILL WANTED**—The advertiser would buy a paper mill located in the East making Book and Newsprint Papers. Replies treated confidentially. Principals only. Address, Box 1927, care Paper Trade Journal.

**WANTED**—To buy. Dry saturating felt. Both for tar and asphalt saturation. Nos. Twenty-two, Twenty-five, Forty, Fifty and Sixty. J. E. Berkheimer Mfg. Co., Tacoma, Wash. A-15

**ACCOUNTANT**, part time work, specializing the paper trade. Experienced in all branches of accounting. Unquestionable references, reasonable rates. Special attention given to concerns without bookkeeper. Address, Box 2121, care Paper Trade Journal. M-25

**WANTED**—Slotter and heavy type vertical creaser to use on old solid fibre board, Knowlton machine preferred. What have you to offer? Address, Box 2189, care Paper Trade Journal. Ap 15

**WANTED URGENTLY**—Large or small pulp or ground wood mill in New York State or New England. Address, Box 2188, care Paper Trade Journal. Ap 15

**WANTED**—Three Centrifugal Pumps, 4" intake, 3" outlet. Mail particulars to Rose Lithographic Company, 55 Thirty-third Street, Brooklyn, N. Y. Ap 15

**WANTED**

Paper Mill with or without buildings, cylinder machine. Trim 64" to 72" or quantity of dryers, winder and wet end same width. State location and make. Address, Box 2141, care Paper Trade Journal. tf

**WANTED**

Wanted—A Schopper Tensile Testing Machine and a Schopper Folding Machine. Must be in good condition. Also interested in any American Paper Testing Instrument. State condition, how soon available and price. Address, Box 2161, care Paper Trade Journal. A 8-22

**Textile and Colored Specialty Mill for Sale in New England**

Twenty-nine acres of land. Six mill buildings A-1 condition; 190 H.P. water power; also steam and electricity; two 1,200-lb. Beaters and two Jordans; 64-inch 3 cylinder machine, 13 dryers. Production 15,000 lbs. 24 hours. It's a good one. Address, Box 2190, care PAPER TRADE JOURNAL. cow-tf

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AND HIGH SPEED  
ENGINES**

All Sizes: Every Engine Will Bear Rigid Inspection

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Engine Specialists  
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**ATLANTA COTTON  
MILLS CO.  
ATLANTA, GA.**

Manufacturers of Cotton Twine, 3 to 6 ply balls and cones. Prompt delivery.

**FOR SALE**

Quaker Hill Paper Mill, Quaker Hill, Conn. On concrete State Highway, 1/4 mile from Vermont Central and Thames River. 3 miles from New London. 150 H. P. now and possible to develop 500 H. P. water power. 150 H. P. Rotary Boiler; two 700-lb. Beaters; two-cylinder machine, 54-inch trim. Seven dryers, 7 Rod Calender stack. Product—Heavy and Light Manila and Extra Red and Brown Bogus, 5 to 6 tons 24 hours. Adaptable to tissue at small cost. Price \$25,000. Investigate.

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COMBINED CIRCULATIONS OF ALL MEDIUMS  
IN ITS FIELD.**

**MISCELLANEOUS**

**TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., April 7, 1920.** Sealed proposals are invited to furnish Postage Stamp Paper and Internal Revenue Paper, Check Paper, Castings, and for the sale of Waste Paper, Pulp, Shredded Trimmings, Ink Scrapings, Scrap Metal and for the Cleaning of Windows during the fiscal year beginning July 1, 1920. The right is reserved to reject any or all bids or parts of bids. Samples of Check Paper, must be received at the Bureau of Engraving and Printing not later than 2 P. M., Monday, May 3, 1920. Blank forms with specifications for proposals, giving dates on which the bids for the several schedules will be opened and further information will be furnished on application to James L. Wilmeth, Director. Proposals on the Postage Stamp Paper and Internal Revenue Paper, Castings, and for the sale of Waste Paper, Pulp, Shredded Trimmings, Ink Scrapings, Scrap Metal and for the Cleaning of Windows must be received before 2 P. M., May 17, 1920. Proposals on Check Paper must be received before 2 P. M., June 7, 1920.

Ap 15-22-29

**PAPER MILL BUILDINGS WANTED**

One or two machine mill, without machines, beaters, or jordans, preferably with 300 boiler H.P. and 150 H.P. engine, or with electric power at reasonable cost. Will purchase or lease. Floor space should not be less than 200,000 square feet. Address, Box 1991, care Paper Trade Journal, giving full details of type of construction and at least approximate space in each building. M-3

Lockwood's Directory for 1920 IS NOW READY Have You Procured Your Copy? Lockwood Trade Journal Co. 10 East 39th St., New York

**FOR SALE**

One (1)—76" Downingtown Duplex Cutter, new, with twelve pairs back stands.

One (1)—86" Beloit Duplex Cutter.

One (1)—96" Beloit Duplex Cutter. Both first class condition.

The Shartle Brothers Machine Co., Middletown, Ohio.

**Architects and Engineers**

**CAREY, JAMES L.,** Paper Mill Architect and Engineer, 106 North Laramie avenue, Chicago, Ill.

**CHAPMAN, C. A., Inc.,** Paper Mill Architects and Engineers, 28 Jackson Boulevard E., Chicago, Ill.

**SNOW, S. M.,** Mill Architect, Engineer, Paper and Pulp Mills. Steam and Water Power plants. 55 Kilby street, Boston, Mass.

**Rags, Paper Stock, Etc.**

**BERLOWITZ, PAUL,** 132 Nassau street, New York. Importer of Rags, Bagging, New Cuttings.

**CHASE & NORTON,** High Grade Shavings and Book Stock a specialty. 277 Water street, New York.

**FLYNN, MICHAEL** 54 Columbia street, Brooklyn, N. Y.

**GOLDSTEIN, R., & SON,** 1162 Scott Street, Baltimore, Md., Cotton Rags and Paper Stock.

**JACOB & CO.,** Alexander, Wrapping, London, England. Supply all classes Waste Papers and Shavings, Paper Making, Rags, etc. Correspondence solicited. Paris Office, 1 Cite d'Hauteville.

**HILLS, GEO. F.** 336 South Street. Branch House, 276 W. 26th street, N.Y.C.

**LIVERPOOL MARINE STORE CO.,** Liverpool, England. L. M. S. Wood Tag, Manila, Rope and Star Brands (Registered).

**ROSENBAUM, INC., L.,** Lafayette street, New York City. Packers exclusively of new cuttings.

**SIMMONS, JOHN, SONS,** Paper and Paper Stock. 28 and 30 South Marshall street, Philadelphia, Pa.

**MISCELLANEOUS**

**Bale Ties**

**WILSON, H. P. & H. F.,** Manufacturers of Steel Wire Bale Ties, for baling all compressible material. 544 West 23rd street, New York City.

**Boards**

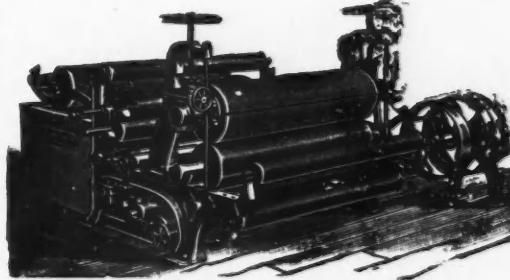
**MILLER PAPER CO., FRANK P.,** high grade specialties. Boards. East Downingtown, Pa.

**Special Machinery**

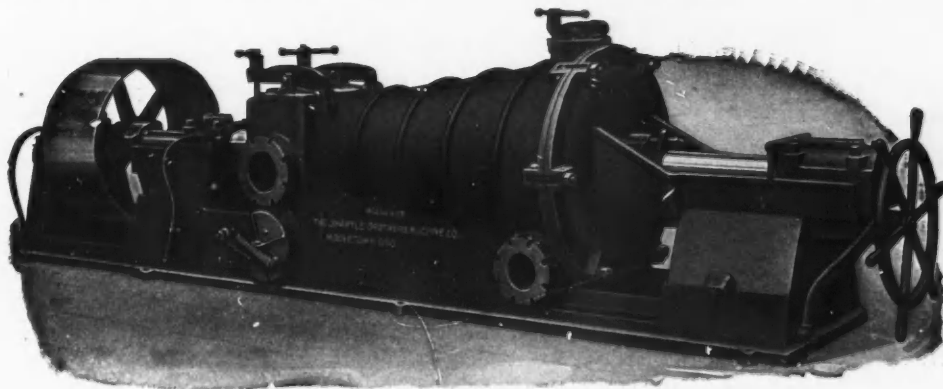
**SWIFT, GEORGE W., JR.,** Designer and Manufacturer of Special Machinery for Manufacturing and Printing Paper Goods. Bordentown, N. J.

**H. C. CLARK & SON MACHINE CO.**  
Manufacturers of **PAPER MILL MACHINERY**  
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Reels  
Dryers with Improved Packing Boxes  
Wet Machines  
Gun Metal and Rubber Rolls  
Rolls Reground



The Shartle Bros. Machine Co. Middletown Ohio

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