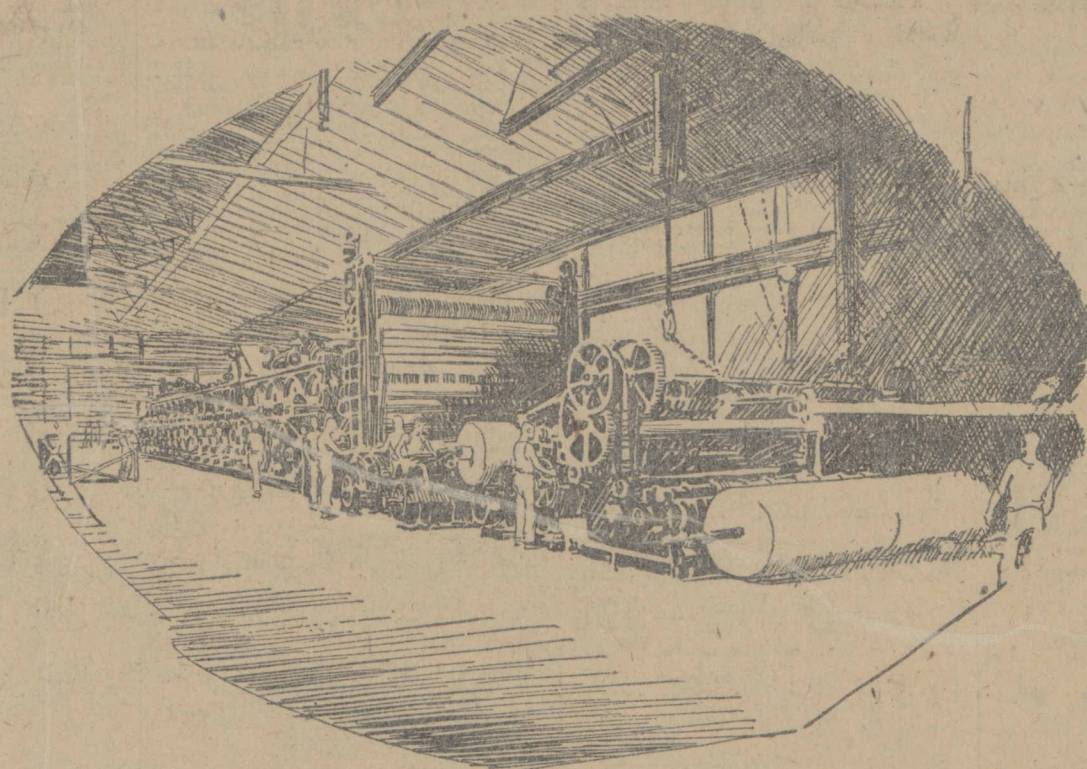


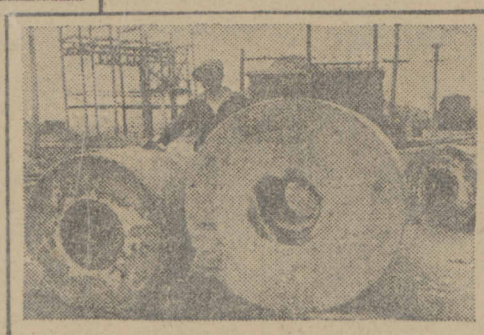
**1921**  
**Will Reward**  
**FIGHTERS**  
 Seven Pages  
 This Is No. 3



# The Chicago Tribune Makes Its Own Newsprint



**TURNING LOGS INTO TRIBUNE NEWSPRINT**—One of the battery of wood-grinding machines in The Tribune's mill. The logs are floated right to the machine. The workman is shown putting them into a box-like opening in one of the three turrets. Pneumatic pistons force them under tremendous pressure against great grindstones. Hot, white slush of ground wood is seen flowing out just behind the workman. Below at the right, a giant stone grinder. The stone at the left looked just the same before its three months' hard usage converting logs into pulp for Tribune readers.



**I**NTO The Tribune's great mill at Thorold, Ontario, go hundreds of thousands of electric horse power from Niagara Falls, millions of gallons of water from the Welland Canal, train loads of coal, steamers full of logs, cars of sulphur and limestone and clay—and out of the mill streams paper at the rate of 600 to 1,000 feet per minute from each of five machines.

The sheets delivered from the various machines range from 150 to 187 inches wide.



**RESERVE WOOD PILE** at The Tribune mill, now containing almost a million dollars' worth of spruce logs. The crane at the right has just lifted a hammock full of logs from the deck of a steamer in the Welland Canal and is throwing them into the log pond. The logs are floated across the pond and taken to the top of the pile by chain conveyors, here shown in operation.

This means that the product is the equivalent of a strip of paper one foot wide and five miles long every sixty seconds.

To produce the newsprint used in an average issue of The Sunday Tribune our paper mill consumes:

- 54 acres of timber
- 21 tons of sulphur
- 28 tons of limestone
- 665 tons of coal
- 63,000 electric H. P.
- 18,200,000 gallons of water

This great mill represents an investment of millions of dollars and employs 650 men. Its output is consumed by The Chicago Tribune, and The Tribune's tabloid pictorial innovation—The Daily News of New York.

Every operation in the conversion of spruce logs into paper is carried out within the mill in order that the highest standards of quality may be constantly maintained.



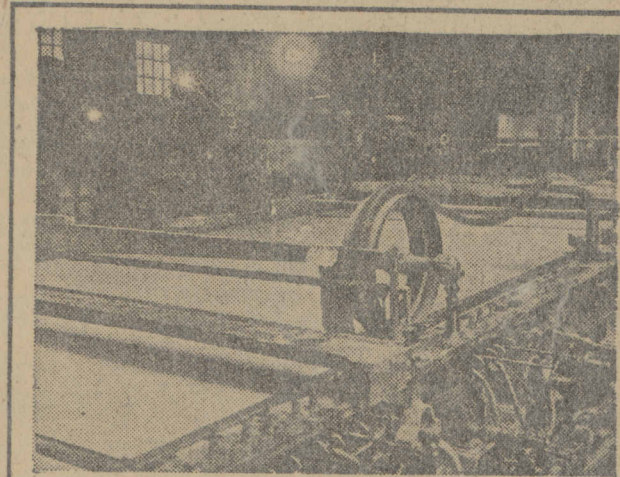
**FIRE PROTECTION**—The Tribune's log pile caught fire a few years ago and burned for five days, occasioning tremendous loss. Fire plugs like this are now placed at intervals all along the pile. Any one of them can shoot a stream over this big hill of logs.

Two kinds of wood pulp are used in making Tribune newsprint—chemical pulp and mechanical pulp. Chemical or sulphite pulp is obtained by chipping the logs and cooking the chips under heavy steam pressure in bisulphite of soda. This acid solution dissolves everything in the wood but the fine cellulose fibers. It leaves these long and unbroken. Even the bisulphite liquor is manufactured in The Tribune's mill by burning raw sulphur and sending the resulting gases up high towers, down which water trickles over masses of limestone.

Mechanical or ground wood pulp is obtained by forcing the side of a log against a huge grindstone whirling at 250 revolutions per minute. This quickly reduces the log to a hot, mushy "slush." This "slush" must be screened to remove the splinters and washed free of resinous material.

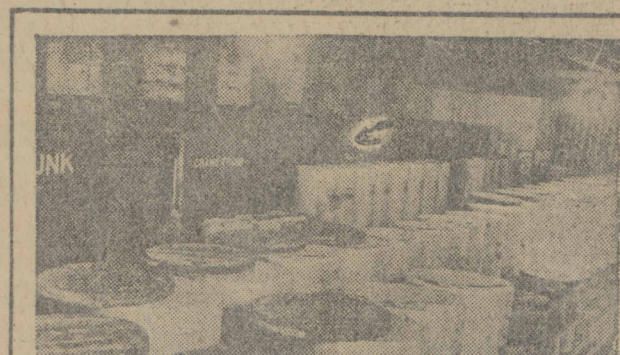
Ordinary newsprint contains 20% of chemical pulp, and 80% mechanical pulp. The quality of Chicago Tribune newsprint is kept above the average by using 30% chemical to 70% mechanical pulp. Not only is the chemical pulp more expensive to manufacture, but a cord of wood makes only 1,300 pounds of chemical, as compared with 2,300 pounds of mechanical pulp. Thirty per cent is the greatest proportion of chemical pulp that can be used to advantage. A greater amount would produce a paper too fine in texture to absorb the ink from cylinder presses grinding out 72,000 papers an hour.

The chemical and mechanical pulp in proper proportions are mixed with clay, which acts as filling; alum for sizing, aniline dye for



**WHERE PULP BECOMES PAPER**—Wood pulp greatly diluted with water flows on a wire screen at the right of this picture. When it reaches the left the water has been drained out, the fibers matted; it has become a sheet of wet paper—ready to pass through the series of rolls, blankets and dryers which finish the process.

bleaching, and then sent to the paper machines. The Tribune's new newsprint machine is said to be the fastest in the country. The pulp in a thin milky sheet, 150 inches wide, flows out on its screen and is converted into paper at the rate of 1,000 feet per minute. This machine and the four others are driven by three shifts of men, twenty-four hours a day, to keep The Tribune supplied with paper.



**SHIPPING FINISHED ROLLS**—Wrapped in special paper made at The Tribune mill, the rolls are loaded into freight cars which run inside the mill within a few yards of the paper machine pictured at the top of this page. The traffic department of The Tribune handles more than 10,000 cars a year, bringing raw materials to the mill and taking away paper.

**E**IGHT years ago, when paper was cheap and the business of making it considered highly unprofitable, The Tribune bought a piece of farm land on the Welland Canal and began the development of the mill described above, one of the largest in Canada. New buildings and machinery have been added during the recent period of extraordinary high prices. The object of The Tribune throughout has been to create a complete institution, self-reliant, independent, equipped to give maximum service to readers and to advertisers, ready to face this big new year knowing that *1921 will reward fighters.*

**The Chicago Tribune**

THE WORLD'S GREATEST NEWSPAPER