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A SAW MILL ON THE NORTH SHORE.

One of the first important saw mills to be built on the north shore of Lake Huron is illustrated on this page. It was erected in the year 1883 by the Cook & Bros. Lumber Company and is located at Spragge, in the Algoma district. At the time of its erection it was considered second to none, while it has since been remodelled in keeping with the advance that has been made in saw mill appliances.

The annual product of the mill is about 23,000,000 feet of lumber and 5,000,000 lath, the annual capacity per day of ten hours being 140,000 feet. It is a steam power mill, having a battery of seven boilers. The equipment includes two band saws, a gang, two edgers, and two trimmers, as well as lath machines,

UTILIZING WASTE.

According to the advanced bulletin of the 12th United States Census on the utilization of waste and by-products, nearly all of what was considered waste products of lumber and timber can be turned to some good use, and some of the new products thus formed are of considerable value. Of this latter class may be mentioned sawdust, which was formerly considered an absolute waste material, and was allowed to float down stream or was thrown into a heap where it could be most conveniently disposed of. French cabinetmakers have found a way of preparing this material which gives it a value far above that of solid timber by a process that has been in vogue for at least twenty-five or thirty years, combining the use of the hydraulic

the first of its kind erected in that country. According to an English patent of 1897, sawdust may be so prepared as to be non-inflammable, and then applied to jacketing of boilers and other purposes.

In the Journal of the Society of Chemical Industry for 1898 is described a series of experiments for obtaining alcohol from either coarse or fine sawdust, without affecting the yield. It was found that pine sawdust as compared with fir sawdust was superior as yielding a purer alcohol. It was also found that a high yield of sugar was obtained from birch sawdust, the yield of sugar being about 30.8 per cent. of the quantity of birch wood used. The quantity of alcohol obtained from 220 pounds of air-dried sawdust (20 per cent. water) was 7 to 8 quarts.



SAW MILL OF THE COOK & BROS. LUMBER COMPANY, SPRAGGE, ONT.

and machinery for making pickets is now being installed, when it will be possible to utilize much of the waste product which is now disposed of by a burner.

The company have two yards, of a capacity of fifteen million feet of lumber. Each yard is equipped with high trams and cars and all facilities for handling lumber expeditiously. Most of the mill product is shipped by water, vessels being able to load very advantageously.

Around the mill are employed over one hundred men, not including boat loaders and shippers.

The Cook & Bros. Lumber Company own extensive timber limits on the Serpent, Spanish, Blind and Mississauga rivers, capable of supplying the raw material for the mill for at least fifteen years. The timber is almost exclusively red and white pine. Mr. Geo. W. Cook is president, and Mr. H. W. Welch secretary of the company. Mr. C. E. Smith is superintendent of the mill.

press and the application of intense heat. By this process the particles of sawdust are formed into a solid mass capable of being molded into any shape and of receiving a brilliant polish, and possessing a durability and a beauty of appearance not found in ebony, rosewood, or mahogany. This product is known as "Bois durci." Artificial woodwork, therefore, seems to have a promising future. Alum, glue and sawdust, kneaded with boiling water into a dough, and pressed into molds when dried, is hard and capable of taking on a fine polish. Ornaments of great beauty can be made from it.

The production of acetic acid, wood naphtha and tar from sawdust is one of the latest enterprises in Norway. A factory has been started at Fredrikstad capable of distilling 10,000 tons of sawdust in a year. It also manufactures charcoal briquettes, which are exported to the Netherlands. The acids are chiefly placed on the German market, while the tar is mostly consumed at home. The factory is said to be

The quality of the alcohol distilled from the fermented liquid was said to have been excellent, and the preliminary experiments indicated that the trifling impurities found in it could be readily removed.

A patent taken out in England in 1896 for utilizing certain waste products of wood describes a process of constructing or manufacturing a product resembling wood from a mixture of sawdust or wood refuse and certain quantities of gums, resins, or other suitable agglutinants, either in a dry state or dissolved, the compound being subjected to pressure at a temperature sufficiently high to soften or melt the gums or resins.

LUMBER INSPECTION BOOK.

Six two-cent Canadian stamps buys the Lumberman's Vest-Pocket Inspection Book, containing rules for the inspection of lumber in the leading markets of Canada and the United States. Every lumberman should have a copy. The C. H. Mortimer Publishing Company, of Toronto, Limited, Toronto, Canada.