

Off the southeast coast of Newfoundland, on Great Bell Island in Conception Bay, about twenty miles from the city of St. John's, is the Wabana mine. The ore bed consists of small regular blocks of red hematite, most of them about four inches long, two wide and two thick, but some considerably larger. These blocks are piled one upon another, and close together, making a bed of ore of an average thickness of eight feet, extending over 817 acres. The bed is estimated to contain over 23,000,000 tons of available ore, beside the areas under the sea, where there are undoubtedly far larger quantities concealed than even the vast masses already known.

The price of this ore delivered at the furnaces in Sydney, including cost of mining, loading on ship, transportation and unloading, will not exceed \$1 a ton. When it is considered that the American furnaces are buying Lake Superior ore at Cleveland for \$5.75 a ton and transportation thence by rail to Pittsburgh, the difference in price is so striking that the advantage which it gives to the Canadian enterprise is obvious. It is thought not to be improbable that Sydney

will eventually surpass even Alabama in the cheap production of pig iron.

#### A MODERN MACHINE SHOP IN CANADA.

The Canadian Rand Drill Co., of which James F. Lewis, the well-known Chicago engineer, is president, has a well equipped and thoroughly modern plant at Sherbrooke, Que., which was visited by the members of the American Institute of Mining Engineers on their recent Canadian trip. We take the following detailed description from the Engineering News:

The new plant consists of a large main machine and erecting shop, pattern shop, storage shed and subsidiary buildings. The main building, two hundred by ninety feet, is of brick with side wall fifteen feet high, with the monitor portion of the roof thirty-five feet high. The roof trusses are of Georgia pine; the roofing is three-inch plank covered with tin, and the flooring is three-inch hemlock plank, set on eight by eight-inch timbers, filled between with broken stone pounded down and covered

with concrete. This floor construction has proved to be so solid that all ordinary machinery needs simply to be fastened to it by lag screws, individual concrete foundations being required only for the larger machines. The window area in the side walls and in the monitor roof is very large and the whole interior of the building is covered with asbestic whitewash, making the shop an exceptionally light one. To one side of the main building are joined three wings, each thirty by thirty-six feet, one at each end and one at the middle, which serve respectively for a blacksmith shop, power house and offices. The wing containing the offices has a second story, which is utilized for the drawing rooms, blue-print rooms, vaults, etc. To the rear of the centre wing containing the power plant is a coal storage shed arranged for the separate storage of steam, tempering and blacksmith coal. Behind this coal storage shed is the pattern shop and to one end of the main shop is the pattern storage house, both buildings being similar in construction to the main building.

The arrangement of the machinery in the main shop is on two sides of a centre aisle. The plan adopted was not to group similar tools together; but knowing exactly the work to be done upon the product, it was planned to place the tools so that the rough casting is passed from the machine performing the first operation to that performing the second and so on to the erecting floor for assembling. Air compressors and hoists are built on the left side and drills and coal cutters on the right side of the shop. The assembling floors are at the ends of the shop. The erecting floor for small compressors is covered by a two-ton travelling crane. For the erection of large compressions the main aisle is employed so that the main travelling crane, running lengthwise of the shop, can be used for handling the heavy parts.

Roughly speaking, the main erecting floor occupies the centre aisle space for one-half the length of the building. The floor consists of I-beams set on cast iron bed plates which in turn rest on concrete foundations. These beams are leveled up so that a

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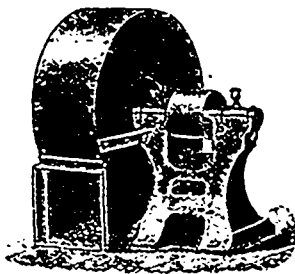
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