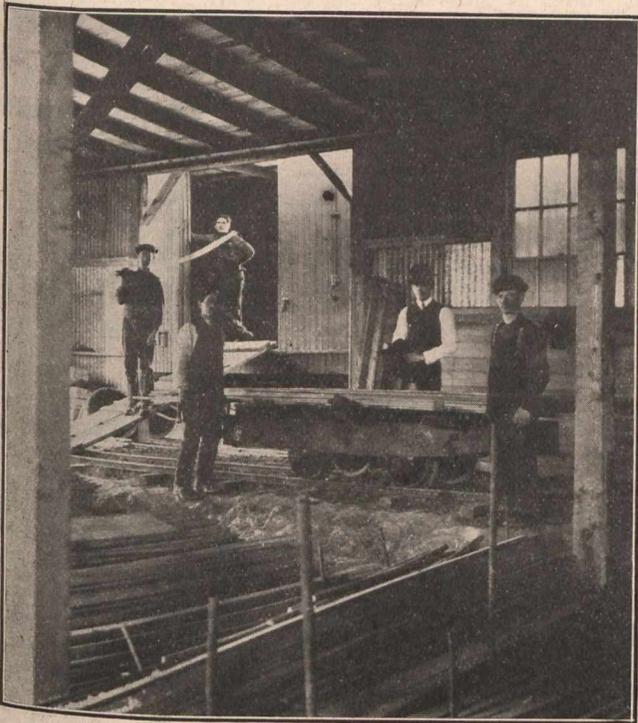


IRON ROLLING INDUSTRY IN THE WEST.

The Manitoba Rolling Mills, which started operations in Winnipeg recently, is the only concern of its kind west of Lake Ontario in Canada. Their plant is situated in the western portion of the city close to the C.P.R. shops in a suburb known as Weston. It was opened for a short time last fall, but was closed down temporarily for the purpose of making extensive alterations and additions, which would so increase the capacity of the plant as to enable the company to take care of the immense amount of work which they found in the Western field.

The president of the company is L. A. McElroy, of Erie, Penn., who is also president of the American Horse Shoe Company. Associated with Mr. McElroy in the Manitoba



Corner in Shipping Room.

Rolling Mills Company are a number of other United States capitalists of Erie, Pa., who have for years been connected with similiar enterprises in the United States. The field for the establishment at Winnipeg, Man., of a manufacturing plant of this kind was observed a few years ago by T. M. Kirkwood, of Toronto, who began the erection of the buildings now owned by the Manitoba Rolling Mills Co. and controlled by the Erie, Pa., capitalists. Mr. Fred. Ziegahn, an experienced and practical "iron mill" man, is general manager of the new mills at Winnipeg and the men employed in the works are among the best paid workmen in the West classified in technical form, as rollers, heaters, roughers, stranders, hookers, straighteners, builders, roll-turners, machinists, engineers and firemen.

There are features in this plant which make it distinctive, and on which the company relies for a superior grade of iron. The raw material used is scrap iron, collected at large throughout the West from the railroad and scrap iron dealers. This scrap is carefully sorted, the steel being shipped East and all cast iron or thin sheet going to the local foundries to be smelted. The iron which is used at the plant is of high grade, and the process is such as to add to its quality. The plant is now turning out about 25 tons of finished material, sizes ranging from $\frac{3}{8}$ to $1\frac{1}{2}$ inches in rounds and squares, and $\frac{1}{8}$ to 1 inch thickness by $\frac{3}{4}$ to 5 inches wide in flats, and is running to its limit with day and night shifts.

Reduced to Convenient Form.

The larger pieces are sheared in a heavy press to a size convenient for handling, and then in the hands of experienced men are stacked in piles of about 250 pounds each. These piles are three feet in length and about ten inches square,

and when completed are bound together with wire. These bundles are then placed in a furnace and heated to a welding heat and then rolled into rough flat bars called muck bars. These bars are cut and again built up and heated in a second series of furnaces for the rolls, where they are given the final finish for the market. This gives what is known in the market as a double refined iron, and it is claimed that the quality is greatly improved by the repeated handling to which it is subjected.

When this plant was first put into operation it was designed on a rather small scale, but under the present management it has been considerably enlarged, and it is the intention, when the business guarantees such a step to remove to a point farther out, where there is still more space available. At the present time they have six acres of ground and buildings covering two acres. In the scrap heap there are 3,500 tons of old iron of all sorts, making a conglomeration impossible to describe. The main building is 100 by 180 feet, and in it are the two series of furnaces, two trains of rolls, and a quantity of machinery of various sorts, including planers and lathes. The office and bar iron warehouse are in a building 60 by 80 feet, and the scrap house is 60 by 100 feet. In it are the stacking benches and heavy shears.

Smelting Facilities.

Through the buildings are series of narrow gauge tracks on which are operated small trucks, while in the main mill are overhead trolleys for carrying the billets from the furnaces to the rolls. The furnaces are coal fired and when the billets are heated to the proper temperature they are removed by long tongs swung from the overhead trolley. The rolling trains consist of a sixteen-inch train with two sets of housings and a nine-inch train with six sets of housings. The heated billet is carried to these rolls, and passed through them till reduced to the desired size and shape, then passed out on a cooling bed and finally cut to market lengths ready for shipping or storing. There is a switch running directly into the shipping rooms as shown by the accompanying illustration, and in this building there is stored ready for shipments stacks of finished rounds, squares and flats.

The power plant consists of a 100 horse-power Corliss engine in the mill, an 80 horse-power Skinner engine in the scrap house and a 40 horse-power engine for running the fans. The boilers, 400 horse-power capacity, are heated from the waste heat from the furnaces. The buildings are all metal clad and spur tracks from the C.P.R. give ready access for raw material, fuel and the shipping of the finished products.

UNIFORMITY IN CONCRETE MIXTURES.

In a recent paper on reinforced concrete it was stated that a rich mixture was used in the columns and a leaner mixture in the floors. In discussion of this method from the contractor's standpoint, Mr. Leonard C. Wason, president of the Aberthaw Construction Company, of Boston, Mass., made it evident that if this rich column mixture is not carried through the thickness of the floor there will be a line of weakness at the point of junction which is so considerable that it should not be overlooked. The writer of the paper was asked what measures were taken while rushing a building at high speed and pouring the floors, to build up the columns with a rich mixture and to fill in the leaner mixture in the floor, and what method was used to make sure that each particular batch of rich mixture was traced from the mixer to the proper point in the column. In answer it was admitted that no provision was made, and that in fact the lean mixture was carried throughout the area of the floor, including that portion of the column contained within the thickness of the floor, thereby supporting Mr. Wason's contention of the undesirability of this method.

Building permits to the value of \$150,000, and including twenty-six dwellings were issued by the city architect from May 16 to May 23.