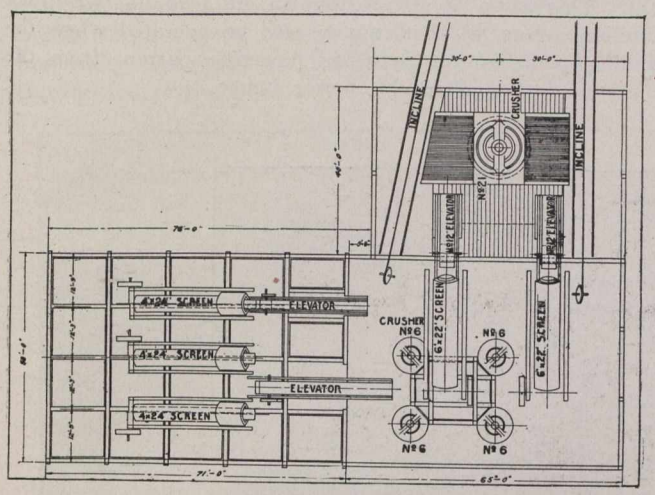
point where it is screened, with the exception of the dust, which is conveyed in a dust-tight screw conveyer to a bin compartment properly covered over. The rock, which is very hard and clean, sizes very accurately, producing the very best of marketable stone.

Storage System:

The storage bins mentioned above have a total capacity of from 2,000 to 3,000 tons, and the bulk of the product is spouted direct from these bins into cars and wagons for shipment. The shipping tracks shown upon the illustration, run under three of the compartments, the remaining



General Plan of Rock Crushing Plant.

two being for teams. The spouts and gates from the storage bins are so arranged that any bin may be made to deliver its product to a car or wagon in the compartment on either side as well as the one directly beneath the bin, making it very easy to load more than one size into a car at the same time or to load the same size into two or more cars at the same time. No provision is made for recrushing any of the different sizes of rock, but the excess of any size that does not market as fast as made is stored on one of four storage piles. The capacity for storage being approximately 150,000 tons is sufficient to take the entire product of the plant for about 75 working days. When rock is to be stored, the particular size of which there is an excess is drawn from its bin on to a belt conveyer, which carries it out from under the bin to the system of storage conveyers extending over the storage yards. There are two belt conconveyers extending under the bin, so that two sizes of rock may be piled at the same time, and the conveying system is so arranged that any size can be piled on any pile. The amount of rock to be stored cannot be predetermined and is not the same throughout the year. Moreover, some sizes are marketable only during the summer time, while other sizes are marketable during the entire year, thus making the flexibility of the storage system above described of paramount importance. The conveyers used in this storage system are partly 20-in. and partly 24-in. belt conveyers of the Stephens-Adamson make, and the long storage piles are provided with movable trippers, which distribute the rock over the pile where desired. On account of the extreme hardness and sharpness of the rock, the belts are made of the best Diamond Rubber Company's brand, with 3/16 in. rubber cover for the narrower belts and ¼-in. rubber cover for the wider. One specially interesting feature of the conveying system is the distributing centre, where the two belt conveyers leading out from under the bins deliver the material into two small hoppers, where the product from either these belt conveyers may be delivered to the same piling conveyer, or to any one of the three piling conveyers, without interfering with the other.

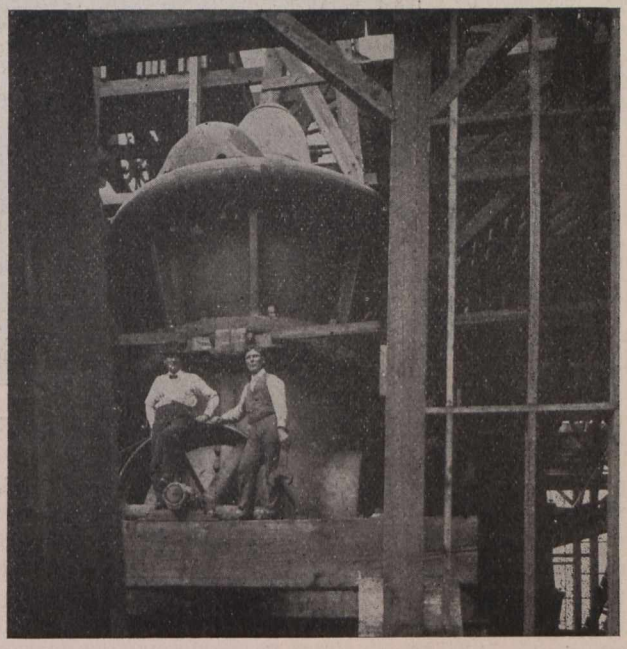
Shipping Arrangements:

The rock loaded directly on the cars from the bins is brought out upon the track shown in the illustration, past the scales (which are of the Fairbanks-Morse recording type) printing upon a ticket the gross and tare, and from this point the railroad track leads to the street railway system of Montreal, upon which it can be distributed to any point in the city, or to any railroad or wharf for further shipment. The wagons leave them properly from the other side, passing over another set of scales. of similar type.

When the rock that has been piled on one of the storage piles is shipped, it is loaded in a railroad car or wagon placed alongside of the pile by steam-operated clam shell derrick crane, made by the Bay City Industrial Works, which has a one-yard clam shell bucket upon a 40-ft. boom so that it can reach from the car to any point upon the storage pile adjacent to it, so that the additional cost of rock taken from the storage pile, when delivered upon cars is only a cent or two more than that delivered direct from the bins.

Power Plant:

The power plant consists of two 250 h.p. Erie City water-tube boilers, and one 720 h.p. vertical triple expansion Belliss & Morcom engine, this engine being connected by an English system rope drive to the main line shaft, which is in turn belted to the various machines mentioned. The belt conveyers are driven by Allis-Chalmers-Bullock induction motors, and the electric current for these (as well as for the Temple drills in the quarry and for lighting) is supplied by 175 K.W. Allis-Chalmers-Bullock generator. This generator is of the belted type, receiving power from the main line shaft, but is placed in the power house in line with a McEwen automatic high-speed self-oiling engine of suffi-



Rock Crusher In Position.

cient power to drive the generator when used either for operating the motors or the drills or the lighting system, when the main engine is shut down. The big engine is run condensing, delivering the steam direct to a Knowles pump and condenser located alongside of it. The hot water from the condenser is elevated by a McDougall centrifugal pump to a water-cooling tower just outside the power house.