three-phase current as furnished by the power company. A general system of lines connects the mill stores, general yard, workshops and coal siding.

The mill consists of 200 stamps, arranged in units of ten, each unit being driven by a 50 h.p. motor. Weight of stamps when new, 2,000 pounds. The stamps have long heads and short stems. A layer of half-inch felt is placed between the mortar bases and the concrete foundations. There are no king-posts, as the concrete foundations are carried up 14 inches wide, with indented steel bar reinforcing to above the level of the mortar-box tops. On the tops of the foundations is bolted a heavy cast-steel frame, which carries the cam shaft and stem guides. Each cam-shaft rests on 11 bearings, as beside the three bearings there are bearings intermediate between the cams. This is to minimize, if not entirely obviate, cam-shaft breakages by reducing vibrations. The stems run in cast-iron guide blocks bolted to the steel guide girts, but with a wood cushion between. As these stamps are designed for very heavy duty, each set of five stamps is provided with two challenge feeders to feed behind the second and fourth stamps of each mortar-box.

Practically the whole mill is of steel, wood only being used for the bin lining, for minor purposes and for fastening on the corrugated iron. The mill pulp is elevated twice, once between the batteries and tube mills, and second between the shaking tables and the sands collectors.

The tube mill plant comprises nine mills 5 feet 6 inches by 22 feet, driven by a slow-speed motor. In order to avoid crowding together of classifying cone and pebble feed, the driving arrangement is at the outlet end of the tube mill. It is at the inlet where most attention is required, and the presence of driving gear there is both inconvenient and dangerous. Behind the tube mills is the gold recovery house, where all the gold is recovered and handled. Each of the nine tube mills has seven shaking tables, with room left for an eighth if required. It will be understood that, in conformity with most modern practice, no amalgamation is done in the battery itself. There are 18 extractor boxes.

The sands collecting plant consists of one row of six vats built in reinforced concrete, which is the outstanding feature of the whole equipment. From the collectors the sand is taken to the leaching vats, of which there are 12, by means of conveyer elevator belts. Blaisdell distributors and excavators are used, and all power for the operation of the plant is purchased electricity.

RECIPROCITY IN COAL

Its Probable Effect on Nova Scotia—An Eastern Point of View.

(See Editorial Pages for Comment.)

Through the courtesy of Mr. J. H. Plummer, president of the Dominion Coal Company, the CANADIAN MINING JOURNAL reproduces a memorandum concerning reciprocity in coal, which has been submitted to the Dominion Government on behalf of the company.

Following is the statement:

1. Such support as a policy of reciprocity in coal has received in Canada appears to be based on the theory that the Nova Scotia collieries would secure a large market in New England, to offset their loss of trade in Quebec and Ontario. It is assumed that the policy could not be discussed except on this theory.

2. The free access to the United States markets which the Nova Scotia collieries would gain under reciprocity would, however, be an almost empty privilege.

The coal trade in Boston and New England has in recent years been revolutionized by important developments in the mining and transportation of coal. The conditions which formerly existed have entirely been changed, and the ability of the Nova Scotia collieries to find a market there has steadily decreased.

The developments have been general, but are most marked in the West Virginia coal fields, whose products reach the seaboard at about the same distance from Boston as Louisburg. By the construction and equipment of railways, steamers, loading and discharging plants, and other modern transportation facilities of the most modern and most economical type, at an enormous cost, the West Virginia mines have gained a strong hold on the New England market. These developments still continue, and the cost of production and transportation may be further lessened.

The consolidation of the New England railroads has also affected the situation. Their enormous trade of 5,000,000 tons gross a year all goes to American channels, and so far as the supply of coal by rail is concerned, their influence cannot but be entirely in favour of American coal.

3. Nova Scotia coals are generally excellent steam coals, but those from West Virginia are less volatile and are freer from sulphur; they are, in fact, of a different class, make less smoke, and are generally more desirable. The appliances installed by the large consumers are adapted to the use of this coal, and they cannot without inconvenience and expense use Nova Scotia coals, which debars us from their trade.

4. Notwithstanding our efforts to sell coal in New England, our shipments have been steadily decreasing, and even with concessions in price equal to the amount of duty, we have recently found that we could not secure contracts. We made strenuous efforts to place coal in New England during the past year, chiefly to provide steadier employment for our men during the winter months, and were willing to work on a very small margin of profit, but were entirely unsuccessful.

5. These conditions arising out of the natural development of the trade are in themselves conclusive, but, in addition, an absolute bar to the sale of our coal has been created by the legislation passed by the State of Massachusetts in June last, to abate the smoke nuisance. By this legislation the State has practically closed its doors against Nova Scotia coal; the terms of the Act, which is supplemented by local regulations elsewhere, as at Springfield and Worcester, preclude