

**A CORRECTION.**

HAMILTON, Dec. 14, 1900.

Editor CANADIAN CONTRACT RECORD:

Dear Sir,—We draw your attention to the item in your issue of the 12th inst., relative to the meeting of A. W. Campbell at Georgetown, recommending that the county of Halton should purchase a "Road Crusher." Now, as there is no such machine as a Road Crusher, it is hard for interested parties to understand just what he has recommended.

We know that the name has been erroneously quoted, and a Road Roller is often alluded to as a Road Crusher. The machines are either Steam Road Rollers, or Horse Road Rollers, or Rock Crushers, there being no such machines as Road Crushers.

We think it necessary for the proper parties to endeavor to correct this impression that has gone about that there is such a machine as a road crusher.

Very truly yours,  
GOOD ROADS MACHINERY CO.

**RUST AND ITS PREVENTION.**

As to what rust is there is no dispute. It is the hydrated sesquioxide of the metal. As to the way in which it is formed, however, there is a difference of opinion. Some hold that the agency of carbonic acid is essential, others that the presence of that gas in the air is without effect. Spennrath quotes the following experiments which seem to be decisive, but it would appear that their entire accuracy is not fully admitted. He asserts that iron does not rust—

- (a) in dry air,
- (b) in pure oxygen,
- (c) in water free from dissolved gases,
- (d) unless liquid water is in contact with it,
- (e) in caustic lyes containing carbonates.

He also asserts that if iron is kept wet and in a current of air free from carbonic acid it will rust perfectly. Spennrath thus infers that rust is due to the simultaneous contact with the iron of liquid water and atmospheric oxygen, the latter being in solution in the water. Those who deny the efficacy of carbonic acid in promoting rust assert that rust spreads as it began, but the supporters of the carbonic acid theory assert that ferric carbonate is first formed. This then gives off carbonic acid and leaves the sesquioxide. This reacts with some of the unchanged iron, forming ferrous oxide, which absorbs oxygen and carbonic acid from the air, reproducing the ferric carbonate, and so on.

(Continued next week.)

# MUNICIPAL DEPARTMENT

**CONSTRUCTION OF GRANITE BLOCK PAVEMENTS.\***

(Concluded.)

Until the concrete is sufficiently set no carting or wheeling over it must be allowed, and then only when covered with planks.

The blocks should be of a durable, sound and uniform quality of granite, free from weather marks and seams. The appearance of the pavement is very objectionable if blocks of different colour or shade are used, and therefore they should be uniform in colour. As to hardness, that is more important still, for the pavement will wear unevenly if blocks of a softer quality are allowed to be mixed in with the harder blocks. In case the blocks come from different quarries it is desirable to pile and lay each lot of blocks by themselves so that there will be no mixing.

The blocks should be split and dressed so as to be in form as nearly rectangular as possible, measuring on the face or upper surface not less than 9 inches nor more than 1 foot in length. If the blocks are longer than this the cross section of the road-bed will show for the surface a many sided polygon instead of the desired curve or arch. There is also danger of the breaking of blocks under traffic where the length is out of proportion to the depth. The width should range between 3½ and 4½ inches. This width seems to give the best footing for the horse. The depth of the blocks should range from 7 to 8 inches.

When the blocks are delivered on the work careful inspection should be made and all imperfect stones removed from the line of the work. The contractor should submit several specimen blocks before begin-

\* A paper presented at the Milwaukee Convention of the American Society of Municipal Improvements by Mr. Josiah A. Briggs, Chief Engineer Department of Highways, Borough of the Bronx, New York City, and published in the Engineering Record.

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ning work, and all blocks furnished should be equal to these if they have been approved.

When ready to begin the laying of blocks, the sand bed or cushion for the pavement is spread evenly over the prepared surface, whether concrete or earth, to a depth of about 2½ inches. This sand should be clean, coarse and free from dirt and large pebbles.

When the sand is spread the bond or guide stones are set by careful measurements from a line stretched between the top of curbs, parallel with and at sufficient height above the finished surface or crown to allow for ramming. They are set about 4 feet apart transversely and about 3 feet apart longitudinally. It is best to work up grade in laying the paving, for the reason that on the steeper grades the front courses of stone are likely to creep

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