

Steel Trucks in Belgian Collieries.—In the Belgian collieries, trucks made entirely of steel have been in use for several years. Drawings of these trucks, published by P. Vanhassel, show that repairs are cheaply and easily effected. A damaged part has merely to be un riveted and replaced by a fresh one kept in stock. The damaged part is, as a rule, merely bent, and being of steel, can be straightened and used again. A truck of this type can be put together without difficulty by a lad, the separate parts having been purchased. A truck with a weight of 375 lbs. and a capacity of 336 lbs. of coal costs 26s. In many Belgian mines, the wheels of the truck are loose and turn freely on the axle, the advantage they present being the small resistance they offer in passing round curves. The wrought-iron axles are square in section with 1.38 inch side. Four wheels and two axles weigh 132 lbs., and cost 19s. 0d. The entire truck weighs 507 lbs. and cost £3, 5s. 9d. The weight of the truck is, to that of the coal carried, as 1 is to 2.3, and this may be considered a very favorable ratio. A truck of the old type with wooden body weighed 551 lbs., and cost £3, 8s. By the introduction of trucks with steel bodies the output of the Mariemont mine has been increased 40 per cent.

Incline Truck Drop for Calcining Kilns.—A new incline truck drop for use in connection with calcining kilns is described by Mr. C. Wood, in a paper read before the Cleveland Institution of Engineers. This drop was designed for lowering the trucks from the top of the kilns at the Tees Iron works, where the space was very limited, and for that reason a drop of the ordinary design was not admissible. After a description of the form of drop usually employed in the district, the details of the latter design are given. Four columns support girders, on which is mounted a shaft with four rope pulleys and a brake-sheave. The counter-balance weights work inside the two main columns. These stand on one side of the centre line of the kilns, from which the truck is run on to the lowering table, its weight being so placed as to keep the guide-wheels in position. The table at the bottom of its travel is tilted automatically, and the stops withdrawn so as to discharge the trucks on the same side as that on which they were received.

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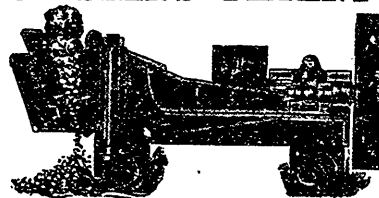
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