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WITNESSES
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IMPROVED APPARATUS FOR CONVEYING AND DUMPING COAL.

Specification forming part of Letters Patent No. 78,430, dated June 2, 1868.

To all whom it may concern:

Be it known that we, HENRY C. CLARK and ROBERT B. LITTLE, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Apparatus for Conveying and Dumping Coal; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of our invention. Fig. 2 is a plan or top view of the same. Fig. 3 is a detail sectional view of the clasp for fastening the rope to the truck.

Similar letters of reference indicate like parts.

This invention relates to a new apparatus for conveying coal or other articles on an inclined or other track, for the purpose of dumping them at a desired spot.

The invention consists, first, in providing the bucket or vehicle in which the articles are transported with a hinged gate, which, when closed, forms an inclined wall of the vehicle, so as to be held closed by the weight of the contents, and which is provided with an upward-projecting lug or pin. When this pin strikes against an obstacle the gate will swing open, and the load will be discharged from the vehicle.

The invention consists, second, in a new clasp for fastening the rope from which a coal or other bucket is suspended to the truck that runs on the rails, said clasps consisting of two metal straps, hinged together at one end and locked together at the other, in such manner that the clasp can be easily opened and closed, when desired, to facilitate the removal of the rope.

The invention also consists in the use of a carriage for holding the bail by which the bucket is dumped, said carriage resting on the inclined track in such manner that it can be moved up by the loaded bucket while the same is being dumped, to prevent the abrupt stoppage of the bucket and consequent injury to the working-gear. When the bucket is let down again the carriage will, by its own gravity, resume its original position.

A in the drawing represents a bucket, cart,

car, or carriage for conveying coal or other loads. It is either running on wheels or suspended, or both.

The front of the vehicle is formed by a plate, B, pivoted to the sides of the vehicle, as shown, which plate, when closed, stands in an inclined position, so that the weight of the load within the vehicle A will serve to hold it closed.

a is a stop, projecting above the upper edge of the plate B, or forming part of the said plate. When this stop strikes an obstruction, while the vehicle A is moving forward, the plate will swing up, and will open the vehicle and cause the discharge of the contents, as is indicated in Fig. 1.

C represents a rope or chain, by means of which the bucket A may be suspended from a truck, D, that runs upon an inclined track, E, as is clearly shown in Fig. 1.

The rope C is fastened to the rear axle, *b*, or to some other rod in the rear part of the truck, by means of a clasp, F, as in Fig. 3.

The clasp F consists of two plates, *c* and *d*, connected by means of a hinge, *e*, and locked together at *f*, as is clearly shown in Figs. 2 and 3.

An eyebolt, *g*, is swiveled in the plate *d*, and to it is the end of the rope C secured. This clasp can be easily loosened and refastened, as may be desired, but cannot spontaneously work open.

The rope C is fastened to the rod *b*, passes under a pulley, *h*, of the bucket, and then over the front axle, *i*, of the truck, as shown; and thus, by pulling it, the truck will be drawn, and the bucket with it, the distance between the truck and bucket not being changed until the truck comes to a stand, and then the rope is still drawn or slackened.

G represents a carriage, running on the outer edge of the track E, its four or more wheels, *j*, being secured to bars *k*, that are connected by braces *l l* under the track, as shown, so that in this way the carriage does not obstruct the passage of the truck, the wheels of which run on the inner edge of the track.

The carriage is, by means of a rope, *m*, or otherwise, suspended or stopped, so that it cannot roll down on the track below a certain desired point, while it is free to be moved up.

When the truck is drawn up, the stop *a* on the bucket will strike against a bail, H, that

is fastened at one end to the carriage, and at the other end, by means of a chain or cord, *n*, suspended, as shown.

When the stop thus strikes the bail, it will carry the carriage up a little, and will then finally be acted upon, and the gate B of the bucket will be opened, all as indicated in Fig. 1.

As soon as the truck is let down again, the gate B will be closed by its own gravity, the bail will, by its own gravity, assume its original position, and the carriage G will, by its own gravity, roll down to its stopping-place, and thus the whole apparatus will set itself automatically, ready to be charged and dumped again.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The construction of a conveying and dumping apparatus or bucket, A, with a hinged front gate, B, and stop *a*, attached thereto, and operating substantially as herein shown and described.

2. The clasp F for securing the rope C to the truck D, said clasp consisting of two plates, *c* and *d*, hinged and locked together, substantially as herein shown and described.

3. The adjustable carriage G, running on the outer edge of the track E, and holding the dumping-bail H suspended by a chain or cord, *n*, the said carriage being free to be moved upward on the track, substantially as and for the purpose herein shown and described.

4. A coal conveying and dumping apparatus consisting of the bucket A, having the hinged front B, with the stop *a* of the rope C, clasp F, truck D, carriage G, and bail H, all combined with each other, and made and operating substantially as herein shown and described.

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