W. S. BULLOCK & H. HANIGAN.

DUMPING-WAGON.

No. 185,767. Patented Dec. 26, 1876.

Fig. 1.

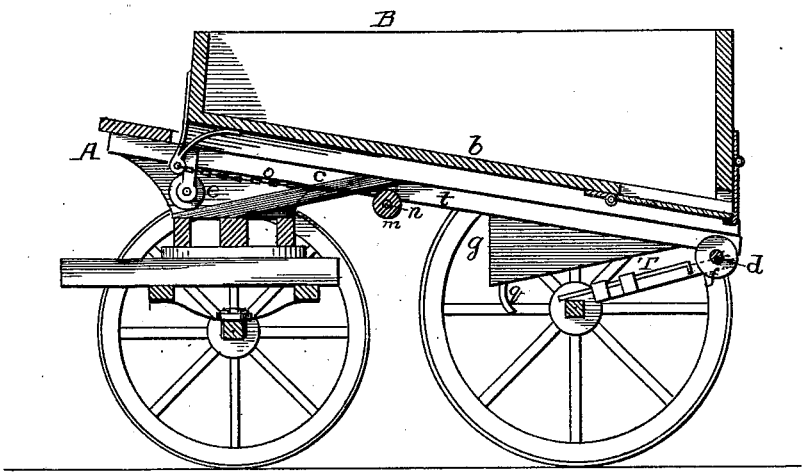
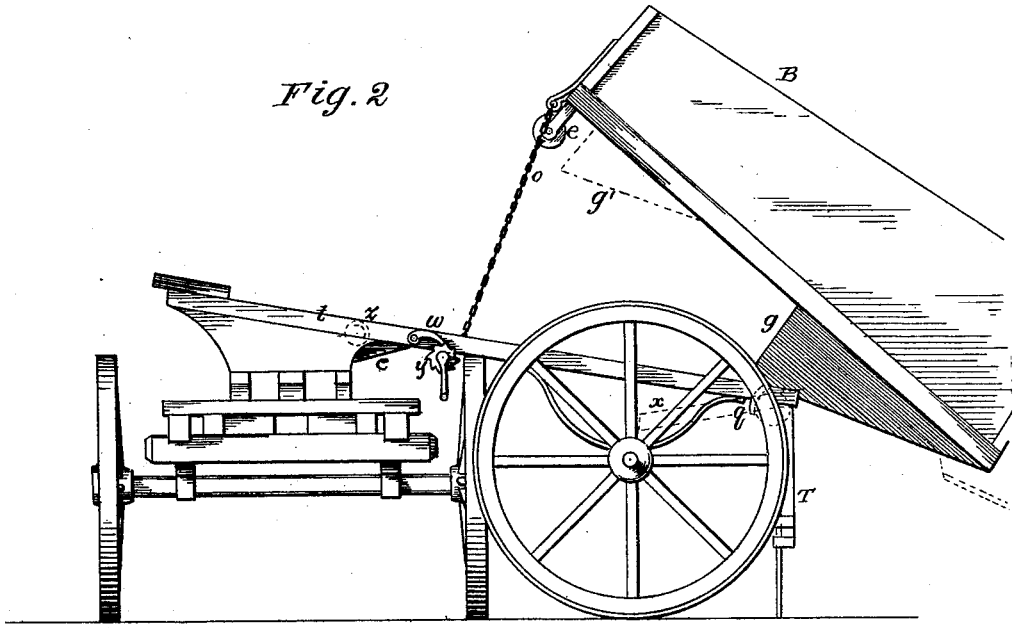


Fig. 2



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UNITED STATES PATENT OFFICE.

WILLIAM S. BULLOCK AND HUGH HANIGAN, OF WILMINGTON, DELAWARE.

IMPROVEMENT IN DUMPING-WAGONS.

Specification forming part of Letters Patent No. **185,767**, dated December 26, 1876; application filed November 9, 1876.

To all whom it may concern:

Be it known that we, WILLIAM S. BULLOCK and HUGH HANIGAN, of Wilmington, New Castle county, Delaware, have invented Improvements in Wagons, of which the following is the specification:

The object of our invention is a dumping-cart, constructed as fully described hereafter, to dump the load at a distance from the ground, and without moving the body to the extent heretofore required.

In the accompanying drawing, Figure 1 is a sectional elevation of a cart constructed in accordance with our invention; and Fig. 2, a side view, showing the parts differently arranged.

The frame A of the wagon is supported by the wheels in the ordinary manner, and may be horizontal; but in the present instance it is inclined and adapted to the inclined bottom *b* of the movable body B, which rests upon inclined side rails of the body, as shown in Fig. 1.

In ordinary dumping-wagons of this class the body is of uniform depth, slides backward, and tilts when the overhanging portions overbalances the forward part.

The objections to this construction are two-fold: first, the body has to be moved backward more than half its length before it will tilt; second, when the body tilts the lower end will be so close to the pavement that a chute placed with one end below the body cannot be sufficiently inclined to permit the coal or other material to pass by its gravity along the chute.

We overcome these objections, first, by making the movable body deeper at the rear, so that this end will preponderate after a rearward movement of less than one-half the length; and, secondly, by carrying the body upward as it moves to the rear, so that when it tilts its rear end will be far enough from the pavement to permit the chute to be so inclined that the material will pass freely by its gravity along the same.

Various modes of guiding the body upward and propelling it backward may be adopted; for an instance, the frame may be provided at the front with side rails *c*, inclined backward and upward, and serving as bearings for wheels *e*, hung to brackets projecting from the body, and a shaft, *d*, may be placed at the rear of the frame to support rollers *f*, on which bear the inclined lower edges of two parallel ribs, *g*, secured to the bottom of the body.

A shaft, *n*, at the center of the frame, carries a drum, *m*, for receiving a chain, *o*, connected to the front of the body, a pawl, *w*, on the side of the body being adapted to a ratchet-wheel, *y*, on the shaft. By turning the shaft the body is drawn back, ascending on the rails and inclined ribs until pins or hooks *q* at the ends of the ribs *g* strike the rollers *f*, when the rear end will overbalance the forward end, but will not descend until the motion of the shaft *n* is reversed, unwinding the chain, when the body will turn on the shaft as a fulcrum.

When the load has been discharged the shaft *n* is turned until the wheels *e* bear upon the rails *c*, when the body will run forward by its own gravity.

The rails *c* may be horizontal instead of inclined, and inclined rails *x* may be arranged, as shown in dotted lines, Fig. 2, to receive wheels at the rear of the body in place of the shaft *d* and wheels *f*. In like manner inclined ribs *g'* may be placed at the front of the frame; or other devices carried by the wagon, as cams or toggles, may be arranged to carry out our invention—that is, to raise the body of the wagon before dumping.

In order to sustain the body when the weight is at the rear it is provided with an extensible support, T, which, when the wagon is moving, may be turned up and supported, as shown in Fig. 1.

Without limiting ourselves to the precise construction described,

We claim—

1. A dump-wagon in which the body, capable of both a sliding and a tilting movement, is deeper at the rear than at the front, as set forth, for the purpose specified.

2. The combination of the frame, the sliding and tilting body, and the rollers and ribs, or equivalent elevating devices, as described, carried by the wagon, whereby the body may be raised at the rear prior to dumping, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WM. S. BULLOCK.
HUGH HANIGAN.

Witnesses:
JOHN SEBO,
JAMES M. WATSON.