(No Model.) 2 Sheets—Sheet 1.

R. SAVAGE.

DUMPING CAR.

No. 332,007. Patented Dec. 8, 1885.

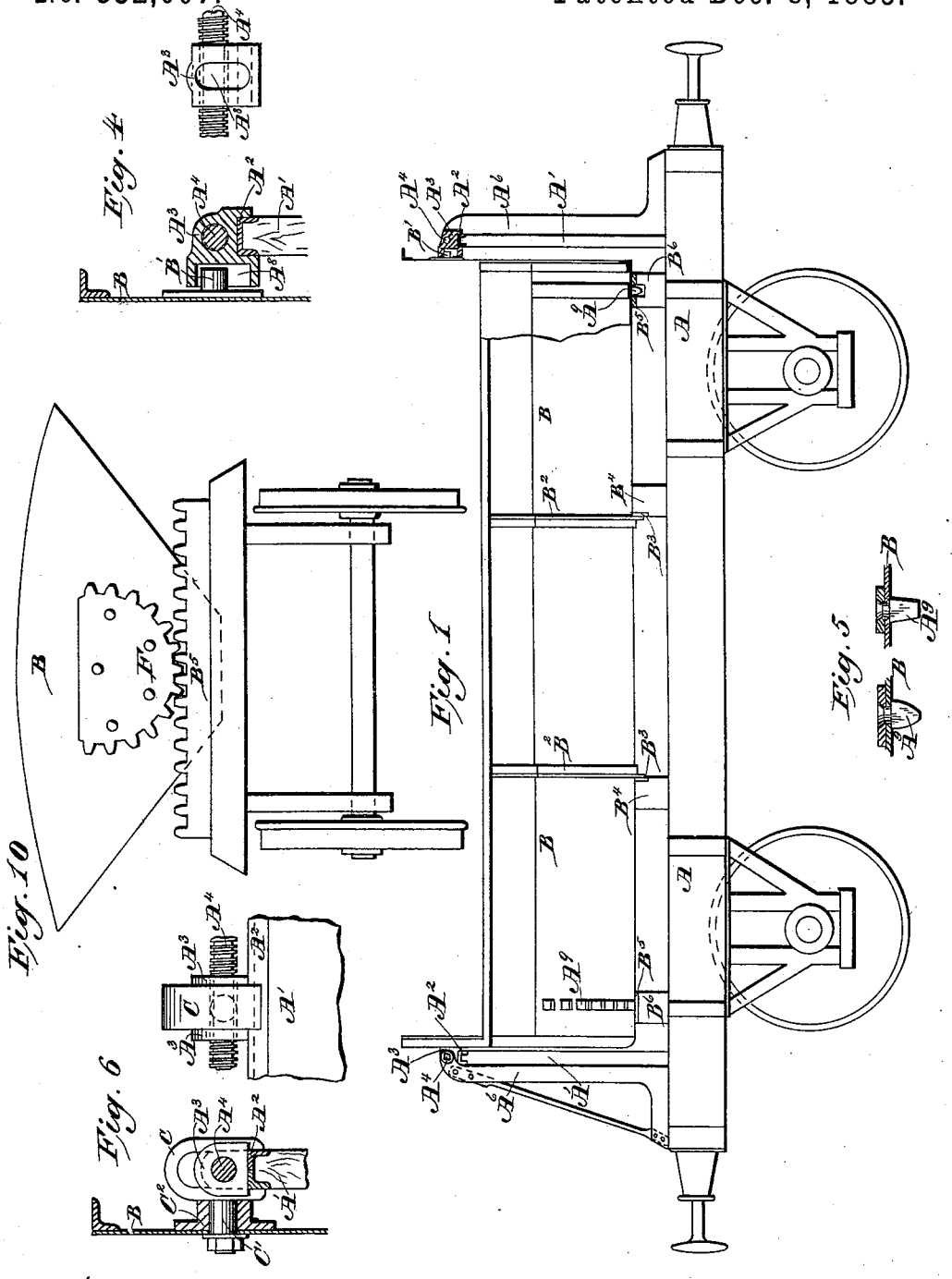

Fig. 4

Fig. 1

Fig. 5

Fig. 10

Fig. 6

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Wm. E. Boulter
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Inventor:
Robert Savage
per Henry Orth
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his atty.

(No Model.) 2 Sheets—Sheet 2.

R. SAVAGE.

DUMPING CAR.

No. 332,007. Patented Dec. 8, 1885.

Fig. 2

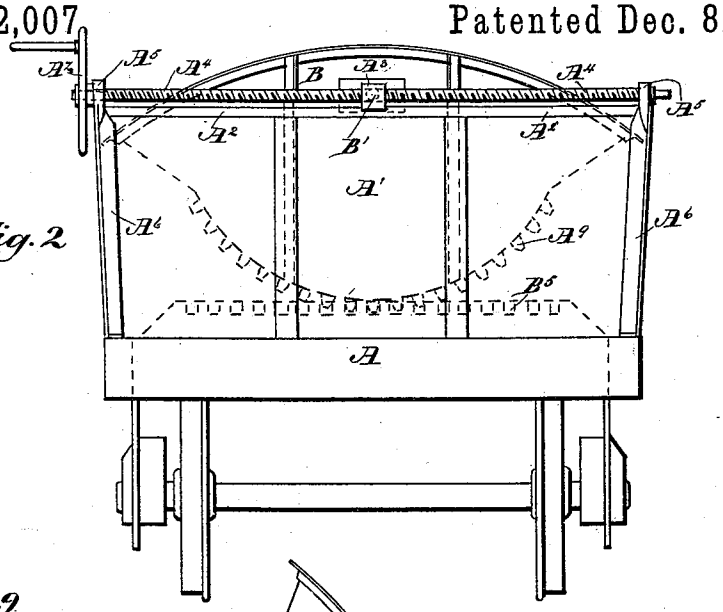
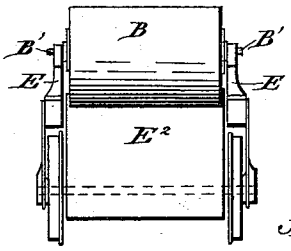


Fig. 9



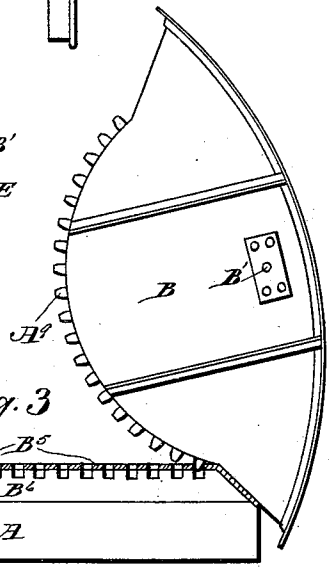


Fig. 3

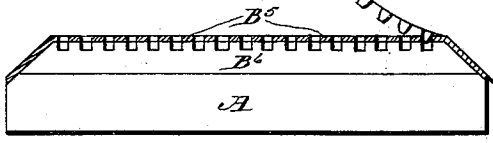


Fig. 8

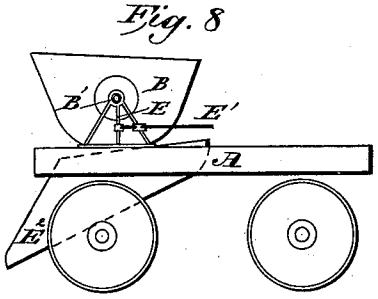
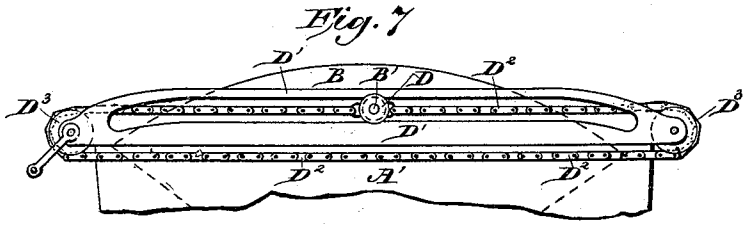


Fig. 7



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UNITED STATES PATENT OFFICE.

ROBERT SAVAGE, OF SOUTH MELBOURNE, VICTORIA, ASSIGNOR OF ONE-HALF TO FREDERICK YORK WOLSELEY, OF EUROKA WALGETT, NEW SOUTH WALES.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 332,007, dated December 8, 1885.

Application filed June 25, 1885. Serial No. 169,747. (No model.) Patented in Victoria July 16, 1884, No. 3,778.

To all whom it may concern:

Be it known that I, ROBERT SAVAGE, a subject of the Queen of Great Britain, residing at Herbert Street, South Melbourne, in the British colony of Victoria, gentleman, have invented an Improved Railway Tip Wagon or Truck, (for which I have obtained a patent in the British colony of Victoria, No. 3,778, bearing date the 16th day of July, 1884,) of which the following is a specification.

My invention of an improved railway tip wagon or truck is designed for the purpose of providing a wagon or truck having, first, a body with a partly-circular bottom, or a body of any other shape, fixed on partly-circular rollers, the pintle at each end being the center of the circle, and in which no part of the body or carrying-receptacle requires to be hinged; second, having gear so arranged as that the tipping is accomplished by moving the pintles to one side or the other by means of traveling nuts and screws, racks and pinions, by winding endless chains or ropes on suitable pulleys, or by means of compound levers or other mechanical arrangements calculated to draw or push the center pintles to either side, as desired, such pintles traveling in transverse guides on the frame or support at each end of the body, and causing the body to roll as if part of a wheel to the side at which it is to be discharged, said guides, together with pins or teeth underneath, fitting into holes or racks across the bottom of the wagon, preventing the body shifting from its proper place or overturning at either side. The wagon, up to the under frame which supports the body, is mounted on wheels and constructed in the ordinary manner, and near each of its ends I fix the end vertical frames which carry or have formed on them the transverse guides having solid ends, and between which guides the pintles on the ends of the body travel, and attached to such frames at each end is the tipping-gear. The body is made for the most part of iron, and its partly-circular bottom or rolling frame will rest and travel on the horizontal under frame of the wagon, the side projecting lips forming a chute for discharging purposes. Toothed or trundled segments are affixed to the outside of the circular bottom or rolling part, and work in suitable racks or holes formed in the top of the under frame, and so insure the steady movement of the body when worked by the tipping-gear. I also provide a tip wagon or truck on which I mount two of my improved bodies or carrying-receptacles, and in this case I place them transversely across the truck, and arrange their controlling-gear so that they tip toward one another and through a hole provided in the under frame. This description of a truck will be useful for ballasting purposes.

Referring to my drawings, Figure 1 shows a side, and Fig. 2 an end, elevation of a railway tip truck or wagon constructed according to my invention, Fig. 1 being broken away at its end so as to show a section thereat. Fig. 3 is an end view of the body in its tipping position with the teeth or spikes on its bottom engaged with the rack or notched plate which is affixed to the frame of the truck. Figs. 4 are enlarged details of the pintle, nut, and screw. Figs. 5 show front and side view of one of the teeth. Figs. 6 show an alternative description of nut and draw-pintle. Fig. 7 shows an alternative means of accomplishing the side tipping by means of a pitched chain working on chain-pulleys, while Figs. 8 and 9 show side and end elevations of a tip-truck having the body placed transversely across the truck for end-tipping purposes, and its pintles supported on brackets thereon; and Fig. 10 is an end view of a side-tripping truck, showing the bottom of the body flat and the rolling toothed segment affixed to the end of said body.

In Figs. 1 to 5, A is the frame of the truck, having end frames, A′, the top of which is faced with the angle-irons A^2, to form a guide for the nut A^3, which is threaded to suit the transverse screw A^4, supported in the bearings A^5, formed at the top of the angle-iron stay-brackets A^6, as shown.

A^7 is a hand-wheel for working said screw. The inner side of the nut has an oblong recess, A^8, formed in it for the reception of the pintle B′, secured to the end of the body B, which is of the form shown, and has the two angle-irons

B^2 riveted to its side, to form guide-flanges to retain the body in its proper lateral position. These angle-irons work against the plates B^3, affixed to the transverse supports B^4.

B^5 are the rack or notched plates having their ends set, as shown, to suit the shape of the body, and these plates are affixed to the end transverse supports, B^6, which are also mortised out similar to the plates in which the teeth A^9 of the body gear, so as to cause it to travel while being drawn by its end pintles.

In the alternative construction of nut and pintle shown in Figs. 6, the nut A^3 has flanges at its ends, so as to form a recess to receive the forked strap C, which, with its pin C′, is secured to the end of the body B, having the bearing C^2 affixed to it for said pin's reception.

In Fig. 7 the pintle B′ works in the guide-bearing D, which travels in the guides D′, when pulled either way by the endless pitch-chains D^2, passing round the chain-sheaves D^3, as shown, and secured at its inner ends to said guide-bearing D.

The alternative construction of tip truck or wagon (shown in Figs. 8 and 9) consists of the body B, supported on its end pintles, B′, which are supported in the bracket-bearings E, and said body retained in position by a suitable catch on the lever E′, and under the body I provide the delivery-chute E^2, which is attached to the frame of the truck. There are two bodies, B, supported on this framing, and these may be made to tip toward the center, instead of outward, as shown. They are so constructed and supported as that when full they are inclined to tip or overturn, and when empty they are inclined to right themselves again.

The side-tipping truck shown in Fig. 10 has the rolling toothed segment F affixed on its ends, so that these support the weight of the body B, and they work in the rack or notched plate B^5, which is secured to the frame of the truck.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is—

1. In a dumping-car, the combination, with the truck-frame, of the car-body having a curvilinear or concave bottom, mechanism, substantially such as described, for imparting to said body a rolling motion on the truck-frame, and a lock for locking said body into position, substantially as and for the purpose specified.

2. In a dumping-car, the combination, with the truck-frame, of a car-body formed in two sections having curvilinear or concave bottoms, and mechanism, substantially such as described, for imparting to said body-sections a rolling motion on the truck-frame toward and from each other, and a lock to lock the same into position, substantially as and for the purpose specified.

ROBT. SAVAGE.

Witnesses:
EDWD. WATERS,
WALTER CHARLES HART.