No. 648,233. Patented Apr. 24, 1900.

A. M. BRANSHAW & J. BEAUDRY

DUMPING CAR.

(Application filed July 7, 1899.)

(No Model.)

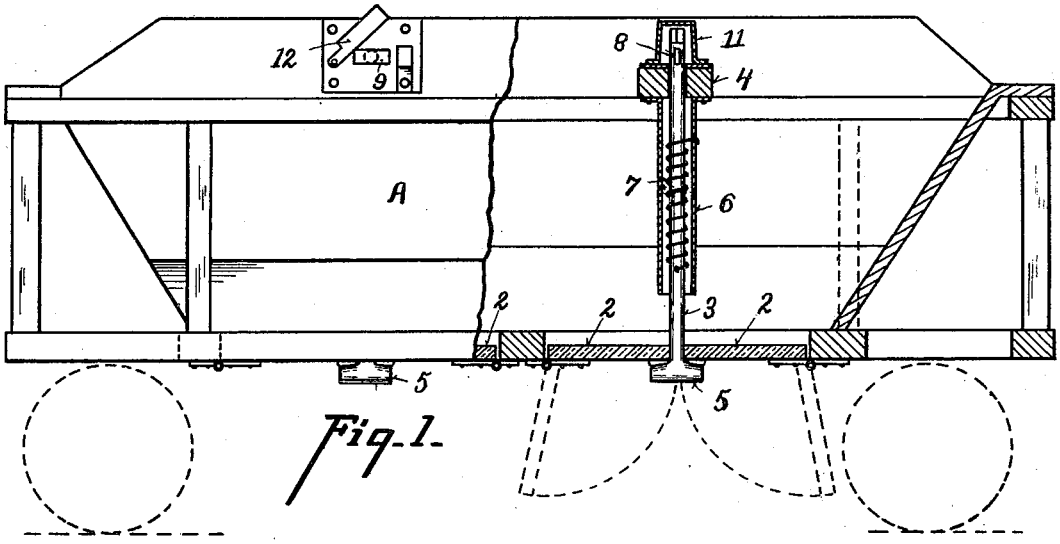

Fig. 1.

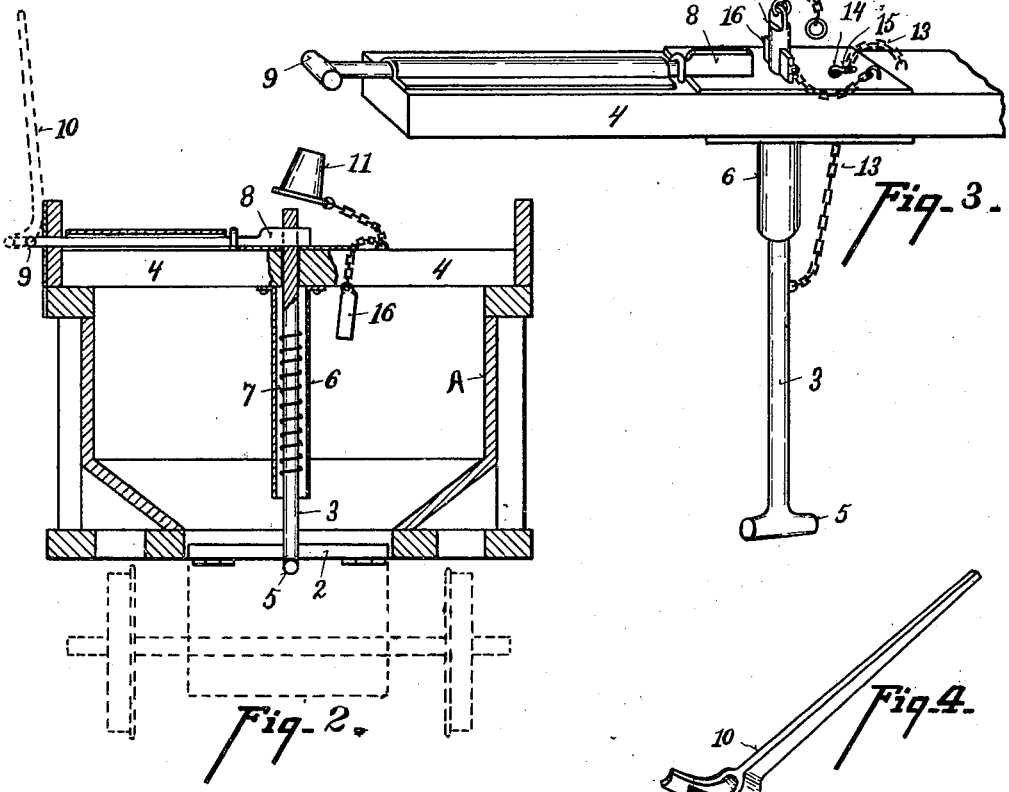

Fig. 2.

Fig. 3.

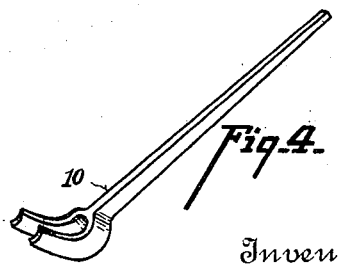

Fig. 4.

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UNITED STATES PATENT OFFICE.

ALBERT M. BRANSHAW AND JOHN BEAUDRY, OF ESCANABA, MICHIGAN.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 648,233, dated April 24, 1900.

Application filed July 7, 1899. Serial No. 723,009. (No model.)

To all whom it may concern:

Be it known that we, ALBERT M. BRANSHAW and JOHN BEAUDRY, citizens of the United States, residing at Escanaba, in the county of Delta and State of Michigan, have invented a new and useful Improvement in Dumping-Cars, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a railway freight-car provided with our improved dumping apparatus; Fig. 2, a transverse section of the same; Fig. 3, an enlarged detail view of a modified form of the trap-door hanger; Fig. 4, a detail view of the bifurcated claw-lever for withdrawing the key from the hanger.

Our invention relates to certain improvements in dumping-cars; and our object is to provide a simple, inexpensive, and durable apparatus whereby bulk freight—such as coal, ore, and similar material—may be easily and rapidly dumped without incurring the delay or expense of manual labor.

The peculiar merit and advantage of the invention will be apparent by referring to the accompanying drawings, in which A represents a freight-car having hopper-shaped discharge-openings in the bottom, which are normally closed by trap-doors 2, upheld by a hanger 3, dependent from and rotatably fixed in the cross-beam 4, which connects and embraces the upper side rails of the car. The lower end of the hanger is provided with a transverse foot 5, the purpose of which will be hereinafter explained. The shank is inclosed in a sheet-metal cylinder 6, by which it is protected from damage or undue pressure of coal or other heavy freight, which might possibly prevent rotary movement. The upper end of said cylinder is flanged and attached to metal plates—one beneath and the other on top of the cross-beam—by screw-bolts and nuts or other suitable means. An upwardly-bearing spiral spring 7 encircles the shank of the hanger and holds it in normal vertical adjustment while the car is empty. The head of the hanger is mortised to receive a key 8, having a stem which projects through the side of the car, and has a cross-head 9, as shown in Fig. 3, which is adapted to be readily engaged by a bifurcated lever 10 when it is desired to withdraw the key and dump the contents of the car. The stem of the key, which lies on top of the cross-beam, is protected by an arch of sheet metal and the hanger is sheltered by a metal cap 11 in order that they may be free to move when desired, even if buried beneath an accumulation of freight. In order to provide against accidental withdrawal of the key, its outer end is secured by a turn-button 12.

If preferred, a modified and cheaper form of hanger, as shown in Fig. 3, may be adopted. A chain 13 is attached to the stem of the hanger near its lower end and passed upwardly through an aperture 14 in the cross-beam. By this arrangement the vertical adjustment of the hanger may be regulated by inserting any desired link of the chain in a slot 15, extending from one side of aperture 14.

The operation of the device is as follows: The doors of the empty car are first brought to the position shown in full line in Figs. 1 and 2. The hanger 3, which in Figs. 1 and 2 is supported or suspended on the spring 7, is adjusted in position, so that the transverse head 5 will engage and hold the doors closed. The key 8 is then inserted through the keyway or slot in the upper end of the hanger 3, which locks the hanger and doors in the closed position. When it is desired to discharge the load, the bifurcated lever 10 is employed on the cross-head 9 of the key 8 to withdraw the key from the slot in the hanger 3, which, being then only supported by the spring 7, drops vertically a sufficient distance to free the doors from the transverse head 5, after which the spring returns it to normal position.

In Fig. 3 the chain 13 is substituted for the spring 7 and serves to prevent the hanger 3 from dropping to the ground when released from the key 8. The key 16 is only temporarily inserted in the slot in the hanger 3 during the operation of resetting the doors, when the key 8 is driven against the key 16, driving it out and taking its place, the releasing operation being the same as in Figs. 1 and 2.

It will be obvious that the invention may be adapted with advantage to old as well as new cars.

What we claim as new is—

1. In a dumping-car having trap-doors in

the bottom thereof, a hanger suspended from the top of the car and provided with a transverse foot adapted to engage and support the free ends of the trap-doors, a key supporting and locking the hanger in position when supporting the doors and a flexible support for securing the said hanger to the car when not locked by the key, substantially as specified.

2. In a dumping-car having trap-doors in the bottom thereof, a hanger suspended from the top of the car and provided with a foot at its lower end adapted to engage and support the free ends of the trap-doors, a key having a stem projecting through the side of the car, and adapted to engage and lock the hanger in position and a flexible support for securing said hanger to the car when not locked by the key, substantially as specified.

3. In a dumping-car having trap-doors in the bottom thereof, a hanger suspended from the top of the car and provided with a foot at its lower end adapted to engage and support the free ends of the trap-doors, a key having a stem projecting through the side of the car and adapted to engage and lock the hanger in position, a projecting cylinder encircling the upper end of the hanger, and a spring located within said cylinder and attached respectively to said cylinder and hanger, substantially as specified.

In testimony that we claim the foregoing we have hereunto set our hands this 13th day of May, 1899.

ALBERT M. BRANSHAW.
JOHN BEAUDRY.

Witnesses:
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