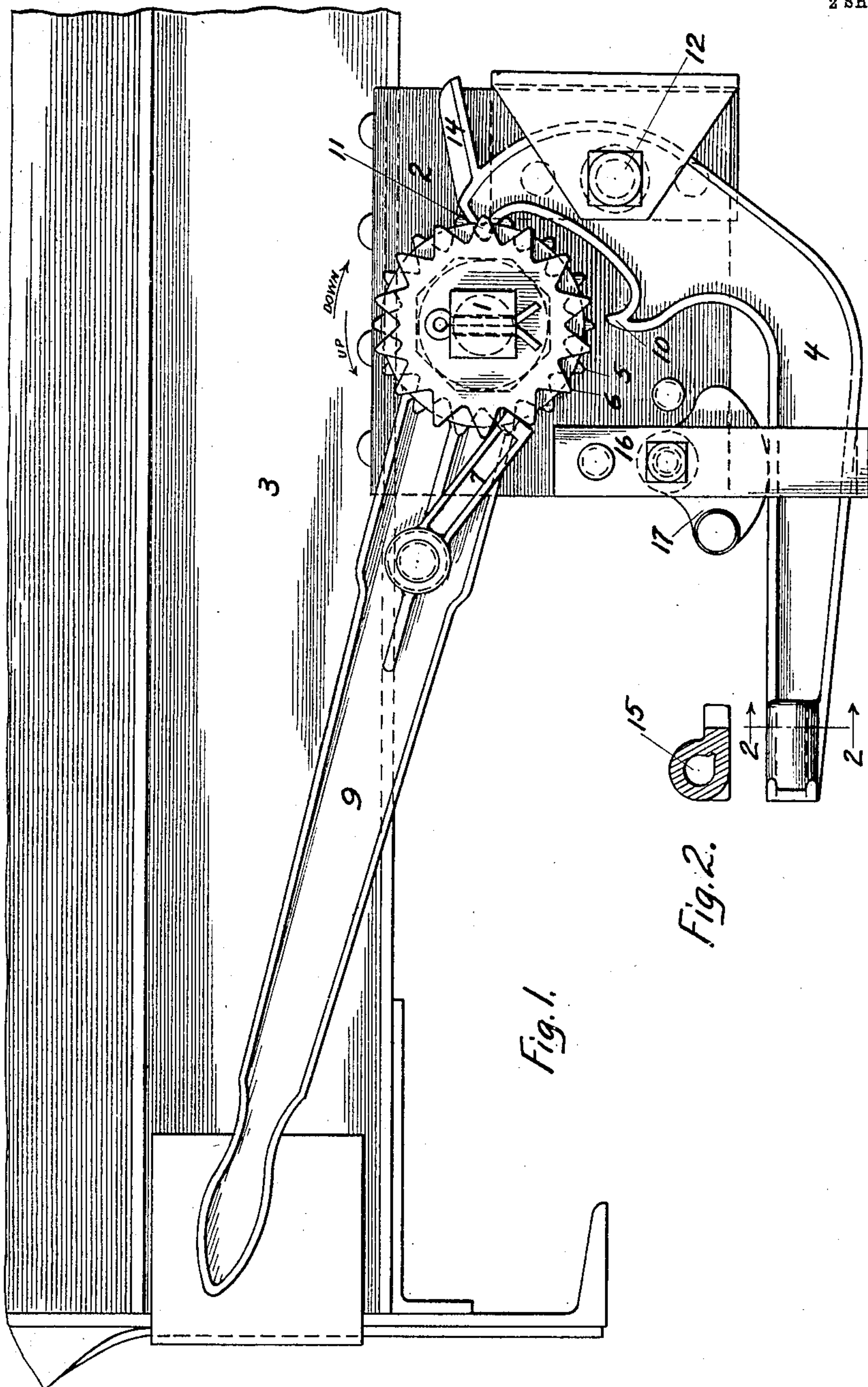


W. H. YOST.
DUMP DOOR OPERATING LEVER.
APPLICATION FILED JULY 6, 1908.

919,413.

Patented Apr. 27, 1909.
2 SHEETS—SHEET 1.



Witnesses:

Anna L. Savie
Edythe M. Anderson.

Inventor:

Winfield H. Yost
By Sheridan & Wilkinson
Att'ys

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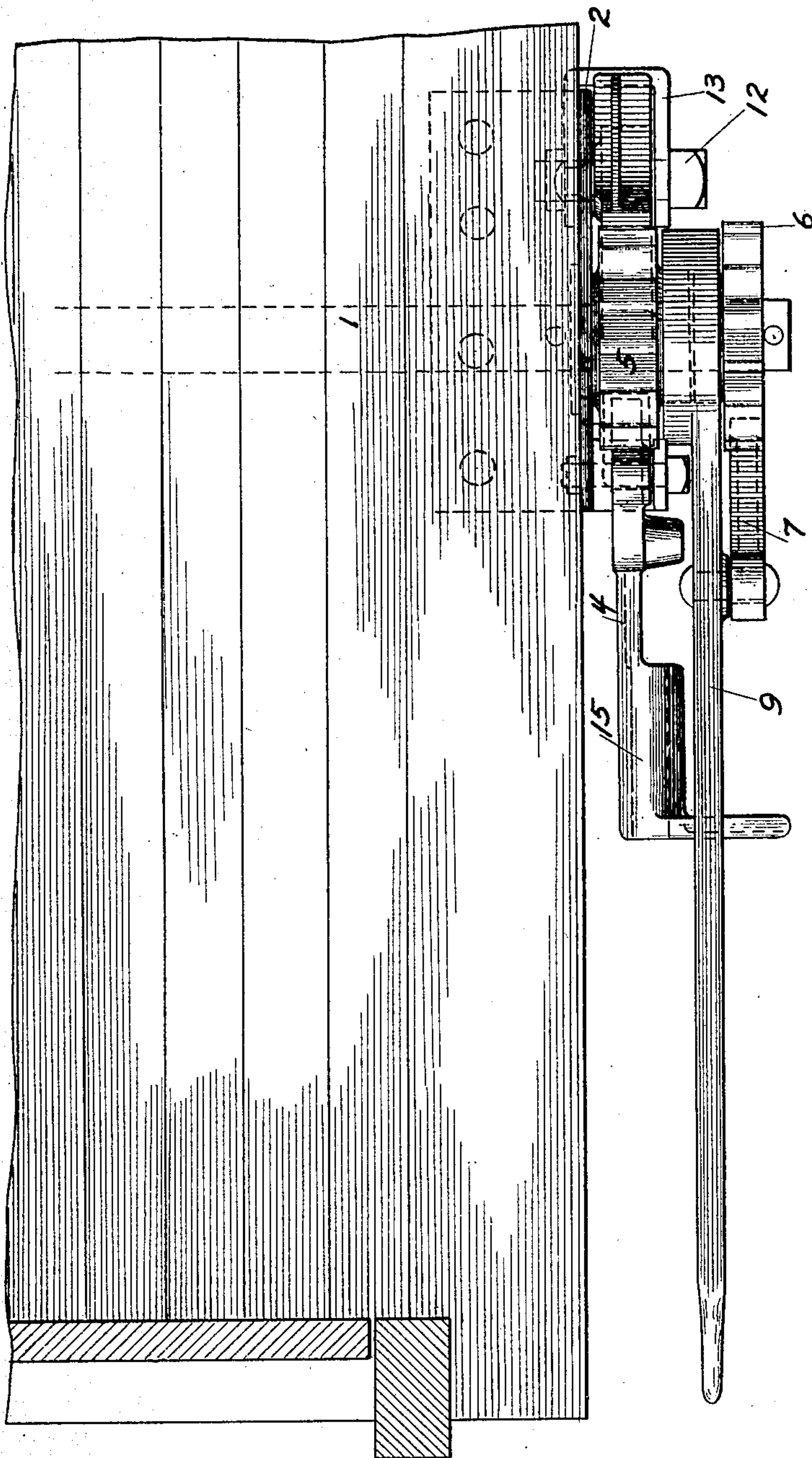


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

WINFIELD H. YOST, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR TO NATIONAL DUMP CAR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF MAINE.

DUMP-DOOR-OPERATING LEVER.

No. 919,413.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed July 6, 1908. Serial No. 442,107.

To all whom it may concern:

Be it known that I, WINFIELD H. YOST, a citizen of the United States, residing at Montreal, in the county of Hochelaga, Province of Quebec, Canada, have invented certain new and useful Improvements in Dump-Door-Operating Levers, of which the following is a specification.

The object of my invention is to provide an improved detent lever to control the opening and closing of dump doors in cars of the type illustrated in the patent to H. S. Hart and O. W. Meissner, No. 764,355, July 5, 1904, although the improvements are also applicable to dump cars of other designs than that illustrated in the patent referred to.

In the drawings—Figure 1 is a fragmentary view showing part of the end of a car with my invention applied thereto. Fig. 2 is a cross section on the line 2, 2 of Fig. 1. Fig. 3 is a plan view of the mechanism illustrated in Fig. 1.

In cars of the type illustrated in the patent above referred to, and to which my invention is applicable, the hopper doors are operated by means of a chain and winding shaft, and my invention relates to the means for holding the winding shaft against backward rotation while it is being turned to wind the chain and close the door and the means for controlling the opening movement of the door.

The winding shaft 1 is in the present instance mounted in bearings in the under frame of the car, these bearings consisting of plates 2 riveted to and depending from the transverse girders. The bearing plate 2 depending from the end sill 3 also affords support for the pallet lever 4.

Rigidly secured to the shaft 1 is an escapement wheel 5 and a ratchet wheel 6. Co-acting with the ratchet wheel 6 is a reversible pawl 7 pivoted at 8 to the hand lever 9 through which power is applied to rotate the shaft 1, in winding the chains to close the doors. The teeth 10 and 11 of the pallet lever 4 are so spaced that upon oscillation of the lever they will permit the shaft to rotate step by step. The pivot 12 of the pallet-lever is supported by means of a plate 13 which is bent to the form of a U, one member of which is riveted to the bearing plate 2 and the other spaced therefrom. The pallet lever 4, and its

pivot, are received between the bearing plate 2 and the outer member of the U-shaped plate 13.

In practice, it has been found that the material transported in cars of this type falls into the space between the outer part of the plate 13 and the bearing plate 2, thus impeding the movement of the lever 4. In order to overcome this difficulty, I provide the lever 4 with an outward projection or guard 14 which lies above the space between the outer and inner supports of the pivot 12 of the lever 4. In this manner the entrance of pebbles or other material is prevented and free action of the lever insured at all times.

In order to avoid the necessity of providing a long handle for the lever 4, which under some circumstances would be objectionable, I provide the outer end thereof with a socket 15 adapted to receive a pole or other extension which will serve to increase the length of the lever when desirable, but may be removed at other times. The detent lever 4 is guided in its movement by means of a keeper 16, and pivoted in the upper part of the keeper is a cam lock 17 adapted to hold the lever 4 against movement when it is desired to retain the doors closed.

What I claim is:

1. In a car of the class described, a winding shaft, an escapement wheel secured thereto, a pallet lever, a support upon each side of said lever, a pivot connecting said lever to said supports, and a guard projecting from said lever above the space between said supports.

2. In a car of the class described, a winding shaft, a bearing plate therefor secured to the end sill, an escapement wheel secured to said shaft, a U-shaped plate having one member thereof secured to said bearing plate and the other spaced therefrom, a pallet lever pivoted between said second member and said bearing plate, and a guard projecting from said pallet lever above the space between said second member and said bearing plate.

3. In a car of the class described, a dump door, a winding shaft, a chain connected to said door and to said shaft, means for rotating said shaft, an escapement wheel secured to said shaft, a pallet lever, a support upon

each side of said lever, a pivot connecting said lever to said supports, and a guard projecting from said lever above the space between said supports.

- 5 4. In a car of the class described, a winding shaft, a bearing therefor at the end of the car, an escapement wheel secured to said shaft, and a pivoted pallet lever, said lever extending outwardly from its pivot toward

the side of the car and provided at its end 10 with a socket.

In testimony whereof, I have subscribed my name.

WINFIELD H. YOST.

Witnesses:

LILLIAN A. KIBBY,
ANNA L. SAVOIE.