J. H. BAKER.

AUTOMATIC CAR DUMPING APPLIANCE.

APPLICATION FILED AUG. 25, 1916.

1,213,327.

Patented Jan. 23, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

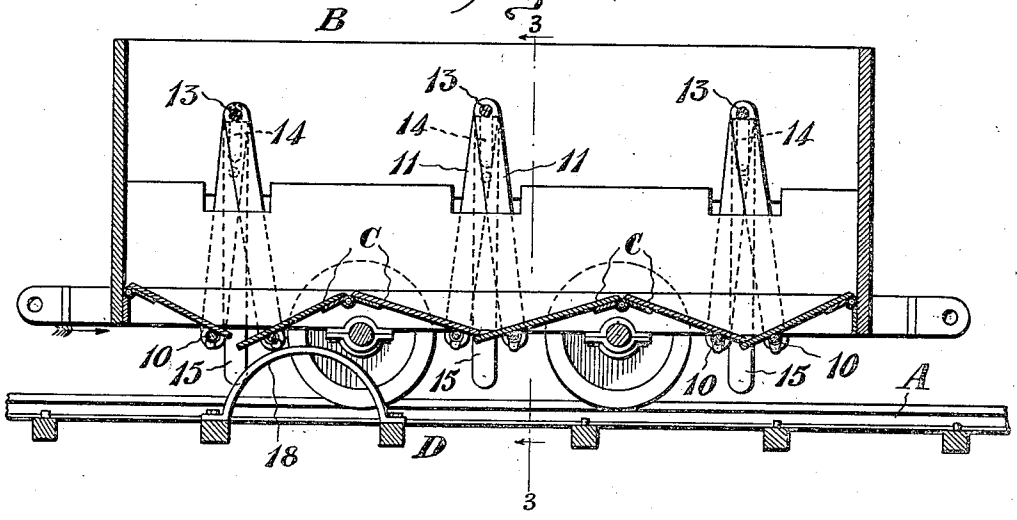
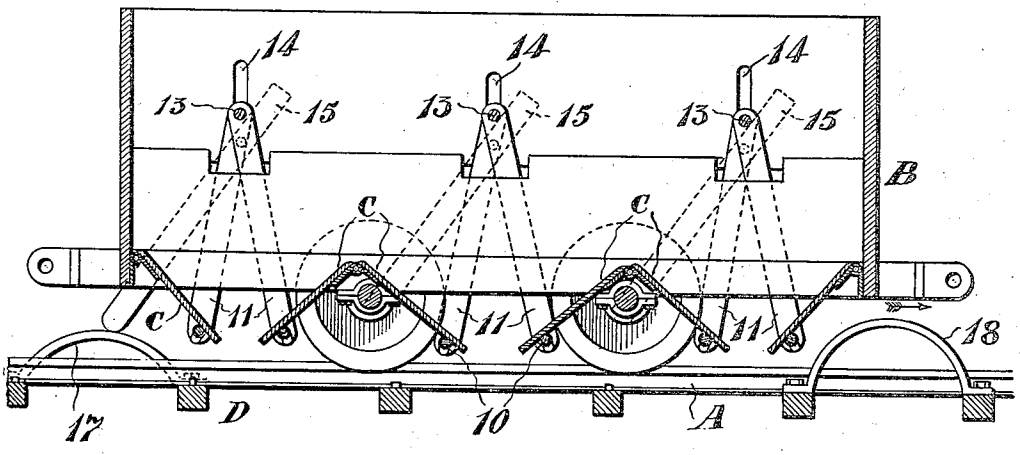


Fig. 2.



Witnesses

Thos. F. Knox

Edward Yeager

Inventor

J. H. Baker

By Victor J. Evans

Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

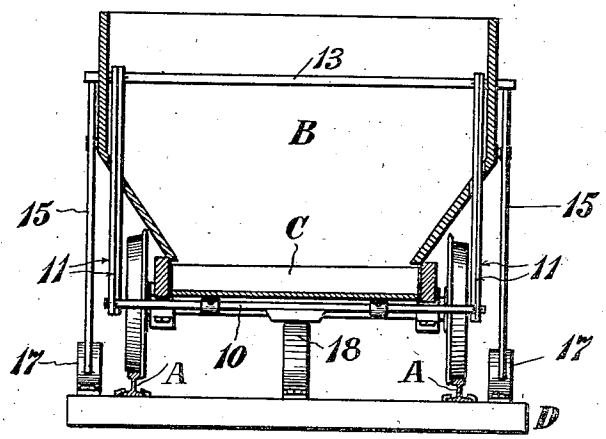
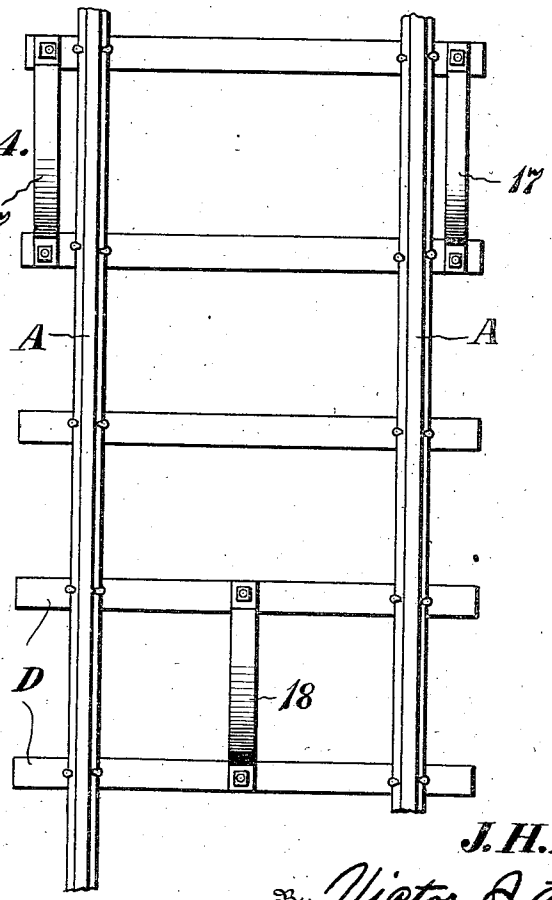


Fig. 4.



Witnesses

Thos. F. Knox

Edward Yaeger

Inventor

J. H. Baker

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JAMES H. BAKER, OF FAIRFIELD, ILLINOIS.

AUTOMATIC CAR-DUMPING APPLIANCE.

1,213,327. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed August 25, 1916. Serial No. 116,881.

To all whom it may concern:

Be it known that I, JAMES H. BAKER, a citizen of the United States, residing at Fairfield, in the county of Wayne and State of Illinois, have invented new and useful Improvements in Automatic Car-Dumping Appliances, of which the following is a specification.

This invention comprehends the provision of an automatic car dumping appliance which is applicable to new and old cars without any alteration of either, the invention providing means whereby the hinged bottom of the car can be automatically released to assume a discharge position, and subsequently returned automatically to its normal or closed position during transit of the car.

The nature and advantages of the invention will be better understood when the following description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this specification like numerals of reference indicate similar parts in the several views and wherein:—

Figure 1 is a longitudinal sectional view through a car showing the hinged bottom sections in their normal or closed position. Fig. 2 is a similar view showing the bottom sections in discharge position. Fig. 3 is a vertical transverse sectional view taken on line 3—3 of Fig. 1. Fig. 4 is a plan view of the track showing the trip and return members.

Referring to the drawings in detail A indicates the tracks over which the car indicated generally at B is adapted to travel, the latter being provided with a sectional bottom, wherein the sections C are hingedly mounted. Each section has its free edge resting on a transverse bar 10, and which bar is supported by the lower extremities of the links 11 which are arranged at opposite sides of the car. As shown the hinged sections C of the bottom of the car have their free edges arranged adjacent each other, thus disposing the links 11 in pairs at each side of the car. Each pair of links 11 converge toward their upper extremities and are connected together by means of a transverse bar 13 whose length is greater than the width of the car so that the opposite extremities of the bar 13 project an appreciable distance beyond the sides of the car through vertically disposed elongated slots 14.

For each pair of links 11 there is pivoted on the side of the car an arm 15 which is pivoted above center as shown to unbalance the arm for the purpose to be hereinafter described. The longest portion of the arm extends an appreciable distance below the body of the car, while the upper extremity of the arm is adapted to support the transverse bar 13 with a view of holding the bottom sections C normally in their closed position. In this position of parts the transverse bar 13 is at the uppermost end of the slot 14 as clearly illustrated in Fig. 1.

Bridging the ties D at spaced intervals along the track, and disposed at opposite sides of the tracks A are substantially arch-shaped trip members 17 which are disposed in the path of the lower extremities of the arms 15 so that when each arm 15 is brought into engagement with one of the trip members 17 during the transit of the car, the arm is rocked upon its pivot removing the upper extremity thereof from beneath the transverse rod 13 which it had previously supported, thus allowing the transverse bar 13 to fall within the slot to the lower extremity thereof. As the links 11 are connected to the transverse bars 13, it is manifest that these links also move downwardly thus allowing the transverse rods 10 to gravitate to a position which permits two of the hinged bottom sections C to assume an open or discharge position. Each arm 15 is thus successively tripped permitting the material in the car to be discharged through the space between the adjacent pairs of hinged bottom sections C, which operation is automatic as will be readily understood.

Bridging the ties D between the tracks A is a substantially arch-shaped member 18 whose function is to return the bottom sections C and their associated parts to normal position. As one of each pair of the bottom sections C is brought into engagement with the arched member 18 the two sections by reason of their connection with the links 11 are simultaneously elevated to their normal or closed position. During this movement of the parts the transverse bar 13 connecting said links is also moved to the upper extremity of the slots 14. As above stated the arms 15 are pivoted above center for the purpose of unbalancing the arms, so that when the bars 13 are moved upwardly

within the slots 14, the arms 15 gravitate to their normal position wherein the upper extremities of the arms support the bar 13 thus holding the bottom sections C effectively closed. An inspection of the drawings will disclose the fact that my invention is applicable to new and old cars without necessitating alteration of the latter, and while the invention is extremely simple in its nature it is very efficient for the purposes intended.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent I desire to have it understood that the same is merely illustrative of the preferred form of the invention to which I do not limit myself, and that such changes may be resorted to as desired as fall within the scope of the appended claims.

What is claimed is:—

1. An automatic car dumping appliance comprising in combination with a car adapted to travel over a track and having hinged bottom sections and vertically disposed slots, of a pair of spaced parallel transverse bars, links connecting the opposite extremities of said bars, one of said bars supporting the free end of each bottom section, the other of said bars being movable in vertically disposed slots, means for supporting the last mentioned bar elevated to hold the bottom section normally closed, trip members at the opposite sides of the track for automatically releasing said means to permit said section to assume a discharge position, and an obstructing member disposed between the tracks for engagement with said section to automatically return the latter and its associated parts to normal position.

2. An automatic car dumping appliance comprising in combination with a car adapted to travel over tracks and having a hinged bottom section and vertically disposed slots, of a pair of spaced parallel transverse bars, links connecting said bars at the extremities thereof, one of said bars supporting the free end of each bottom section, the other of said bars being movable within vertically disposed slots in said car, arms pivoted upon the car and adapted to support the latter mentioned bar elevated to hold the bottom section normally closed, trip members at the opposite sides of the track in the path of movement of said arms to rock the latter from beneath the last mentioned bar to permit said bottom section to assume a discharge position, and an obstructing member arranged between the tracks for engagement with said section to return the latter and its associated parts to normal position.

3. An automatic car dumping appliance comprising in combination with a car adapted to travel over tracks and having a hinged bottom section and vertically disposed slots, of a pair of spaced parallel transverse bars, links connecting said bars at the extremities thereof, one of said bars supporting the free end of each bottom section, the other of said bars being movable within vertically disposed slots in said car, arms pivoted upon the car and adapted to support the latter mentioned bar elevated to hold the bottom section normally closed, trip members at the opposite sides of the track in the path of movement of said arms to rock the latter from beneath the last mentioned bar to permit said bottom section to assume a discharge position, an obstructing member arranged between the tracks for engagement with said section to return the latter and its associated parts to normal position, and said arms being pivoted above the center to gravitate to its normal position beneath the latter mentioned bar.

In testimony whereof I affix my signature.

JAMES H. BAKER.