H. D. PRATT.

BOX CAR LOADER.

APPLICATION FILED APR. 10, 1918.

1,346,678.

Patented July 13, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

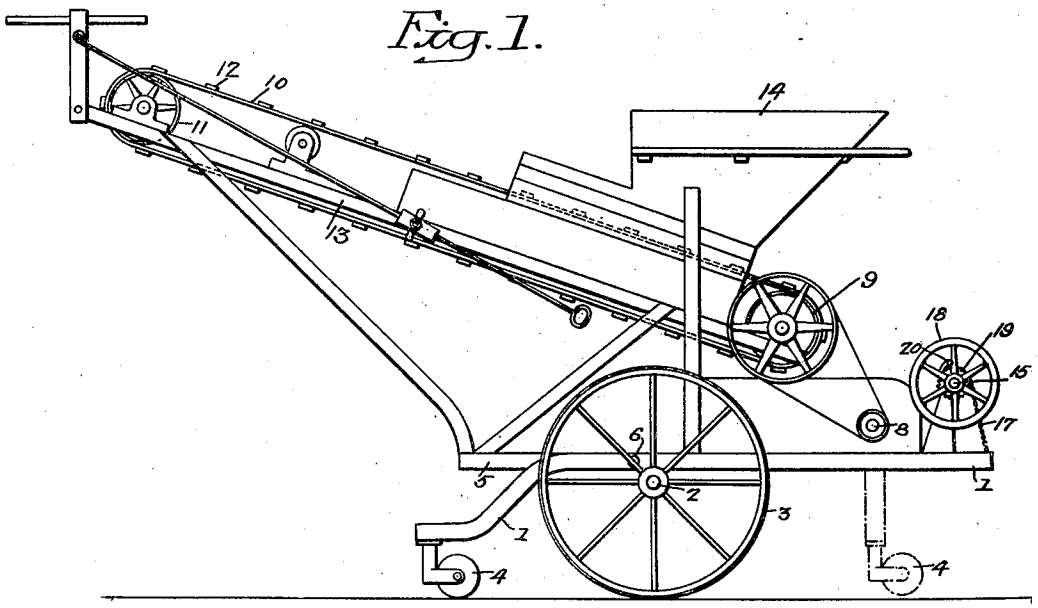
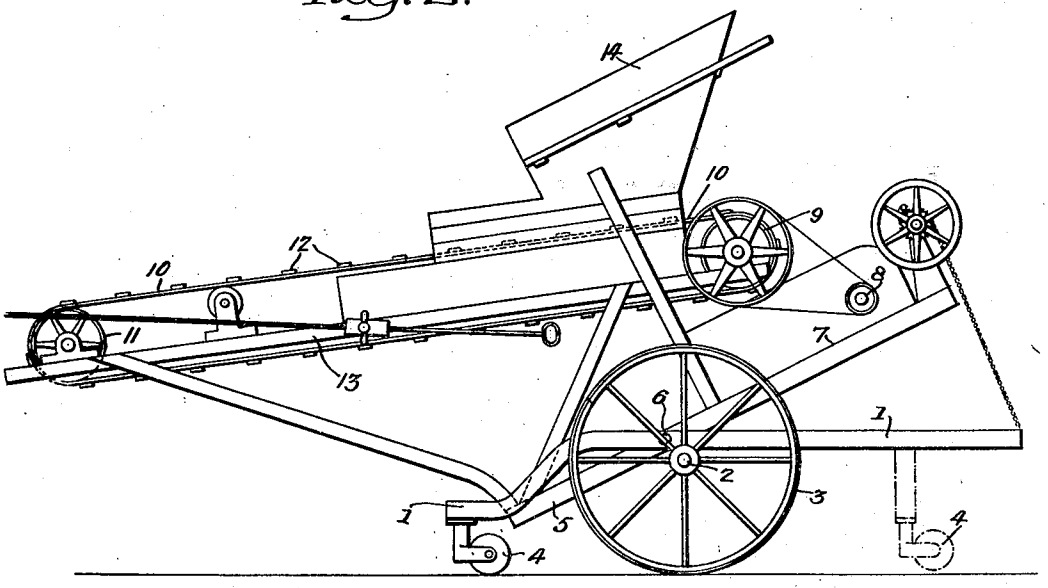


Fig. 2.



Inventor;
Howell D. Pratt,
by his Attorneys,
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2 SHEETS—SHEET 2.

Fig. 3.

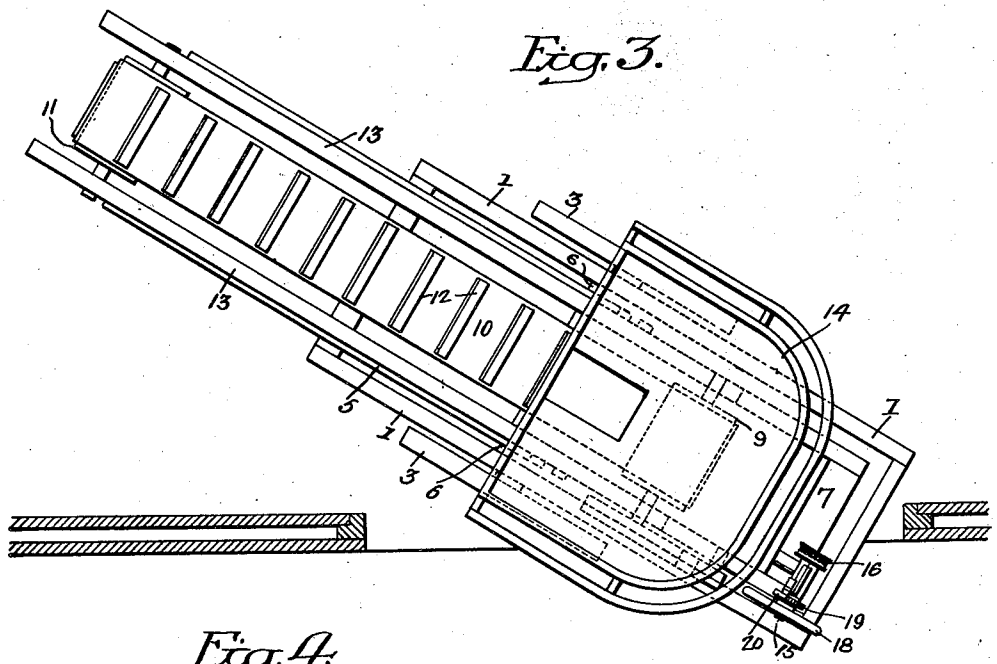


Fig. 4.

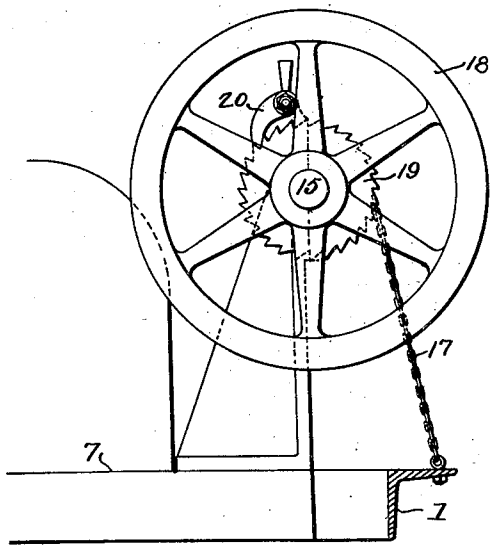
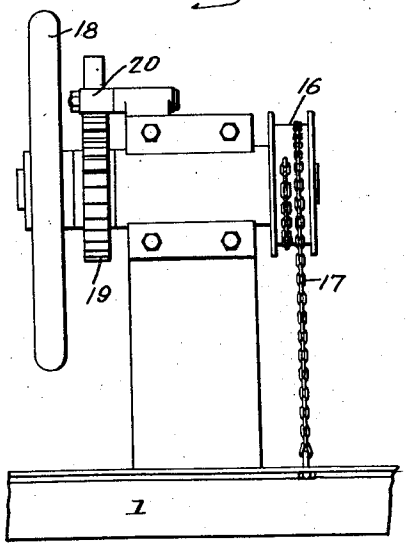


Fig. 5.



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UNITED STATES PATENT OFFICE.

HOWELL D. PRATT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO LINK-BELT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BOX-CAR LOADER.

1,346,678. Specification of Letters Patent. Patented July 13, 1920.

Application filed April 10, 1918. Serial No. 227,705.

To all whom it may concern:

Be it known that I, HOWELL D. PRATT, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Box-Car Loaders, of which the following is a specification.

My invention relates to certain improvements in a box car loader for which application for patent was filed by me on December 24, 1917, Serial No. 208,644.

The object of my invention is to provide means for bodily adjusting the car loader on its carriage so that it can be adjusted toward and from the floor of the car and when the car is loaded the end of the loader can be located near the floor and gradually worked up to its full height so as to handle more effectively certain material and prevent breakage of the material.

In the accompanying drawings:

Figure 1 is a side view of my improved adjustable car loader, showing it in its highest position;

Fig. 2 is a view showing it in its lowest position;

Fig. 3 is a plan view of the loader;

Fig. 4 is an enlarged view showing the hand operated means for adjusting the frame on its pivot; and

Fig. 5 is an end view of the same.

1 is the main frame of the car loader. 2 is an axle. 3 are the wheels which are mounted on the axle. At one or both ends of the carriers is a pivotally mounted caster 4. 5 is a frame carrying the loading mechanism. This frame is of substantially triangular form having one of its angles presented downwardly and having a long side presented upwardly, and from said angle there is a rearward extension which is pivoted at 6 to the main frame 1, and on the platform 7 of the pivoted frame is mounted an electric motor 8 of any suitable type, which drives the belt wheel 9, around which passes the loading belt 10, which also passes around a belt wheel 11. On the belt 11 are slats 12, similar to those described in the above entitled application. Extending parallel with the carrying run of the belt is the member 13 of the frame 5, which member forms the long arm of the triangle which carries the bearings for the shafts of the two rolls 9 and 11, and also carried by this member of the frame is a hopper 14, shaped as shown in the drawings, for receiving the material from a spout, or other suitable source of supply. The hopper is shaped as clearly shown in the plan view, Fig. 3, so as to extend beyond the sides of the car at the doorway to allow the material to be fed directly into the hopper from a chute on the outside of the car. The balance of the weight of the conveyer is beyond the pivot toward the discharge end and mounted on the rear of the frame 7 is a hoisting shaft 15 having a drum 16 for a chain 17, which is attached to the rear end of the platform 1 of the carriage. On the shaft 15 is a hand wheel 18 and a ratchet wheel 19 with which engages a pawl 20 on the frame. By this construction, the pawl can be thrown out and on turning the hand wheel the discharge end of the loader can be lowered to the position illustrated in Fig. 2 and, then, as the pile of material increases in height the hand wheel is turned so as to move the drum into the position illustrated in Fig. 1, the frame being locked in this position by the pawl. While I have illustrated an electric motor, it will be understood that any suitable motor may be used without departing from the essential features of the invention.

In operation, when a car is to be loaded the portable car loader is rolled into the car and located so that its hopper projects beyond the edge of the car and under a suitable feed spout for feeding the material into the hopper. The traveling belt is then set in motion and the material flowing into the hopper will flow onto the belt and will be discharged by the belt into one end of the car, the pivoted frame being in its lowest position, as shown in Fig. 2, and as the pile of material accumulates the frame is raised, as above described, and the loader can be adjusted so as to discharge the material into different parts of the car.

Thus the breakage of material is considerably reduced, as the loader can be set to deliver material directly onto a pile. This is especially the case in loading lime and other fragile granular material in cars where in the ordinary process of handling there is considerable breakage.

I claim:

1. The combination in a box car loader, of a carriage; a tiltable frame of substantially triangular form mounted on the carriage and having its long side presented up-

wardly, and having a part extending rearwardly from the base of the triangle, said rear extension being pivotally connected to the carriage; an endless conveyer mounted on said frame substantially parallel with the long side thereof; means on the frame for operating said conveyer; and a hopper carried by said frame above the receiving end of the conveyer, said loader adapted for operation in a car box with a portion of its hopper projecting through a door opening thereof so that material may be delivered directly into the hopper from outside the car.

2. The combination in a box car loader, of a carriage; a tiltable frame of substantially triangular form mounted on the carriage and having its long side presented upwardly, and having a part extending rearwardly from one of the base angles of the triangle, said rear extension being pivotally connected to the carriage; an endless conveyer mounted on said frame substantially parallel with the long side thereof; a motor on the rear extension of the frame and a connection from the motor to the conveyer for driving the same; a winding drum on the rear extension of said frame and a cable therefrom connected to the carriage, for tilting the frame about its pivotal support; and a hopper carried by said frame above the receiving end of the conveyer and tiltable in unison therewith.

3. In a box car loader, a wheeled carriage; a tiltable frame of substantially triangular form mounted above the forward end of the carriage having one of its angles presented downwardly and one of its long sides presented upwardly, said frame having a base member projecting rearwardly from said angle and pivotally mounted on the carriage; an endless conveyer sustained by the tiltable frame substantially parallel with a long side thereof; means for operating the conveyer from the rear extension of the frame; means for varying the inclination of the frame and its conveyer; and a hopper fixed to the tiltable frame and sustained thereby above the receiving end of the conveyer.

In witness whereof I affix my signature.

HOWELL D. PRATT.