

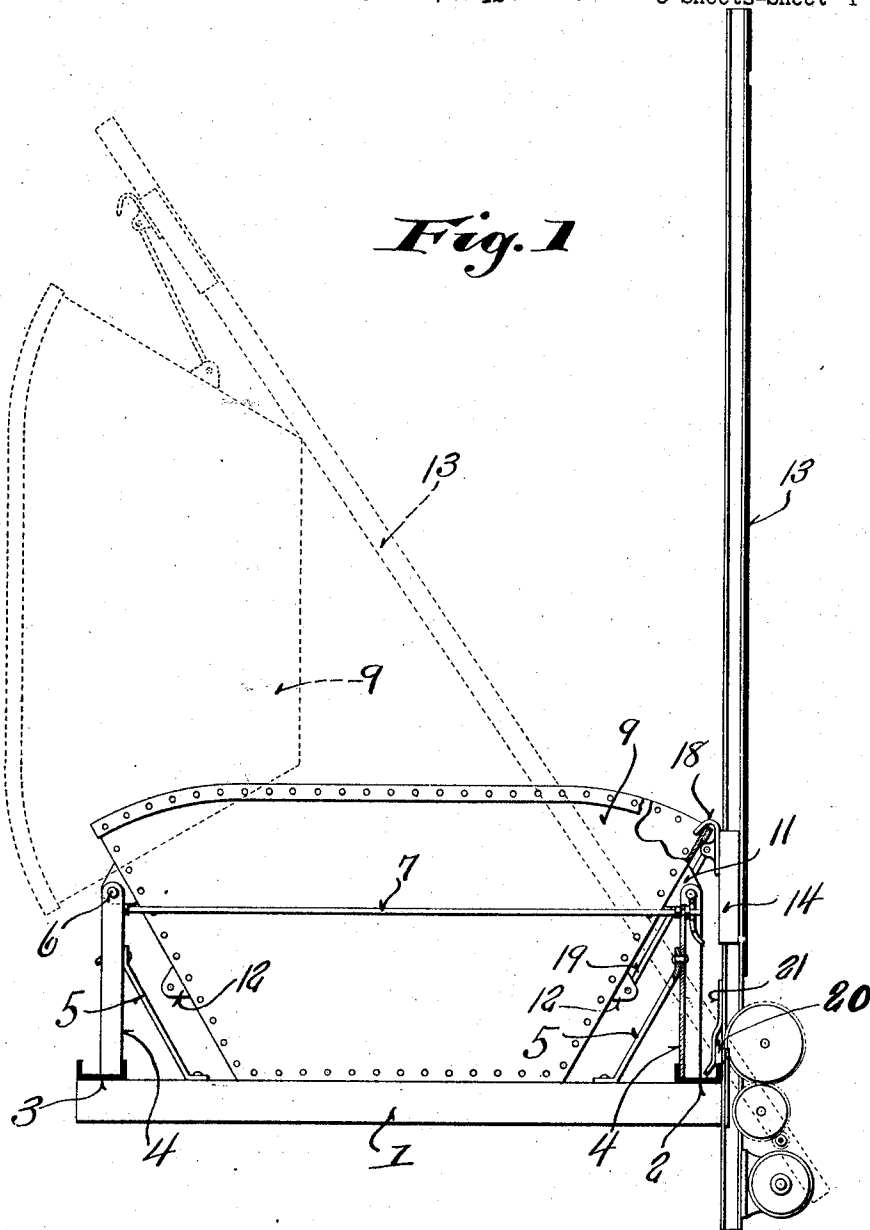
Sept. 22, 1925.

1,554,608

M. P. VAN RYZIN
COMPARTMENT DUMPING CAR

Filed Sept. 12, 1924

3 Sheets-Sheet 1



Inventor
Martin P. Van Ryzin
By *[Signature]*
Attorneys

Sept. 22, 1925.

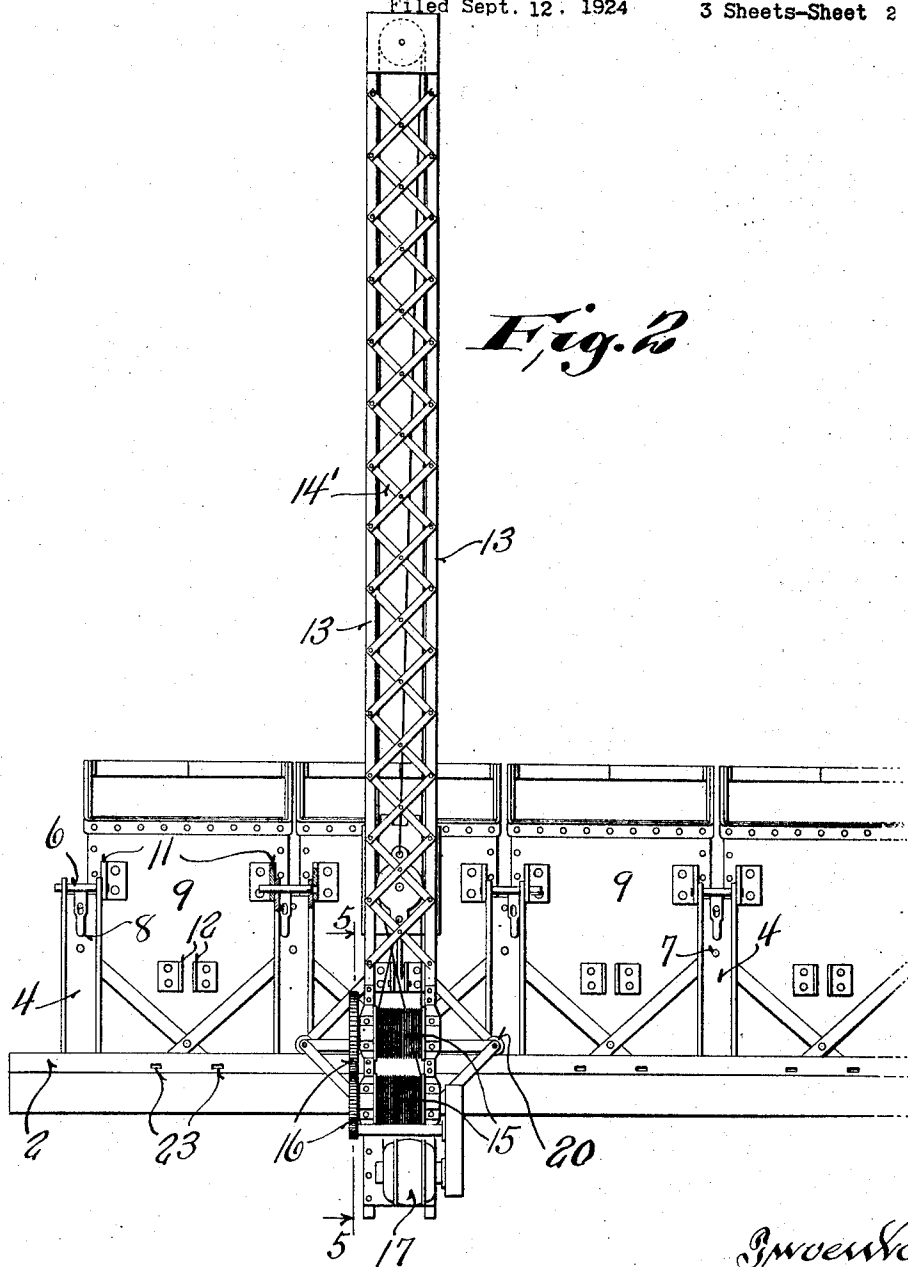
1,554,608

M. P. VAN RYZIN

COMPARTMENT DUMPING CAR

Filed Sept. 12, 1924

3 Sheets-Sheet 2



Inventor
Martin P. Van Ryzin

By *[Signature]*
Attorneys

Sept. 22, 1925.

1,554,608

M. P. VAN RYZIN
COMPARTMENT DUMPING CAR

Filed Sept. 12. 1924

3 Sheets-Sheet 3

Fig. 3

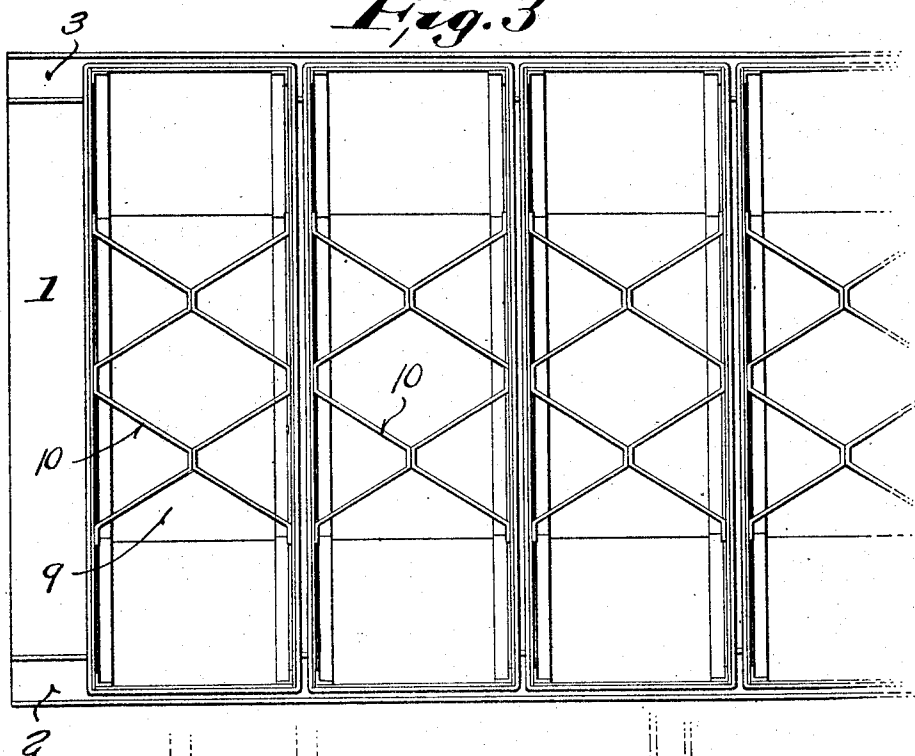


Fig. 4

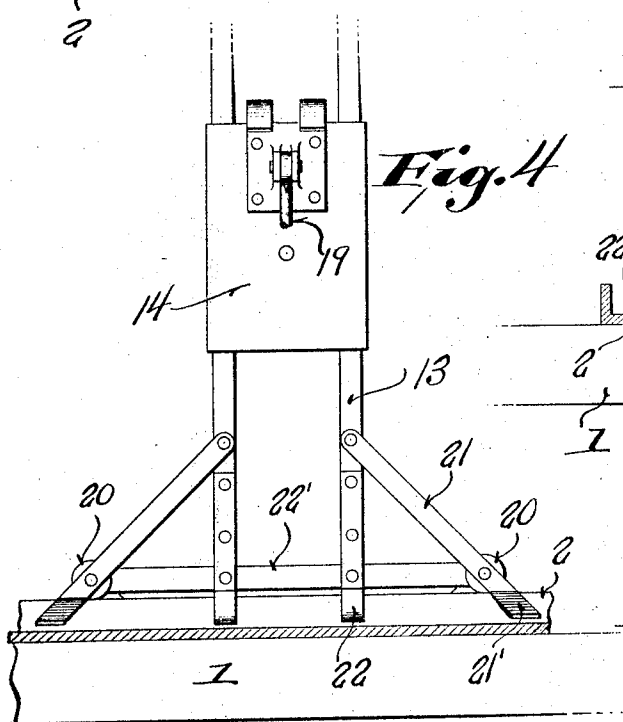
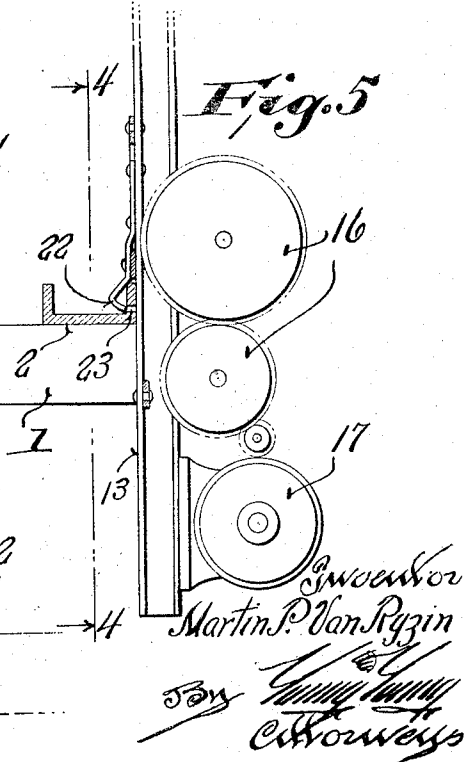


Fig. 5



In witness whereof
Martin P. Van Ryzin
1/26/25
By *[Signature]*
Attorneys

UNITED STATES PATENT OFFICE.

MARTIN P. VAN RYZIN, OF APPLETON, WISCONSIN.

COMPARTMENT DUMPING CAR.

Application filed September 12, 1924. Serial No. 737,357.

To all whom it may concern:

Be it known that I, MARTIN P. VAN RYZIN, a citizen of the United States, and resident of Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Compartment Dumping Cars; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to compartment dumping cars and to means for use in effecting the dumping.

Objects of this invention are to provide a car which is equipped with a plurality of compartments or hoppers so arranged that they may be individually dumped, to provide a compartment car in which the hoppers are adapted to be dumped from either side of the car, and to provide means which serve both as the pivotal point of support for opposite sides of the hoppers and also as temporary or detachable end securing means.

Further objects are to provide a compartment car which is adapted for use with a traveling boom adapted to be attached to any desired hopper at either side thereof, and which is so constructed that it may be readily operated to elevate the hopper and tilt it about its opposite side.

Further objects are to provide a traveling boom which may be used with any one of several cars, which will automatically lift itself into place or lower itself from the car when it is desired to attach or detach it.

An embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is an end view of the car equipped with the hoppers and showing the traveling boom in position, said view showing in dotted lines the position assumed by the parts during dumping.

Figure 2 is a fragmentary side view of the structure shown in Figure 1.

Figure 3 is a plan view of the car with the boom removed.

Figure 4 is a face view of a portion of the boom showing the elevating block, such view corresponding to a section on the line 4—4 of Figure 5.

Figure 5 is a sectional view on the line 5—5 of Figure 2.

The car comprises an elongated body portion 1 upon which longitudinally extending channel iron members 2 and 3 are provided

which form in effect tracks. These channel iron members carry upright channel iron members 4 which are rigidly secured thereto, and which are further braced by means of the diagonal members 5, as may be clearly seen from Figure 1. These uprights 4 are provided with apertures within which sliding locking bolts 6 (see Figure 2) are positioned.

It is to be noted that opposed uprights are joined by means of tie rods 7, as may be seen from Figure 1, and that these tie rods have projecting ends. The sliding bolts 6 are equipped with levers or handles 8 which are apertured and adapted to be swung downwardly so as to receive the projecting ends of the tie rods within such apertures, as clearly shown in the end portions of Figure 2 and in Figure 1.

A plurality of upwardly flaring hoppers 9 are provided and are adapted to rest transversely of the car, as shown in Figures 1 and 3. These hoppers are provided with bracing members 10 (see Figures 3) across their upper central portions, so as to render them extremely rigid. They are provided with apertured ears 11 (see Figures 1 and 2) which are mounted adjacent opposite edges and at opposite ends of such hoppers. These apertured ears are adapted to receive the projecting ends of the sliding bolts 6 when such bolts are in their locking position, as shown in the outer portions of Figure 2, and in Figure 1. The hoppers are further provided with opposed apertured ears 12, as may be seen from Figures 1 and 2 for a purpose hereinafter to be described.

It will be seen from the construction thus far detailed that the sliding bolts 6 serve both as locking means and as pivotal members about which the hoppers may tilt. For example suppose it is desired to tilt the second hopper from the left hand end of Figure 2, the latching bolts 6 are slid outwardly after detaching the handle 8 from the projecting ends of the tie rod, as shown. Thereafter, the hopper may be lifted at the end presented in Figure 2, and will tilt about its opposed pivotal latching bolts located on the opposite side of the hopper, as shown in Figure 1.

A traveling boom is provided for elevating the hoppers and comprises uprights 13 which are braced by lattice work members 14, as may be seen from Figure 2. These

uprights 13 carry an elevating block 14 which is adapted to slide upon such uprights into any desired position.

This elevating block is operated by means of drums 15 (see Figure 2) which are connected by means of gearing 16 with a driving motor 17. The elevating block is provided with cables at opposite ends connected with the drums so that it may be positively driven in either direction.

Means are provided for temporarily attaching the elevating block to any desired hopper. These means may comprise a hook 18 at the upper end of the elevating block and a link 19 pivoted to such block and provided with an apertured end adapted to be secured to the appropriate apertured ears 12, as shown in Figure 1.

The traveling boom is supported by means of rollers 20 which travel upon the upper edge of the outer flange of the channel members 2 and 3, as clearly shown in Figures 1 and 4, these rollers being carried in suitable frame members 21 and brace members 22'. It is to be noted that the frame members 21 are extended downwardly and are provided with outwardly flaring lower portions 21' which act as guides to prevent the boom from slipping off from the track, as shown in Figure 4.

It is further to be noted that the uprights 13 are provided with inwardly turned clip like members 22 which, when the boom is tilted, are adapted to enter apertures 23, formed in the channel members 2 and 3, as shown in Figures 2 and 5, thus preventing the boom from shifting and locking it to the corresponding track or channel member.

In operating the device to elevate one side of the particular hopper desired, the elevating block 14 is lowered until the hook 18 engages over the upper end of the hopper. Thereafter, the link 19 is secured to the ears 12. The latching bolts 6 securing that side of the hopper under consideration are then slid outwardly thus freeing the hopper from the corresponding uprights. The motor 17 is then started and the elevating block is caused to travel upwardly along the uprights 13 of the boom. The link 19 lifts the end of the hopper upwardly and causes such hopper to tilt about the bolts 6 on the opposite side of the hopper, that is to say, on the left hand side of the hopper, as shown in Figure 1. During this tilting operation the hook 18 is detached from the hopper, but re-engages the hopper when the elevating block is lowered. The boom rocks to the left, as shown in Figure 1, and the fingers 22 (see Figure 5) enter the apertures 23 in the channel member, thus locking the boom against shifting.

It is to be noted that by having the device constructed as described, that the hopper is very free when in its elevated position and

may, if desired, be rocked outwardly beyond the dotted line position shown in Figure 1.

It is intended that these cars be shipped or transported with the hoppers locked in place, and that, thereafter, a suitable elevating and traveling boom may be employed to tilt the hoppers.

It is to be noted that one elevating boom may serve for a great number of cars and may be most readily handled. For example, when it is desired to remove the boom from the car, it is merely necessary to detach the link 19 (see Figure 1) and lower the elevating block 14, thus lifting the boom upwardly and detaching it from the track or channel member 2. Thereafter, the boom may be swung outwardly a slight distance and the elevating block may be caused to travel upwardly of the boom. This lowers the boom until its lower end rests upon the ground at which time the hook may be readily detached from the upper end of the hopper. Obviously, when it is desired to place the boom upon a particular car, it is merely necessary to rest the boom upon the ground and slip the hook 18 over the upper end of a hopper. Thereafter, the elevating block 14 is caused to travel downwardly relatively to the boom and thus elevate the boom and position it upon the track or channel member.

It will be seen that a compartment dumping car has been provided in which a plurality of hoppers are most readily, pivotally and detachably secured in position, and in which the hoppers are adapted to be selectively dumped from either side.

It will further be seen that a compartment dumping car has been provided in which means are furnished for automatically dumping the particular hopper desired in a very easy and rapid manner.

Although the invention has been described in considerable detail, it is to be understood that the invention may be variously embodied and is, therefore, to be limited only as claimed.

I claim:

1. A compartment dumping car comprising a car, a plurality of channel uprights mounted in longitudinal rows upon opposite sides of said car, a plurality of hoppers adapted to normally rest upon said car between said uprights and having projecting apertured ears, slide bolts carried by said uprights and adapted to enter the apertures in said ears to act either as detachable locking means or as pivot means to permit the individual dumping of said hoppers from opposite sides of said car.

2. A compartment dumping car comprising a car, a plurality of channel uprights mounted in longitudinal rows upon opposite sides of said car, tie bolts joining opposed uprights and having projecting ends, a plurality of hoppers adapted to normally rest

upon said car between said uprights and having projecting apertured ears, slide bolts carried by said uprights and adapted to enter the apertures in said ears to act either as detachable locking means or as pivot means to permit the individual dumping of said hoppers from opposite sides of said car, said slide bolts having apertured flaps adapted to be positioned over the projecting ends of said uprights.

3. A compartment dumping car comprising an elongated car body, a track secured adjacent one edge thereof, a traveling boom adapted to be supported upon said track and having an elevating block, a plurality of supports carried by opposite sides of said body, means for pivotally and detachably locking said hoppers to said uprights, and means for joining one end of any of said hoppers to said elevating block to rock such hopper about the support on the opposite side of said car.

4. A compartment dumping car comprising an elongated car body, a track secured adjacent one edge thereof, a traveling boom adapted to be supported upon said track and having an elevating block positively driven in either direction, a plurality of supports carried by opposite sides of said body,

means for pivotally and detachably locking said hoppers to said uprights, and means for joining one end of any of said hoppers to said elevating block to rock such hopper about the support on the opposite side of said car.

5. A compartment dumping car comprising an elongated car body having longitudinally extending tracks upon opposite sides thereof, a traveling boom adapted to rest upon either of said tracks and having an elevating block positively driven in opposite directions along said boom, said boom adapted to rock about said tracks, said tracks and boom having interlocking members adapted for interengagement when said boom tilts, a plurality of hoppers arranged transversely of said body, a plurality of uprights, locking mechanism for detachably and pivotally securing said hoppers at opposite ends thereof to said uprights, and means for temporarily joining said elevating block to either end of any of said hoppers.

In testimony that I claim the foregoing I have hereunto set my hand at Appleton, in the county of Outagamie and State of Wisconsin.

MARTIN P. VAN RYZIN.