

W. J. NEWMAN.
 APPARATUS FOR DISPOSAL STATIONS.
 APPLICATION FILED APR. 16, 1910.

985,442.

Patented Feb. 28, 1911.
 2 SHEETS—SHEET 1.

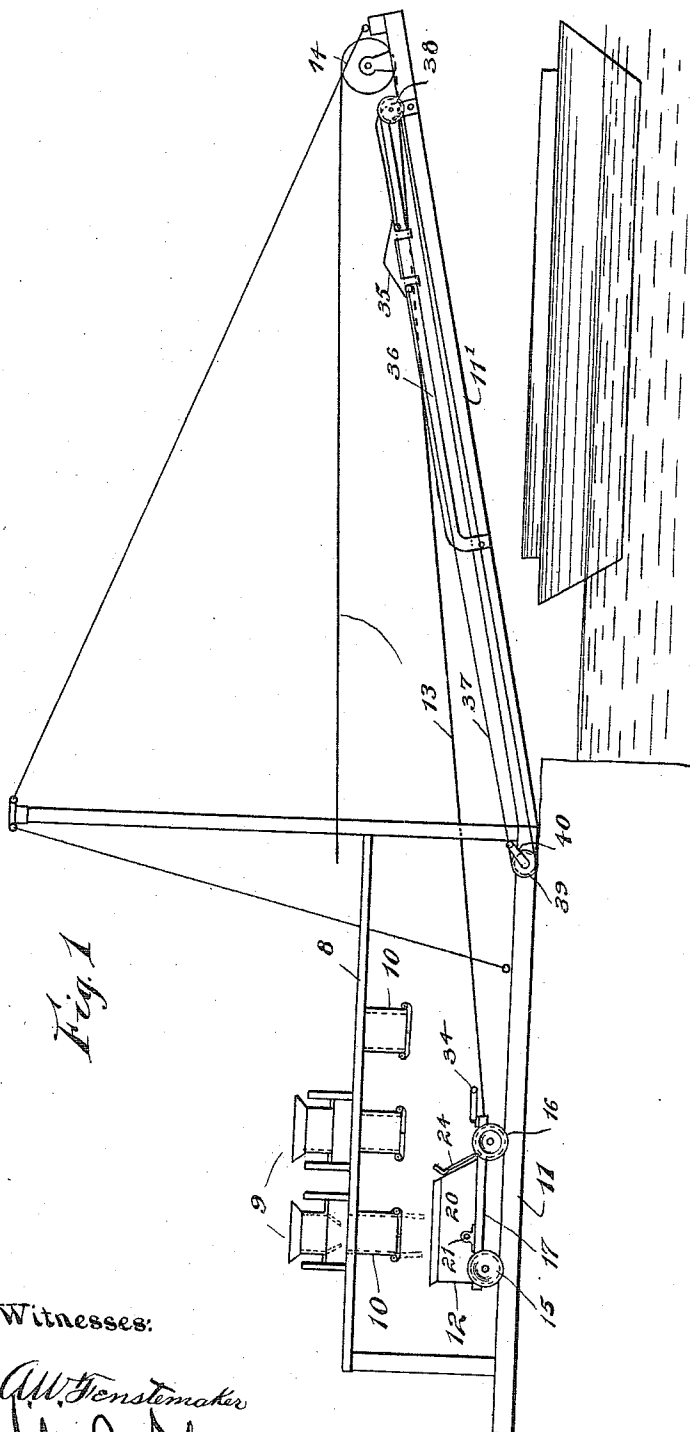


Fig. 1

Fig. 3

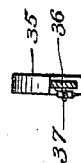
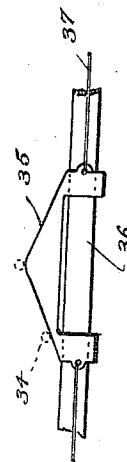


Fig. 2



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Fig. 4.

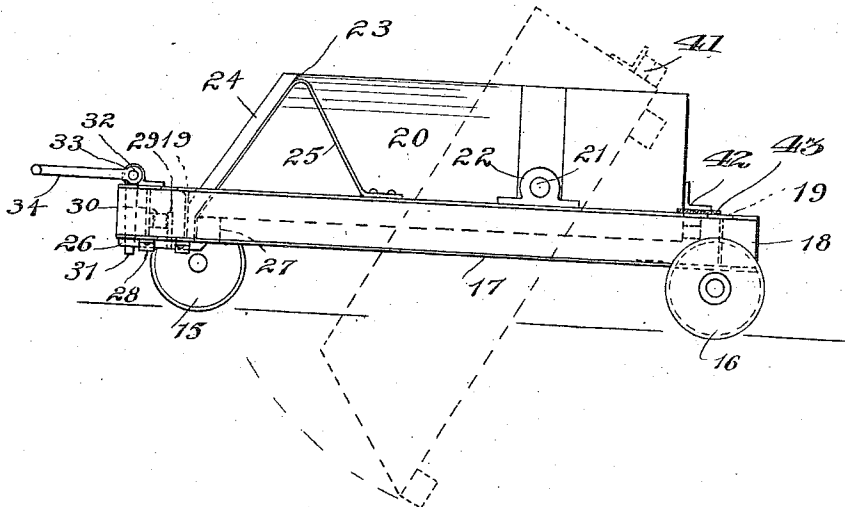


Fig. 5.

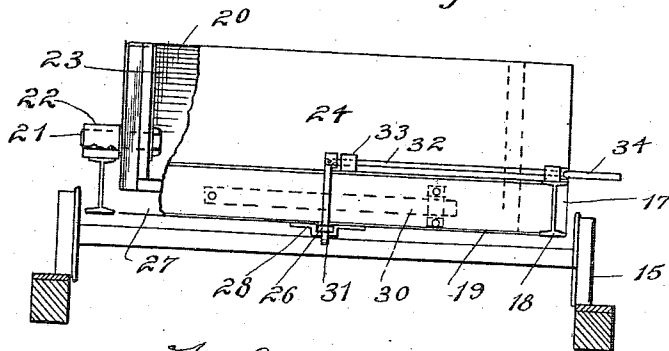
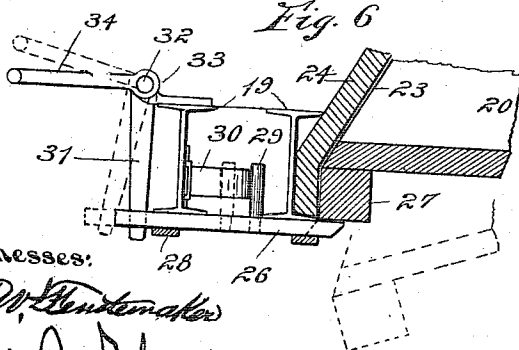


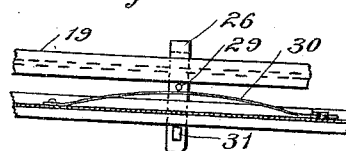
Fig. 6.



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Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM J. NEWMAN, OF CHICAGO, ILLINOIS.

APPARATUS FOR DISPOSAL-STATIONS.

985,442.

Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed April 16, 1910. Serial No. 555,910.

To all whom it may concern:

Be it known that I, WILLIAM J. NEWMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Apparatus for Disposal-Stations, of which the following is a specification.

While this invention is adapted to be used for general purposes in handling material, it is particularly adapted for use in city disposal stations.

In most large cities there is a large amount of material of various kinds, such as excavated earth, material from wrecked buildings, garbage, etc., which has to be carried away and disposed of. In cities situated upon the water, this material is frequently placed in scows and hauled out to deep water, or used for purposes of filling.

The present invention relates to apparatus to be used for transferring the material from the cars or wagons, into which it has first been put for hauling to the station, to scows or railway cars in which the material is finally carried away. Its objects are to provide means whereby one or more dump wagons or cars may be dumped into suitable hoppers, the arrangement being such that two or more of such wagons may be unloaded at the same time, and to provide means whereby material from all of such hoppers may be carried out and discharged into the scow or car with a minimum amount of labor and with great rapidity. It will be particularly noted that in handling this sort of material, the ordinary conveying devices will not operate satisfactorily in view of the fact that at one time a large load of clay, for instance, may be the material to be handled, and the next load will be sticks, stones, brick-bats, or anything that may happen to be picked up to be disposed of.

I have illustrated my invention in the accompanying figures, in which—

Figure 1 is a diagrammatical side view of a disposal station provided with my improved apparatus; Figs. 2 and 3 are detail views of the car lock tripping device; Fig. 4 is a side view of the car used for carrying the material from the hoppers to the scow; Fig. 5 is a front end view of the same; Fig. 6 is an enlarged sectional detail, showing the lock for the car body; and Fig. 7 is a sectional plan detail, showing the spring for operating the lock.

As indicated in these drawings, 8 represents a platform of any suitable construction upon which dump wagons or carts 9, into which the material has been brought to the station, may be run. These wagons or carts are preferably of the bottom dump variety, although other forms may be used if desired. Underneath the platform 8 is a series of hoppers 10—10 into which the material from the wagons may be dumped. These hoppers are arranged at a sufficient distance apart so that two or more wagons may be dumped at the same time, and each hopper is preferably made so that it will hold two or more wagon loads. These hoppers are also provided with bottom discharge doors of any ordinary or preferred form of construction, suitable means being provided for opening and closing the same, such means being omitted from the drawings inasmuch as it forms no part of the present invention.

Below and in alinement with the hoppers 10 is a track 11 upon which runs a car 12 of novel construction, as will be shown hereinafter. When the material is to be dumped into a scow, the track 11 is preferably continued in the form of a boom 11', out over the water so that the scow may be run thereunder. The car 12 is drawn out upon the boom or overhanging trackway, by means of a cable 13 which is fastened at the front end of the car and passes out and around a sheave 14 at the end of the boom and back to any suitable source of power, not shown. The construction of the car 12 is clearly shown in Figs. 4 to 7. Upon the trucks 15 and 16 is mounted a frame 17, preferably made of longitudinal beams 18 and cross beams 19. Within this frame is pivotally mounted a box 20, the sides of the box being provided with trunnions 21 which engage with bearings 22 on the side beams 18. This box is open at its front end, as indicated at 23, this end closing against a stationary abutment 24 which forms a closure for this end of the box when the box is in normal position. The abutment 24 is securely mounted in the frame 17 and is preferably braced by means of braces 25, as indicated in Fig. 4. The front end of the pivoted box is held in normally closed position by means of a bolt 26 which engages with a cross beam 27 on the bottom of the box, as best shown in Fig. 6. This bolt slides in guideways formed by means of straps 28—28 on the bottoms of two of the cross beams 19, and is provided

with a pin 29 which engages with a flat spring 30 on the side of one of the beams 19, which holds the bolt yieldingly in locking position. This spring bolt is withdrawn to allow the box 20 to tip for dumping, by means of an arm 31 on a rock shaft 32, which shaft is mounted in suitable bearings 33 on the frame 17. The shaft 32 extends over to one side of the frame 17, where it is provided with a crank arm 34, the end of said arm preferably extending some distance to one side of the car so that it may strike a suitable cam or raising device whereby it may be raised automatically when the car reaches its dumping position. A preferred form of this cam or incline is shown at 35 in Figs. 1 to 3. In this instance the cam is slidably mounted on a bar 36 extending for some distance along the side of the track 11'. This cam may be moved in any desired manner to adjust its position on said bar, but I prefer to provide a chain or cable 37 which is attached at one end of the cam, and then passes around a wheel 38 adjacent to the outer end of the bar 36, and then back around a wheel 39 on the main framework, and then back to the opposite end of the cam or slidable incline. The wheel 39 is provided with a crank 40, so that it may be readily turned to operate the cable 37 in order to adjust the position of the cam 35. The box 20 is pivoted at a point some distance back of the center, so that the tendency of the load therein would be to tip the box to dumping position, as indicated in dotted lines in Fig. 4. In order to return the box to normal locking position, it is provided, at the rear end, with weights 41 sufficient to swing the box back to normal or locked position. The rear end of the box is also provided with a cross piece 42, which strikes against buffer strips 43 on the side beams 18, thereby preventing undue striking of the front end of the box against the abutment 24.

The operation of my improved apparatus is as follows. When the wagons 9 arrive at the disposal station, they dump their loads immediately in the receiving hopper, 10, where the material is held until the car 12 is in position to receive the same. As soon as the car 12 arrives under one of the hoppers, its doors are opened and the material dumped into the car, the car preferably being sufficiently large to hold the charge from two of such hoppers. As soon as the car has been filled, it is run out onto the trackway, by means of the cable 13, until it reaches its proper position for dumping over the scow or other receptacle into which it is to be dumped. As soon as it reaches this position, the outwardly projecting arm of the crank lever 34 strikes the cam or incline 35, which raises said lever sufficiently to withdraw the bolt 26 from its locking

position. This frees the front end of the box 20, and the weight of the load causes this end to swing down, thereby discharging the load. The weights 41 then cause the box to swing up to normal position and the front lower edge of the box striking the beveled end of the spring-pressed bolt, drives the bolt back until the beam or cross piece 27 passes above the bolt, when the spring 30 shoots the bolt into locking position. In order to discharge the load at various points along the boom or elevated track portion 12, the operator, by turning the handle 40, may adjust the cam or incline 35 so as to dump the car 12 at any desired point, thereby enabling the scow to be evenly filled.

As will appear from the above description and the drawings, this apparatus furnishes means for economically and rapidly handling the material to be disposed of, with a minimum amount of labor, and by having a plurality of dumping hoppers 10 in connection with a single car, a large number of wagons may be handled, and the material from all of such wagons readily carried away by the single transferring car.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In an apparatus for handling material, the combination of a receptacle for receiving material, a trackway passing underneath said receptacle, said trackway being arranged so that a boat or carrier in which the material is to be carried away may be run underneath the same, a car having a tipping portion and adapted to run on said trackway, means for holding said tipping portion in normal position when the load is in the car, and means along said trackway for releasing said holding means on the car in order to dump the load.

2. In an apparatus of the character set forth, the combination of a platform on which wagons or carts may be run, hoppers beneath said platform for receiving material from said carts, a trackway underneath said hoppers, said trackway being continued out and over a boat or other receptacle into which the material is to be dumped, a car having a tipping body, mechanism on said car for releasing said body to permit its being swung by gravity to cause its load to be dumped, and adjustable means along said trackway for actuating said mechanism.

3. In an apparatus of the character set forth, the combination of a car having a pivoted body or box, a lock for holding said box in closed position, withdrawing devices connected with said lock for actuating the same to release the box, a trackway on which said car runs, a support along said trackway, a slidable device mounted on said support and adapted to actuate the lock-with-

drawing devices on said car, and means for sliding said last-named device.

4. An adjustable car-tripping device, comprising a track, a support mounted adjacent to the track, a slidable cam or incline mounted on said support, a cable engaging with said cam, wheels over which said cable runs, and means for turning one of said wheels for actuating the cable in order to slide said cam.

5. In an apparatus of the character set forth, the combination of two or more hoppers, a trackway under said hoppers, a car operating on said trackway, a box pivotally mounted in said car, said box being pivoted

so that the weight of the load will tend to tip the same, a catch for holding said box in filling position to receive the material from said hoppers, a releasing device provided with a projecting crank-arm for releasing said catch, a cam slidably mounted adjacent to said trackway for engagement with said projecting crank-arm, and means for moving said cam longitudinally of said trackway.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
