

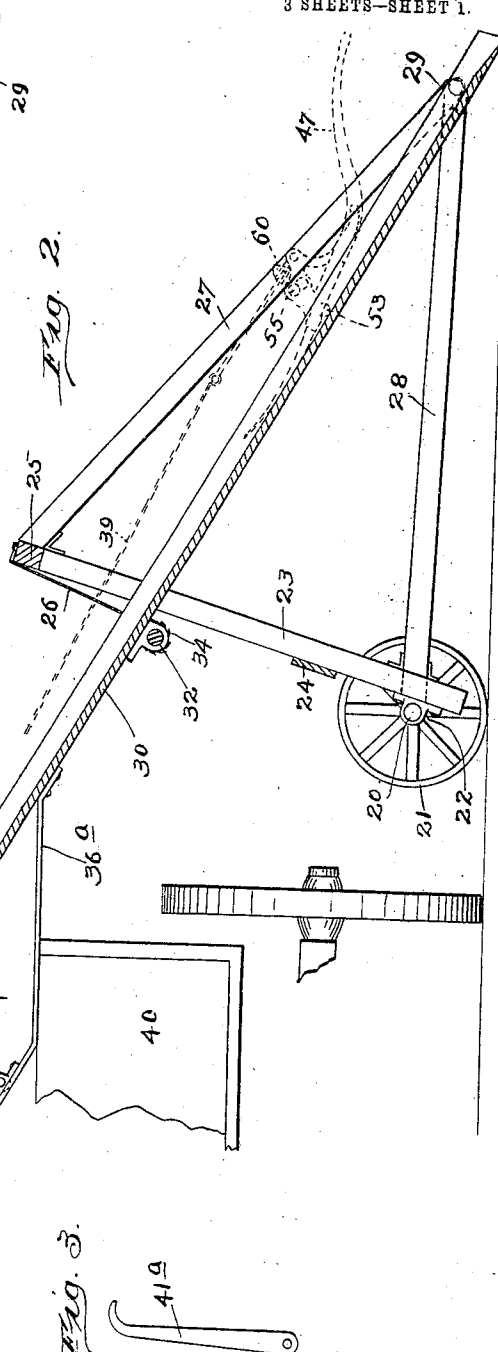
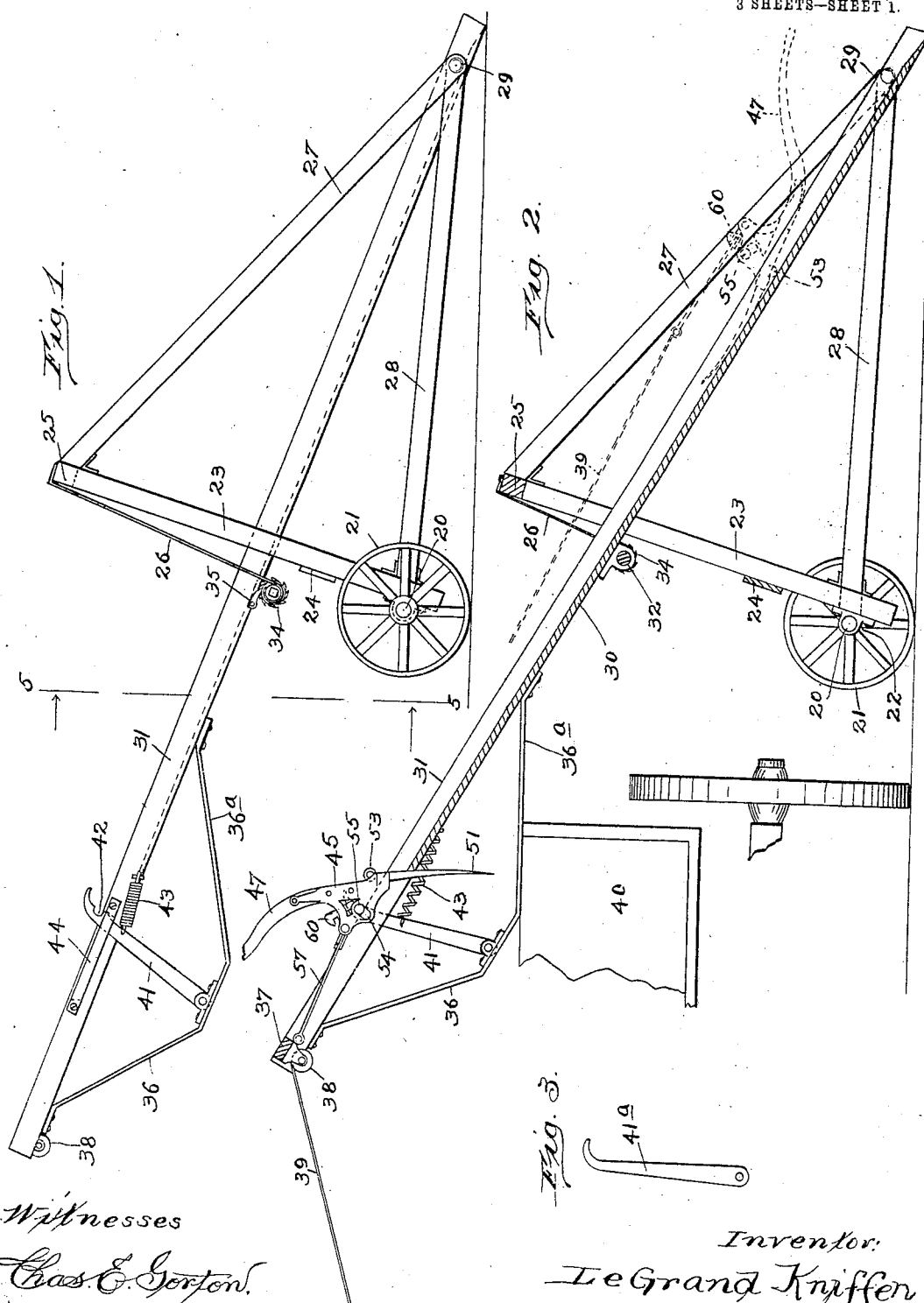
No. 835,624.

PATENTED NOV. 13, 1906.

LE GRAND KNIFFEN.
LOADING APPARATUS FOR WAGONS AND THE LIKE.

APPLICATION FILED JULY 7, 1906.

3 SHEETS--SHEET 1.



Witnesses

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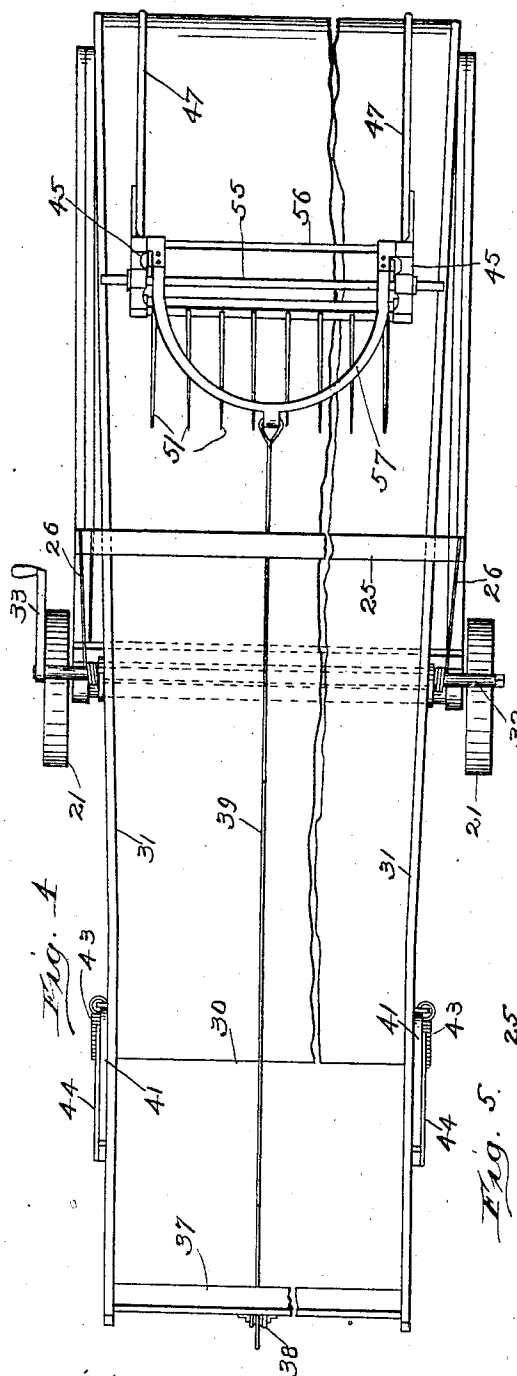
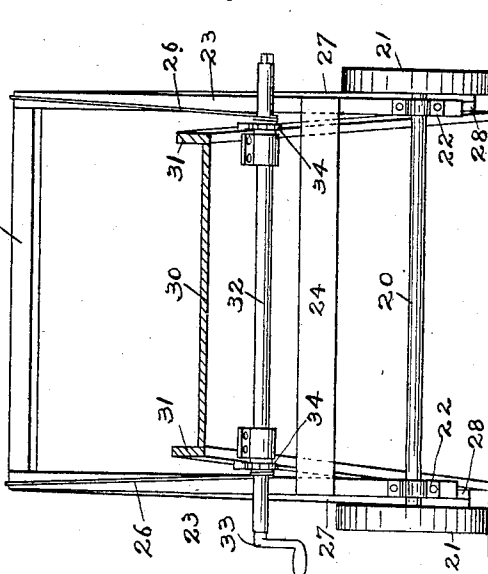


Fig. 1

Fig. 6

Fig. 7

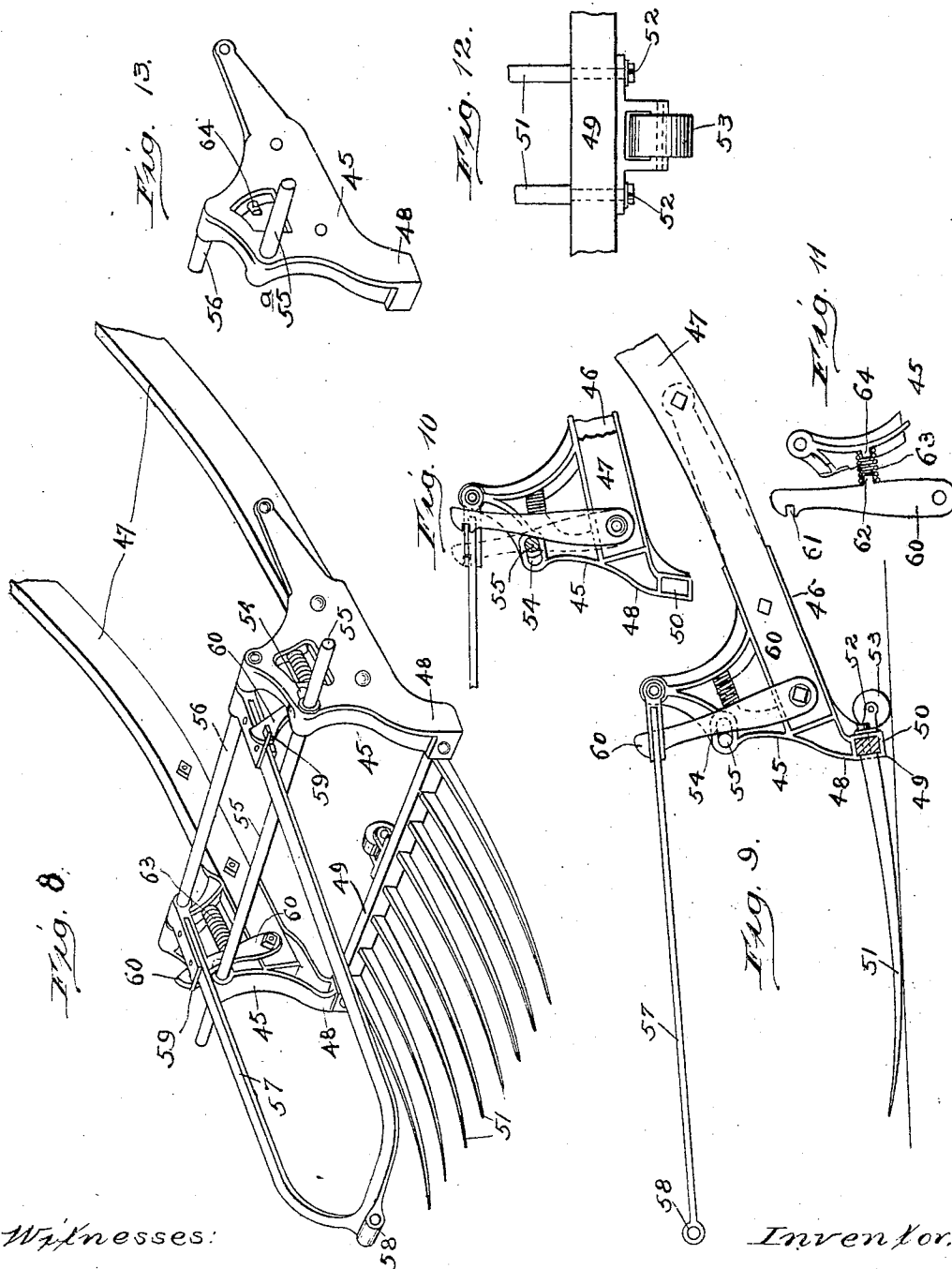


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3 SHEETS—SHEET 3.



Witnesses:

Chas. E. Gorton.

M. A. Nymann.

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UNITED STATES PATENT OFFICE.

LE GRAND KNIFFEN, OF CHICAGO, ILLINOIS.

LOADING APPARATUS FOR WAGONS AND THE LIKE.

No. 835,624.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed July 7, 1906. Serial No. 325,066.

To all whom it may concern:

Be it known that I, LE GRAND KNIFFEN, 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 a Loading Apparatus for Wagons and the Like, of which the following is a specification.

This invention relates to that class of apparatus employed for loading wagon-boxes or bodies and other elevated receptacles from the ground or usually a point lower than the receptacle to be loaded with grain, gravel, sand, manure, ore, earth, and the like, which consists when in operation of a wheeled chute or platform, one end of which rests on the ground and the other is extended above the wagon-body or receptacle to be loaded and in which the earth, manure, or other material to be loaded is moved by a fork, scraper, or carrier of the proper construction along the floor of the chute from the ground and dumped into the receptacle over the upper end of the chute.

In the present instance the invention is shown in the drawings and will be hereinafter described and explained as being primarily adapted for loading manure into the bodies of manure-spreaders; but it will be understood that I do not desire to be limited to the specific construction of the parts herein shown and described, except when so claimed, or to any particular purpose to which the apparatus may be used.

In many of the loaders of the above-named general type now in common use the front end of the chute rests directly on or near the body or receptacle to be loaded, and the carrier is dumped by the front edge or portion thereof coming in contact with stops located either in front or at the sides near the middle or front of the carrier, and besides the chute is usually so constructed that the distance between the sides thereof at its upper end is about the same width as that of the carrier or just sufficiently wide enough apart to permit the carrier to pass between the same, the sides often being employed to act as guides for the carrier. Practical use or experience proves that when the sides of the chute are thus contracted the straw and fibrous manure will become crowded or wedged in between the said sides and the sides of the carrier, thus preventing its free movement and the free discharge of its contents and, further, that the stops when arranged as above

stated will become clogged in handling manure with straw and similar material and will also prevent the carrier entirely clearing itself of all material.

It is therefore one of the objects of my present invention to so construct the apparatus by making the chute considerably wider than the carrier to the end that there will be no possibility of the accumulation of material between the sides of the two to obstruct the free movement of the latter either in its travel or dumping movement and to so construct the parts of the apparatus that the pivotal point of the carrier will be located at the rear and upper portion thereof, so that all material carried thereby will rest thereon in front of its pivots, and therefore cannot clog the same.

Another object is to provide the lower surface of the upper portion of the chute with brackets of such construction as to furnish considerable area to rest on the rave of the body and to elevate the chute at a sufficient distance thereabove to permit the body to be located diagonally thereunder and to allow of the unobstructed dumping movement of the carrier.

A further object is to furnish means for gradually retarding, then permanently stopping and dumping the carrier, clearing the same, and then returning it to its normal position at the lower end of the chute.

Numerous other objects and advantages will be disclosed in the subjoined description and explanation.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts, as will be hereinafter more fully set forth and specifically claimed.

In the accompanying drawings, which serve to illustrate the invention, Figure 1 is a view in side elevation of a loading apparatus, showing the chute thereof partly elevated, but with the carrier omitted. Fig. 2 is a longitudinal sectional view of the apparatus, showing the chute thereof elevated into position and resting on the body of a wagon or manure-spreader and illustrating by full lines the carrier in the position it will assume when dumped and by dotted lines one of its positions when traveling up or down the chute. Fig. 3 is a detached view of a modified form of one of the levers used for retarding, stopping, and returning the carrier. Fig. 4 is a plan view of the apparatus.

Fig. 5 is a cross-sectional view, partly in elevation, taken on line 5 5 of Fig. 1 looking in the direction indicated by the arrows. Fig. 6 is a perspective view of a portion of the chute and supporting-frame therefor, showing the means for raising and lowering the chute on its frame. Fig. 7 is a cross-sectional view of a portion of the shaft on which the chains or cords used for raising the chute are secured. Fig. 8 is a perspective view of the carrier, showing the handles thereof broken off for the convenience of illustration. Fig. 9 is a side view, partly in section, of the carrier. Fig. 10 is a view, partly in section and partly in elevation, of a portion of the carrier, showing the means for holding the bail thereof in such position as to remove or restrict the tendency of the handles to rise when the carrier is being loaded. Fig. 11 is a detail view of a portion of one side of the carrier and one of the spring-actuated levers thereof. Fig. 12 is a rear view of a portion of the carrier-frame; and Fig. 13 is a perspective view of one of the side pieces of the carrier, showing a modification in its construction.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The truck or carriage of the apparatus consists of an axle 20, on or near each end of which is mounted a wheel 21 of any desired construction, and two triangular upright frames, one of which is located near each end of the axle, so as to be in parallelism with one another. As shown in Figs. 2 and 5 of the drawings, the axle 20 is journaled in suitable bearings 22 on the lower part of the front or upwardly-extending rails 23 of the triangular frames, which rails are connected together just above the bearings 22 and at their upper ends by means of cross-pieces 24 and 25, the latter of which has secured at each of its ends a cord or chain 26 for the purpose to be presently explained. Secured at their front ends to the upper and lower portions of each of the rails 23 are rails or bars 27 and 28, which are connected together at their rear ends by means of a rod 29, which also passes loosely through the chute near its rear end. This chute consists of a floor 30 and an upright side piece 31 at each of its side edges and is preferably made flaring toward its lower end, as is clearly shown in Fig. 4 of the drawings, from which figure it will be noted that the floor 30 terminates some distance from the front ends of the sides 31 of the chute. Transversely journaled on the chute just in front of the front rails of the angular frames of the truck is a shaft 32, one or both ends of which may be equipped with a handle 33 to be used for turning the same when it is desired to elevate or lower the chute.

The cord or chains 26, which are secured at their upper ends, as before stated, to the transverse bar or rail 25, have their lower

ends secured to the shaft 32, so as to be wound therearound, and said shaft is provided at points near the sides of the chute with ratchet-wheels 34, which are adapted to be engaged by pawls 35, pivotally secured to the sides of the chute, as is clearly shown in Figs. 1 and 6 of the drawings. Secured longitudinally on the lower portion of the upper part of the chute at each of its sides is a bracket 36, which comprises two sides of substantially a triangular figure, the chute forming the other side of the triangle.

By reference to Figs. 1 and 2 of the drawings it will be seen and understood that the brackets 36 are secured at their lower ends to the chute some distance below the upper end or termination of the floor 30 and that their upper ends are secured to the chute near its front or upper end, which end is provided with a cross-piece 37, on the lower surface of which at about its middle is journaled a pulley 38, over which the cord or cable 39, used for drawing the carrier upwardly over the chute, passes. By reference to said figures it will also be seen that the brackets 36 are of such construction or shape as to furnish, with their lower portions, when elevated a considerable supporting surface or area 36^a to rest on the rave or upper edge of the wagon-body 40 or other receptacle to be loaded. By employing brackets of this form it is apparent that the wagon-body can be driven or located under the chute diagonally with respect thereto and that the chute may be moved toward or from the wagon-body while resting thereon or its position otherwise shifted so as to deposit the loads from the carrier at the desired places, so as to properly fill the body or receptacle. It is further apparent that these brackets will hold the chute on the body at such an elevation therefrom as to permit the body to be completely filled without obstruction to the lower portion of the carrier. Pivotally secured at its lower end to each of the brackets 36, at about the middle thereof, is an upwardly-extending lever 41, each of which has its upper portion provided with a recess 42 to receive the pivots or stops on the carrier. Each of the levers 41 is actuated by means of a spring 43, one end of which is connected to the chute and the other end to the lever near its upper end. Secured longitudinally to the outer surface of each of the sides 31 of the chute near their upper ends is a strap 44, between which and said sides the levers 41 are extended and adapted to move back and forth, the said straps forming guides therefor.

The carrier which forms a part of the invention or apparatus may be of any desired form or construction—such as a scraper, scoop, or fork—for gathering and holding the manure or material; but there are certain novel features of construction and arrangement of the parts which may be employed on any of

the general forms of scrapers that are novel and of which I am the inventor and will hereinafter claim. In the present instance I have shown a pronged or tined carrier, which consists of two upright side members 45, which are counterparts of one another and preferably of about the shape shown in Figs. 8 to 10, inclusive, of the drawings. Each of these members is provided on its inner surface with a rearwardly-extending socket or channel 46, in which are located and secured the handles 47, which project rearwardly and upwardly and are for the use of the operator in guiding the carrier when the same is being loaded or filled. On a front and downwardly-extending portion 48 of each of the members 45 is horizontally secured a cross-bar 49, the ends of which are preferably fitted in sockets 50, formed on the inner surfaces of each of the extensions 48, and said bar carries a series of forwardly-extending tines 51, which are reduced at their rear ends and passed through the bar 49 and held in place by means of nuts 52 on the rear portion of said reduced parts. The bar 49 has journaled on its rear surface at about its middle a roller 53, which is employed for assisting the movement of the carrier in its descent on the chute. Each of the members 45 is provided in its upper portion and somewhat rearwardly from the bar 49 with a horizontal slot or opening 54, in which is loosely located a horizontally-extending rod or shaft 55, the ends of which project a considerable distance from the outer surfaces of the members 45 and form pivots for the carrier. At the rear of the rod 55 the members 45 are transversely connected by means of a rod or bar 56, on which is loosely mounted the rear ends of a bail 57, the front end of which is provided with an eye 58 for the reception and detention of one end of the cord or cable 39, which passes over the pulley 38, and the other end of which may be connected to a horse used for drawing the carrier up on the inclined chute. The rear portion of each of the arms of the bail 57 is provided with a laterally and outwardly extending projection 59, which are located slightly to the rear of the rod 55 or the pivots of the carrier. Fulcrumed at its lower end on each of the members 45 is a lever 60, each of which has in its upper front portion a recess 61 to engage the projections 59 on the arms of the bail. As is clearly shown in Figs. 8, 9, and 10 of the drawings, the lever 60 extends between the rods 55 and 36 and have their front surfaces upwardly and rearwardly inclined and their upper ends rounded. Each of the levers 60 is provided on its rear surface at about its middle with a lug 62, around which is fitted one end of a coiled spring 63, the other end of which spring is fitted around a lug 64 on the inner surface of each of the side members. These springs serve to press the levers 64 forwardly, so that the recesses 61 in their upper

ends will engage the projections 59, and thus rigidly hold the bail 57 in its horizontal or lowered position until the ends of the rod 55 or the pivots of the carrier strike the retarding-levers 41 on the chute, by means of which the rod or shaft 55 will be pressed backwardly in the slots 54, thus disengaging the levers 60 from the projections 59 and permitting the carrier to be dumped.

In Fig. 13 I have shown a modification in the construction of a portion of the side members 45 of the carrier, which consists in omitting the slots 54 therefrom and in substituting for the transverse shaft 55 outwardly the laterally-extending rods 55^a, which will cooperate with the levers 41 in the same manner as the projecting ends of the rod 55; but of course it will be understood when this modified construction is employed the levers 60, which retain the bail in its lowered position, will also be omitted.

From the foregoing and by reference to the drawings it will be readily understood and clearly seen that by turning the handle 33 on the shaft 32 the front end of the chute may be elevated through its connections 26 with the upper portion of the triangular frames of the truck to the desired position—for instance, as shown in Fig. 2—so that the wagon-body may be driven under the front portion of the chute, when the latter will be supported on the body by means of the supporting portions 36^a of the brackets 36 in such a manner that the body may be diagonally located with respect to the chute and so that the chute may be moved toward or from the body, thus shifting the position of the upper end of the floor, so that the load from the carrier may be distributed as desired. When the chute is thus placed in position, the cord or cable 39, which is attached at one of its ends to the bail 57 of the carrier and at its other end to a horse, is passed over the pulley 38 at the top of the chute, the cord or cable 39 being of sufficient length to permit the chute to remain on the ground and be manipulated by the operator at the rear or lower end of the chute, so as to fill the carrier with the material to be loaded. After it is so filled the carrier is drawn upwardly on the chute by means of the horse until the laterally-projecting pivots carried by the carrier strike the levers 41, when said pivots will engage the recesses 42 in said levers, when in the further upward movement of the carrier the pivots thereof will be caused to describe an arc of a circle until the levers 41 reach the limit of their upward movement, when they will permanently stop the progress of the carrier and will force the projecting ends of the rod 55 rearwardly against the levers 60, thus disengaging them from the projections 59 on the bail 57, thereby permitting the bail to raise the carrier to its dumped position, as shown in Fig. 2 of the

drawings, thus discharging the load from the carrier into the body or receptacle to be loaded. When the projecting pivots of the carrier first strike the levers 41, it is apparent that said levers will act as retarders on account of the tension of the springs 43, and thus lessen the movement of the carrier as well as give a warning to the horse that he is about to reach the limit of his travel, thereby preventing the abrupt stoppage of the carrier. After the carrier shall have reached the limit of its upward movement and been dumped or turned to the position shown in Fig. 2 it is apparent that further turning thereof will be prevented by reason of the tines 51 striking the upper end of the bottom 30 of the chute and also by reason of the front end of the bail 57 striking against the cross-piece 37 of the chute. As soon as the load of the carrier is discharged and the cable 39 is slackened the springs 43 will retract the levers 41 to the positions shown in Fig. 1, thus righting the carrier and imparting to it downward movement on the chute, in which operation the upper end of the floor of the chute will scrape off or dislodge any manure or other material which may cling to the tines of the carrier, thus wiping or thoroughly cleaning the same. The wheel or roller 53 on the lower rear portion of the carrier will facilitate its movement down the chute and will also act as a guide therefor, so as to keep the handles and the tines straight with respect to the chute and prevent the carrier colliding with the sides thereof. Instead of using the levers 41, with recesses 42 in their upper ends, as shown in Fig. 1 of the drawings, I may use levers 41^a of the construction shown in Fig. 3, in which it will be observed that the recess 42 is omitted therefrom.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a wheeled axle, of two upwardly-extending angular frames mounted thereon and spaced apart, connections transversely uniting said frames, a chute connected at its rear portion to the rear parts of said frames and bodily movably located between the frames, and means on the frames and chute to elevate the latter.

2. The combination with a wheeled axle, of two upwardly and rearwardly extending angular frames mounted in parallelism thereon and spaced apart, connections transversely uniting said frames, a chute pivotally connected at its rear portion to the rear parts of the frames and bodily movably located between the frames, a shaft transversely journaled on the chute, and a connection secured at one of its ends above the chute and at its other end to said shaft.

3. The combination with a wheeled axle, of two upwardly-extending angular frames mounted thereon and spaced apart, connec-

tions transversely uniting said frames, a chute connected at its rear portion to the rear parts of said frames and bodily movably located between the frames, a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, and means on the frames and chute to elevate the latter.

4. The combination with a wheeled axle, of two upwardly-extending angular frames mounted thereon and spaced apart, connections transversely uniting said frames, a chute connected at its rear portion to the rear parts of said frames and bodily movably located between the frames, a downwardly-depending and angular-in-outlines bracket longitudinally mounted on the upper portion of the chute at each of its sides, and means on the frames and chute to elevate the latter.

5. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having near its upper end an opening between its sides, a lever mounted on each side of said opening and extending above the sides of the chute, and means to elevate the latter from the axle.

6. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a lever mounted on each side of the opening of the chute, means to elevate the same from the axle, a carrier adapted to travel thereon and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented.

7. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a lever mounted on and extending above each side of the chute, means to elevate the same from the axle, a carrier adapted to travel thereon and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented.

8. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a spring-actuated lever mounted on each side of the opening of the chute, means to elevate the same from the axle, a carrier adapted to travel thereon and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented and whereby after the load of the carrier is discharged said carrier will be moved rearwardly by the spring-actuated levers.

9. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a spring-actuated and recessed lever mounted on each side of the opening of the chute, means to elevate the same from the axle, a carrier adapted to travel thereon and having laterally-projecting pivots on its sides to engage the recesses in said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented and whereby after the load of the carrier has been discharged the carrier will be moved rearwardly on an arc of a circle by the spring-actuated levers to the end that it will be started down the inclined chute and its tines freed or cleaned of the material carried thereby.
10. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, means to elevate the same from the axle, a lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, a carrier adapted to travel on the chute and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented.
11. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, means to elevate the same from the axle, a spring-actuated lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, a carrier adapted to travel on the chute and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented and whereby after the load of the carrier has been discharged the carrier will be moved rearwardly by the spring-actuated levers.
12. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, means to elevate the same from the axle, a spring-actuated and recessed lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, a carrier adapted to travel on the chute and having laterally-projecting pivots on its sides to engage the recesses of said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented and whereby after the load of the carrier has been discharged the spring-actuated levers will move the carrier rearwardly on an arc of a circle and start it down the inclined chute so as to cause the upper end of the chute to remove material from the carrier.
13. The combination with a chute adapted to be placed in an inclined position, of a downwardly-depending and angular-in-out lines bracket longitudinally mounted on the upper portion of the chute at each of its sides.
14. The combination with a chute adapted to be placed in an inclined position and having an opening in its upper end between its sides, of a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, a lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, means on the sides of the chute to restrict the movement of said levers; a carrier adapted to travel on the chute and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be partially rotated or tilted to discharge its load through said opening and its further forward movement prevented.
15. The combination with a chute adapted to be placed in an inclined position and having an opening in its upper end between its sides, of a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, a spring-actuated lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening of the chute, a carrier adapted to travel on the chute and having laterally-projecting pivots on its sides to engage said levers whereby the carrier will be retarded in its movement and partially rotated or tilted to discharge its load through said opening and its further forward movement prevented and whereby after the load of the carrier has been discharged the spring-actuated levers will move the carrier rearwardly and start it down the inclined chute so as to cause the upper end of the chute to remove material from the carrier.
16. The combination with a chute adapted to be placed in an inclined position and having an opening near its upper end between its sides, of a downwardly-depending bracket longitudinally mounted on the upper portion of the chute at each of its sides, a spring-actuated and recessed lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, a carrier adapted to travel on the chute and having laterally-projecting

pivots on its sides to engage the recesses of the said levers whereby the carrier will be retarded and then stopped and partially rotated or tilted to discharge its load through said opening and whereby after the load of the carrier shall have been discharged the spring-actuated levers will move the carrier rearwardly on an arc of a circle and start it down the inclined chute so as to cause the upper end of the chute to remove material from the carrier.

17. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a downwardly-depending bracket longitudinally mounted on the upper portion of the chute near each of its sides, means to elevate the chute from the axle, a spring-actuated lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, a carrier adapted to travel on the chute and having laterally-projecting and movable pivots on its sides to engage said levers, a bail pivotally mounted on the sides of the carrier at points above and to the rear of the said pivots and having on each of its sides a lateral projection, and a spring-actuated and recessed lever on each of the sides of the carrier adapted to engage said projections on the bail whereby the bail will be rigidly held in its lowered position and released when the pivots of the carrier strike the levers on the upper end of the chute.

18. The combination with a wheeled axle, of a chute mounted thereon above the wheels and having an opening near its upper end between its sides, a downwardly-depending bracket longitudinally mounted on the upper portion of the chute near each of its sides, means to elevate the chute from the axle, a spring-actuated lever fulcrumed at its lower portion on each of said brackets and extending above the sides of the opening in the chute, a carrier adapted to travel on the chute and having laterally-projecting and movable pivots on its sides to engage said levers, a bail pivotally mounted on the sides of the carrier at points above and to the rear of the said pivots and having on each of its sides a lateral projection, a spring-actuated and recessed lever on each of the sides of the carrier adapted to engage said projections on the bail, and a wheel journaled on the lower portion of the carrier.

19. A carrier consisting of two upright side pieces each having a channel to receive a handle, a cross-bar uniting the side pieces at their lower portions, means on the cross-bar to carry the material to be loaded, a transverse rod uniting the side pieces at their upper portions, a bail pivotally secured on said cross-bar and having on each of its sides a lateral projection, a pivot on each of the sides of the carrier to strike stops on the upper portion of an inclined chute for the purpose of tilting the carrier, a spring-actuated and recessed lever fulcrumed on each of the sides and adapted to engage the projections on the bail.

20. A carrier consisting of two upright side pieces each having a channel to receive a handle, a cross-bar uniting the side pieces at their lower portions, means on the cross-bar to carry the material to be loaded, a transverse rod uniting the side pieces at their upper portions, a bail pivotally secured on said cross-bar and having on each of its sides a lateral projection, a pivot on each of the sides of the carrier to strike stops on the upper portion of an inclined chute for the purpose of tilting the carrier, a spring-actuated and recessed lever fulcrumed on each of the sides and adapted to engage the projections on the bail, and a wheel journaled on the cross-bar at the lower portion of the carrier.

21. The combination with a chute adapted to be placed in an inclined position and having an opening in its upper end between its sides, of a stop on each side of said opening, a carrier having on each of its sides a long laterally-projecting pivot adapted to project over the sides of the chute at its upper end and to strike said stops.

22. The combination with a chute adapted to be placed in an inclined position and having an opening in its upper end between its sides, of a stop located on the chute on each side of the opening therein, a carrier having on each of its sides a long laterally-projecting pivot, said pivots being located above and to the rear of the material supporting or carrying part of the carrier and adapted to extend over the sides of the chute at its upper end and to strike said stops, and a bail pivoted to the carrier above said pivots.

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Witnesses:

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