

A. W. BORLAND & C. M. LAW.
ELEVATED CARRIER.

No. 558,148.

Patented Apr. 14, 1896.

Fig. 2.

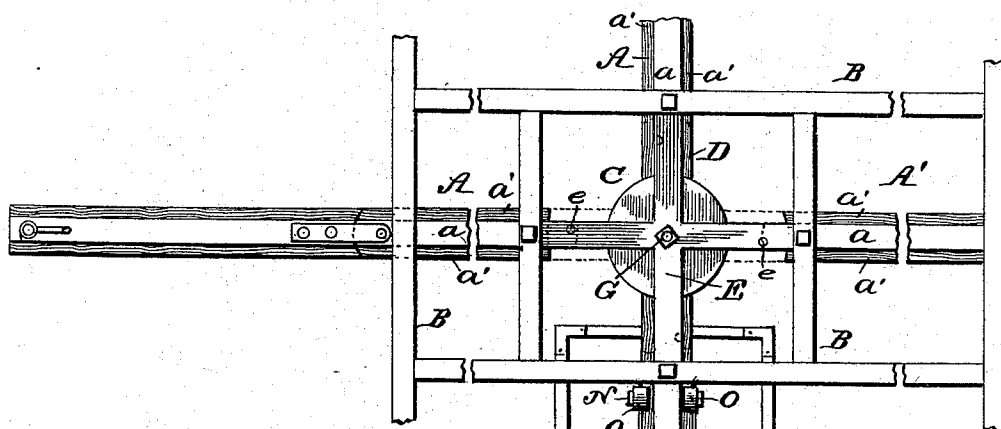


Fig. 5.

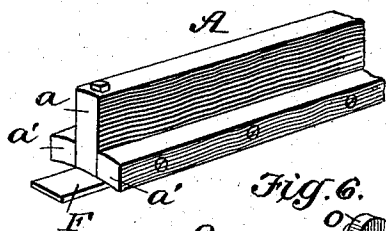


Fig. 6.

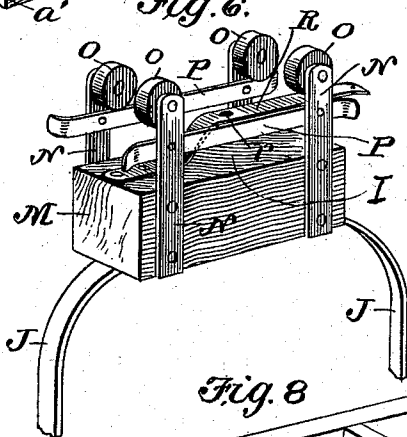


Fig. 7.

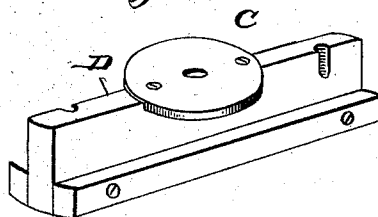
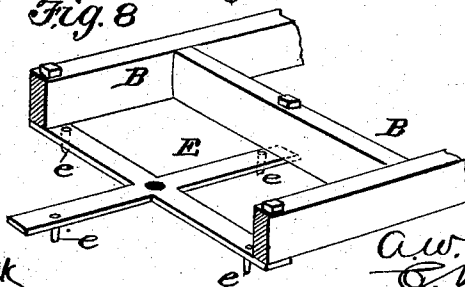


Fig. 8.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT W. BORLAND AND CHARLES M. LAW, OF CONOTTON, OHIO.

ELEVATED CARRIER.

SPECIFICATION forming part of Letters Patent No. 558,148, dated April 14, 1896.

Application filed September 21, 1895. Serial No. 563,171. (No model.)

To all whom it may concern:

Be it known that we, ALBERT W. BORLAND and CHARLES M. LAW, of Conotton, in the county of Harrison and State of Ohio, have invented an Improved Elevated Carrier, of which the following is a specification.

This invention is an improved carrying device, and is particularly adapted for removing manure and the like from large stables or barns, carrying and dumping the same to one side upon the exterior of said stable or barn.

The object of our invention is to provide an improved form of carrier, a track upon which the same travels, and a turn-table and track by means of which the carrier can be shifted from one track to another in order to travel to and from different points.

Another object of our invention is to provide a movable track upon the exterior of the barn whereby the carrier can be discharged at any desired point within certain limits.

With these and such other objects as will appear later on our invention consists in the details of construction and novelties of combination hereinafter fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a view and side elevation showing our improved carrier mounted upon a movable section of track, which movable section is in alinement with the fixed section of track and extension. Fig. 2 is a top plan view showing the tracks, rafters, turn-table, and extension. Fig. 3 is a detail sectional view on the line 3 3 of Fig. 1. Fig. 4 is a sectional view on the line 4 4 of Fig. 1. Fig. 5 is a detail view of the track. Fig. 6 is a detail view of the trolley or carrier. Fig. 7 is a detail view of the turn-table, and Fig. 8 shows the rafters and spider as supporting the turn-table.

In carrying our invention into effect we employ a number of tracks A, which are secured to the joists or rafters B of the barn or stable, such tracks being arranged according to the interior construction of the stable or the character of the work to be done, and

such tracks may be arranged to intersect at any desired angle; but in the present instance we have shown them arranged at right angles to each other.

The track A is preferably constructed of wood composed of three pieces—viz., the central piece *a*, which is securely bolted to the rafters, and the lateral portions or track proper, *a'*, which are securely fastened upon opposite sides of the central piece *a*, there being sufficient space between the rafters and top of portions *a'* to permit the trolley-wheels of the carrier to move freely back and forth thereon.

The track A, though preferably constructed of three pieces of wood, could be constructed of a central piece of metal, if so desired; but we have found the wooden track cheaper, easier to make, and more easily attached.

The tracks A do not intersect one another; but at their point of juncture we arrange a turn-table C, carrying a track-section D, which is adapted to be moved into alinement with any one of the tracks, and thus making a complete unbroken track from one end of the stable or barn to the other.

The track-section D carried by the turn-table C is identical in construction with the track A. The turn-table C is supported and pivoted to a spider or framework E, which is secured to the joists or rafters of the stable or barn, as clearly shown, and each track is provided with a supporting-plate F at its inner end, so that when the track-section is moved into alinement with the track the ends of said track-section will be supported by the supporting-plates, and thus prevent any sagging or vibration of the track-section and turn-table.

The spider or supporting-frame E is provided with stop-pins *e*, which limit the movement of the track-section, and thus bring the same into the proper alinement with the fixed portions of the track.

The pivotal bolt G, which connects the track-section and turn-table to the spider or supporting-frame, projects a short distance below the securing-nut *g*, the purpose of such projecting end being fully described later on.

The carrier, which is adapted to be moved from one portion of the stable or barn to the other upon these tracks, already described, consists of a box or carrier proper, H, supported from a trolley or traveling car I by means of bails J, said bails being pivotally connected at their lower ends to end of the box or carrier H by means of bolts *j*, its other metallic plates *j'* and *j''* arranged upon the interior and exterior of said box, respectively.

The spring-actuated catch K is attached to one of the bails J and is adapted to engage a lock-plate *k*, fixed upon one end of the box or carrier, the purpose of said lock-plate and spring-catch being to hold the box rigid in a horizontal position while being loaded and transported.

In order to provide ample room for the action of the spring-catch we interpose a washer *k'* between the end of the bail and its adjacent metallic bearing-plate. The upper ends of the bails J are secured to the under side of the block M, forming a part of the trolley, and extending upward from each corner of said block are the bracket-arms N, carrying the trolley wheels or rollers O, which are adapted to travel upon the track, and between the trolley wheels or rollers and the top of the block M are secured the guide-arms P, curved outward at their ends, and the purpose of which arms is to guide the trolley safely from the fixed track-section to the movable section, or vice versa.

In order to hold the trolley and its attached carrier-frame upon the movable track-section while the same is being revolved we provide a spring-tongue R, which is secured upon the upper side of the block M and is provided with the perforations *r*, which receive the projecting end of the bolt G when said trolley is moved upon the track-section, and thus lock the trolley and carrier centrally upon said track-section, so that all of the parts being duly centered can be easily revolved to bring the movable section of the track opposite to any particular fixed section of the track.

The tongue R, being a spring, automatically engages the lower end of bolt, and in order to disengage said tongue when it is desired to move the trolley from the movable track-section we provide an elbow-lever S and rod S', said lever being pivoted upon the inner side of the bail and the rod S', connecting said lever with the spring-tongue, so that by depressing the end of the lever the spring-tongue is turned down and disengaged from the end of the bolt.

In the drawings we have shown two sections of fixed track arranged at right angles to each other for the purpose of moving the carrier from each of the four sides of the stable or barn, so that every portion of the stable

or barn can be easily cleaned and the dirt or matter to be discharged can be conveniently loaded in the carrier and quickly transported from the barn or stable to a point upon the exterior thereof. Thus we will suppose that it is desired to remove the manure from the aisle marked A' in the drawings and that the carrier is at the position marked B'. In such case removable section of track is first brought into alinement with the track A, upon which the carrier is, and the carrier made to travel upon said movable section. When the trolley reaches the center of said movable section, it is automatically locked thereon, and the section is then revolved and brought into engagement with the fixed section of track arranged centrally of the aisle A. The lever S is now depressed, releasing the spring-tongue R, and the trolley and carrier are permitted to move to the point A, where the box or carrier is loaded with the matter to be discharged. The carrier is then moved back along the fixed section of track onto the movable section, where it is again moved onto the desired section of fixed track, and in order to move the carrier some distance outside of the barn we provide a hinged section or extension X to the track, said extension X being connected to the track proper, A, by means of hinged plates *x*, and in order to properly support the said extension we provide a spring suspension-rod X', which holds the track in the proper horizontal position. This extension is usually made about twenty feet, so that the manure can be discharged at least that far from the stable or barn. When not in operation, the extension-track can be folded horizontally against side of the stable or barn.

It will thus be seen that we provide a cheap, simple, and efficient contrivance by means of which a stable of great extent can be quickly and easily cleaned.

Although we have described our invention as particularly adapted for stable, it is obvious that it can be used for other purposes without departing from the spirit of our invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a track of a trolley running thereon, the spring-tongue connected with the trolley, and having an opening, a bolt projecting below the track and adapted to engage said opening, the carrier suspended from the trolley by means of bails, and the lever arranged upon the carrier, and connected with the spring-tongue, substantially as shown and described.

2. The combination, with the fixed and movable tracks, of the trolley having the guide-arms, and spring-tongue, said tongue having

an opening, and the bolt passing through the movable track, the lower end of said bolt being adapted for engagement with the opening in the spring-tongue, substantially as shown and described.

3. The combination, with the fixed sections, of track, of the movable section of track, the trolley having guide-arms, and the spring locking-tongue, the dumping-carrier supported from said trolley, and means for re-

leasing the spring-tongue, substantially as shown and described.

In testimony whereof we affix our signatures in the presence of two witnesses.

ALBERT W. BORLAND.
CHARLES M. LAW.

Witnesses:

D. R. PHILIPS,
A. B. MCKEAN.