F. C. TOBIAS.

PORTABLE TRAM.

APPLICATION FILED DEC. 8, 1914.

1,253,301.

Patented Jan. 15, 1918.

2 SHEETS—SHEET 1.

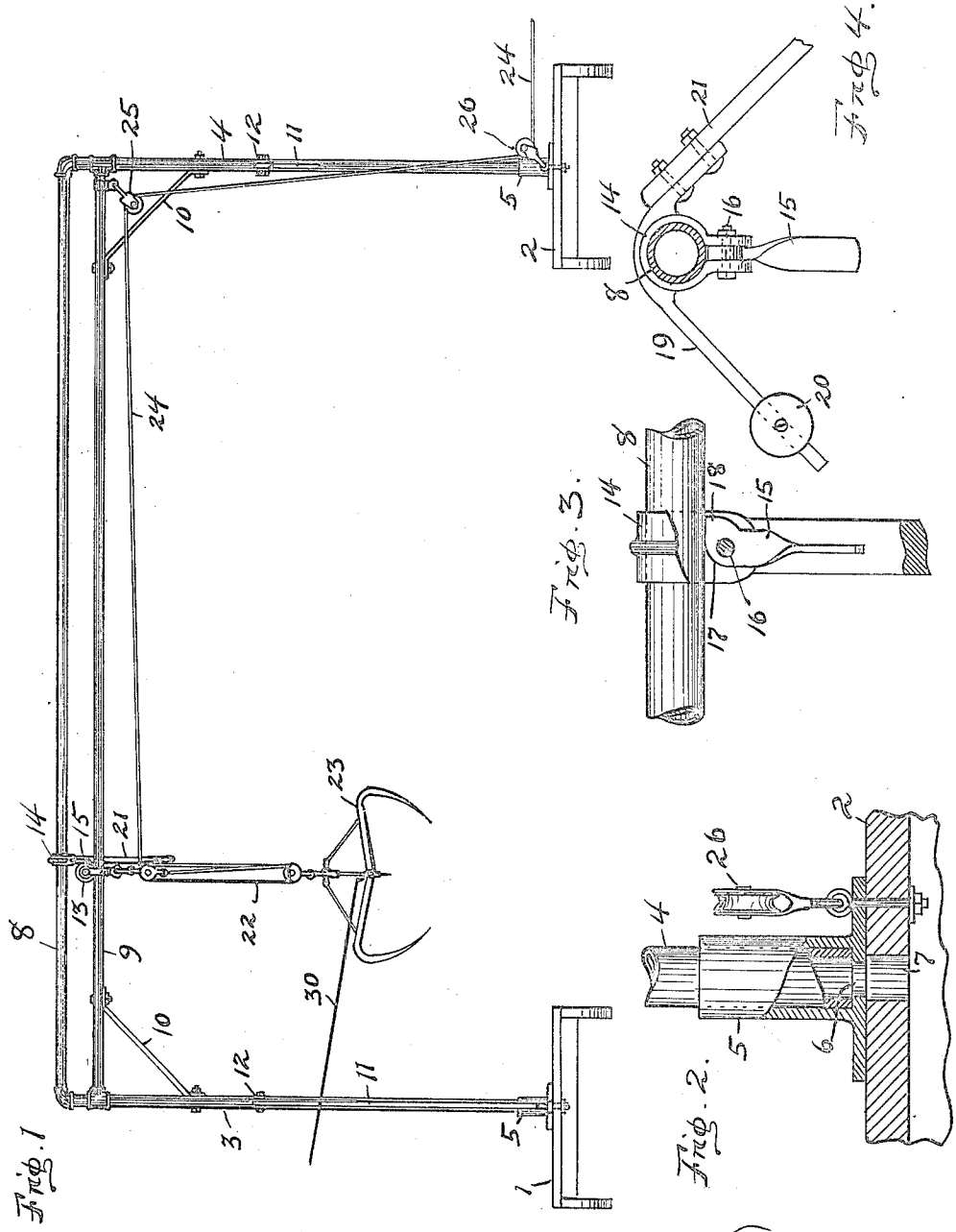


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

WITNESSES:

Mathilda Mettler

Marie A. Hartman

Frank C. Tobias, INVENTOR.

BY H. G. Burns

ATTORNEYS.

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2 SHEETS—SHEET 2.

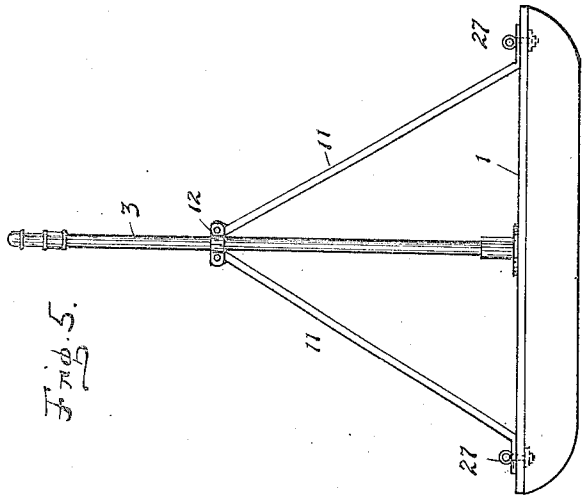


Fig. 5.

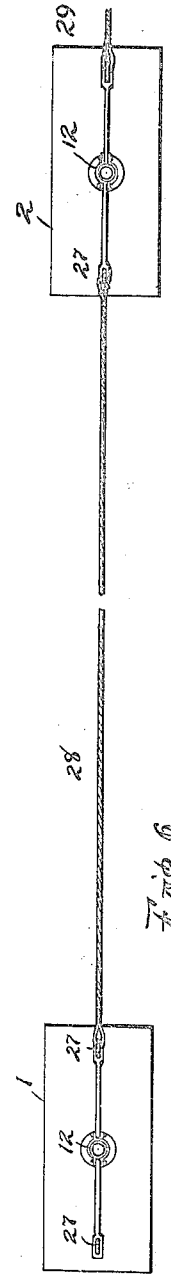


Fig. 6.

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UNITED STATES PATENT OFFICE.

FRANK C. TOBIAS, OF FORT WAYNE, INDIANA.

PORTABLE TRAM.

1,253,301. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed December 8, 1914. Serial No. 876,051.

To all whom it may concern:

Be it known that I, FRANK C. TOBIAS, a citizen of the United States of America, and resident of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Portable Trams, of which the following is a specification.

This invention relates to improvements in manure loaders, and the object thereof is to afford a portable apparatus by means of which manure may be gathered from the ground and loaded upon a wagon in large quantities within a short time and thus effect a saving of both time and manual labor.

The object of the invention is accomplished by the construction illustrated in the accompanying drawings in which:

Figure 1 is a side elevation of the invention partly cut away;

Fig. 2 is a detail view, partially in section showing the connection between one of the sleds and vertical standards;

Fig. 3 is a detail view showing the detent pawl for engaging the carrier;

Fig. 4 is a view of Fig. 3 at right angles thereto;

Fig. 5 is an end view of the supporting apparatus; and

Fig. 6 is a plan view showing the sleds arranged in position for transporting the apparatus.

Similar characters of reference indicate corresponding parts throughout the several views and referring now to the same:

1 and 2 indicate respectively the sleds upon which the apparatus is carried, and 3 and 4 are vertical standards, each being seated at the lower end upon the corresponding sled in a socket casting 5, the latter having an opening 6 at the bottom that is coincident with another opening 7 in the sled through which debris may be expelled by gravitation. The standards are connected at their tops by two parallel pipes 8 and 9 respectively, and a brace 10 reinforces the connection of the pipe 9 at each end with the corresponding standard. The connections of the standards and the castings 5 are loose so that the sleds may be turned in a horizontal plane, and the standards are braced by means of pipes 11 that are secured at their lower ends to the corresponding sled near the ends thereof, and at their upper ends to a collar 12 through which the standard extends loosely so that it may turn therein.

Upon the horizontal pipe 9 is mounted a traveling pulley 13 which is adapted to be moved along the pipe 9 from one end to the other, and upon the pipe 8 is mounted a detent member comprised of a collar 14 that straddles the pipe and carries a pawl 15 that is pivoted upon a bolt 16 extending therethrough. The pawl is rounded upon one side as shown at 17 so that it may be swung in one direction freely without engaging the pipe 8 but has a shoulder 18 upon its opposite side that engages the pipe when pressure is brought to bear against the lower end of the pawl from the opposite side so that the detent member is prevented from being moved lengthwise upon the pipe 8. The detent member has also an arm 19 upon which is adjustably secured a weight 20, and upon the opposite side extends an operating handle 21 by means of which the detent member may be turned upon the pipe or shifted lengthwise thereupon.

Attached to the traveling pulley 13 is a hoist 22, and to the lower end of the hoist is connected a grapple fork 23. The draft-rope 24 of the hoist is trained through a pulley 25 that is fixed adjacent the juncture of the pipe 9 and the standard 4 and extends from thence through a pulley 26 that is attached to the sled 2 adjacent to the juncture of the standard 4 and the sled 2.

The sleds have at each end an eyebolt 27 that forms the connection between the corresponding braces 11 and the sled, and these eyebolts serve as a means for connecting the sleds together by a chain or cable 28 and for attaching a draft line 29 when it is desired to shift the apparatus from place to place.

In using the apparatus, the sleds are coupled together by a cable 28 and a team is hitched to the draft-line 29 so that the apparatus may be drawn to the field for operation.

When the apparatus is in position for operation the sleds may be turned at right angles to their positions shown in Fig. 6 which has the effect of bracing the standards so as to prevent lateral swinging of the overhead pipes. The detent member is moved upon the pipe 8 to a position immediately over the manure that is to be loaded and a wagon (not shown) is drawn between the sleds adjacent the manure. The fork and the hoist together with the traveling pulley are moved upon the pipe 9 so that the latter passes the pawl 15, and the fork is then lowered to re-

ceive its charge by slacking the draft-rope 24. The charge is then lifted by drawing the rope 24, the pawl 15 gripping the pipe 8 prevents the detent member from sliding upon the pipe and prevents the traveling pulley from moving upon the pipe 9 so that the charge taken up by the fork will be lifted by the hoist to an elevation above the top of the wagon that is to receive the load. When a sufficient elevation has been reached by the hoisting apparatus, the handle 21 of the detent member is manipulated so that the pawl 15 is swung laterally out of contact with the traveling pulley 13 thereby allowing the latter to run upon the pipe 9 and convey the hoist and fork with its load to a position over the wagon where the load may be released in the customary manner by manipulating the trip cord 30. The hoisting apparatus is then returned to its former position for receiving a new charge. As the manure is removed from the ground by the fork either one or the other of the sleds may be drawn so that the fork will be brought from place to place as the available quantity of manure becomes exhausted.

What I claim is:—

1. In apparatus of the class described, two parallel pipes spaced apart and in horizontal position; means for supporting said pipes at their respective ends in fixed relation with each other; a traveler supported by the lowermost of said pipes; a movable detent member on the uppermost of said pipes, and a pawl pivoted in the detent member having a shoulder for engaging the pipe upon which the detent member is mounted when the traveler bears against the pendent end of the pawl in one direction.

2. In apparatus of the class described, two parallel supporting pipes; a traveler on one of the pipes; a detent device movably mounted upon the other of said pipes and adapted to engage and detain the traveler from passing in one direction; and a handle for turning the detent member upon its support out of engagement with the traveler.

3. In combination with a pair of parallel tracks, horizontally disposed, a traveler mounted upon one of the tracks; and a detent member adjustably mounted upon the other or said pipes adapted to engage the traveler and stop its movement in one direction.

4. In combination with a supporting track; a weighted collar slidably mounted upon the track and adapted also to be turned laterally thereupon; a handle attached to the collar for manipulating the same; and a pawl pivoted in connection with the collar and having a shoulder adapted to bear against the track and bind the collar in fixed position upon the track when the pawl is pressed in one direction.

In testimony whereof I affix my signature, in presence of two witnesses.

FRANK C. TOBIAS.

Witnesses:
MATHILDA METTLER,
W. G. BURNS.

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