L. C. PETERSON.

MANURE AND DIRT LOADER.

APPLICATION FILED DEC. 19, 1908.

918,695. **Patented Apr. 20, 1909.**

3 SHEETS—SHEET 1.

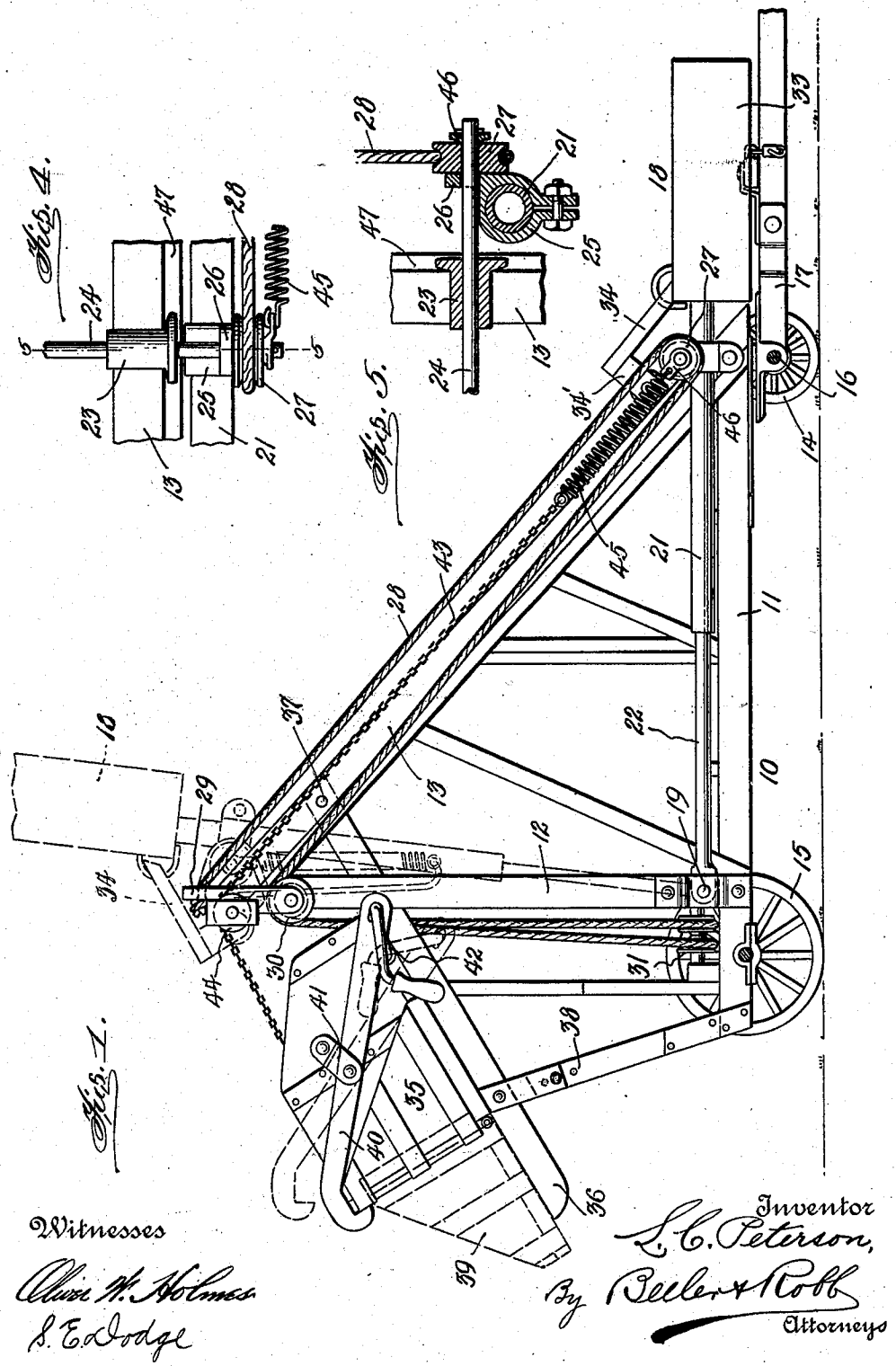


Fig. 1.

Fig. 4.

Fig. 5.

Witnesses

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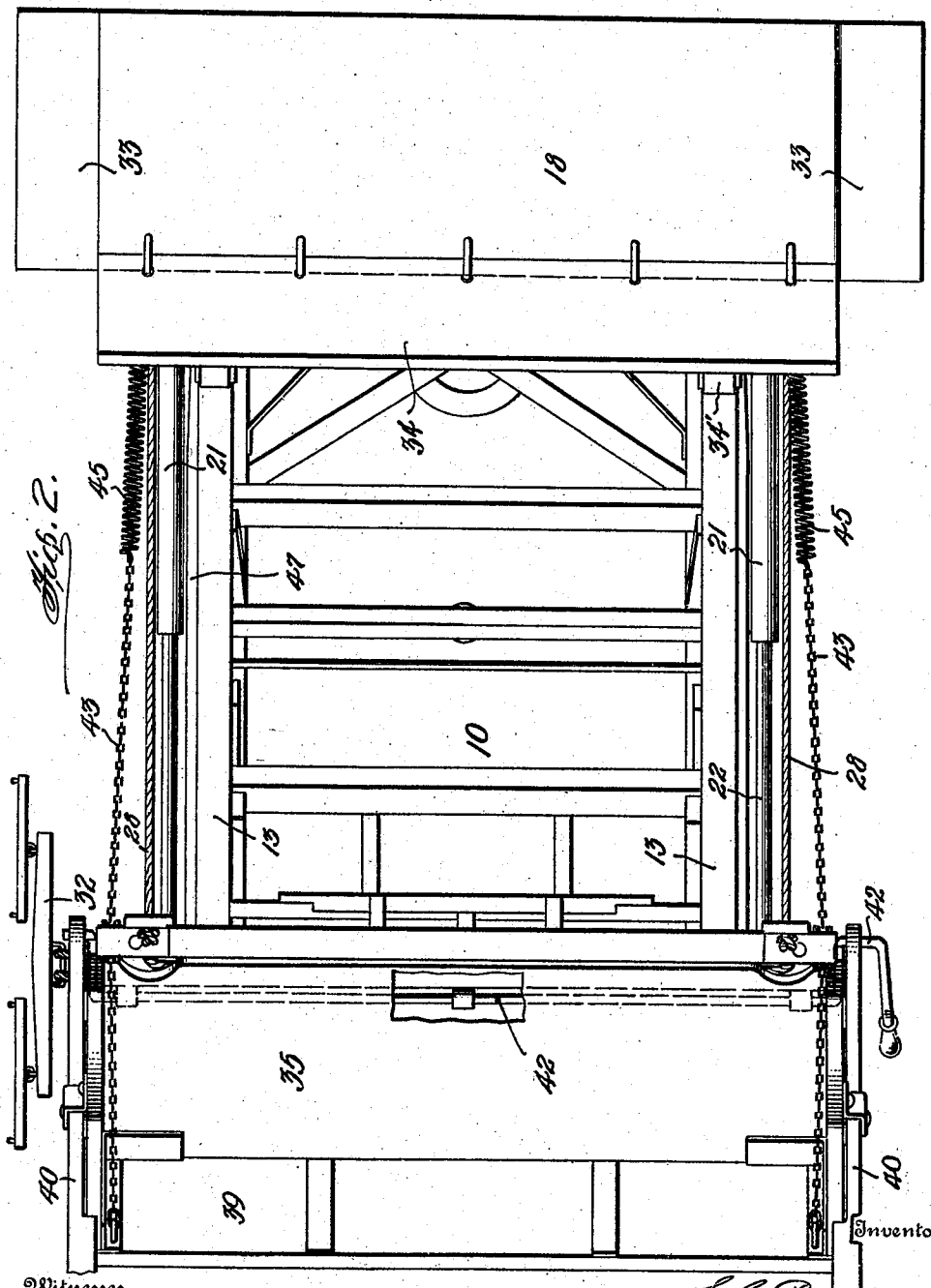
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3 SHEETS—SHEET 2.

Fig. 2.



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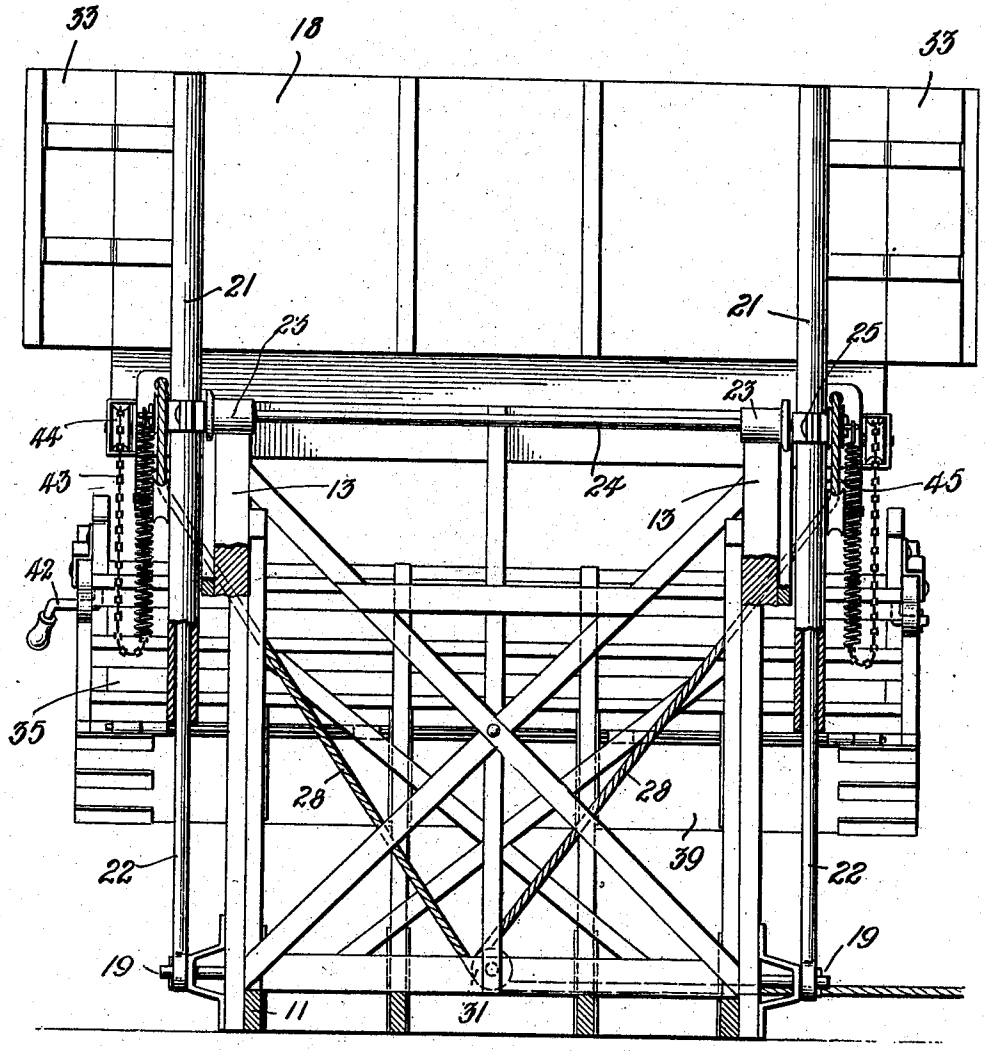
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

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MANURE AND DIRT LOADER.

No. 918,695. Specification of Letters Patent. Patented April 20, 1909.

Application filed December 19, 1903. Serial No. 468,303.

To all whom it may concern:

Be it known that I, LARS C. PETERSON, a citizen of the United States, residing at Osage City, in the county of Osage and State of Kansas, have invented certain new and useful Improvements in Manure and Dirt Loaders, of which the following is a specification.

This invention relates to the class of loading and unloading apparatus, and has particular reference to a device of the hoisting and dumping species, designed for loading various kinds of materials from the ground and depositing the same upon a cart, wagon, railway car, or the like.

The invention consists of certain specific novel features of construction, whereby the machine is adapted for ease of operation and general utility, and will be hereinafter fully described and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the improvement shown as mounted upon truck wheels for transportation, some of the parts, however, being shown as in a lowered position; Fig. 2 is a plan view of the device, in the position for operation; Fig. 3 is a front elevation of the device, the hoisting platform being shown in elevated position; Fig. 4 is a detail to be hereinafter described, and Fig. 5 is a cross section of the same on the line 5—5 of Fig. 4.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

This invention comprises a suitable frame 10 of generally triangular form in side view, consisting of a base member 11, a vertical member 12, and an inclined member 13, said members being duplicated on both sides of the device. The frame 10 is designed to be mounted upon suitable truck wheels 14 and 15 when it is desired to transport the machine from one location to another. The front wheels 14 are connected to a bolster or axle 16 to which is connected any suitable form of draft apparatus 17, said axle and wheels being removable when the machine is set for operation. Likewise the wheels 15 will be removed at such time.

A platform 18, designed to be substantially level when in its lowered position, is pivotally connected to the frame 10 at 19, and is intended to be hoisted along the upper edges of the inclined members 13 of the frame. As a convenient means for such pivotal connection there are employed pairs of telescopic arms, each pair comprising a tubular section 21 rigidly connected to the platform 18 and a section 22 of any suitable construction, pivotally connected at 19 and having slidable engagement in the member 21.

The platform 18 is mounted on anti-friction rollers 23, journaled on a cross bar 24 having permanent connection to the tubular members 21. As a convenient means for such connection there are shown clamps 25, having clamping means on one side whereby the same may be securely clamped to the members 21, and on the other side having perforated extensions 26 through and beyond which said bar 24 extends. On the ends of said bar 24 and on the outer sides of the extensions 26 are pulleys 27. The said rollers 23 travel along the upper faces of the members 13 of the frame during the hoisting operation. Any suitable power devices may be attached to the platform to hoist the same. I have shown as a preferred embodiment of such means a pair of draft ropes 28 secured permanently at 29 at the upper end of the frame, thence they extend down and around the pulleys 27, thence upwardly over guide pulleys 30 and thence in any suitable direction to other guide pulleys 31 to a suitable source of power such as indicated by a whiffletree 32, to which a team of horses may be applied.

At each end of the platform 18 is a skid 33, whereby a team may be driven across the same laterally from one side of the machine to the other for the purpose of drawing thereupon scoop loads of material to be hoisted. Hinged in any suitable manner to the rear edge of the platform is an extension 34 which serves to retain the material on the platform during the loading and hoisting thereof, and which when the top of the structure is reached will direct the material carried on the platform over the top of the frame and parts carried thereby into a hopper 35. Said hinged member 34 is supported anti-frictionally upon the rails 13 by rollers 34′. The

hopper 35 is designed to hold a considerable quantity of material, for instance as much as would be hoisted on the platform during a number of operations thereof, and from which hopper the material may be deposited upon a cart, wagon, or the like. The hopper is supported upon a frame-work 36 having pivotal connection at 37 to the main frame, and having supports 38 near its lower end, whereby the same is supported at the lower portion of the frame. The frame members 36 extend downwardly sufficiently to constitute supports for the door, hereinafter described, when the latter is open to direct material to the place of deposit. Said supports 38 are preferably provided with adjustable connections for the frame 36 in order to vary the inclination of the bottom of the hopper 35, according to the condition of the material being operated upon.

The hopper is provided with a hinged door 39, the hinge being at the lower edge of the hopper. Said door is normally held closed by a pair of hooks 40 pivoted to the hopper ends at 41, and adapted to be tripped simultaneously by a hand-operated rock shaft 42 extending across the machine beneath the floor of the hopper. The door 39 has flexible connection with the platform 18, such connection being represented by a pair of chains 43 guided over pulleys 44 at the upper end of the structure and having a pair of springs 45 constituting the immediate connection of said chains to the cross bar 24, heretofore described as being connected to the platform. The springs 45 are connected to the extreme ends of the bar 24 by a pair of eyelets 46. After the hopper has been dumped, the door thereof will be closed automatically by said connections between the platform and door upon the next movement of the platform to its lowest position, the springs serving to cushion the operation of the devices. The members 21 of the platform arms are spaced from the truck members 13 of the frame by wear rails 47. During the hoisting operation the members 21 telescope upon the members 22 of said arms in accordance with the position the anti-friction rollers 23 occupy with respect to the pivots 19. It will be noticed furthermore that the platform 18 and the members 21 connected thereto may readily be removed from the machine for the purpose of examination or repair of the frame-work or the like, if desired, by simply detaching the ropes 28 and chains 43.

Having thus described the invention, what is claimed as new, is:

1. In a device of the character set forth, the combination of a frame having a pair of inclined members, a platform movable along said members, a pair of telescopic arms pivoted to the frame and connected to said platform, power means to elevate said platform, a hopper at the upper portion of the frame, and a member pivoted to said platform to direct the material carried thereon over the top of the machine into said hopper.

2. In a device of the character set forth, the combination of a frame, a platform movable along said frame, a pair of telescopic arms connected to said platform and pivoted to the frame, a member pivoted to the rear edge of the platform and having anti-friction rollers to coöperate with the frame during the hoisting operation of the platform, a hopper supported by the frame, and means to lift the platform to the top of the machine, whereupon the material carried thereupon will be guided by said pivoted member into the hopper.

3. In a device of the character described, the combination of a frame including a pair of inclined rails, a platform movable along said rails, a pair of arms pivotally connecting said platform to the frame, a hopper adjacent to the upper portion of the frame, said hopper having a movable door, means to hold said door normally closed, and flexible connections between said door and the platform, whereby when the platform is lowered the door will be closed.

4. In a device of the character described, the combination of a frame, a platform movable along said frame, a pair of arms connected to the platform and pivoted to said frame, a member hinged to the rear edge of the platform and movable along said frame to retain material on the platform during the hoisting thereof, power means to lift the frame, a hopper into which the material is directed from the platform by said pivoted member when the platform is elevated, said hopper having a hinged door, a pair of hooks operable simultaneously to engage said door to hold it closed, and flexible connections between the door and the platform whereby the door will be closed when the platform is lowered, said connections including a pair of cushioning springs.

5. In a device of the character described, the combination with a frame and hoisting means operable thereover, of a hopper pivotally secured at one portion to said frame and adjustably supported at another portion to the lower portion of the frame, said hopper including a door pivoted at the lower edge of the hopper to drop downwardly to direct the material dumped into a place of deposit, and means to hold the door closed, said means including a pair of hooks pivoted at opposite ends of the hopper, and a hand operated bell crank coöperating with said hooks.

6. In a machine for hoisting and dumping, the combination of a frame including a pair of inclined members, a platform, a pair of

arms pivoted to the frame and connected to said platform, power means for hoisting the platform, said means including a pair of ropes, a pair of rollers over which said ropes operate, a cross bar, and means for securing said cross bar to said arms, said rollers being journaled on said cross bar, and a pair of anti-friction rollers journaled on the cross bar for coöperation with said inclined members of the frame.

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

LARS C. PETERSON.

Witnesses:

E. NETTLEBLADE,

V. L. JOHNSON.