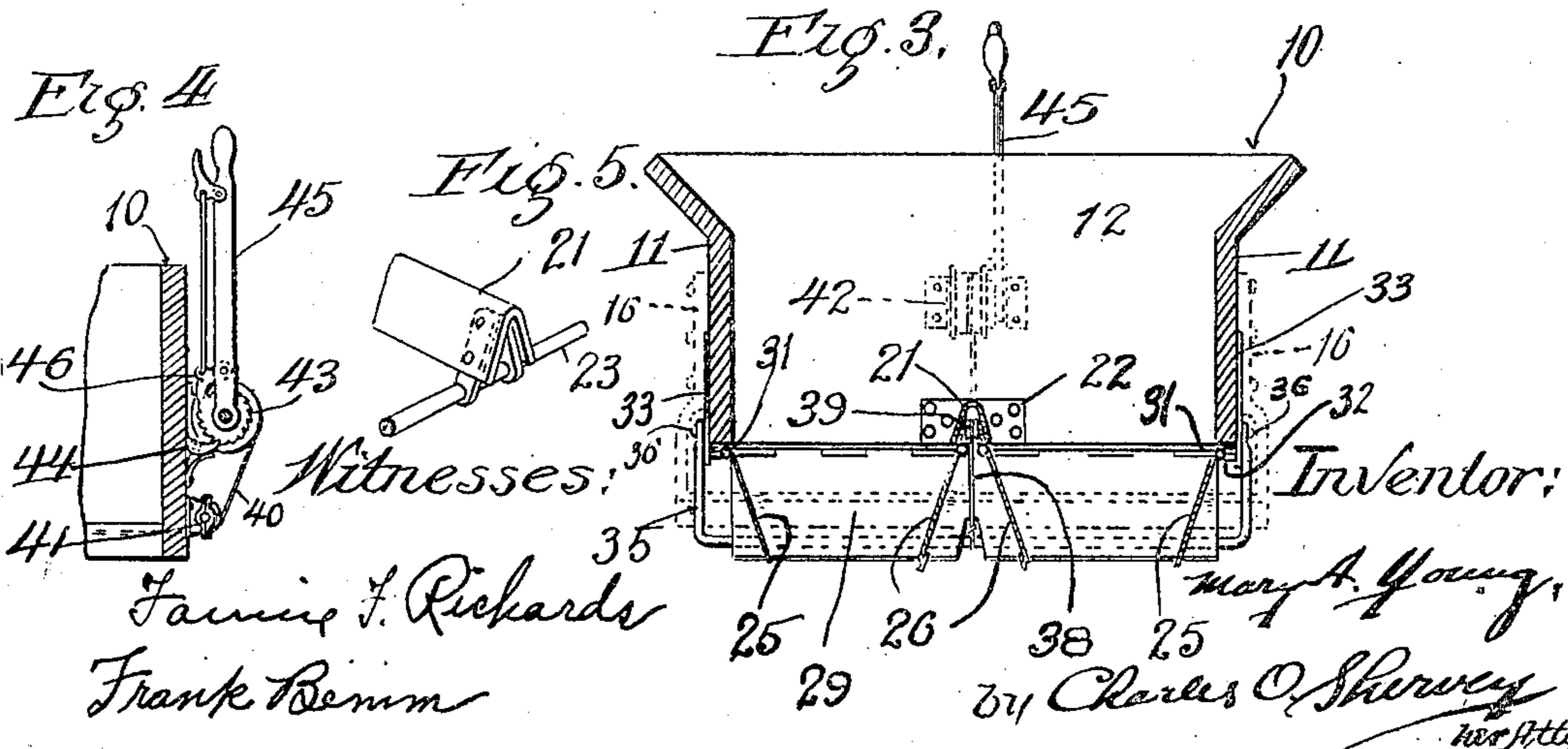
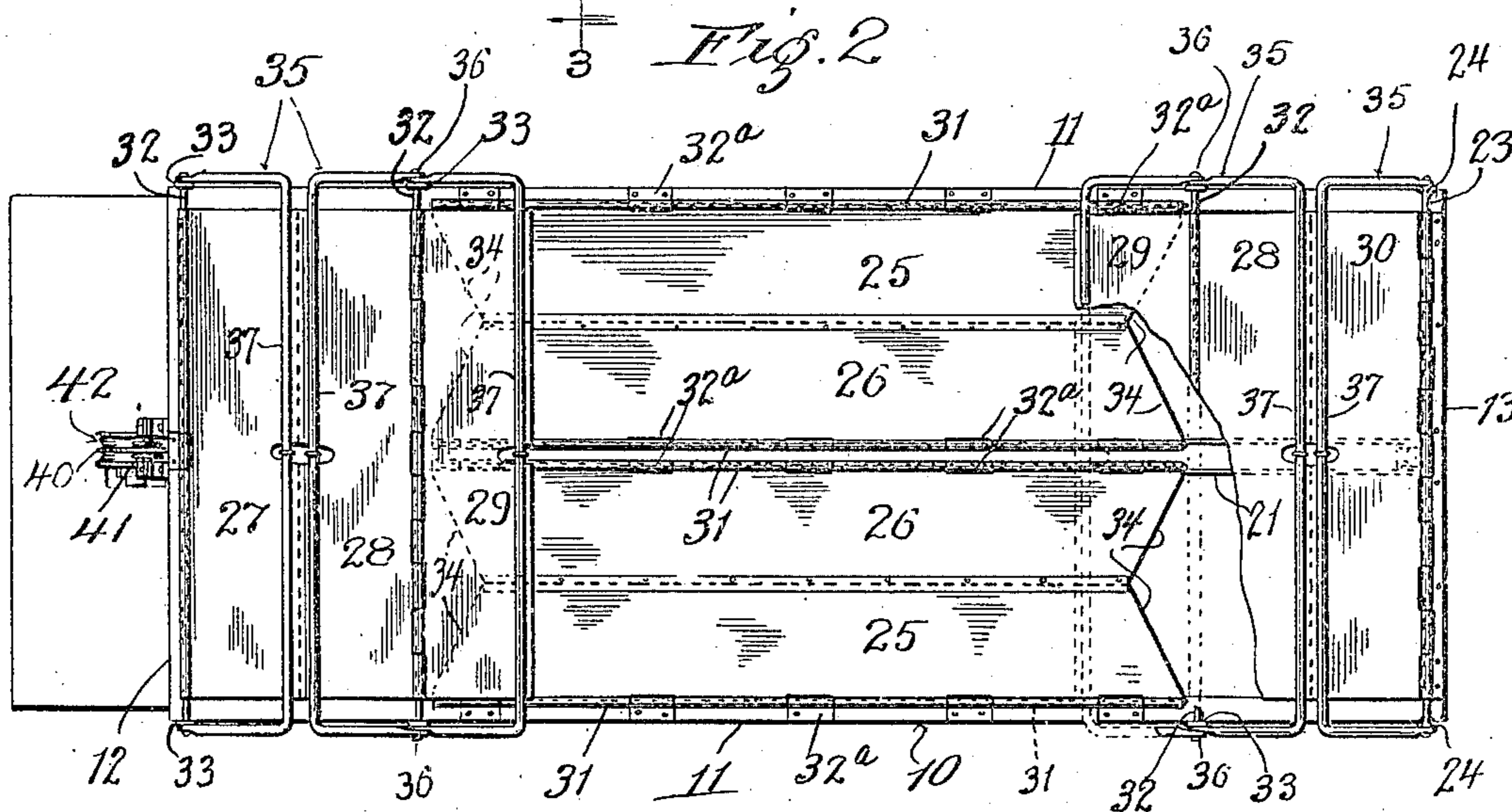
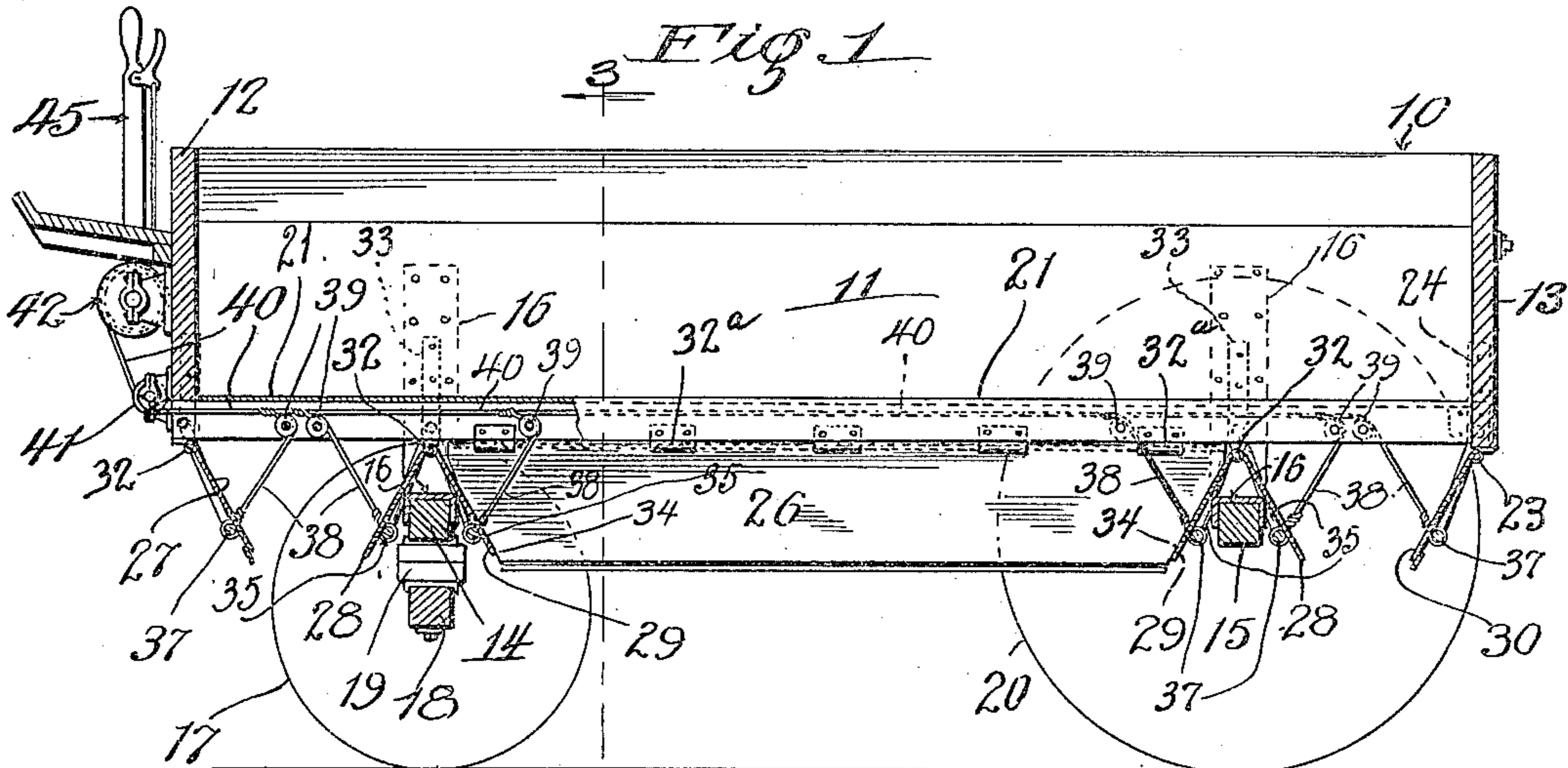


M. A. YOUNG.
DUMPING MECHANISM.
APPLICATION FILED MAR. 29, 1909.

952,169.

Patented Mar. 15, 1910.



UNITED STATES PATENT OFFICE.

MARY A. YOUNG, OF CHICAGO, ILLINOIS.

DUMPING MECHANISM.

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Specification of Letters Patent. Patented Mar. 15, 1910.

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To all whom it may concern:

Be it known that I, MARY A. YOUNG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Dumping Mechanism, of which the following is a specification.

This invention relates to dumping mechanism for wagons, cars or the like, and more particularly to that class of dumping mechanism in which the bottom or bed drops down.

The object of this invention is to simplify and otherwise improve upon dumping mechanism of this type.

Another object is to provide dumping mechanism in which the entire bed opens down and permits the contents to freely escape from the box.

Another object is to provide simple operating means whereby the entire bed may be returned to its normal or closed position by the mere manipulating of a lever.

To such ends this invention consists in certain novel features of construction and arrangement, a description of which will be found in the following specification and the essential features of which will be more definitely pointed out in the claims appended hereto.

The invention is clearly illustrated in the drawings furnished herewith, in which—

Figure 1 is a vertical longitudinal section through a wagon containing my improvements, and showing the bottom sections in open position, Fig. 2 is an under plan view thereof showing the bottom sections closed and with certain of the sections partially broken away, Fig. 3 is a vertical cross section taken on the line 3—3 of Fig. 1, Fig. 4 is a view of the winding drum and lever looking at the same from the opposite to that in which they are seen in Fig. 1, and Fig. 5 is a perspective view of a fragment of a beam and pivot rod.

In these drawings 10, represents a wagon box, containing the usual side walls 11, front board 12, and end gate 13. The box is supported upon bolsters 14, 15, by brackets 16, which are secured to the sides of the box. The front wheels 17, are journaled upon an axle 18, which is swiveled upon the bolster 14, by means of a fifth wheel 19, and the rear wheels 20, are journaled upon the bolster 15.

Running longitudinally of the wagon box is a beam 21, which is fastened upon the front board 12, as shown at 22, and the rear end of said beam is carried by a transversely extending rod 23, the ends of which are bent up as at 24, and secured to the box. Said beam 21, extends approximately midway between the side walls 11, of the box and divides the latter into two main parts. As shown in Fig. 3, the beam is in the form of an inverted V in cross section and accommodates certain pulleys and cables or chains, as will hereafter appear.

The bottom or bed of the dumping mechanism is made up of a plurality of sections which are hinged to the box and arranged to be supported in a horizontal or closed position or to be released from said horizontal position and allowed to fall into an open position whereby the contents which are contained in the box may be discharged through the bottom thereof. In the preferred form, this bed comprises longitudinally extending side leaves 25, 26, and transversely extending leaves 27, 28, 29 and 30. The side leaves 25, are hinged to the lower edge of the side walls 11, of the box, and the leaves 26, are hinged to the lower edge of the beam 21. A simple form of hinge consists in bending the hinged edge of the leaf around a rod 31, and notching out the metal at certain points to accommodate ears 32^a, that encircle the rod and are secured to the walls or beam.

The transversely extending leaves 27, 28 and 29, are hinged upon rods 32, which are supported in the lower ends of straps 33, that are secured upon the outer sides of the wagon box and project slightly below the same. If desired the rods may be flattened upon their ends and bent up and secured to the sides of the box. It is my purpose to form the rod 23, for the leaf 30, in this manner.

In the form of construction shown, there are two sets of leaves 28, 29, each set being hinged upon a single rod as clearly indicated in Fig. 2 of the drawings. Said pairs or sets of leaves 28, 29, are arranged to overlap the bolsters 14, 15, so that when they are let down they will permit the contents to escape freely from all points over the bolsters.

The end gate 13, is hinged upon the rod 23, and may be let down in the same manner as the ordinary end gate.

The longitudinal leaves 25, 26, extend between and rest upon the transverse leaves 29, and are beveled off along their ends as seen at 34, in order that they may swing down whenever the leaves 29, have been let down. The beveled edges 34, of the leaves 25, 26, rest against the upper faces of the leaves 29, when the leaves are let down and the arrangement is such that whenever the cross leaves 29, are raised they will swing the longitudinal leaves 25, 26, up into place and form supports for the free edges of said longitudinal leaves. Yoke-shaped, leaf-supporting members 35, are provided for the cross leaves and said members 35, are pivotally connected with the box, as shown at 36. The main bars 37, of said members 35, lie directly underneath the free ends of the cross leaves and support the same. Connecting devices such as cables, ropes or chains 38, are secured to the cross bars 37, and trained around pulleys 39, where they may be united into one connecting member in the form of a rope, cable, chain or the like 40. The pulleys 39, are journaled in the hollow of the beam 21, and the connecting devices extend through said hollow around a pulley 41, and to a winding drum 42, supported upon the front board 12, of the box. Connecting with the shaft of the winding drum is a ratchet wheel 43, with which is associated a pawl 44, which acts to prevent rotation of the drum in one direction, and a lever 45, is journaled upon the drum shaft and carries a pawl 46, which is operated from the handle of the lever. By moving the lever back and forth the drum may be turned to wind up the connecting device thereon and raise the leaves. Whenever it is desired to let down the leaves of the bed the pawls 44, 46, are disengaged from the ratchet 43, and the weight of the contents of the box will swing the leaves down and open up the bottom of the box, permitting the contents to escape.

The device is extremely simple, may be operated from the one point at the driver's seat, and is not liable to get out of repair.

I realize that various alterations and modifications of the device are possible without departing from the spirit of my invention, and I do not therefore desire to limit myself to the exact form of construction and arrangement shown and described.

I claim as new and desire to secure by Letters Patent:

1. In a device of the class described, the combination with a box, of longitudinally extending, hinged leaves, transversely extending hinged leaves engaging with said longitudinal leaves and arranged to lift and support the same, operating mechanism and connections solely between the cross leaves and said operating mechanism.

2. In a device of the class described, the

combination with a box, of a bottom therefor, comprising longitudinally extending hinged leaves having beveled ends, hinged cross leaves arranged to lift and support said longitudinal leaves, a winding drum and connections solely between the winding drum and cross leaves.

3. In a device of the class described, the combination with a box having a longitudinally extending beam supported therein, of longitudinally extending leaves hinged to said box and longitudinally extending leaves hinged to said beam and meeting with the first mentioned leaves, cross leaves hinged to the box and adapted to lift and support said longitudinally extending leaves, a winding drum, pulleys journaled upon said beam and cables running over said pulleys and connecting the drum solely with the cross leaves.

4. In a device of the class described, the combination with a box, having a longitudinally extending, inverted V shaped beam supported therein, of pulleys journaled in the hollow of said beam, longitudinal leaves hinged upon the box, longitudinal leaves hinged upon the beam, and cross leaves hinged upon the box and adapted to support the longitudinal leaves, all of said leaves being arranged to form the bottom of the box, a winding drum and cables passing through said beam and over said pulleys and extending from the winding drum to the cross leaves.

5. In a device of the class described, the combination with a box and bolsters supporting the same, of leaves hinged together along the median line of each bolster, yoke shaped leaf supporting members pivoted upon the box and arranged to carry said leaves, suitably supported pulleys, a connecting device passing over said pulleys and connected with the leaf supporting members and means for actuating said connecting device to raise the leaves.

6. In a device of the class described, the combination with a box, of cross leaves hinged thereto, yoke shaped leaf supporting members pivoted upon the box and carrying said leaves, a winding drum and connections extending from said winding drum to the yoke shaped leaf supporting members for manipulating said members.

7. In a device of the class described, the combination with a box, and a longitudinally extending beam secured therein, of transversely extending rods secured to said box, leaves hinged to said rods, longitudinally extending leaves hinged to the box, longitudinal leaves hinged to the beam, pulleys journaled upon said beam and suitably operated cables for raising the leaves from their open to their closed position.

8. In a device of the class described, the

combination with a box, of leaves hinged thereto, yoke shaped leaf supporting members pivoted upon the box and carrying said leaves and suitably operated cables for
5 manipulating said yoke shaped supporting members.

In witness whereof, I have hereunto sub-

scribed my name to the foregoing specification, at Chicago, Cook county, Illinois, this 24 day of March A. D. 1909.

MARY A. YOUNG.

Witnesses:

R. D. CHILDS,

WM. EDWARDS.