No. 886,344.

PATENTED MAY 5, 1908.

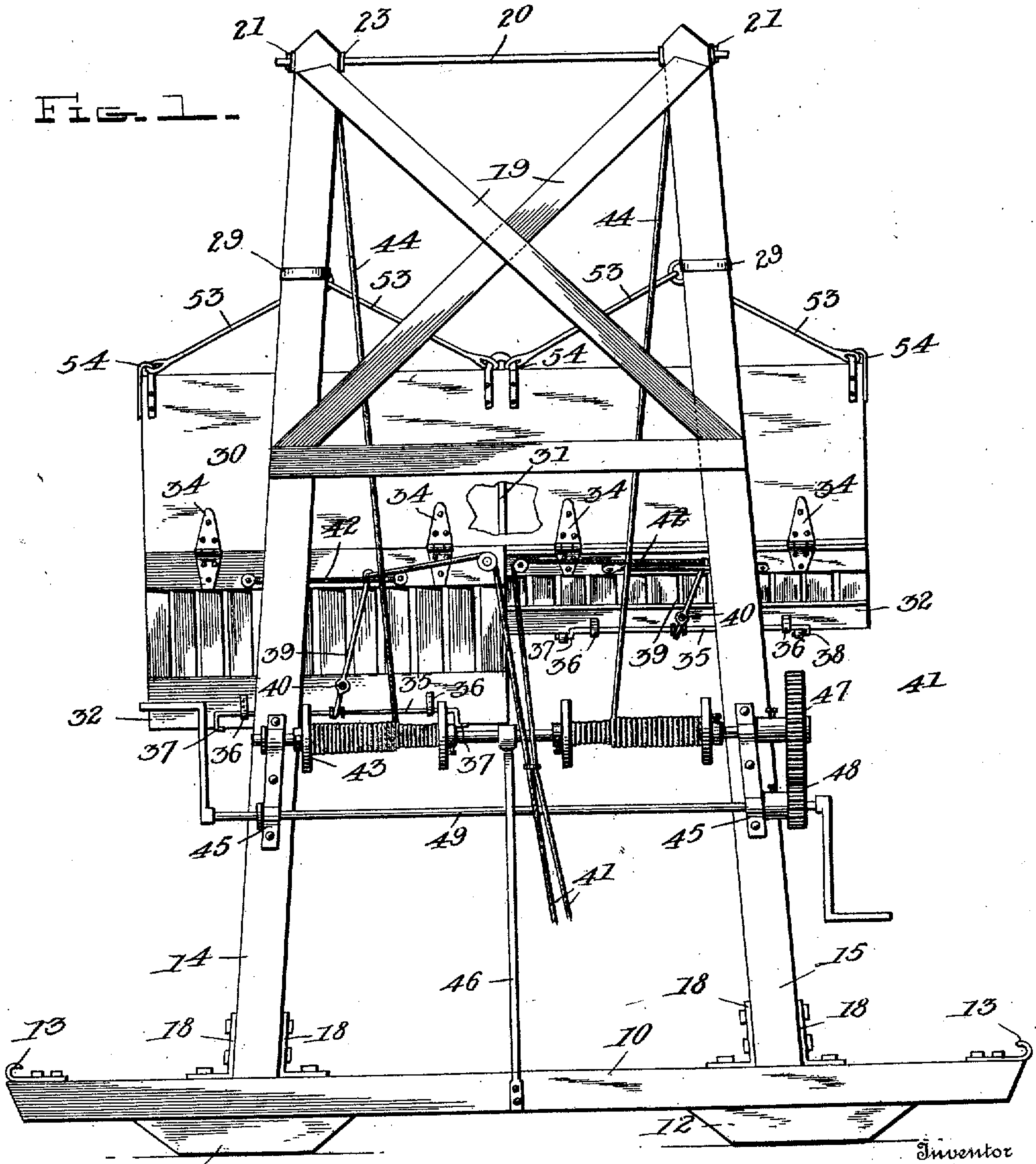
P. BISSEN.

LOADING APPARATUS.

APPLICATION FILED FEB. 23, 1907.

3 SHEETS—SHEET 1.

Fig. 1.



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Witnesses

[illegible]

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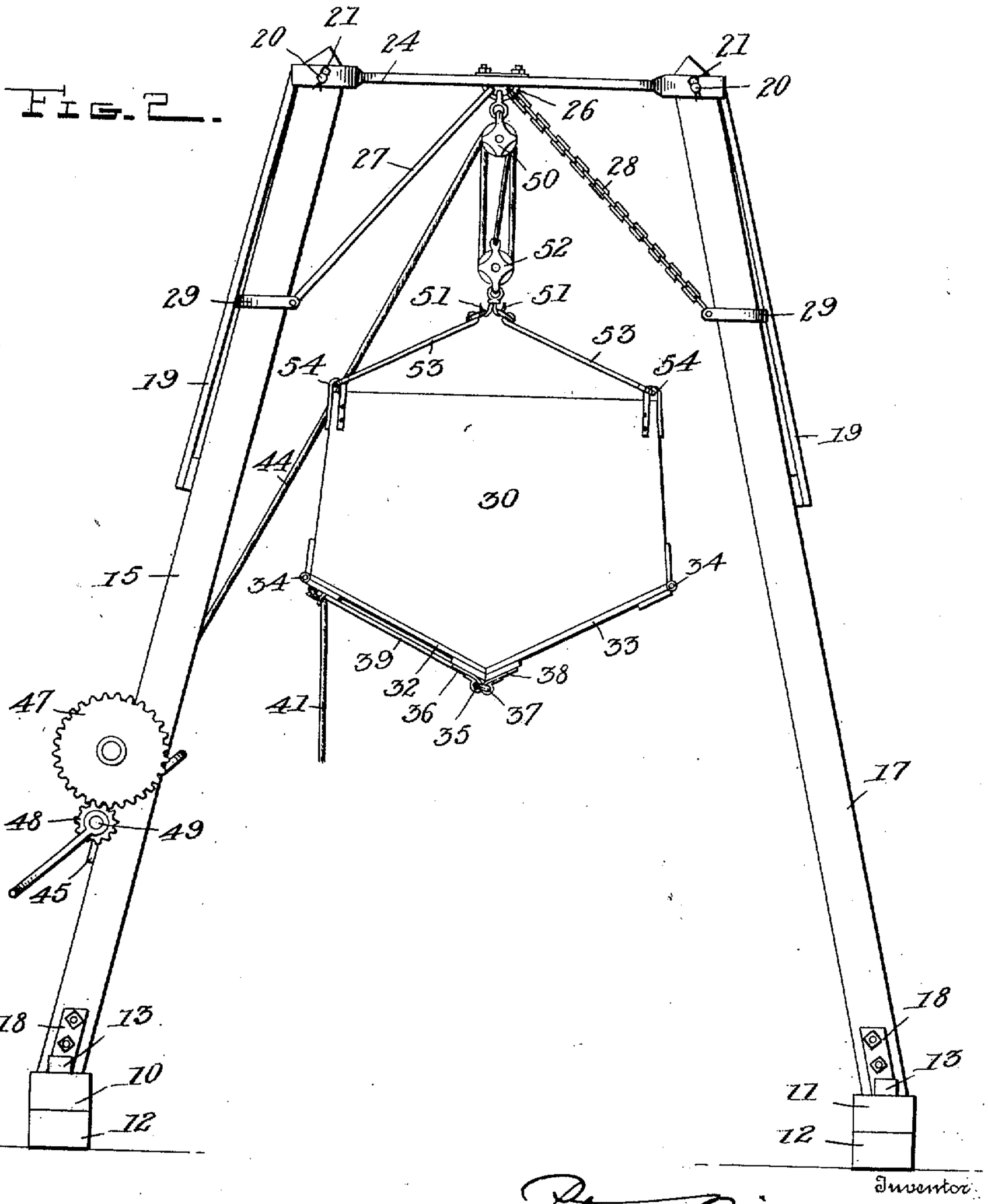
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

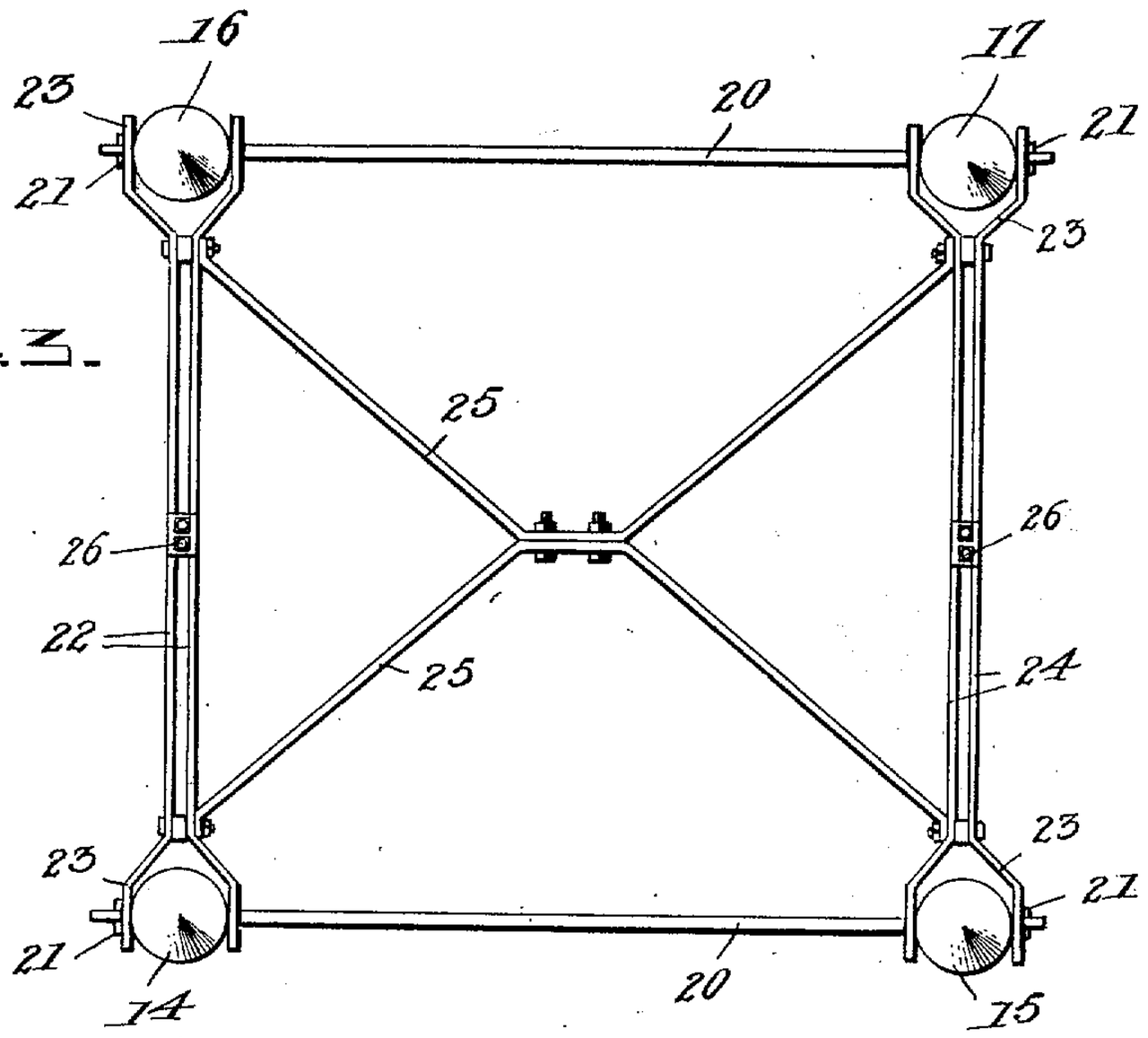
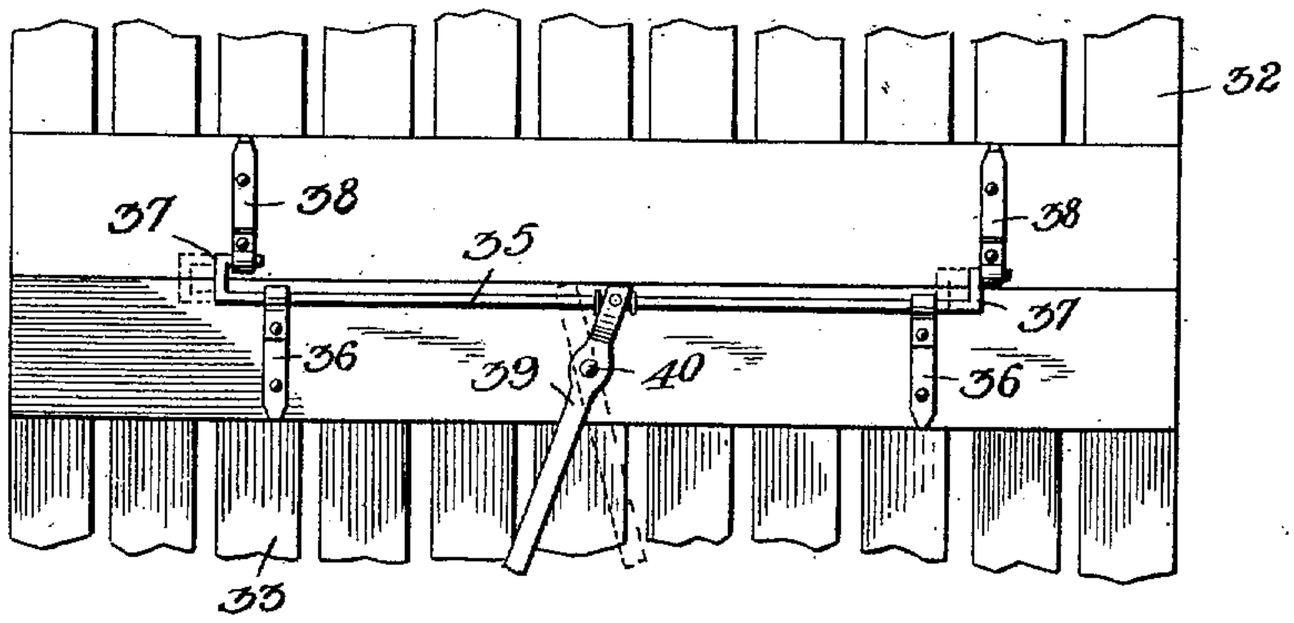


Fig. 4.



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UNITED STATES PATENT OFFICE.

PETER BISSEN, OF STACYVILLE, IOWA.

LOADING APPARATUS.

No. 886,344. Specification of Letters Patent. Patented May 5, 1908.

Application filed February 23, 1907. Serial No. 358,887.

To all whom it may concern:

Be it known that I, PETER BISSEN, a citizen of the United States, residing at Stacyville, in the county of Mitchell and State of Iowa, have invented certain new and useful Improvements in Loading Apparatus, of which the following is a specification.

This invention is a loading apparatus, and has for its object to provide an apparatus of this kind which shall be simple and practical in construction, and also one which can be operated with speed and ease.

A further object is to provide a portable apparatus so that it can be moved about for different kinds of work, and also placed under cover when not in use.

In the accompanying drawing, Figure 1 is an elevation of the invention. Fig. 2 is an end view. Fig. 3 is a detail in plan showing the construction of the top of the derrick. Fig. 4 is a detail showing the latch construction hereinafter referred to.

Referring specifically to the drawing, the derrick which supports the hoisting apparatus is mounted on spaced parallel sills 10 and 11, respectively, provided with shoes or runners 12 so that the apparatus may be hauled about. To both ends of the sills are secured clevises 13 for attachment of draft devices. The posts or uprights of the derrick indicated at 14, 15, 16 and 17, respectively, are secured in pairs to the sills by angle-irons 18, the posts 14 and 15 being secured to the sill 10 and the posts 16 and 17 to the sill 11. The members of each pair of posts are suitably spaced apart and connected by cross-braces 19, and at the top said members are joined by a cross-rod 20 which passes through the posts and is secured by cotters 21. The posts of one sill are also connected at the top to the opposite posts of the other sill in such a manner that the derrick can be set closer together to enable it to pass through a gate or along a narrow road or passage when transporting it. This connection comprises cross-bars 22 which are spaced apart by blocks and bolted together. The cross-bars are arranged between the posts 14 and 16, and have laterally offset ends 23, which extend on opposite sides of said posts and are connected to the rods 20 by passing the latter through holes in the said ends. The posts 15 and 17 are connected in a similar manner by cross-bars 24. The cross-bars 22 and 24 are connected by diagonal braces 25. The hoisting tackle to be hereinafter described is suspended from clips 26 which are secured to the cross-bars 22 and 24. The derrick also has braces 27 and 28, respectively, which are fastened at one end to collars 29 on the posts, and at the other end to the clips 26. The braces 28 are chains or other flexible devices so that the posts can be set closer together as heretofore described.

The box 30 which receives the material to be loaded is divided into two compartments by a partition 31. Each compartment has a hopper bottom formed by oppositely inclined doors 32 and 33, respectively, which meet at the center of the box and open by swinging downwardly and outwardly, they being hinged as at 34 to the bottom of the side walls of the box. The box is made slightly smaller at the top than at the bottom to allow the material to be more readily discharged, and its end walls are shaped to conform to the hopper bottom.

The doors 32 and 33 are held closed by a latch which is secured to one of said doors and enters a keeper on the other door. The latch comprises a rod 35 which is slidably mounted under straps 36 secured to the door 33. The ends of the rods are bent to form hooks 37 which are engageable with the keepers 38 on the door 32. To the latch rod 35 is connected one end of an operating lever 39 which is pivoted at 40 to the door 32. To the other end of the lever is secured a rope 41 for actuating the lever to withdraw the latch from its keepers. The lever works under a guide-rod 42 secured to the door 32. The doors of each compartment are provided with a latch and latch-operating means as herein described and said latches are operated independently so that the contents of the compartments may be discharged independently.

The hoisting mechanism comprises a drum 43 on which the fall 44 of the hoisting tackle is wound. The drum is journaled in suitable bearings 45 on the posts 14 and 15 and also has a center brace 46. The drum is fitted with a large spur wheel 47 which meshes with a pinion 48 on a crank shaft 49 also journaled in bearings on the posts 14 and 15. The standing-blocks 50 of the tackle are made fast to the clips 26, and the hooks 51 of the running blocks 52 are connected to suspen-

sion rods 53 which are engageable with eyes 54 on the sides and corners of the box 30. A hoisting tackle is provided for each end of the box and the winding drum is made in two sections to receive the fall of each tackle.

The apparatus herein described is designed especially for loading manure spreaders, although it can be used for various other purposes. To load the spreader, the box 30 is lowered to the ground and disengaged from the block 52 which permits the material to be thrown into the box without interference from the suspension rods 53. When the box is full it is hoisted a suitable distance from the ground and the spreader is driven thereunder. A pull on the ropes 41 withdraws the latches 35 whereupon the doors 32 and 33 swing open under the weight of the load, and the material is dumped into the spreader. By dividing the box 30 into two compartments, the spreader can be loaded in two dumps if one dump is too much of a strain or jar on the spreader. During the time the spreader is in the field spreading the load the box 30 will be refilled and made ready for a new load, so that when the spreader returns it can be quickly reloaded.

The principal parts of the apparatus herein described are bolted together so that repairs when necessary can be readily made, and the apparatus can also be taken apart for convenience in shipping.

When not in use the apparatus can be moved under cover, the derrick construction herein described enabling it to be narrowed sufficiently to pass through a gate or along narrow places, and by making the derrick portable it can be readily moved about and used for various purposes.

I claim:—

1. In a loading apparatus, a box having fixed end and side walls, eyes at the corners and at the middle of the sides of the box, and a hoisting tackle over each end of the box, each being connected to the eyes at the corners of the respective ends and to the eyes at the middle.

2. In a loading apparatus, a box, a pair of doors at the bottom thereof, a rod slidably mounted on one of the doors and having hooks at its ends, keepers on the other door engageable by said hooks to hold the doors closed, and means for actuating the rod to withdraw the hooks from the keepers.

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

PETER BISSEN.

Witnesses:

NICHOLAS PITZEN,

KATIE WELTER.