

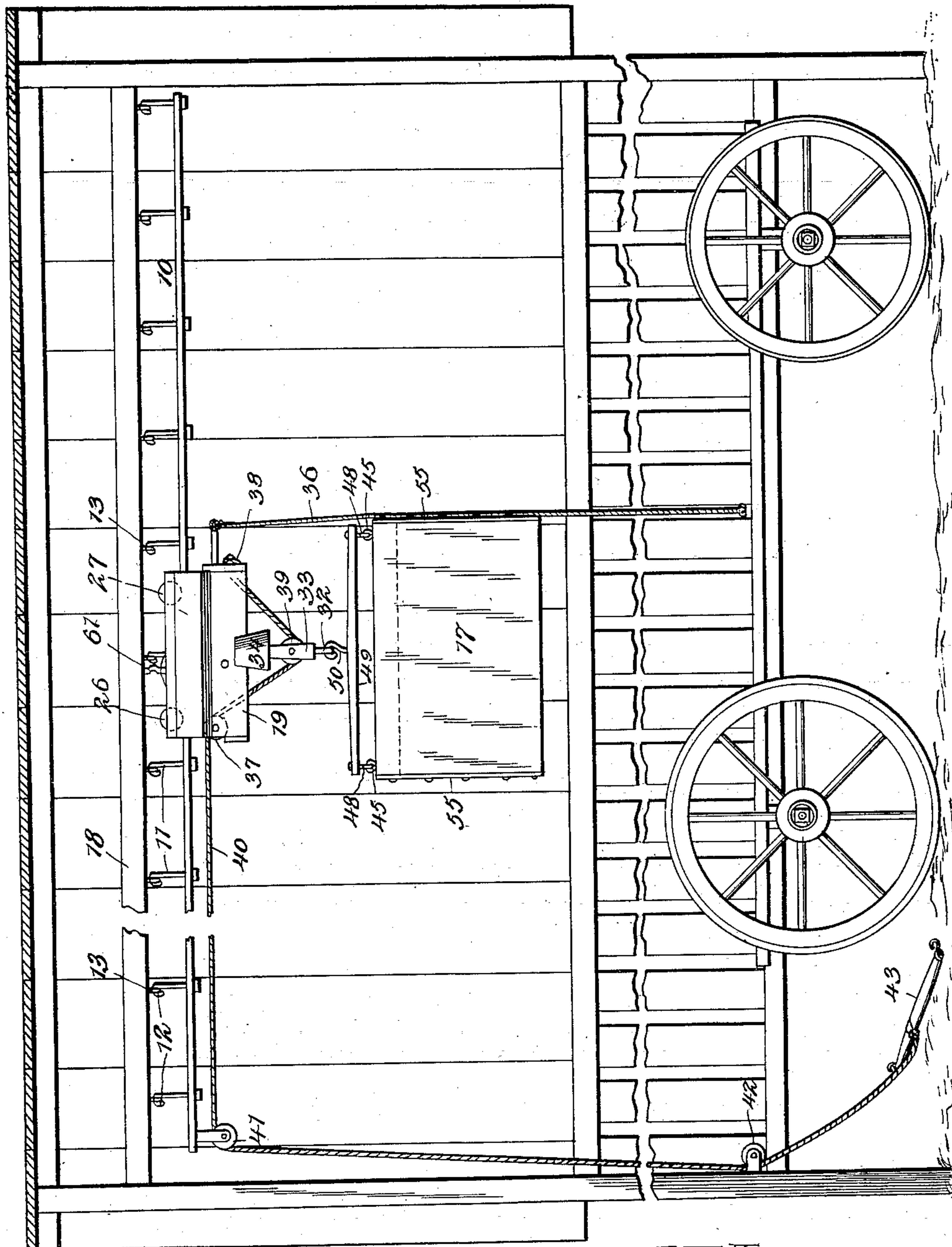
No. 657,547.

Patented Sept. 11, 1900.

J. W. KAMM.
UNLOADING APPARATUS.
(Application filed May 21, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Fig. 1.

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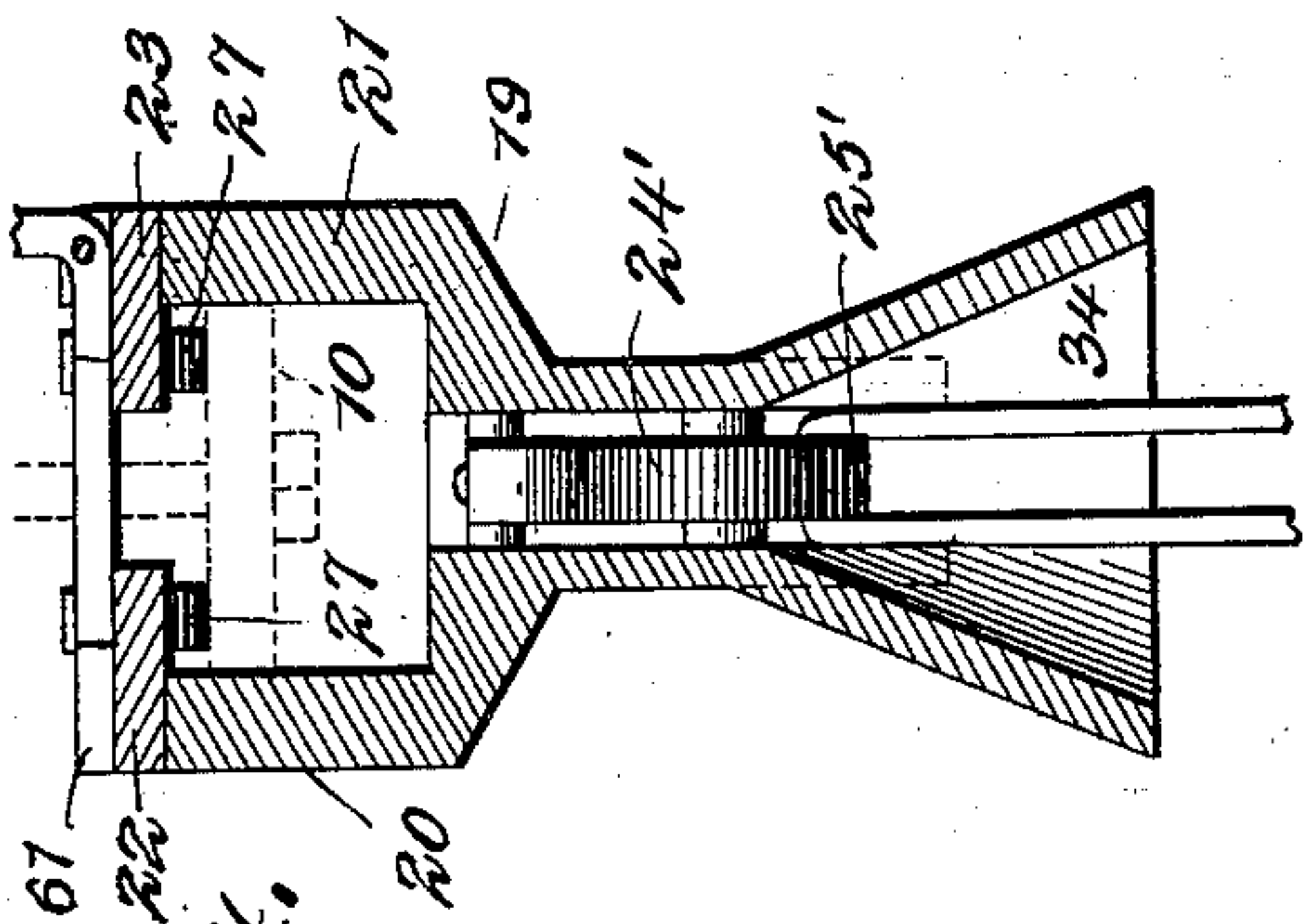


Fig. 4.

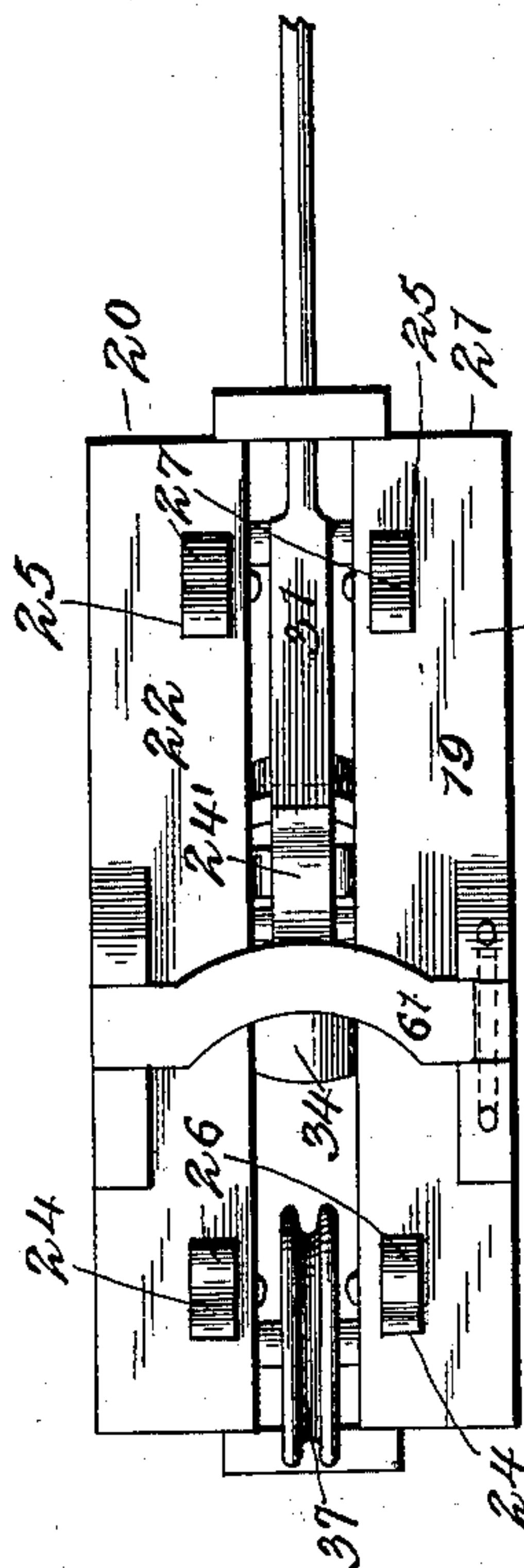


Fig. 2.

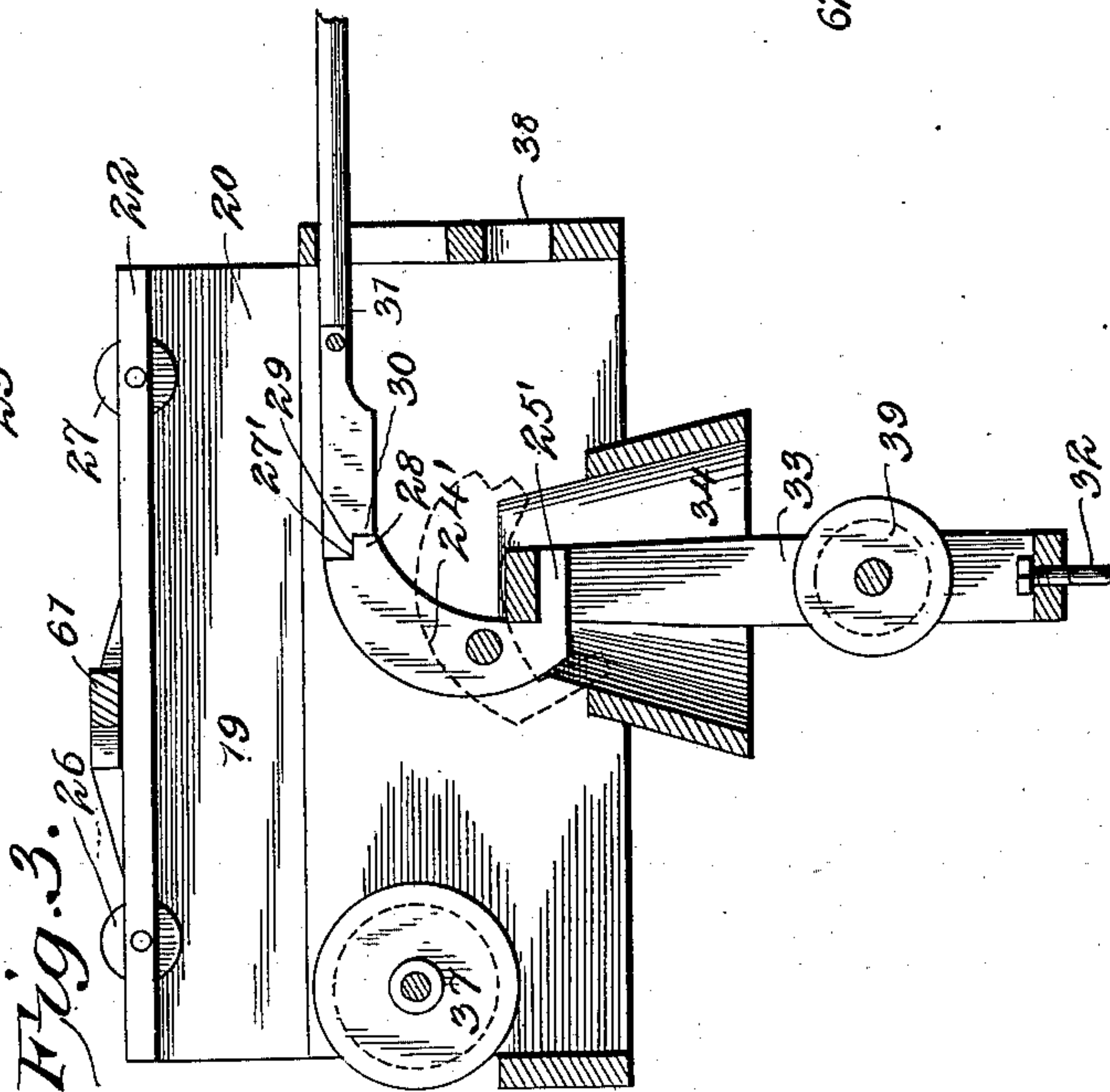


Fig. 3.

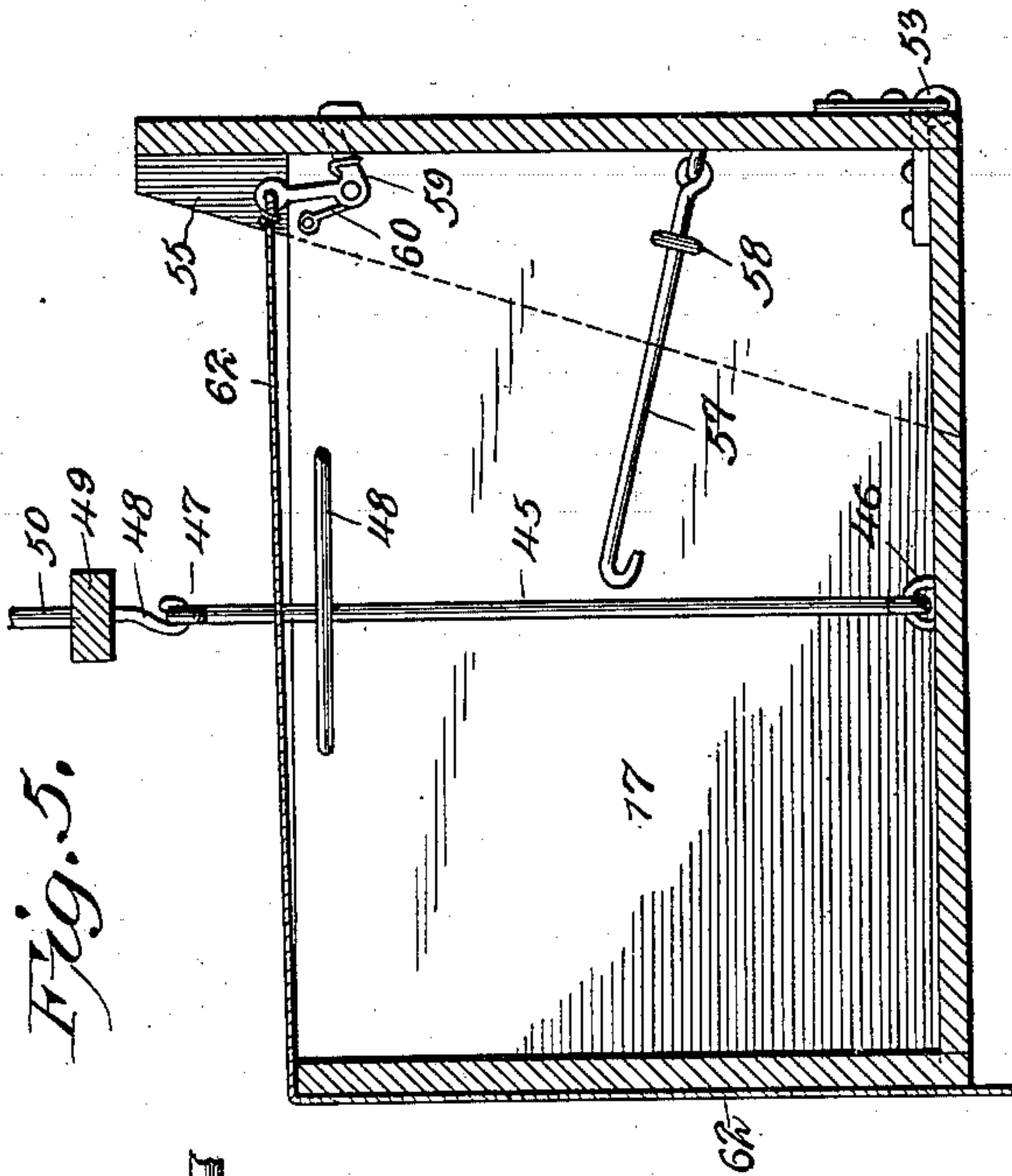


Fig. 5.

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UNITED STATES PATENT OFFICE.

JACOB WILLIAM KAMM, OF ATWOOD, ILLINOIS.

UNLOADING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 657,547, dated September 11, 1900.

Application filed May 21, 1900. Serial No. 17,503. (No model.)

To all whom it may concern:

Be it known that I, JACOB WILLIAM KAMM, a citizen of the United States, residing at Atwood, in the county of Douglas and State of Illinois, have invented a new and useful Unloading Apparatus, of which the following is a specification.

This invention relates to unloading apparatus, and is particularly adapted for the unloading of corn or other grain from a wagon to a crib or granary, although it will be understood from the following description that the principles involved may be employed in apparatus for other purposes.

The object of the invention is to provide a simple and cheap construction which will be efficient in its operation and will be particularly adapted for conveying corn from a wagon to a crib and in dumping the corn into the crib through the usual side door thereof; also, to provide means for raising and lowering the bucket and manipulating the bucket in the dumping operation.

Further objects and advantages of the invention will be apparent from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is an elevation showing the complete unloading apparatus and illustrating the position thereof with respect to a wagon and a crib, from the former to the latter of which the corn is unloaded. Fig. 2 is a plan view of the carrier or traveler with which the bucket is engaged. Fig. 3 is a central longitudinal section of the traveler and showing the latch mechanism thereof in elevation and engaged with the bucket-supporting pulley. Fig. 4 is a transverse section of the traveler with the bucket-supporting pulley engaged therewith. Fig. 5 is a transverse section of the bucket and illustrating the means for latching the movable side in its closed position.

Referring now to the drawings, the unloading apparatus comprises, essentially, a track 10, upon which the traveler operates, this track being in the form of a cross-sectionally rectangular rail. This rail has a series of hangers 11 in the form of bolts which are passed upwardly through the rail and have

their upper ends bent to form hooks which are engaged with specially-formed eyes 13, secured to one of the rafters of the crib, it being understood that this apparatus is designed particularly for use in unloading corn into a crib.

In practice a number of buckets are placed upon a wagon-bed from which the sides have been removed or upon a platform placed upon the bolsters of a wagon, and the corn is shucked directly into the buckets, from which it is to be discharged into the crib, the buckets being necessarily raised from the wagon and discharged into the top of the crib. During the hoisting and dumping operation the bucket is suspended from a traveler (shown in Figs. 2 and 3) which is slotted longitudinally to form two parallel legs 20 and 21 at its upper side, and upon the upper ends of these legs are fixed plates 22 and 23, respectively, having slots 24 and 25, in which are journaled supporting-wheels 26 and 27, adapted to rest upon the upper surface of the rail 10 and support the traveler. The separation of the legs 20 and 21 is such as to permit free movement of the traveler along the rail and yet to prevent lateral displacement of the traveler, it being understood that, as shown in dotted lines in Fig. 4, the rail 10 lies below the plates 22 and 23 and between the legs 20 and 21. The slot of the traveler is continued through the bottom thereof, and between its sides and adjacent the bottom there is pivoted a latch 24', comprising an arc-shaped upper portion having a laterally-extending foot 25' at its lower end, this foot being adapted to lie in a horizontal position when operative. In the upper end of the arc-shaped portion of the latch there is formed a recess 27' and a shoulder 28 therebelow, and this recess and shoulder are designed for engagement by the similar shoulder and recess 29 and 30 upon the end of a keeper 31, which is in the form of a rod pivotally mounted in the traveler. The notched or recessed end of the latch is adapted to normally lie forwardly, as shown in dotted lines in Fig. 3, and with the foot of the latch retracted and in a slanting position; but when engaged by the keeper it is held raised and with the foot in a horizontal position, as shown in full lines in Fig. 3.

The bucket 17 is engaged with a hook 32 at the lower end of a link 33, which is adapted for engagement with the foot 25', whereby the bucket may be connected with the traveler, the foot being disposed to operate in a frusto-conical guide 34, the major end of which is disposed downwardly, so as to guide the link into operative relation to the latch. When the link is disengaged from the foot 25', the latch lies in the position shown in Fig. 3 in dotted lines. If the link 33 be then moved upwardly into the guide 34 and beyond the upper end thereof, it will engage with its upper end the reentrant curvilinear face of the latch above the foot 25' and will raise the latch so as to project its foot into the link. When the latch is in its inoperative position, the keeper rests against the upper outwardly-curved face thereof, and when the latch is raised by engagement of the link therewith the recessed end thereof is moved to such position that the corresponding end of the keeper will drop or ride into engagement therewith, and if the link be then lowered it will finally rest upon the foot 25', the keeper acting to hold the latch in this its operative position. In order to release the link and therewith the bucket from the traveler, it is only necessary to pivotally move the keeper to release the latch, and the link and bucket will be dropped, this movement of the keeper being effected by means of a cord 36, connected with its outer end.

In order that the bucket may be raised and lowered into and out of engagement with the traveler, an idler 37 is mounted in one end of the traveler and in the same plane occupied by a pulley-wheel 39, journaled in the link 33 when said link is engaged with the latch, and a cord or cable 40 is passed into the traveler and over idler 37, then through link 33 and under pulley-wheel 39, and is finally engaged with the perforation 38 in the opposite end of the traveler. The opposite end of the cord is taken over the idler 41 and then over the idler 42 and has a singletree 43 at its extremity for the attachment of a horse for raising the weight of the bucket and the matter contained therein.

The bucket 17 is rectangular in form and is supported by means of hangers 45, each of which consists of a straight rod, the lower end of which is pivoted at the bottom of one side of the bucket by engagement with an eye 46, while the upper end is provided with an eye 47, which lies above the upper edge of the bucket. Limited swinging movement of the upper ends of the rods is permitted by guides 48, which are U-shaped and are connected with the sides of the bucket and with their web portions inclosing the bars. Engaged with the eyes at the upper ends of the rods are the hooks 48 at the ends of a cross-bar 49, having a hook 50 engaged with the hook 32 of the link 33. One side of the bucket is hinged to the bottom of the bucket by means of hinges 53 in such manner that the

upper edge of the hinged side may be swung outwardly and downwardly to lie below and at an angle to the bottom of the bucket and form a chute, this hinged side having its edges extending upwardly, as shown at 55, to prevent spilling at the sides of the chute. The portions 55 lie exterior to and against the outer faces of the adjacent sides of the bucket, so that they act to brace the bucket when the chute is raised. The outward pivotal movement of the hinged side of the box is limited by means of rods 57, which are connected at one end with the inner face of the hinged side and slide freely in guides 58 on the adjacent fixed sides of the bucket, these rods having hooks at their free ends which engage guides to arrest the movement of the pivoted side. The pivoted or hinged side of the bucket is held in its raised position by means of triggers or angular latches 59, which are pivoted to the fixed sides of the bucket and have downturned ends for engagement over the outer face of the hinged side, these engaging ends passing through openings in the hinged side of the bucket and they are held yieldably in their engaging positions by means of springs 60.

The operation of the construction is as follows: While in the present instance there is shown only a single bucket, it is the intention to place upon the wagon a number of buckets, the aggregate capacity of which is equal to that of the ordinary wagon-body. The corn is directly shucked into the buckets, and when they have been filled the wagon is driven to the side of the crib and beneath the trackway, the traveler being then moved to lie directly above the bucket that is to be hoisted. The link 33 is then disengaged from the traveler and is lowered into position to engage its ring with the hook of the bucket. A horse is hitched to the singletree 43 and is driven to draw up the slack, after which the bucket rises until the link 33 is engaged with the latch of the traveler in the manner hereinbefore described. During this operation it is of course necessary to hold the traveler from moving along the track, and for this purpose a bar 61 is pivoted to ears on plate 23 and is adapted to move with its opposite end in and out of position between ears upon plate 23, this bar when lying across the traveler being adapted to engage a hanger-bolt of the track. When the bar is in this position against a hanger, it prevents movement of the traveler, so that the bucket may be raised and lowered. If the bar 61 were not in place against a hanger, instead of the bucket being raised the traveler would run along the track when the bucket-rope is wound in. After the bucket has been raised into engagement with the traveler to hold it elevated the latches 59 may be raised by drawing the cords 62, attached thereto, when the hinged side of the bucket will be released and will move outwardly and form a chute projecting into the crib, and the bucket may

be tilted, by reason of the pivotal connections of the rods 45 with the bucket, so as to discharge its contents into the crib. After dumping the bucket is closed, and the latch-keeper 5 is operated to cause the latch to release the link and permit the bucket to descend to the wagon. The link is then disengaged from the bucket, and the traveler is moved to assume a position over the next bucket, the 10 link being connected with this next bucket, and it is raised and discharged in the same manner as above described.

In practice various modifications of the invention may be made, and any suitable materials and proportions may be used without 15 departing from the spirit of the invention.

What is claimed is—

1. An unloading apparatus comprising a trackway having hangers, a traveler mounted 20 upon the trackway for movement therealong, a lever pivoted to the traveler for movement to lie above and transversely of the trackway

to engage a hanger and hold the traveler from movement, a latch carried by the traveler and a bucket adapted for engagement with the 25 latch.

2. An unloading apparatus comprising a trackway, a traveler mounted to travel on the trackway, and a bucket removably connected with the traveler for movement therewith, 30 said bucket having hangers pivotally attached thereto and adapted for connection with the traveler, and one side of the bucket having hinged connection with the bottom of the bucket and having its side edges turned up- 35 wardly to form a chute, and means for holding the side at the limits of its movement.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JACOB WILLIAM KAMM.

Witnesses:

F. W. RIDEOUT,

T. A. REESE.