

No. 668,256.

Patented Feb. 19, 1901.

R. F. FELDMEIER.
MAIL CRANE.

(No Model.)

(Application filed Nov. 27, 1900.)

2 Sheets—Sheet 1.

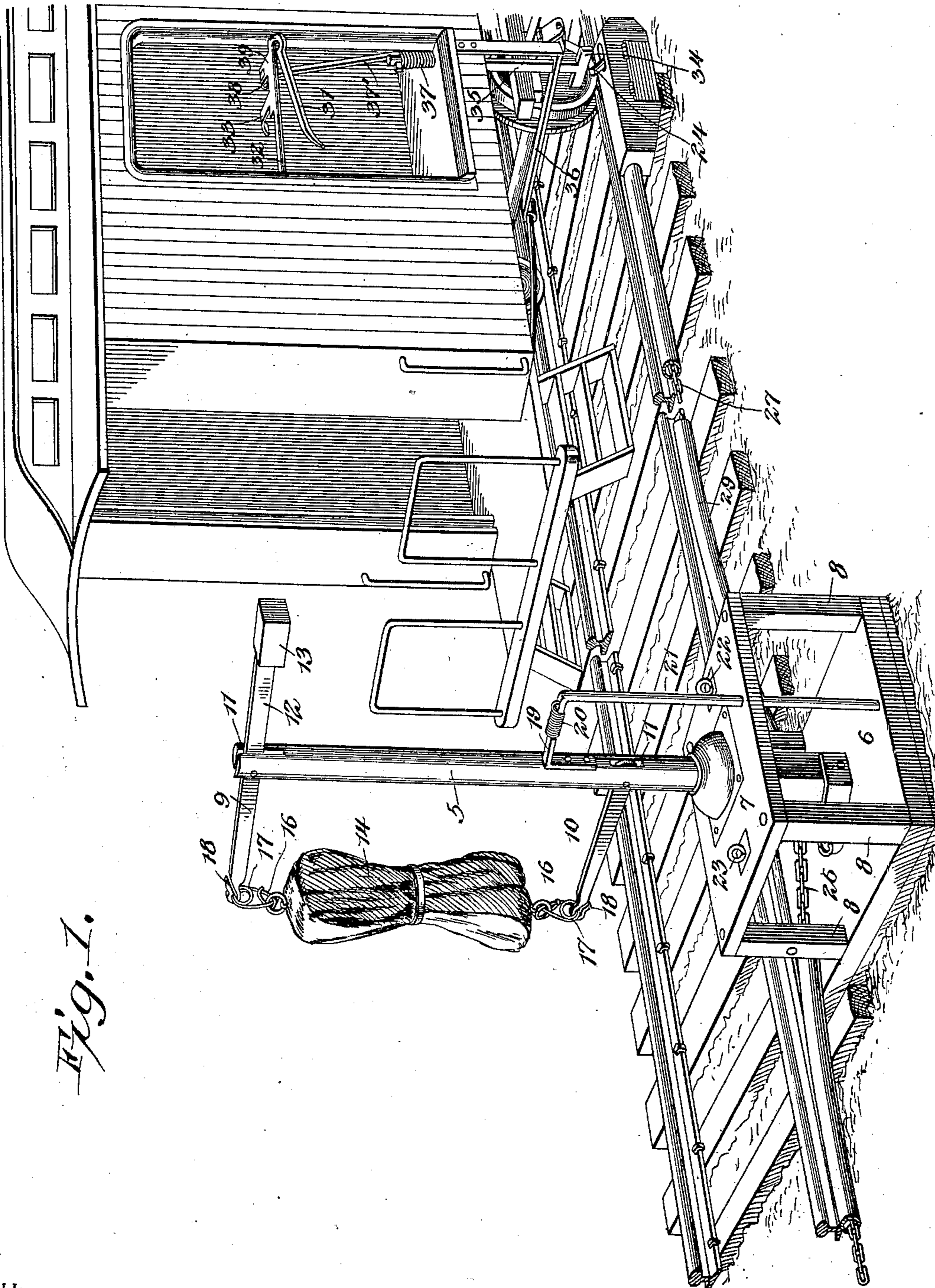


Fig. 1.

Witnesses

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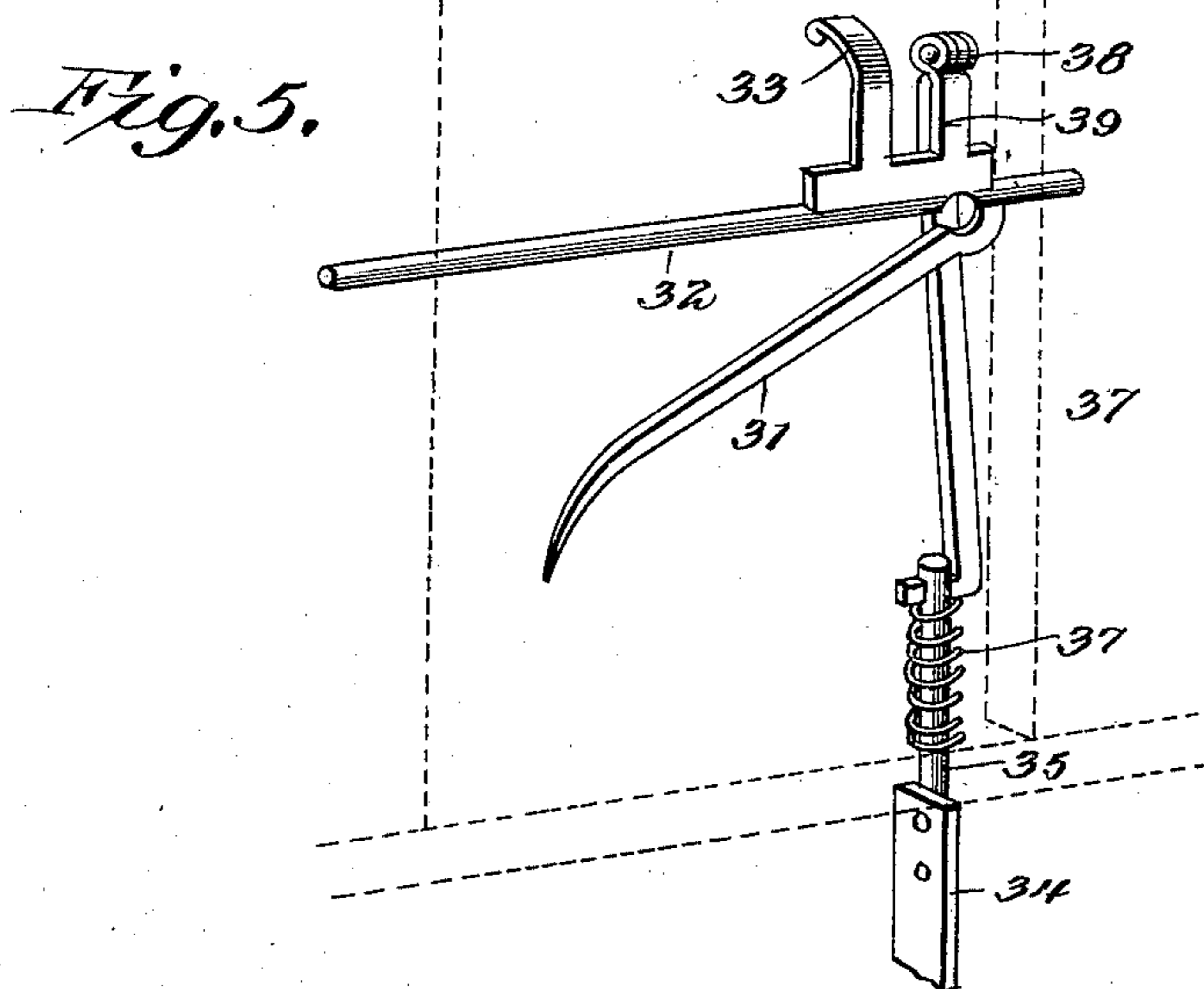
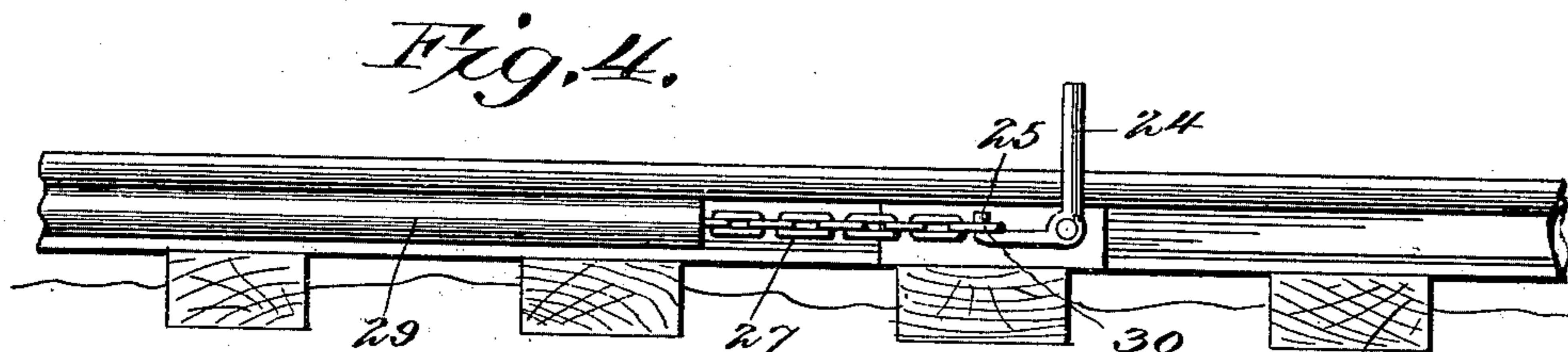
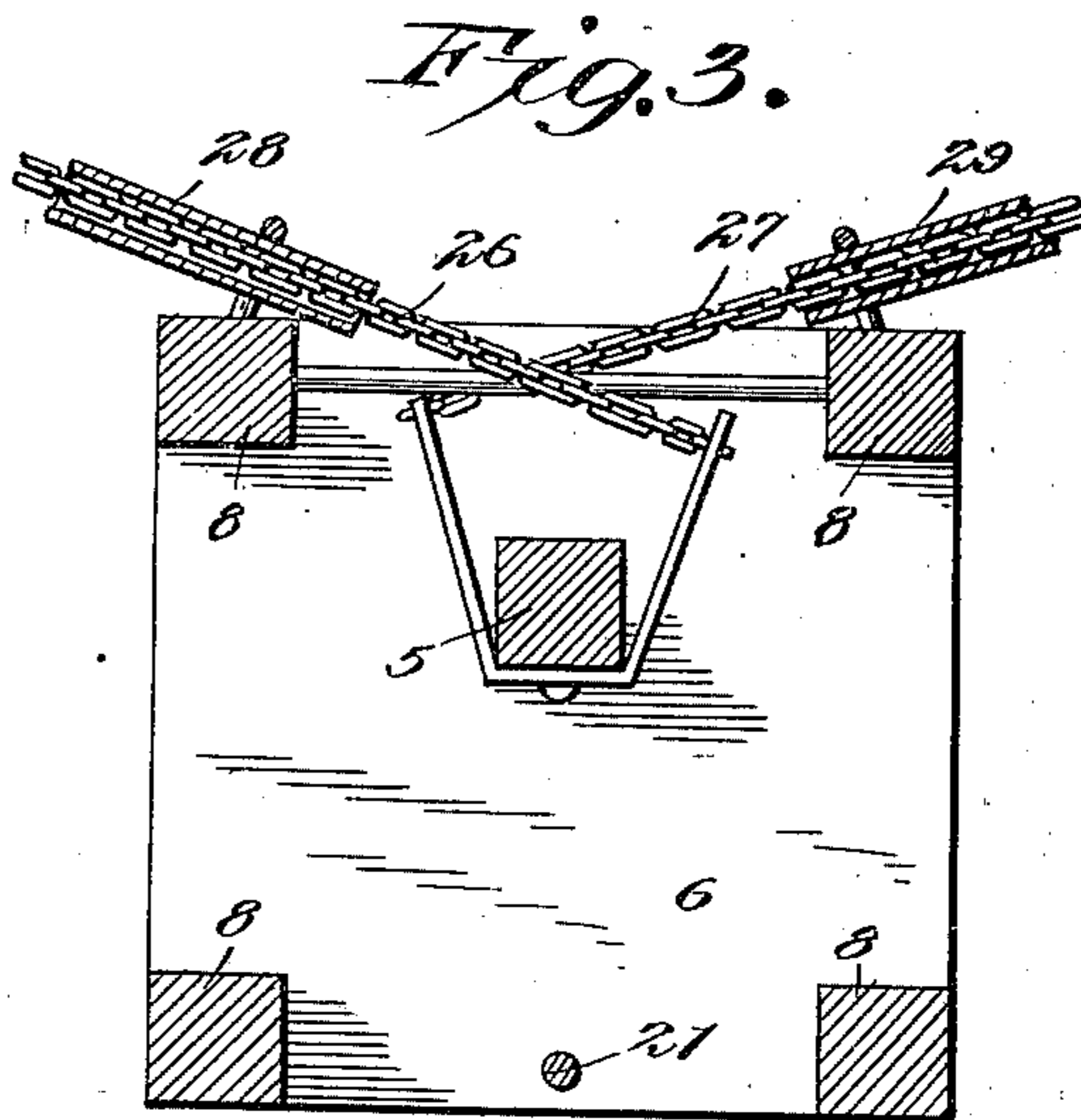
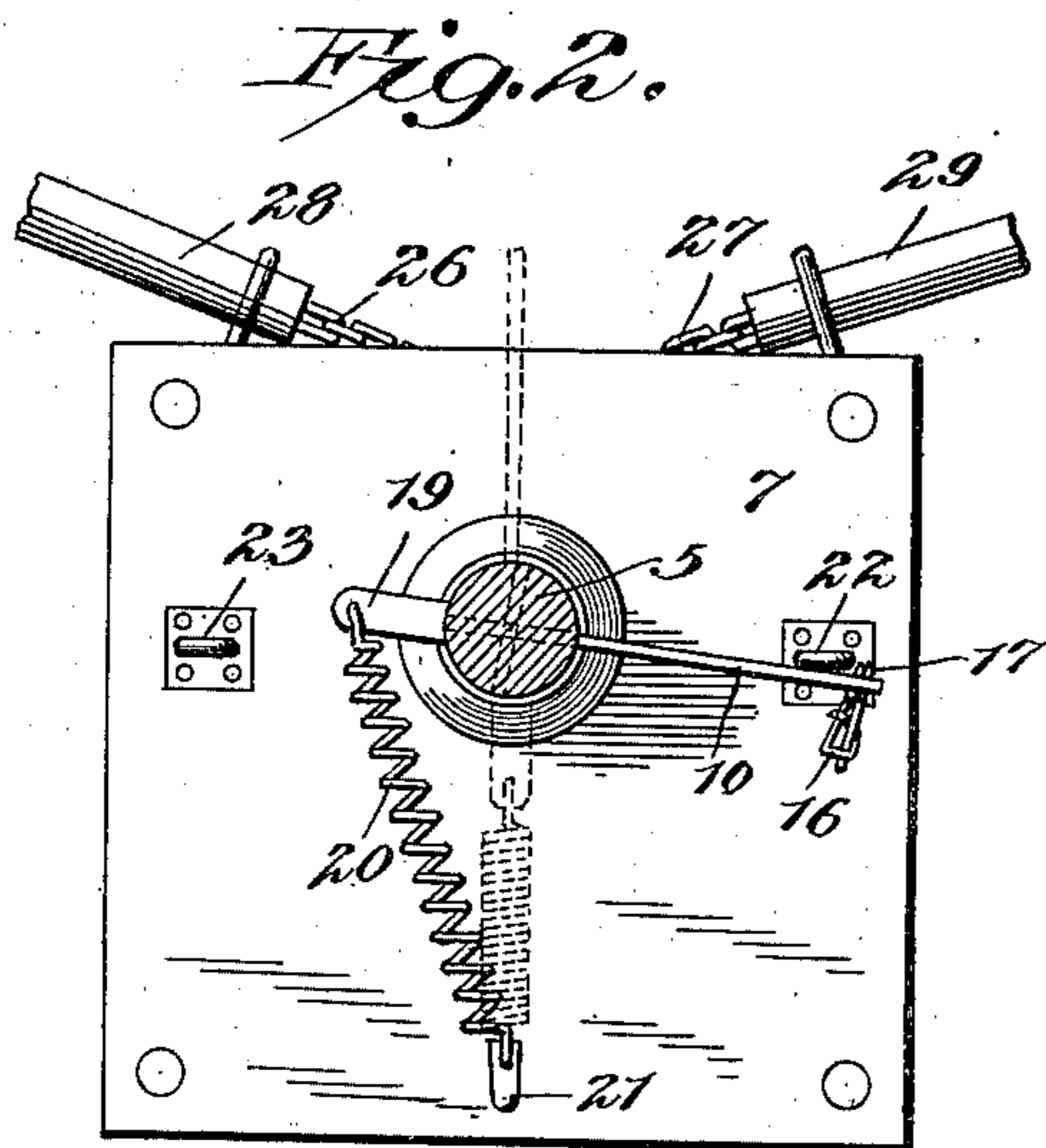
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2 Sheets—Sheet 2.



Witnesses

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UNITED STATES PATENT OFFICE.

RUDOLPH F. FELDMEIER, OF DODGE CITY, KANSAS, ASSIGNOR OF ONE-
THIRD TO GEORGE B. DOOLITTLE, OF SAME PLACE.

MAIL-CRANE.

SPECIFICATION forming part of Letters Patent No. 668,256, dated February 19, 1901.

Application filed November 27, 1900. Serial No. 37,909. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH F. FELDMEIER, a citizen of the United States, residing at Dodge City, in the county of Ford and State of Kansas, have invented a new and useful Mail-Crane, of which the following is a specification.

This invention relates to mail-cranes of that type designed to be swung into and out of operative position with respect to a trackway; and it has for its object to provide a construction wherein the mail-bag will be swung to operative position only upon the approach of the train that is to take the bag, the crane-moving means being actuated by the train when the catching-hook is swung to operative position and is held in such position during the passage of the train by a predetermined point, further objects and advantages of the invention being evident 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 a perspective view showing the mail-crane and a portion of a mail-car equipped with mechanism for operating the crane. Fig. 2 is a transverse section taken through the mast of the crane at a point above the connection of the returning-spring therewith. Fig. 3 is a transverse section through the lower portion of the mast and showing portions thereof with the operating connections in elevation. Fig. 4 is a side elevation showing a portion of a rail having an angle-lever pivoted adjacent thereto and engaged with a chain for operating the crane-mast in one direction. Fig. 5 is a detail perspective view showing the catching-hook and the striker operated thereby.

Referring now to the drawings, the present crane comprises a mast 5, which is mounted in bearings formed in a base 6, and a platform 7, supported thereabove on uprights 8, said mast being adapted for rotation in the bearings into and out of operative position.

To support the mail-bag, the mast 5 is provided with two arms 9 and 10, of which the upper arm 9 is pivoted in a slot 11 at the upper end of the mast, while the lower arm is pivoted in a slot in the lower portion of the

mast, the pivotal movements of the two arms being in the same vertical plane. The upper arm 9 has a portion 12, which extends rearwardly beyond the crane-mast, and this rearwardly-extending portion is provided with a counterbalancing-weight 13, which holds the arm normally with its opposite end raised to approximate the vertical. The outer end of the lower arm 10 of course falls by its own weight when disengaged from a mail-bag.

To hold the mail-bag 14 to the arms, said bag is provided with the usual rings at its ends, and these rings are engaged by spring-clamps upon the ends of the arms 9 and 10. Each of these spring-clamps, as illustrated, consists of a spring-wire having a loop 16 formed at one end, the central portion of the wire being wound into a coil 17 and the ends of the wire lying normally with one end resting in the loop at the opposite end. The clamp is attached to the crane-arm by engaging the looped portion thereof with a hook 18 at the end of the arm, and the two clamps are so disposed that the interlocking end portions of the two clamps will be disposed toward each other. When the bag is to be hung up, the ends of the upper clamp are separated and then engaged with the ring at one end of the mail-bag, after which the said ends are released and by engaging one into the loop at the end of the other the ring of the bag is held securely. The ring at the lower end of the bag is then engaged in the same manner.

To hold the crane-mast in position to project the arms 9 and 10 toward the track, so that the bag may be taken therefrom by the hook of a passing train, an angle-iron 19 is secured to the rear side of the mast and a helical spring 20 is engaged therewith, the opposite end of said spring being engaged with an upright 21, which is secured to the platform and base by passing through alining perforations or in any other suitable manner. When the mast is rotated in either direction, it is against the tendency of this helical spring.

Upon the platform 7 are disposed stops 22 and 23, which stops are adapted to hold the mast swung in either direction while the holding-latches, hereinafter described, are en-

gaged, after which the lower arm, which has been engaged with a stop, is raised for connection with the mail-bag. The stops 22 and 23 are so disposed as to hold the mast ninety 5 degrees either one way or the other.

To hold the crane swung with its arms away from the track, so as not to strike a projection from the wrong train, latch-levers 24 are pivoted at the side of the track, one at 10 each side of the crane, the latch at the right being used when the bag is to be caught by a train proceeding from the right and that at the left to be used when the bag is to be caught by a train proceeding from the left. These 15 latches each consist of an angle-iron pivoted at its angle near the side of a rail, one end of the iron projecting above the surface of the rail for engagement and operation by a striker upon a passing train, while its opposite end 20 projects in the direction of the crane and has an upturned extremity forming a hook 25. At the base of the crane-mast and just above the base-plate 6 there is secured a plate which extends around three sides of this angular 25 lower portion of the mast, the free ends of the plate diverging and being perforated for engagement of chains 26 and 27. These chains are crossed and taken through guidetubes 28 and 29, their free ends terminating 30 in rings 30, adapted for engagement with the hooked ends of the latch-levers 24 alternately. When the crane-mast is swung with its arms to the right, the chain 27 is engaged with the right-hand latch-lever to hold the crane in 35 that position against the tendency of its returning-spring, and when the crane is swung to the left chain 26 is engaged with the opposite latch-lever. A train in moving from the right may be caused to operate the right-hand latch-lever to lower its hooked end and 40 release the chain therefrom, and a train moving from the left may engage the left-hand lever to operate it in a like manner.

In connection with the present crane there 45 is employed a catching-hook 31, mounted upon a shaft 32, journaled in bearings upon the mail-car in the usual manner, this hook having a handle 33 for rocking the shaft into and out of its projected or operative position. 50 In connection with this catching-hook there is employed a striker 34, carried at the lower end of a reciprocatory rod 35, mounted in bearings in the floor of the mail-car and in a bracket 36, depending therefrom, this rod projecting above the floor of the car and having 55 a helical spring 37 disposed thereon and resting with its lower end against the floor of the car and its upper end against the laterally-turned end of a connecting-rod 37', which is 60 engaged with a perforation in the rod 35. The opposite end of the connecting-rod is pivoted between ears 38 at the end of a crank-arm 39 upon the rock-shaft of the catching-hook. The lower end of the striker has a T-head, and when the catching-hook is rotated 65 in the usual manner to project it into position for catching the mail-bag the striker is

moved downwardly through the medium of the connecting-rod into position to engage a latch-lever. 70

As above stated, before the mail-bag is hung in place the crane is rotated to carry the bag in the direction from which the train approaches that is to catch the bag and the proper chain is engaged with its latch-lever, 75 causing said lever to stand erect, owing to the tendency of the crane to return to its normal position under the influence of its returning-spring. When the mail-train approaches, it swings out its hook, thereby depressing the 80 striker, which engages the latch-lever and operates it to release the chain and permit the crane to turn into position to hold the bag in position for engagement by the catching-hook. Inasmuch as the crane is operated only when 85 the striker actuates the latch-lever, the crane will project the bag only when the hook is projected and only the proper train will effect a release of the crane.

It will be understood that in practice various modifications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention. 95

What is claimed is—

1. A device of the class described comprising a mast having bag-supporting arms, means for holding the mast yieldably with the arms in operative position, and a latch for holding 100 the mast with the arms retracted, said latch being disposed for operation by a passing train to release the mast and permit it to move to its operative position.

2. A mail-crane comprising a mast having 105 bag-supporting arms, means for holding the mast yieldably with the arms projected in operative position, latches adapted for holding the mast with the arms retracted alternately in opposite directions and means connected 110 with the mast and adapted for alternate connection with their respective latches to hold the mast in its opposite positions, said latches being disposed for engagement and operation by a passing train when their respective con- 115 nections are connected therewith.

3. A mail-crane comprising an oscillatory mast having arms pivoted thereto for movement in a common vertical plane, bag-attaching means upon the arms, means for holding 120 the mast with the arms yieldably in operative position, and means for engagement by an arm for holding the mast in retracted position.

4. A mail-crane comprising an oscillatory 125 mast having arms pivoted thereto for movement in a common vertical plane, bag-attaching means upon the arms, means for holding the mast yieldably with the arms in their projected position, and a stop disposed to permit of engagement of the lower arm there- 130 behind when said arm is dropped from its engaging position, to hold the mast in retracted position.

5. A mail-crane comprising a base having a platform supported thereabove, a mast rotatably mounted in the platform and base, arms connected with the mast below the platform, means for holding the mast yieldably in predetermined position, latch-levers, flexible connections attached to said arms and adapted for engagement with their respective latch-levers alternately to hold the mast in opposite positions, and bag-supporting arms upon the mast above the platform and adapted to hold the bag projected under the influence of said yieldable mast-holding means.

6. The combination with an oscillatory mast having arms pivoted thereto for movement in a common vertical plane and provided with bag-attaching means, said mast being mounted adjacent to a track, of angular latch-levers pivoted adjacent to a track-rail and connections with the mast for alternate engagement with their respective latch-levers to hold the mast at opposite inoperative positions, said

levers being adapted for projection to be engaged by a striker upon a moving train when said levers are engaged with their respective mast connections, and the mast having means for holding it yieldably with the arms in operative position.

7. The combination with an oscillatory crane having means for holding it yieldably in operative position, of a latch disposed for operation by a passing train, connections for holding the mast retracted, and a catching-hook having a striker connected therewith and adapted for movement into position for engagement with the latch to release when the hook is moved to operative position.

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

RUDOLPH F. FELDMEIER.

Witnesses:

J. W. GILBERT,
G. L. FINLEY.