

No. 637,651.

Patented Nov. 21, 1899.

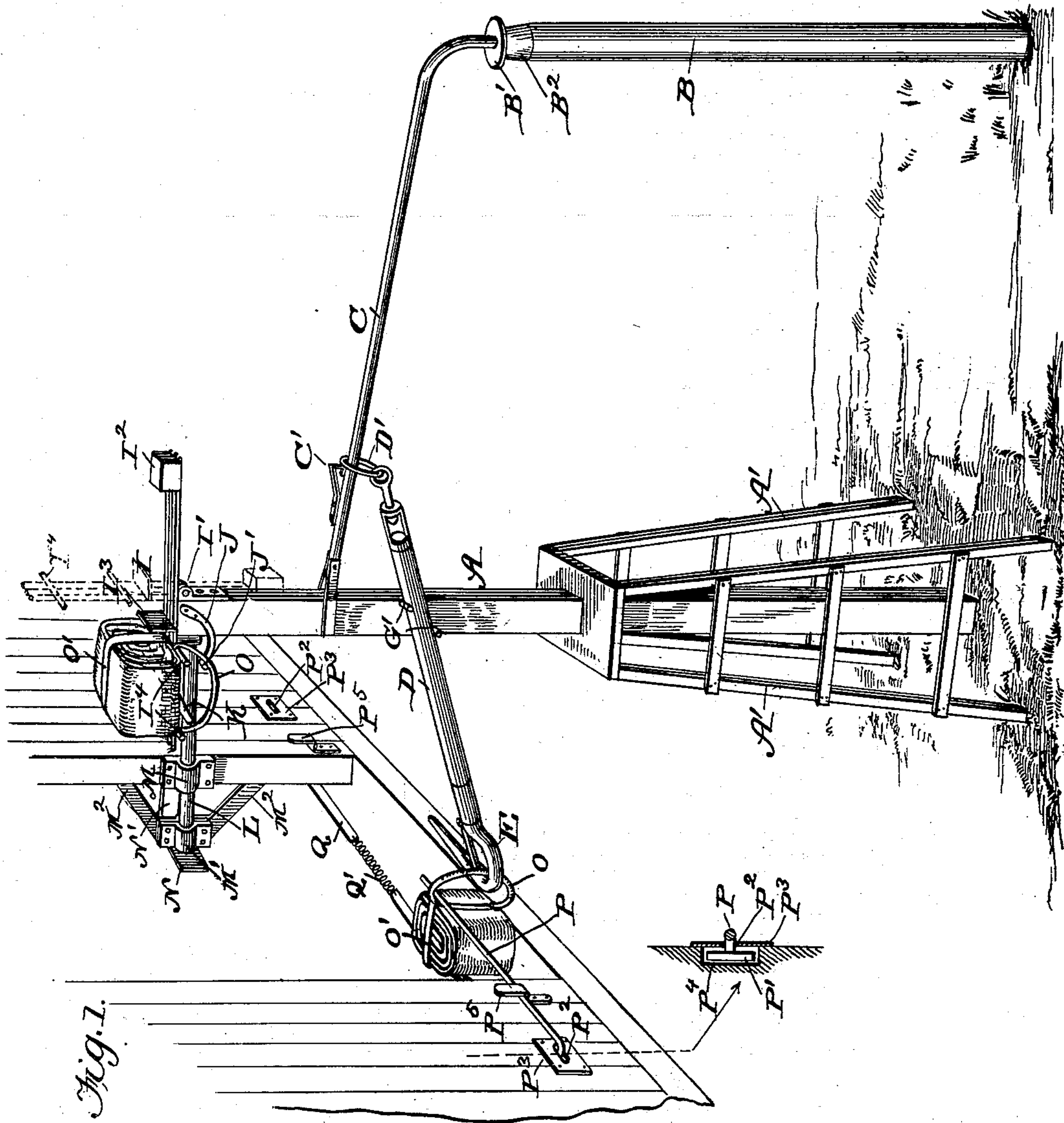
H. A. ORCHARD.

MAIL BAG DELIVERER AND RECEIVER.

(Application filed Apr. 19, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES :

Jos. A. Ryan
 Perry B. Zupser.

INVENTOR

Hugh A. Orchard.

BY *Munn & Co.*

ATTORNEYS.

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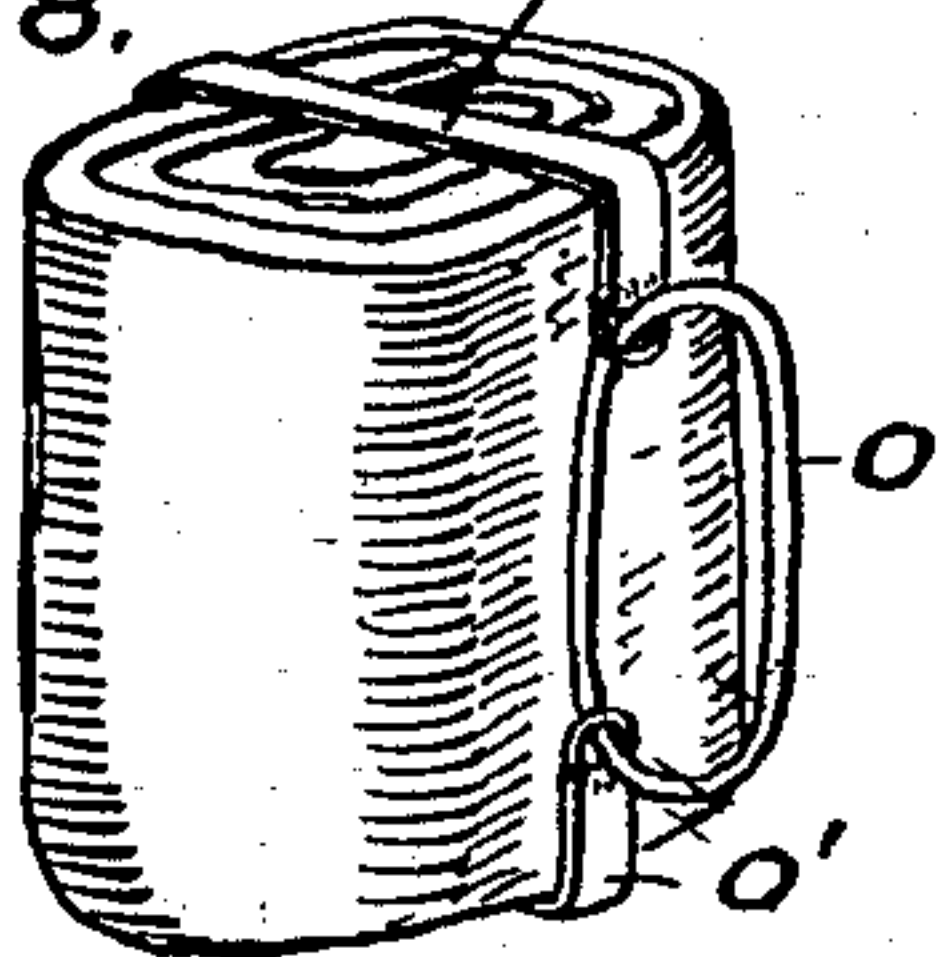
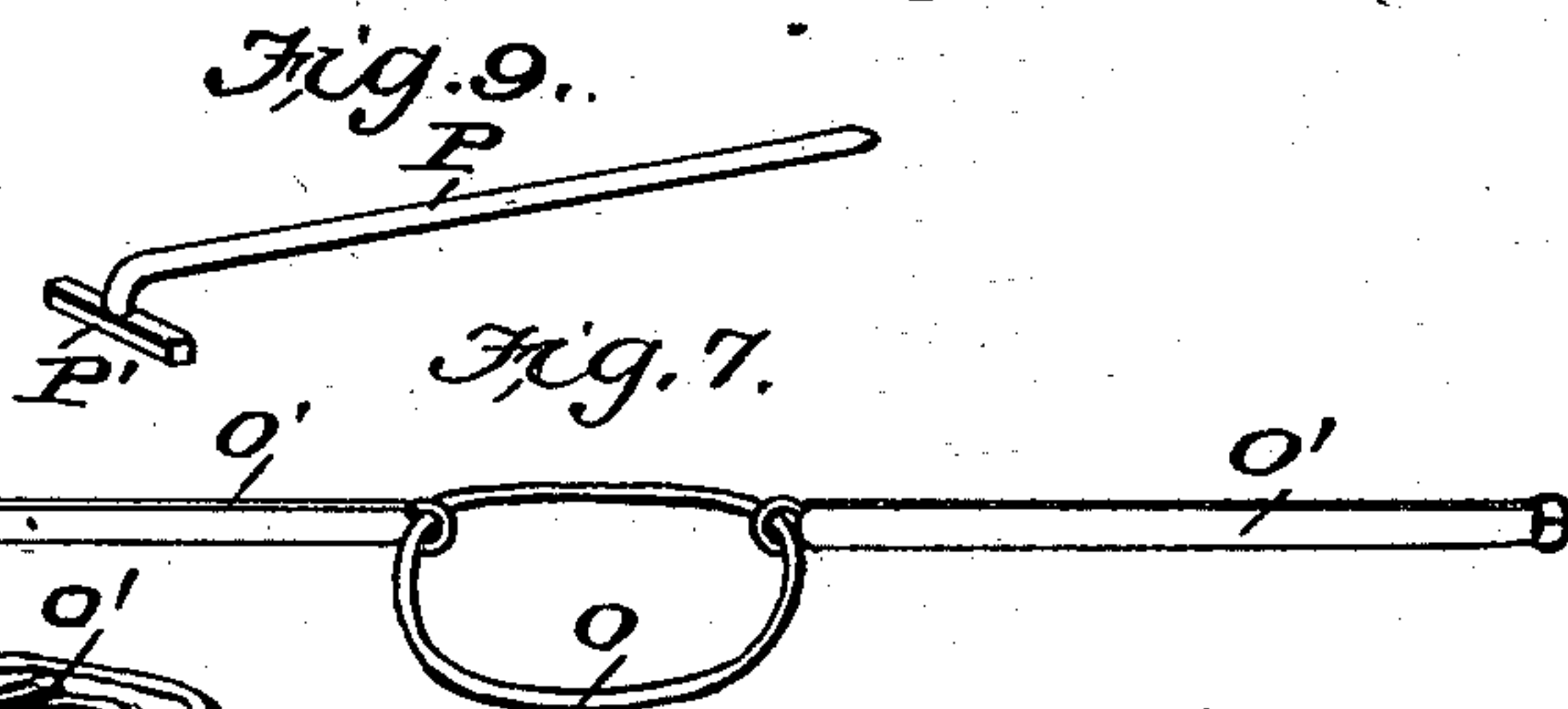
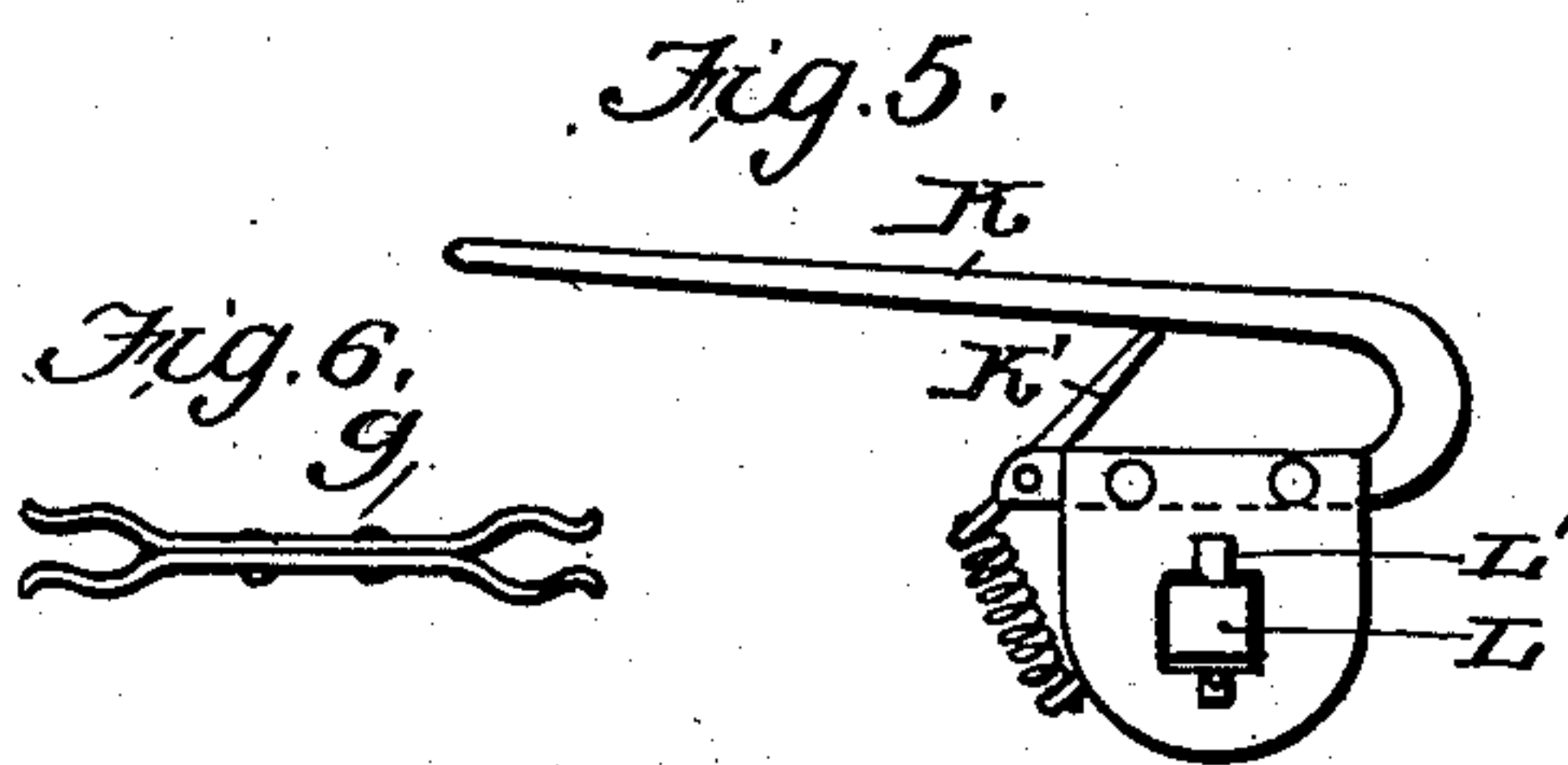
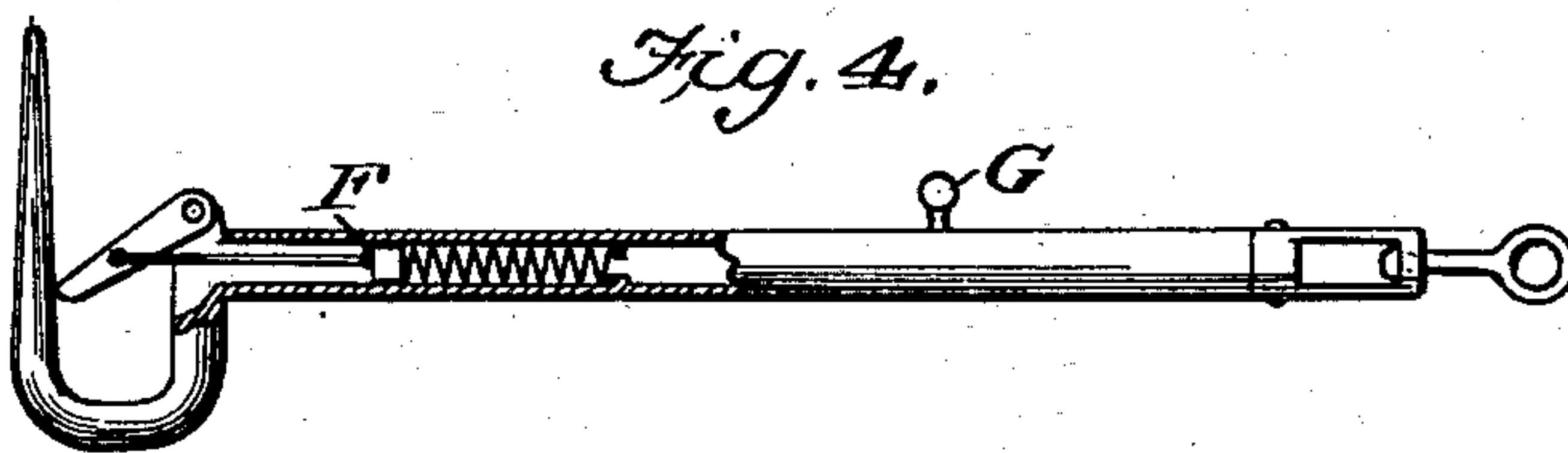
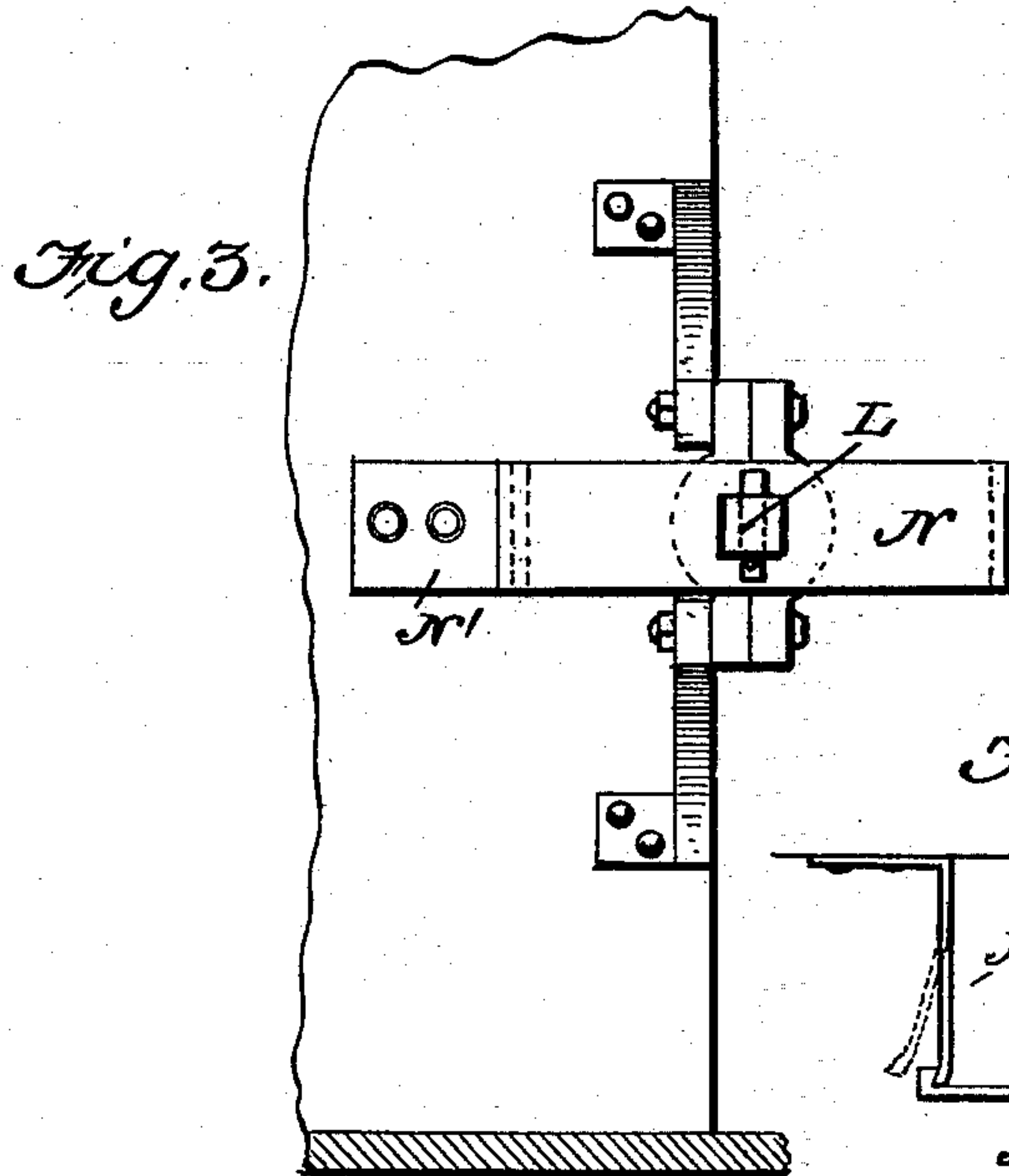
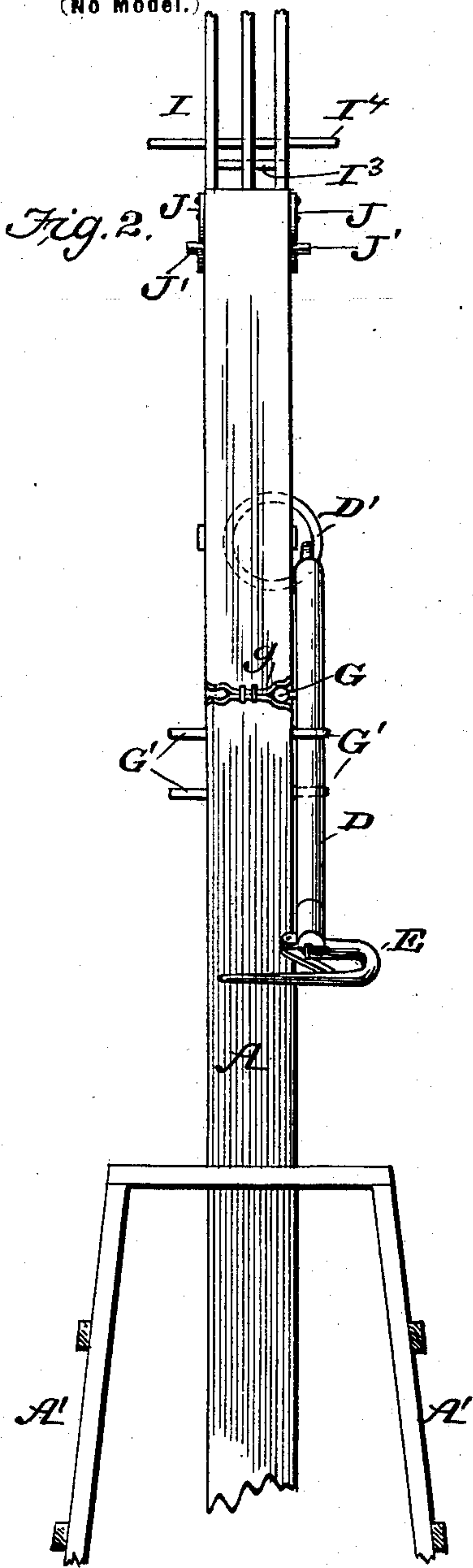
H. A. ORCHARD.

MAIL BAG DELIVERER AND RECEIVER.

(Application filed Apr. 19, 1899.)

2 Sheets—Sheet 2.

(No Model.)



WITNESSES:

Jos. A. Ryan,
Carver B. Furber.

INVENTOR

Hugh A. Orchard.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HUGH A. ORCHARD, OF ROODHOUSE, ILLINOIS.

MAIL-BAG DELIVERER AND RECEIVER.

SPECIFICATION forming part of Letters Patent No. 637,651, dated November 21, 1899.

Application filed April 19, 1899. Serial No. 713,608. (No model.)

To all whom it may concern:

Be it known that I, HUGH A. ORCHARD, of Roodhouse, in the county of Greene and State of Illinois, have invented a new and useful
5 Improvement in Mail-Bag Receivers and Deliverers, of which the following is a specification.

My invention is an improvement in apparatus for receiving mail-bags from and delivering them to moving railroad-trains; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

15 In the drawings, Figure 1 is a perspective view of my apparatus as in use. Fig. 2 is a front edge view of the means for delivering a bag to and receiving one from a car. Fig. 3 is a detail inner end view of the catcher on the
20 car, and Fig. 3^a another detail view of the same. Fig. 4 is a detail side view of the catching-arm on the land. Fig. 5 is a detail outer end view of the catcher on the car. Fig. 6 is a detail view of the clasp. Fig. 7 is
25 a detail view of the straps and ring for application to the bag. Fig. 8 shows the bag with the ring and straps applied, and Fig. 9 is a detail view of the discharging-rod for use on the car.

30 The devices on the land include two inner and outer uprights A and B, the former being arranged near the track and the latter in rear of the upright A in a line at right angles to the track. Both uprights are properly
35 seated in the ground, and the upright A is braced by the steps A', which also enable the operator to have convenient access to the operating parts on the upright or post A. The posts A and B are connected by a rod C,
40 which inclines downward from the post A to the post B and curves gradually downward to its connection with the post B, entering the top of the latter through a cap-plate B', which surmounts a ferrule B², surrounding
45 the upper end of the post B. Near its connection with the post A the rod C has a lug C', which forms a stop to limit the outward movement of the catching-arm D in adjusting such arm to position for use. At its in-
50 ner end the catching-arm D has a swivel pro-

vided with a ring D', which encircles and slides along the rod C in the operation of the device, as presently described. The swivel forms a connection which permits the arm to hang and swing freely on its ring, and also
55 the adjustment of such arm to either side of the post A to set its hook E to face in either direction to receive a mail-bag from a car moving in either direction. A plunger F, sliding in the tubular arm D, closes the hook
60 when the bag enters the same and prevents the bag from bounding or being jarred out of the hook. A headed pin G on the arm D engages one of the spring-clasps g, provided
65 on both sides of the post A, thus anchoring the arm or bar D yieldingly against the post, pins G' being also provided on the upright A to support the arm or bar D, as best shown in Fig. 1.

In the operation of catching a bag by the
70 arm D such arm is set as shown in Fig. 1 and the bag on the moving car is caught by the hook E. The momentum of the bag will free the arm D from its connection at its middle G g with the post A, and the said arm will slide
75 by its end ring down the rod C until the ring rides upon the top of the post, around which the arm and bag may swing freely until they stop, thus preventing any injury to the bag
80 or contents such as would result from a sudden stoppage of the bag.

The bag-supporting table I is hinged at I' at the top of the upright A and counterbalanced at I² so it will swing to the dotted-line position when the bag is removed. This table
85 has the flange I³, forming a gage for placing the bag, and is also formed with cross-rods I⁴, whose free ends project in opposite direction and permit the strap-ring to slip from the table when caught by the hook on the car.
90

Spring-rods J, secured at one end to the opposite sides of the upright A and having outwardly-deflected hooks J' at their outer ends, serve to hold the strap-ring on the bag open, and also to steady the bag in place on the
95 table. The bag can be set to be taken by a car coming from either direction, the hook on said car engaging the ring and sweeping the bag off the table.

The bag-catching hook K on the car has a
100

spring-closed tongue K', by which to secure the bag when caught. This hook K is fitted reversibly on the squared outer end of a shaft L by means of pins L' so it may be removed
5 from and set on said shaft to face in either direction. This shaft L fits in guide-boxes M M', the former being secured at the side of the doorway of the car and the latter on brace-bars M², projecting into the car.

10 The inner squared end of the shaft L receives a handle-bar N, by which the shaft may be slid in or out in adjusting it for use, and this bar has at one end a flange or lip, which is engaged by a spring N', fixed to the
15 car to secure the shaft in position when the hook is properly set to engage a bag resting on the tilting platform. When the bag is caught by the hook, its ring is drawn off the hooked end of the spring-rod J and then slid
20 off the table or platform and, taking a downward course, the bag will revolve around the point or outer end of the shaft, thus avoiding the jerk caused by a sudden stop of the bag and also preventing the bag from striking
25 against the side of the car. When the shaft is set in motion by the momentum of the bag, the spring N' is released from the bar N and assumes the position shown in dotted lines, Fig. 3^a.

30 The shaft may be turned to cause the hook K to face in either direction, and when not in use the shaft may be drawn inward to set the hook close to or against the side of the car.

The spring N' by engaging lip on the end of
35 handle N holds the shaft L and the hook K in proper position for action. When the hook K receives the bag, the shaft L is made to revolve, which action releases the handle N from the spring N', which then assumes the
40 position indicated by the dotted lines in the drawings, Fig. 3^a. The handle N is used in moving the shaft L in out of the way or out to position for use.

The ring O on the bag is secured thereto
45 by straps O', as will be understood from Figs. 7 and 8. The bag to be left by the car at the station is held in position on its outer side by a rod P, having at one end a head P', which fits in a slot P² in a plate P³, which covers
50 a recess P⁴, the slot being adapted to receive the head P' when the rod P is set vertically and the plate to lock the said head when the rod P is turned, as shown in Fig. 1, the rod P being supported in such position by the
55 hook P⁵. The rod P may be set at either side of the doorway, as will be understood from Fig. 1. The bag held at its outer side by the rod P is supported in rear by the strap Q, which buttons at both ends to inside of car
60 and is provided at its center with a coil-spring Q', which adjusts the strap to bags filled to different degrees. The bag so held in the car-door is ready to be caught by the hook on the arm D alongside the inner upright A.

65 Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus substantially as described a mail-bag catcher consisting of a guide-rod inclined downwardly and away from
70 the track, supports for said rod, and a catching-arm sliding at one end on said inclined rod and adapted to catch the bag substantially as set forth.

2. In an apparatus substantially as described the combination of the uprights, the slide-rod extending between the same the catching-arm having at one end a ring sliding on the slide-rod, and means for holding
80 said arm at its middle to one of the uprights in position to catch the bag substantially as set forth.

3. The combination of the inner and outer uprights, the slide-rod connecting the same, the catching-arm provided at one end with
85 means whereby it may slide on the slide-rod, spring-operating catch devices for detachably securing the middle of said arm to the inner upright, and a stop on the slide-rod for limiting the movement of the bag-catching
90 arm substantially as set forth.

4. The combination of the inner upright having the spring-catches and the supporting-pins, the outer upright, the connecting slide-rod having a stop, and the catching-arm
95 having a ring sliding on the slide-rod, and a headed pin for engagement by the spring-catches substantially as set forth.

5. The combination with the upright, of the tilting bag-supporting platform, having the
100 cross-rods whose free ends are adapted to permit the pendent bag-ring to be adjusted to position for engagement by the car-hook and to permit the escape of said ring substantially
105 as set forth.

6. The combination with the table for supporting the bag of the spring-arm below said table by which to spread the strap-ring of the bag and to steady the bag in place on the table substantially as set forth.
110

7. The combination of the upright the pivoted counterbalanced table having cross-rods having free ends to permit the arrangement and escape of the pendent bag-ring, and the spring-rods arranged at opposite sides of the
115 upright, secured at one end thereto and having at their free ends reversely-projecting hooks arranged to engage the pendent bag-ring substantially as described.

8. In an apparatus substantially as described the combination with the car of the shaft provided at its outer end with the bag-catching hook, and supports on the car in which said shaft is journaled and movable
120 longitudinally whereby the shaft may be turned and may be moved in and out to adjust the hook to position for use substantially
125 as set forth.

9. The combination of the car having boxes for the shaft, the shaft fitted in and movable
130

in and out in said boxes, and having the bag-catching hook at its outer end and the handle at its inner end, and the spring engaging said handle substantially as set forth.

rod having at one end a head fitted to said recess and slot and adapted at its other end to support the bag substantially as set forth. 10
HUGH A. ORCHARD.

Witnesses:

WM. C. ROODHOUSE,
H. W. SMITH.

5 10. The combination of the car having adjacent to its doorway a recess and a slotted plate covering the same, and the bag-holding