

No. 873,735.

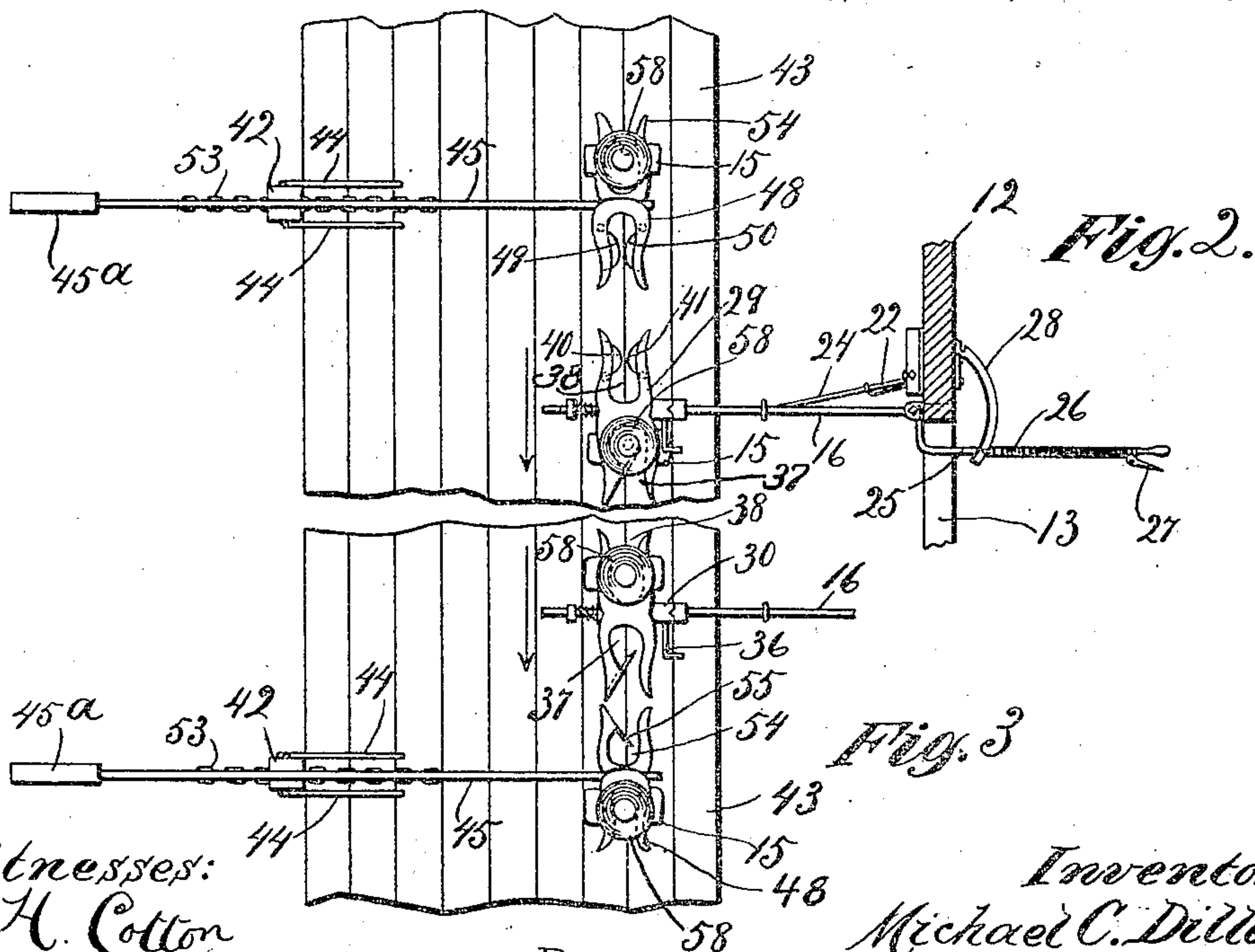
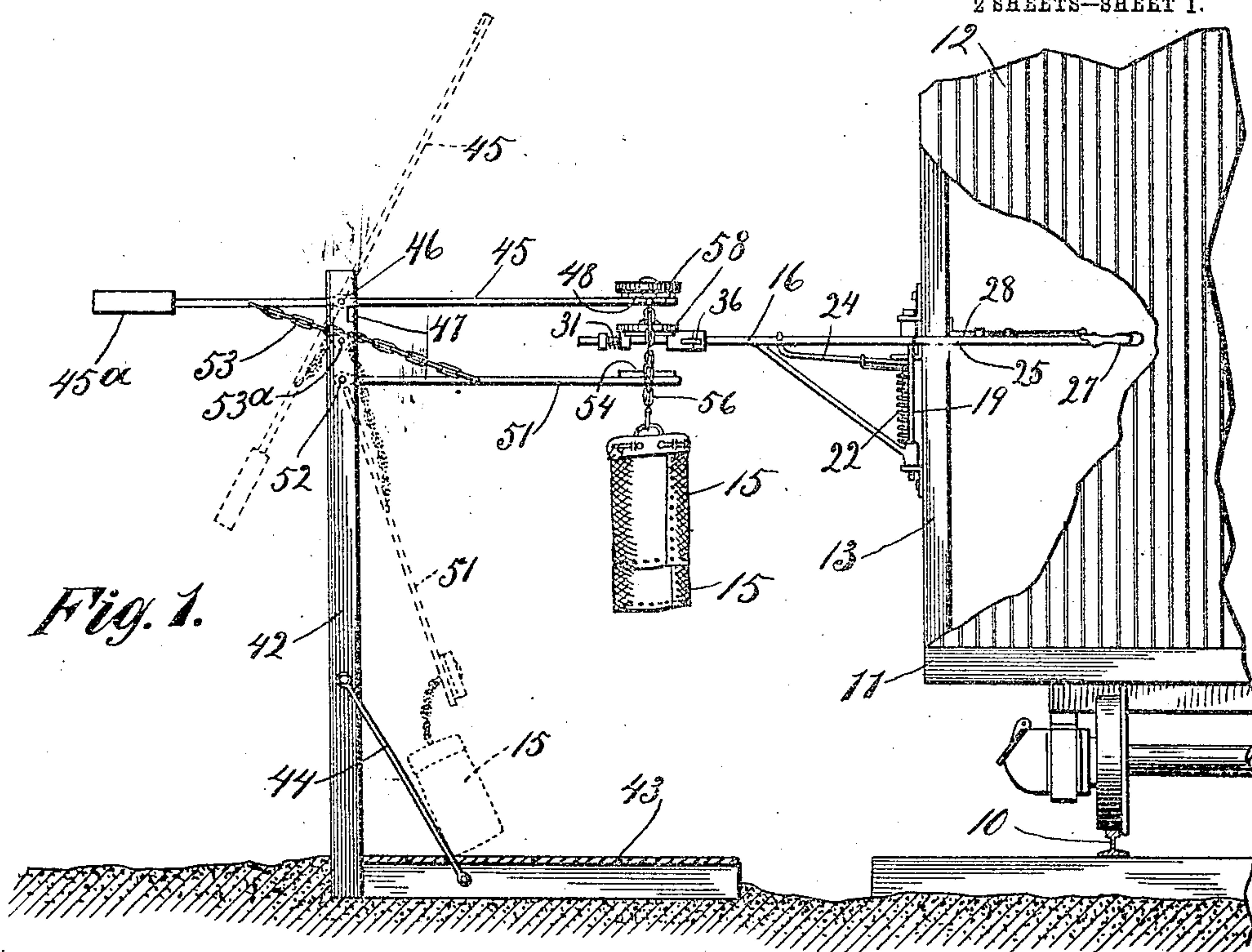
PATENTED DEC. 17, 1907.

M. C. DILLEN.

MAIL POUCH DEPOSIT AND COLLECTION APPARATUS.

APPLICATION FILED JAN. 16, 1907.

2 SHEETS—SHEET 1.



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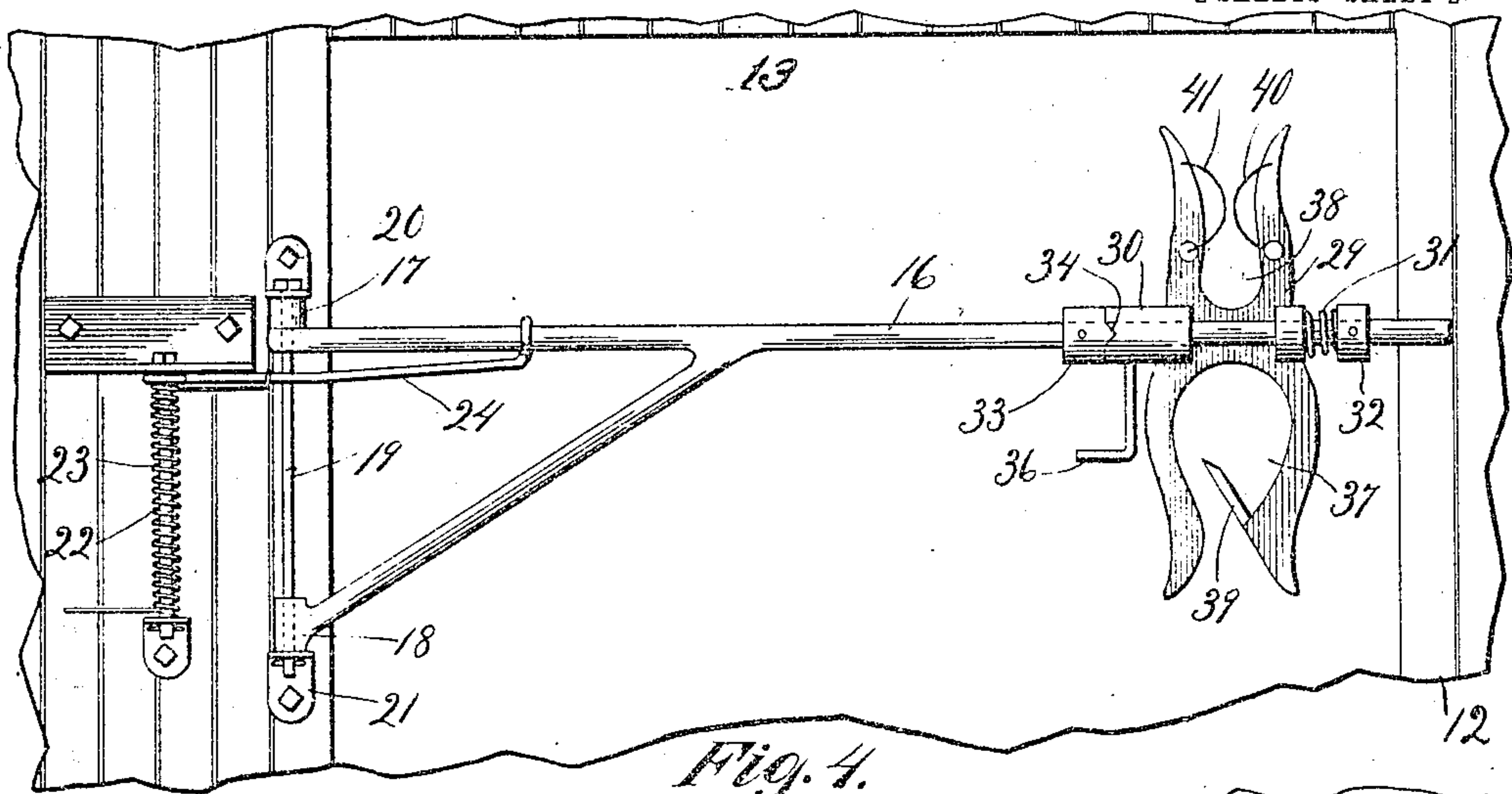


Fig. 4.

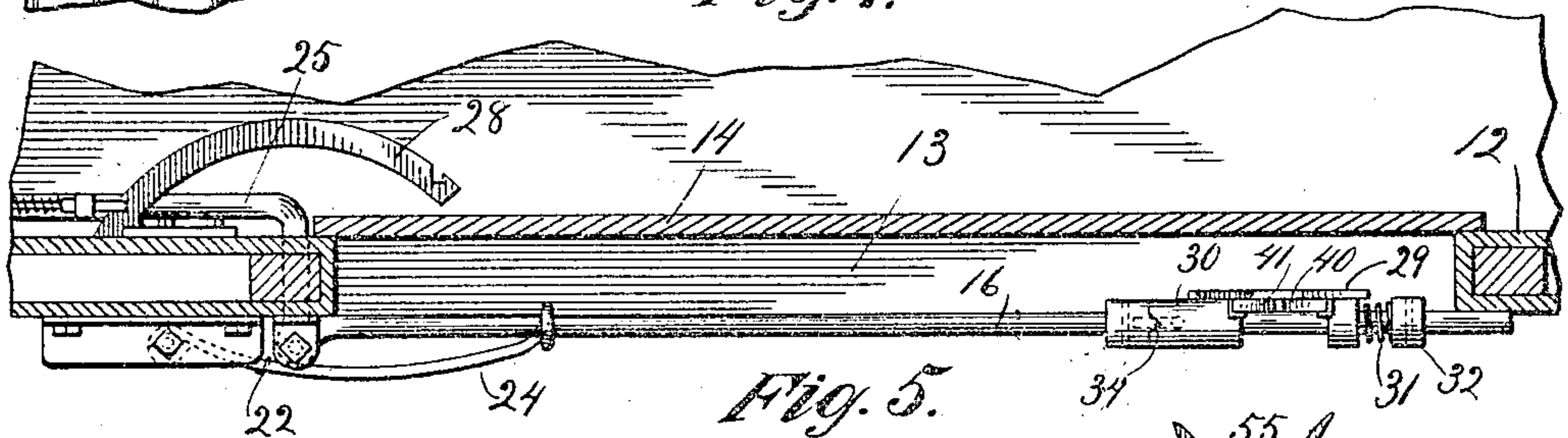


Fig. 5.

Fig. 6.

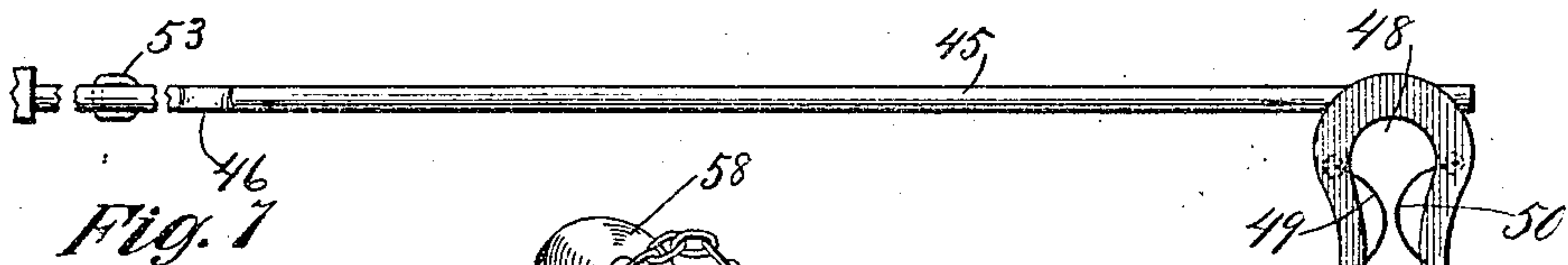
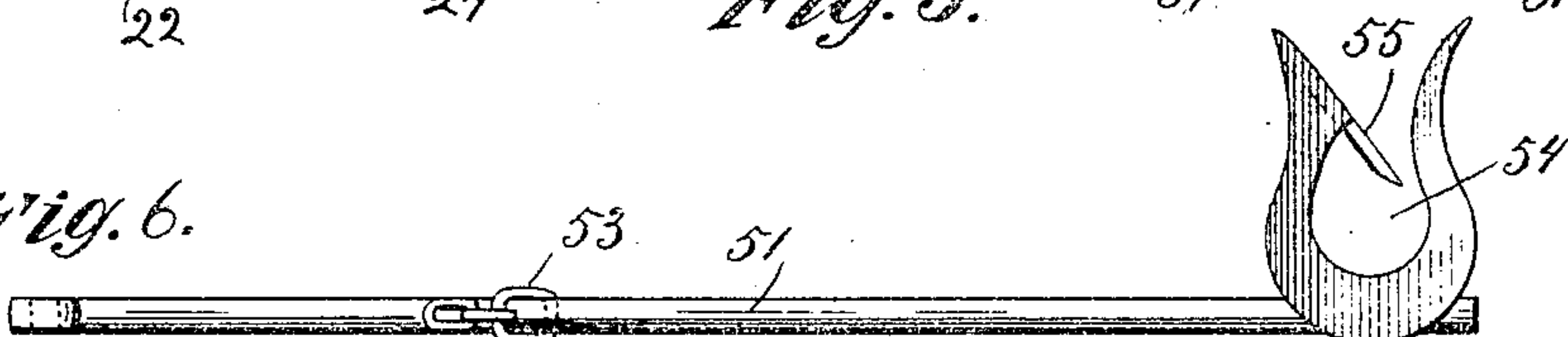


Fig. 7.

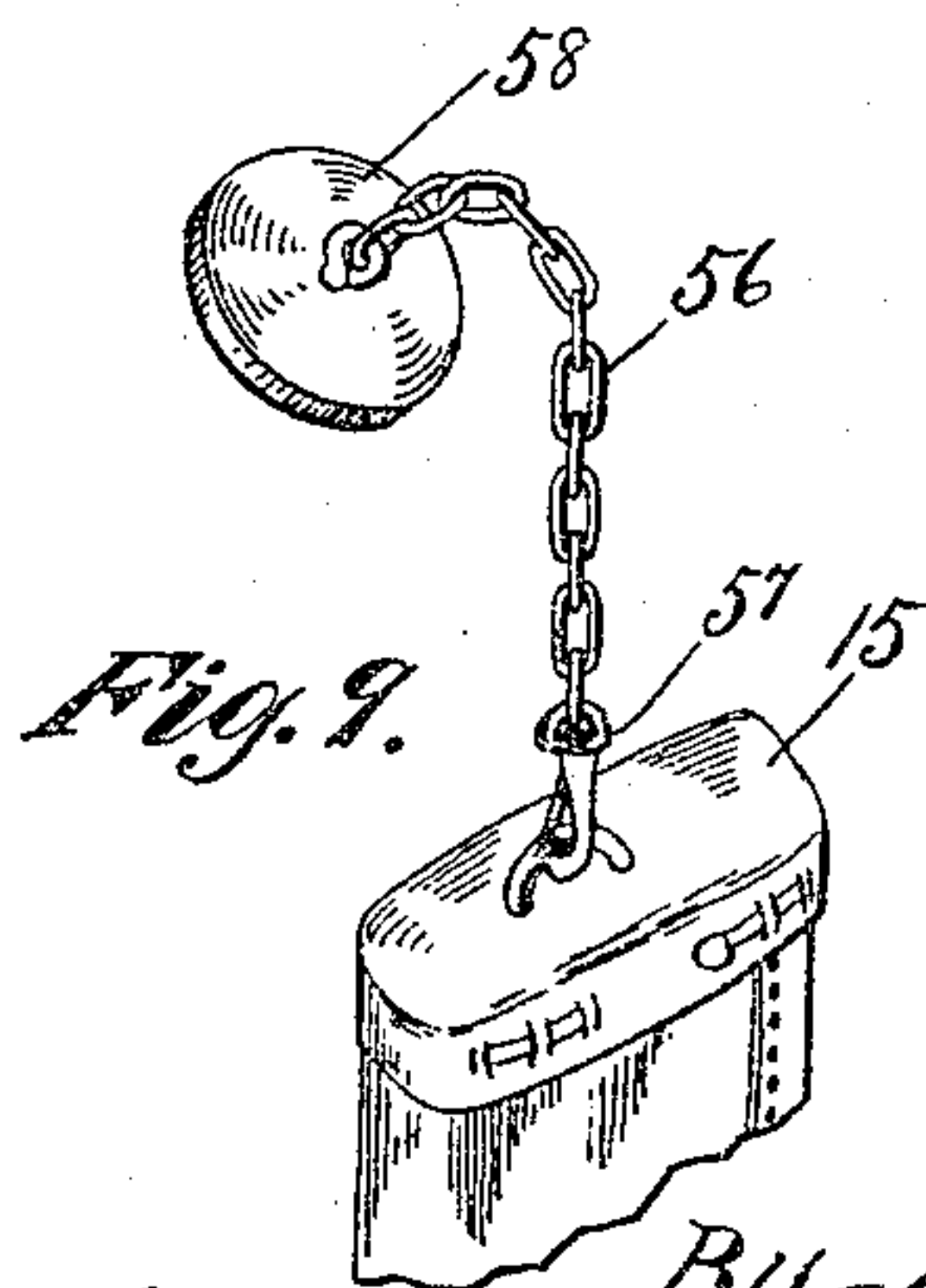


Fig. 9.

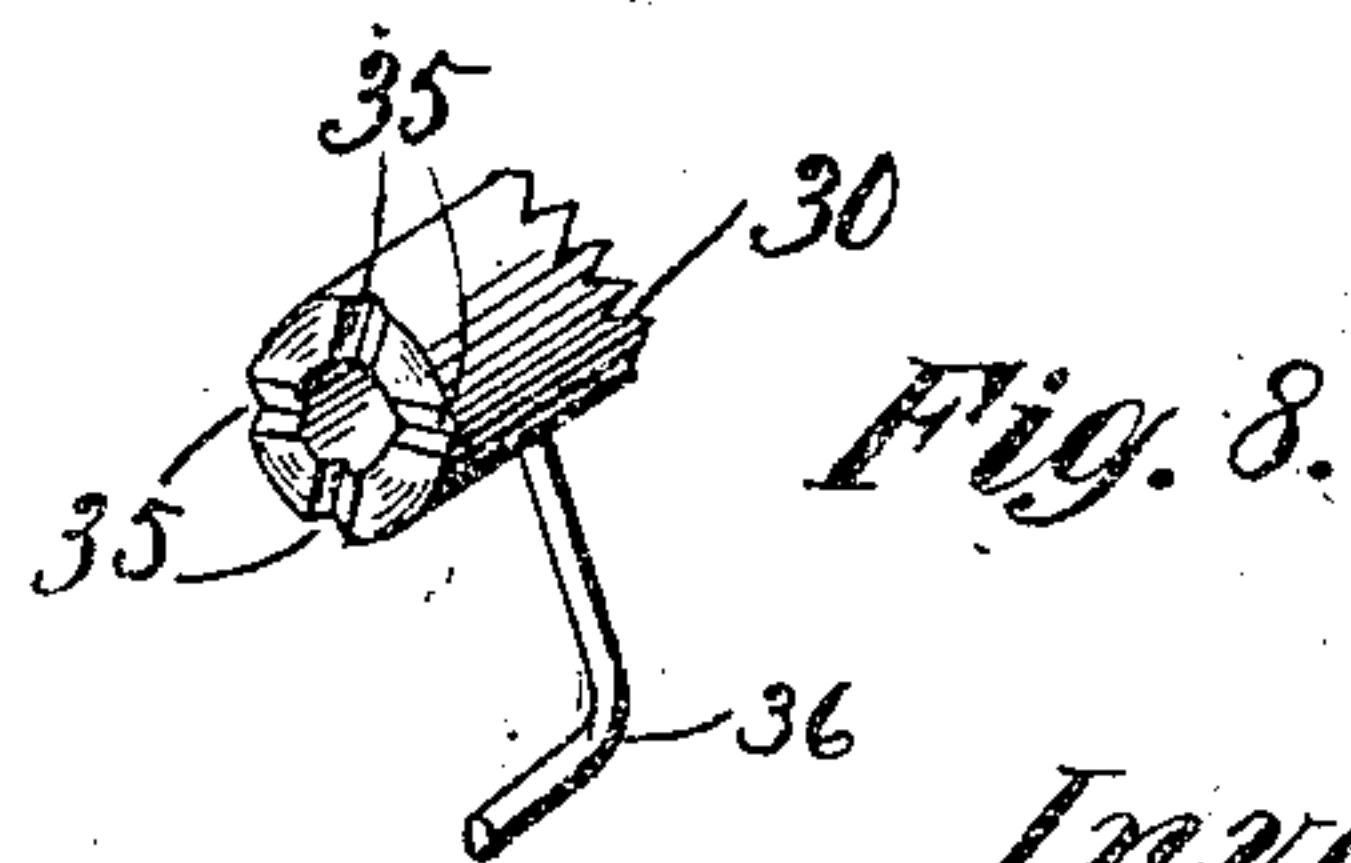


Fig. 8.

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UNITED STATES PATENT OFFICE.

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MAIL-POUCH DEPOSIT AND COLLECTION APPARATUS.

No. 873,735.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed January 16, 1907. Serial No. 352,580.

To all whom it may concern:

Be it known that I, MICHAEL C. DILLEN, a citizen of the United States, and resident of Sandwich, county of Dekalb, and State of Illinois, have invented certain new and useful Improvements in Mail-Pouch Deposit and Collection Apparatus, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates particularly to the collection and deposit of mail pouches by moving trains, and contemplates improved means for effecting an interchange of parcels between a moving train and standards fixed in position adjacent the path of such train.

A detail of the invention provides for the delivery of a deposited mail pouch to a conveniently accessible position at the foot of the standard by which it is received, and for the swinging of the receiving and delivery arms of the standard when not in use to a position removed from the path of a passing train and its accessories.

The object of the invention is to facilitate the handling of incoming and outgoing mails at stations located on the route of rapidly moving trains; and the invention is exemplified in the structure to be hereinafter described and illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of apparatus constructed in accordance with the invention, details of a railway track and of a car mounted thereon being shown, the car in end elevation partly broken away and the track in vertical cross-section; Figs. 2 and 3 are plan views showing the apparatus illustrated in Fig. 1 in different positions, a detail of a railway car appearing in plan section in Fig. 2; Fig. 4 is a detail side elevation of that part of the apparatus which is carried by a railway car; Fig. 5 is a plan view of the same, details of the car to which it is attached appearing in cross-section; Figs. 6, 7 and 8 relate to details of the apparatus; and Fig. 9 shows in perspective the preferred form of mail pouch employed in connection with the apparatus.

Details of a railway track having rails 10, and of a car 11 mounted on the rails, are shown in the drawings. The body 12 of the car has the customary side opening 13 through which its load of mail pouches 15 is received and discharged, and, as is usual in cars of the kind shown, this opening may be

closed by a sliding door 14. A bracket-arm or crane 16 is pivotally attached to the side of the car to swing in a horizontal plane in front of the door opening 13. As shown it is provided with journals 17, 18, rotatably mounted on a vertical pivot-bolt 19 secured to the wall of the car at 20 and 21.

A spring 22 is provided for swinging the crane arm 16 on its pivot to a position parallel to the side wall of the car. Preferably this spring is coiled about a rod 23 mounted on the wall of the car adjacent the pivot-bolt 19, and reacts upon an arm 24 pivotally attached to the rod 23 and having its free end in sliding engagement with the crane arm 16 intermediate its ends. For swinging the crane in opposition to the spring 22, to a position at right angles to the wall of the car, a hand lever 25 extends into the body of the car from one of the journal bearings, as 17, of the crane, and is turned at an angle, as is most clearly shown in Fig. 5, in order that it may lie along the inner wall of the car body when the crane is extended across the door 13. The hand lever 25, as shown, carries a spring pawl 26, which coöperates with a toothed quadrant 28 mounted on the wall of the car for securing the crane-arm in either of its extreme positions, and which is controlled in the usual manner by a grip-piece 27.

For engaging and supporting mail pouches collected and deposited by a train when in motion, the crane-arm 16 is provided with a head 29, preferably comprising receiving jaws 37 and delivering jaws 38. As shown these jaws are oppositely directed and are formed integral with a sleeve 30, which rotatably incloses the end of the crane-arm, and provision is made for securing the sleeve 30 and the jaws 37 and 38 in any one of a plurality of angularly-adjusted positions. To this end a stop 33, having a lug 34 adapted to engage any one of a plurality of notches 35 (Fig. 8) spaced at equal intervals about the inner end of the sleeve, is fixed in position upon the crane arm, and a spring 31, reacting between a collar 32 and the outer end of the sleeve, is provided for yieldingly advancing the sleeve upon the stop. A crank arm 36 serves for turning the sleeve 30.

To prevent articles retained by the receiving jaws 37 being accidentally dislodged, the opening between these jaws is guarded by a fixed prong 39 extending inwardly and across the opening from the outer end of one of the jaws. The opening between the delivering

jaws 38 is closed in order that a parcel may be yieldingly retained therein. As shown springs 40 and 41 project from each of these jaws, respectively, across the opening to contact with each other, and each of the springs presents a curved face toward the base of the opening.

A standard 42, only one of which is shown, is provided at each station along the track where mail is to be collected or deposited, and it rises in a position adjacent the track, preferably from a platform 43 to which it is secured by stays 44. Preferably means are provided at each of the standards 42 for supporting a mail pouch 15 in position to be collected by the receiving jaws 37 carried by the railway car 11, and for stripping a pouch from the delivering jaws 38. As shown an arm 45, pivotally secured to the standard 42 at 46 to swing upwardly in a vertical-plane from a horizontal position, in which it extends above the path of the crane head 29 and in which it is supported by a shoulder 47 formed on the standard, is provided for carrying a mail pouch 15 to be collected by a passing train. This arm has formed at its outer end a pair of forwardly-directed jaws 48, preferably similar in form to the delivering jaws 38 of the crane head 29, the opening between the jaws being yieldingly closed by springs 49 and 50 extending inwardly from each of the jaws, respectively, to a position of contact, and each of the springs presenting a curved face toward the base of the opening between the jaws. A second arm 51 is provided for stripping a mail pouch from the delivering jaws 38 of the crane head 29. As shown this arm is pivotally attached to the standard 42 below the arm 45 at 52, and has formed upon its outer end rearwardly-directed jaws 54, preferably similar in construction to the receiving jaws 37 of the crane head 29, the opening between the jaws being guarded by a fixed prong 55 which projects inwardly across the opening from one of the jaws.

Preferably the arm 51 is adapted to swing downwardly on its pivot from a horizontal position, in which it extends to a point directly beneath the path of the crane head 29, to discharge its load, received from the jaws 38 of the crane head, at the foot of the standard 42. In order that this downward movement of the arm 51 may cause the arm 45 to be raised to a position substantially parallel with the standard 42, and in which it is well out of the way of a train running on the rails 10 of the track, and in order that the arm 45, when in a horizontal position, may support the arm 51 in a similar position, these arms are operatively connected, as shown, by a chain 53, which turns over a pulley 53^a carried by the standard 42 and is joined to the arm 45 behind its pivot and to the arm 51 in front of its pivot. Preferably a counterweight 45^a is applied to the apparatus car-

ried by the standard 42, in order that both of the arms 45 and 51, when unloaded, will retain any position in which they are placed, and most conveniently this counterweight is secured to the arm 45 behind its pivot. 70

Preferably mail pouches 15 handled by the apparatus have a chain 56 secured to one of their ends by a swivel 57, and at the outer end of this chain is mounted a disk 58, greater in diameter than the width of the openings of the receiving and delivering jaws, as 37 and 38. 75

In practice the crane-arm 16 carried by the railway car 11 will normally occupy a position parallel to the wall of the car in front of the door opening 13, the head 29 being turned to the vertical position shown in Figs. 4 and 5 to permit the closing of the door 14. Before the car arrives at any station at which it is to deposit and collect mail, an attendant at that station will mount a mail pouch, as 15, at the outer end of the cross-arm 45 of the standard 42 by securing the chain 56 of the pouch within the jaws 48 behind the springs 49 and 50. In the meantime a second attendant riding in the car 11 will mount a similar pouch at the end of the crane 16, by securing the chain 56 within the delivering jaws 38 of the head 29, and will then turn the head 29 to a horizontal position, in which the jaws 38 are directed outwardly from the car and the jaws 37 extend into the car, by operating the crank handle 36. He will then swing the crane 16 to a position at right angles to the wall of the car by the use of the hand lever 25, the jaws 37 being then directed forwardly and the jaws 38 being directed rearwardly. The weight of the pouch 15 mounted at the end of the cross-arm 45 of the standard 42 causes the arms 45 and 51 to assume the horizontal position shown by full lines in Fig. 1, the arm 51 extending into a proper position to strip the mail pouch carried by the crane-arm 16 from the jaws 38, and the arm 45 supporting its load in proper position to be stripped from the jaws 48 by the jaws 37 of the crane head 29. This position of the parts is shown in plan in Fig. 3 of the drawings, the corresponding position of the parts immediately after the car 10 has passed the standard 42 being shown in plan in Fig. 2, the jaws 54 and 37 then carrying the pouches previously retained by the jaws 38 and 48, respectively. The mail pouch deposited by the car as it passed the standard and left hanging in the jaws 54 of the arm 51, causes this arm to swing downwardly, thus delivering its load at a conveniently accessible position upon the platform 43. After the car 11 has passed the standard 42, the attendant riding in the car, by operating the hand lever 25, may permit the crane 16 to be swung, by the spring 52, to its normal position across the door opening 13 of the car, when, by operating the 130.

crank handle 36, he may turn the crane head 29 to a vertical position and easily remove the mail pouch collected by the crane from the jaws 37 and close the door of his car.

5 I claim as my invention—

1. In combination, a railway car, an arm pivotally mounted upon the body wall of the car to swing in a horizontal plane, a sleeve rotatably mounted on the arm, mail pouch
10 holding-jaws projecting laterally from the sleeve, and a stop for securing the sleeve in an angularly adjusted position.

2. The combination with a pair of rigid receiving jaws having a flaring mouth and a
15 constricted throat, of a backwardly-inclined

rigid prong carried by one of the jaws and guarding the throat for the purpose set forth.

3. The combination with a pair of rigid retaining jaws having a constricted delivery opening, of a yielding guard member projecting from each of the jaws to a point of contact within the delivery opening between the jaws, each of such members presenting a rounded face toward the base of the opening between the jaws for the purpose set forth.
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Witnesses:

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