G. W. POMEROY.

MAIL BAG CATCHING AND DELIVERING APPARATUS.

APPLICATION FILED NOV. 6, 1909.

947,648.

Patented Jan. 25, 1910.

3 SHEETS—SHEET 1.

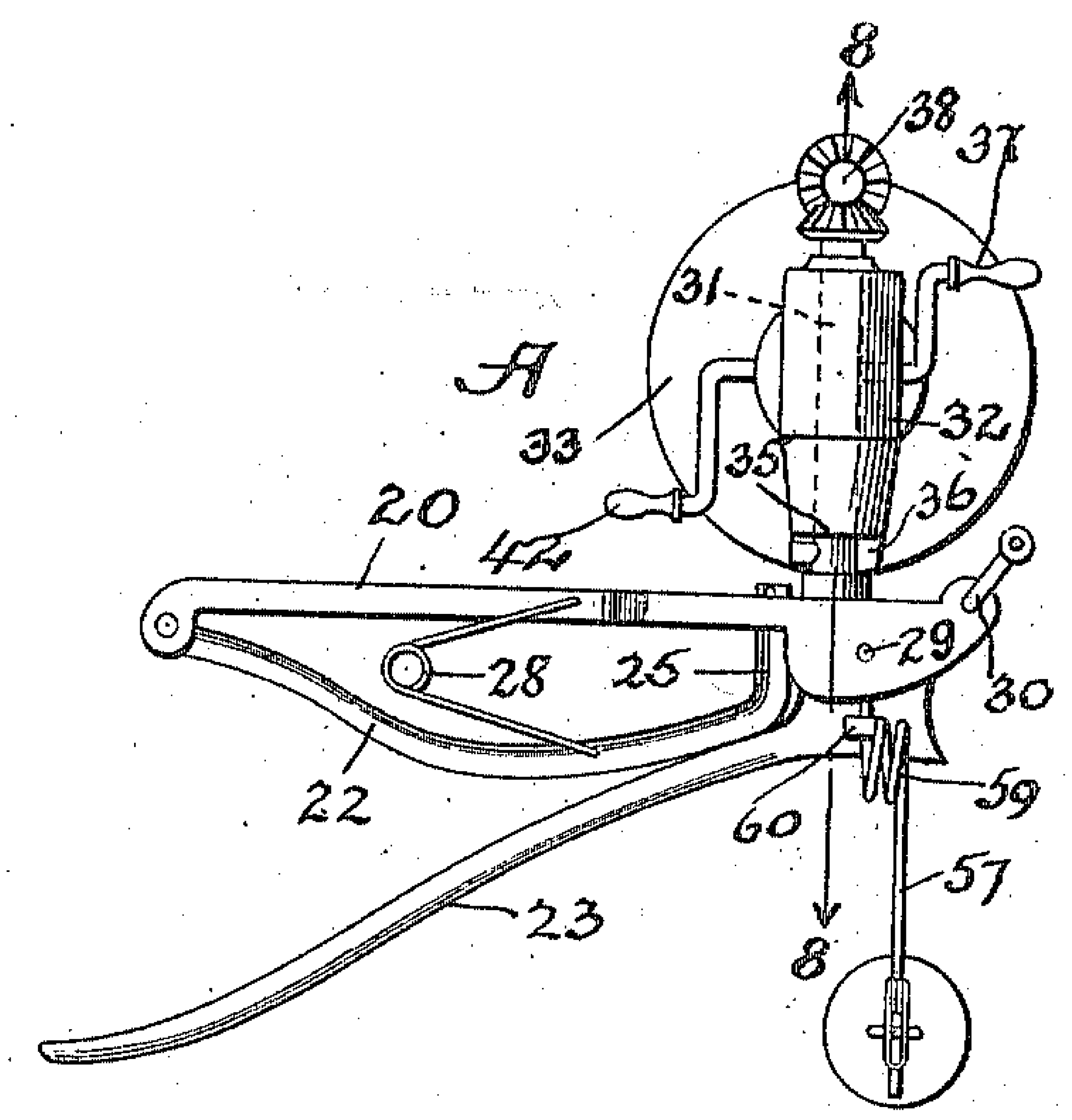


Fig. 1.

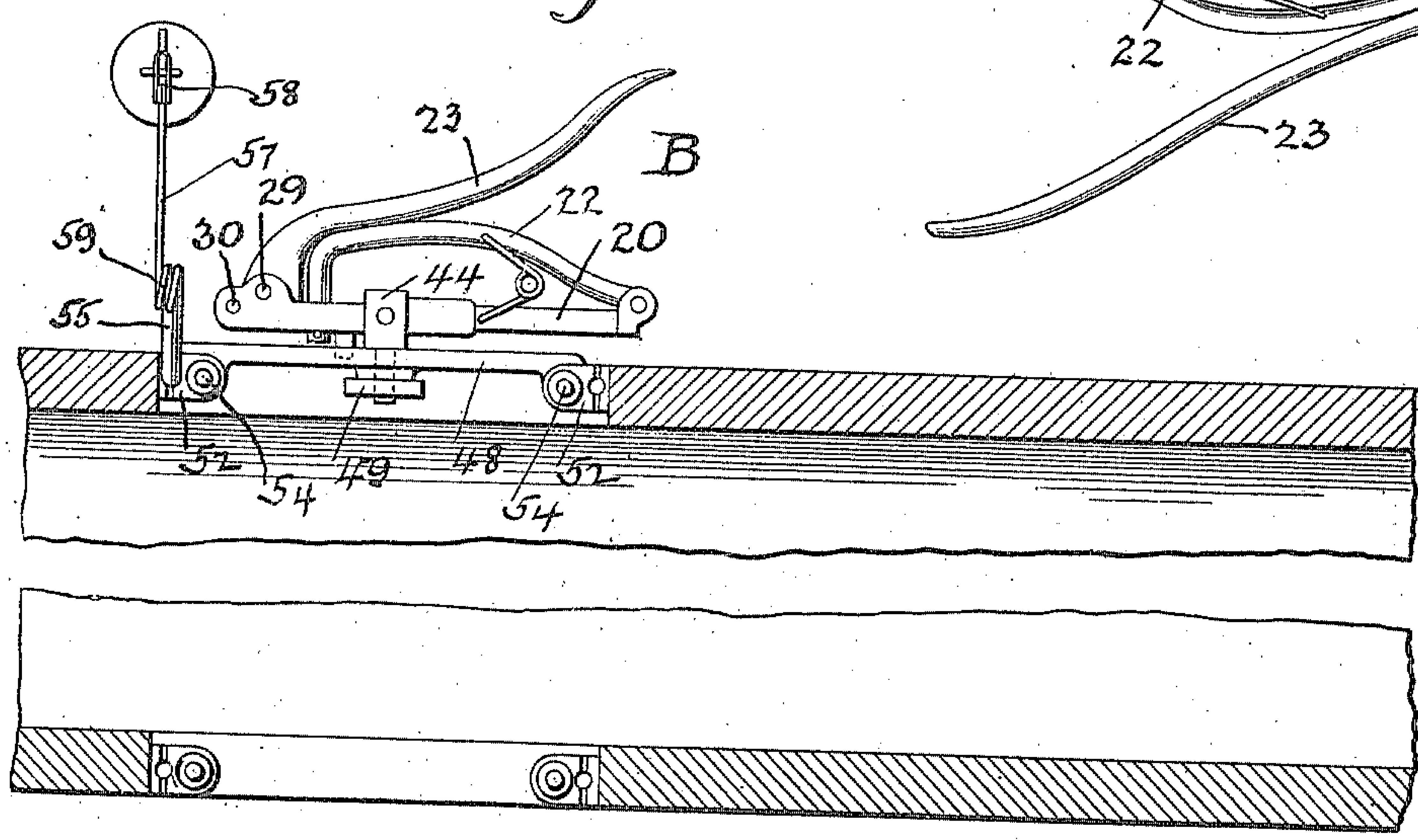


Fig. 2.

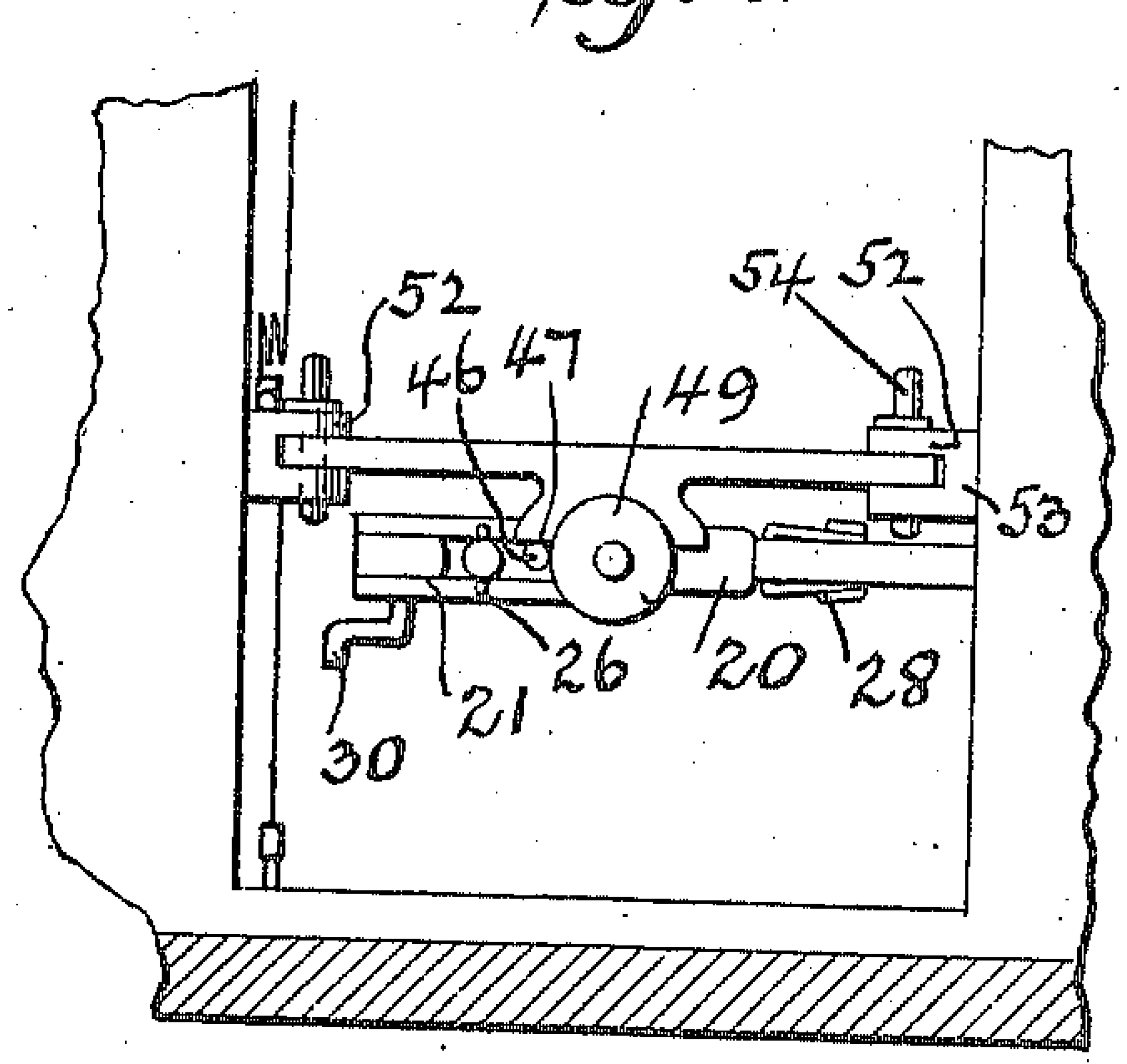
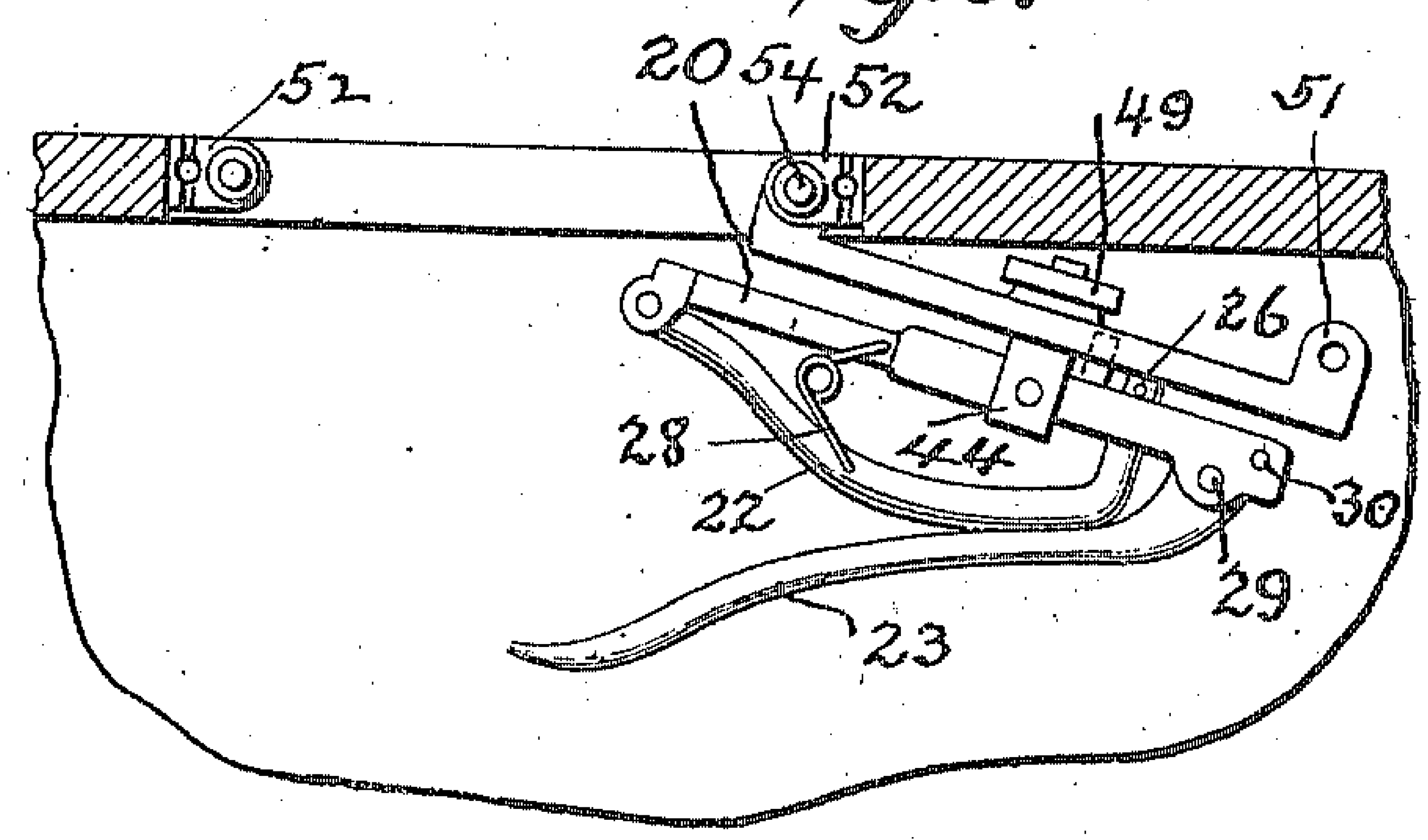


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 5.

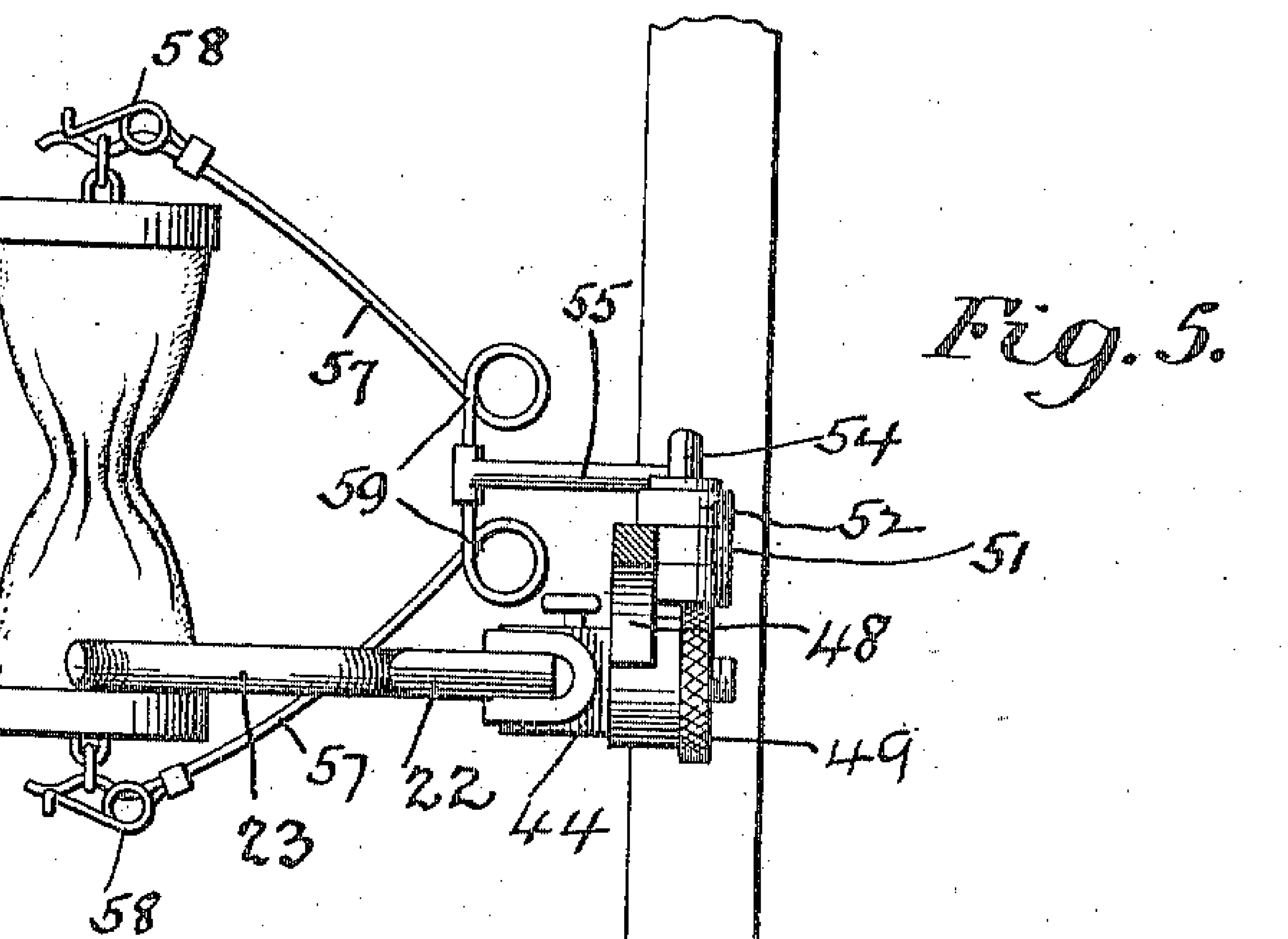


Fig. 4.

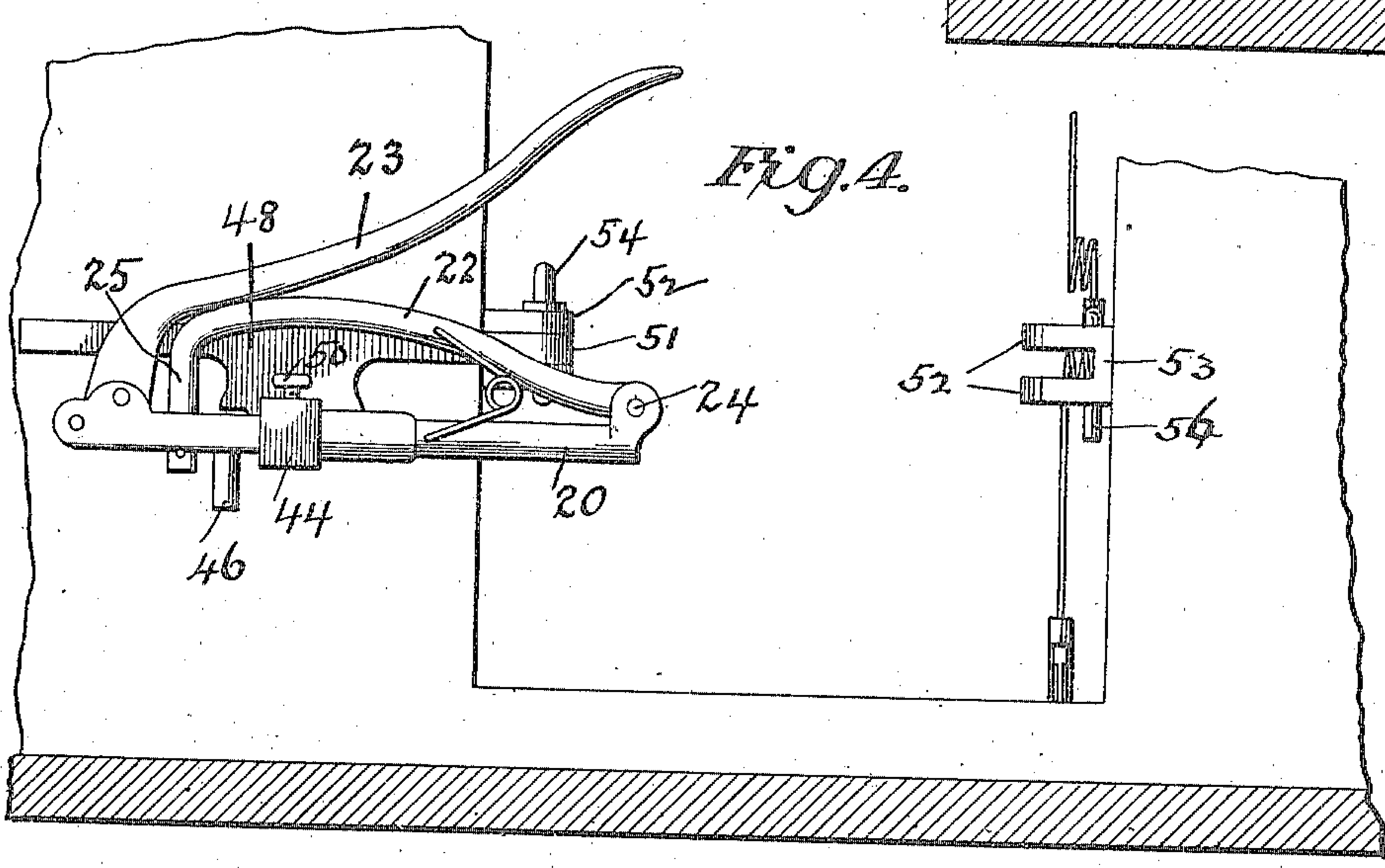
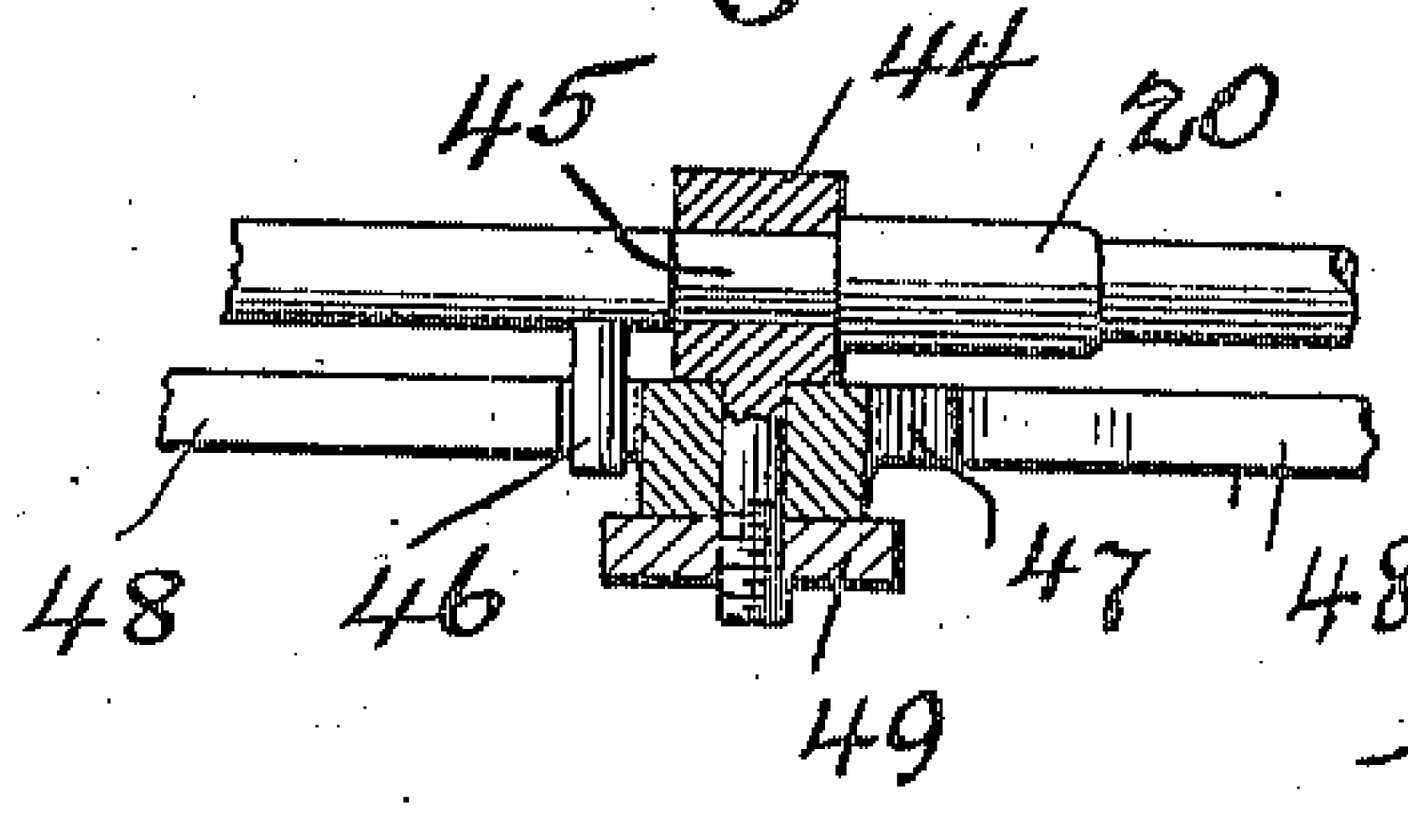


Fig. 6.



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3 SHEETS—SHEET 3.

Fig. 8.

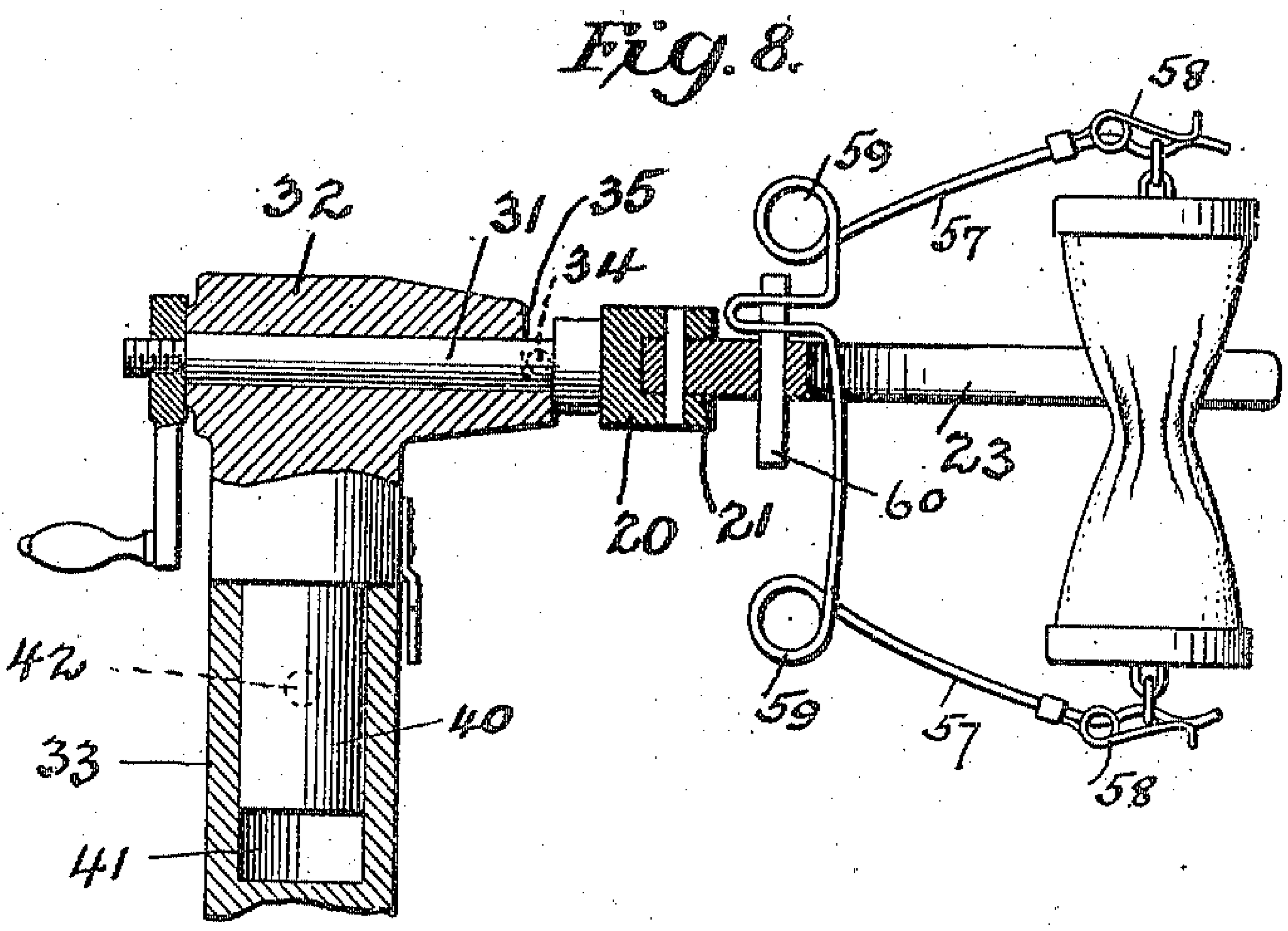

Fig. 7.

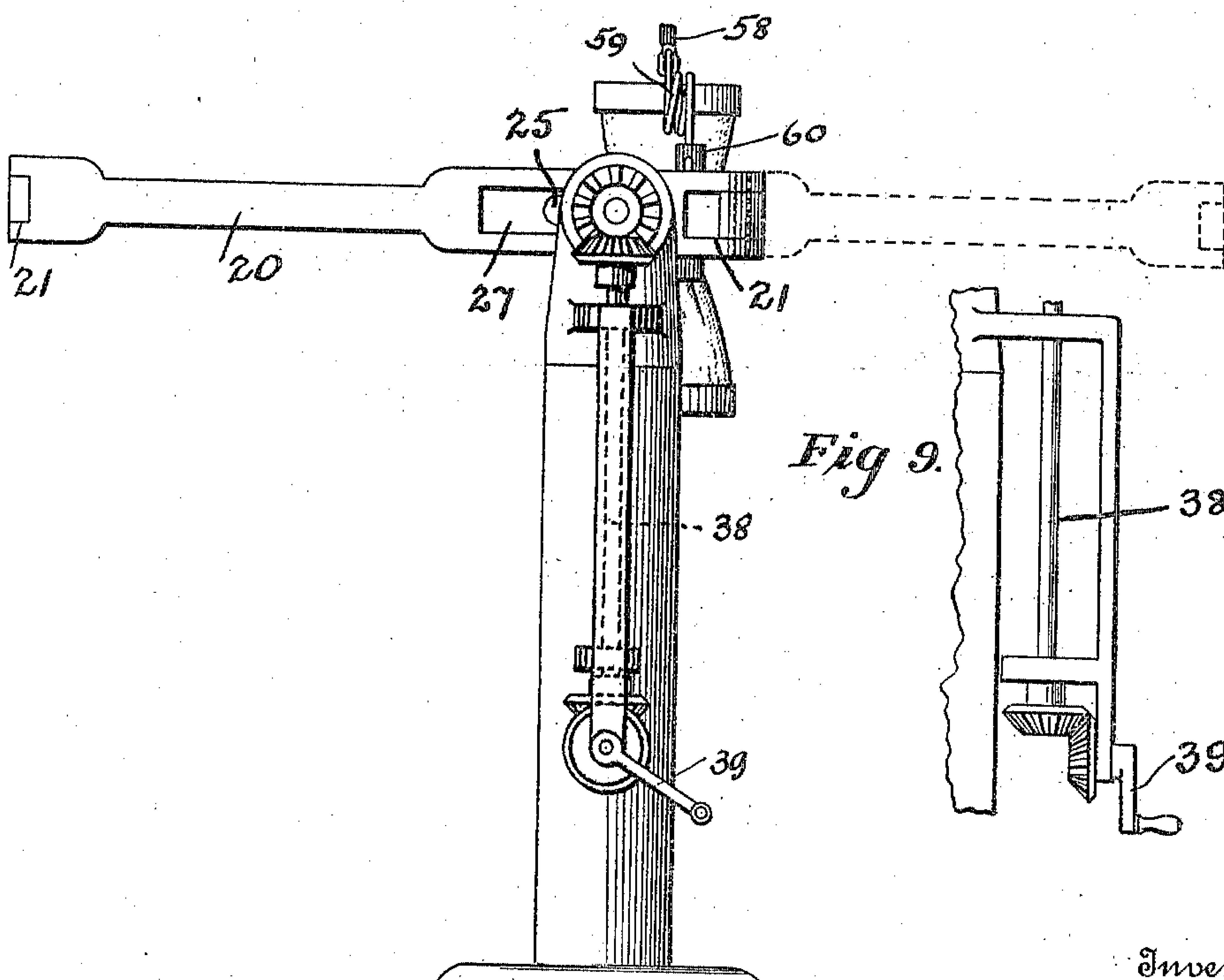

Fig 9.

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UNITED STATES PATENT OFFICE.

GEORGE W. POMEROY, OF LOGANSPORT, INDIANA, ASSIGNOR OF ONE-HALF TO EDWARD L. POMEROY, OF LOGANSPORT, INDIANA.

MAIL-BAG CATCHING AND DELIVERING APPARATUS.

947,648. Specification of Letters Patent. Patented Jan. 25, 1910.

Application filed November 6, 1909. Serial No. 526,522.

To all whom it may concern:

Be it known that I, GEORGE W. POMEROY, a citizen of the United States, residing at Logansport, in the county of Cass and State of Indiana, have invented new and useful Improvements in Mail-Bag Catching and Delivering Apparatus, of which the following is a specification.

This invention relates to improvements in mail bag catching and delivering apparatus.

Among the objects of the invention are to be found: (1) The provision of mail bag catching members of similar type for use both on the stationary and the movable portions of the apparatus (the latter being the postal car). (2) The provision of a mail bag catching member supported to permit of its operation in connection with movements of a car in either direction. (3) The provision of a novel form of mail bag catching member. (4) The provision of a support for the mail bag catching member, said support being mounted on the car and adapted to permit of a swinging of the member into and out of the car from either side of the door, the member being connected to the support in such manner that the member may be swung upwardly to occupy a minimum space when located within the car. (5) The provision of a mail bag supporting device adapted to support the bag under tension and at the same time permit of a yielding movement of the bag and support in the direction of travel, the support retaining the bag during such yielding movement a length of time sufficient for the bag to become firmly seated within the catching member. (6) The provision of means for supporting a mail bag in a manner to provide a positioning of the bag in rear of the catching device carried by the same portion of the apparatus, the supporting member being positionable to provide this relative position regardless of the direction of travel of the moving portion of the apparatus.

Other objects are to provide a structure for this purpose which is neat and attractive in appearance, durable in construction, simple and efficient in operation, and which may be manufactured at a low cost.

To these and other ends, the nature of which will be readily understood as the invention is hereinafter disclosed, said invention consists in the improved construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, in which similar reference characters indicate similar parts in each of the views, Figure 1 is a view showing parts of the apparatus in position, said view diagrammatically illustrating a postal car having a mail bag catching member and a mail bag supporting member in position, and also illustrating similar members in position on a stationary post, the view illustrating the positions of the members just prior to the catching of the mail bags by the catching members. Fig. 2 is a fragmentary view of a postal car and showing one of the devices in position within the door-way of the car to show the device in rear elevation. Fig. 3 is a fragmentary sectional view of a car showing the catching device in top plan view and thrown inward. Fig. 4 is a fragmentary view of the interior of a car showing the catching device as swung inward, with the catching member turned upwardly to economize space. Fig. 5 is a cross sectional view of a fragment of the car showing the catching and the supporting devices in position therein. Fig. 6 is a fragmentary sectional view of the connection of the catching member with the support with which it is connected to the car. Fig. 7 is a view in rear elevation of a standard or post on which the catching and suspending devices are supported. Fig. 8 is a vertical sectional view taken on line 8—8 of Fig. 1. Fig. 9 is a detail view showing the actuating mechanism disclosed in Fig. 7.

As disclosed herein the mail bag catching member is substantially similar in structure for both the stationary and the movable parts of the apparatus, the same general idea being incorporated in them, the differences being mainly in the manner in which they are connected to the parts on which they are supported; another difference lies in the fact that they are of different size, the one carried by the car being made on a smaller scale than that carried by the stationary support. As the structure of the catching device is substantially similar, a description of one will suffice.

The mail bag catching device comprises a member 20 having its opposite ends bifurcated, as at 21, to form ears to receive one end respectively of two arms 22 and 23

which provide, when the parts are assembled, the part within which the mail bag is received and supported, the arms 22 and 23 forming the inner and outer members respectively of the catcher. The arm 22 is pivotally mounted, as at 24, at the forward end of the member 20, extending rearwardly with an outward curve, and terminating with a laterally extending portion 25 which passes through a slot 27 formed in the member 20 adjacent the bifurcated rear end of said member, a suitable pin 26 being employed for normally preventing the free end of the arm 22 from passing out of said slot 27. The arm 22 is yieldingly supported in its outermost position by means of a spring 28 connected to said arm and the member 20 and adapted to provide a tension in a direction tending to provide relative movement of said parts away from each other. The arm 23 is secured between the ears of the rear end of the member 20 by means of pins 29 and 30, the latter having a removable engagement with the arm 23 in order that, when desired, said arm may be given a pivotal movement on the pin 29, this particular construction providing for an easy release of the mail bag, if the latter should, by reason of its size, become wedged within the crotch formed by the arms 22 and 23, the arm 23 having its outer end curved outwardly to provide with the curved portion of the arm 22 the crotch structure referred to. By this construction of catching member it will be seen that the outer arm 23 forms a fixed surface which is so positioned as to have its forward end extend beyond the plane of the mail bag which is adapted to be caught up by the catcher, the mail bag being guided toward the rear portion of the catcher by this fixed arm, the arm 22 yielding as the bag passes rearwardly, said arm 22 however being so held by its spring 28 as to insure that the bag will not drop out of these catching arms.

For the purpose of readily distinguishing between the two members of the apparatus, that portion of the apparatus which is positioned alongside of the track is designated A, while the apparatus carried by the car is designated B.

The catching device above described is supported pivotally in each of the forms used, the pivotal support for the form A being a shaft or spindle 31 extending laterally of the member 20 from a point intermediate the slot 27 and the bifurcated rear end of said member, said shaft extending through a rotatable cap 32 pivotally mounted on the post 33.

The rotating movement of the shaft 31 is limited to a half revolution, the shaft being provided with a pin 34 movable within a cut-away portion 35 of the cap 32, the opposite end walls of the cut-away portion forming shoulders 36 upon which the pin 34 may rest at the extremes of the pivotal movement of the shaft, these extremes being positioned so as to cause the arms 22 and 23 to extend in a horizontal plane at each extreme. To retain the shaft 31 in either extreme, a screw threaded pin insertible through the cap and which is adapted to engage the shaft, as in Fig. 1, may be employed, or the free end of the shaft 31 may be formed with a screw-threaded portion by means of which a handle 37 may be tightened against the rear of the cap, as indicated in Fig. 8; or, if desired, no tightening means may be employed, dependence being had upon the weight of the projecting portion to retain such horizontal plane in use. To rotate the shaft 31 on its axis, it would be necessary only to use the projecting portion of the member 20 as a handle, but in order that a more ready operation may be had, it is preferable that the shaft 31 be operated by a suitable device, such for instance as shown in Figs. 7 and 9, consisting of a shaft 38 having gear connections with shaft 31 and a handle 39; an alternative structure would be to employ sprocket wheels and chains for this purpose.

To permit a change in position of the catching device of the portion A the cap 32 may be formed with a spindle 40 located in a recess 41 in the post 33, as indicated in Fig. 8, a suitable set member 42 being employed for retaining the cap in adjusted position. And, if desired, the cap may be provided with a pointer or other indicating device adapted to coöperate with a suitable mark carried by the post to indicate the correct position of the cap when the catching device is in position to properly operate in connection with a passing car.

The catching member carried by the car is of the same general type as that heretofore described, with the exception that the shaft 31 is carried by a sleeve 44 which, in turn, receives a circular portion 45 of the member 20, to permit of a pivotal movement of said member within the sleeve, this movement, however, being limited to a quarter revolution by the presence of a pin 46 carried by the member 20 and which is adapted to contact with a shoulder 47 formed on the supporting bar 48 mounted on the car as presently described, said pin 46 and the shoulder 47 also providing the equivalent of the pin 34 and the shoulders 36 to limit the pivotal movement of the shaft 31 within the supporting bar 48. The shaft 31, in the form used on the car, is screw-threaded at its inner end and is provided with a suitable nut 49 for retaining it in position. To retain the catching device against pivotal movement in the sleeve 44 a set screw 50 is employed. The supporting bar 48 has its ends provided with suitable eyes 51 adapted to be passed between ears 52 formed on

members 53 carried at the sides of the door, said ears being perforated to receive pins 54 which serve to retain the bar 48 in position.

In use, with the catching device in the position shown in Fig. 1, it will pick up the mail bag from the supporter carried by the portion A of the apparatus. After this pick up has been made, the proper pin 54 is removed, thereby permitting the supporting bar 48 to be moved into the car, the other pin 54 serving as the pivot, bringing the catching device entirely within the car, as indicated in Fig. 3, where the mail bag may be removed, and, if desired, the catching device may be turned upwardly by unloosening the set screw 50, the parts then being in the position shown in Fig. 4. Prior to the next "pick up" station, the attaching device is again moved outwardly to the position shown in Fig. 1 ready for operation.

The mail bag supporting member comprises an arm 55 having its inner end bent downwardly, as at 56, and preferably formed angular in cross section to fit a similarly formed recess on the part to which it is connected, this part in the portion A being the arm 23, as indicated in Figs. 1 and 8, while the part in the portion B is the member 53 in rear of the catching device, the supporting device being changed from one member 53 to the other as change in the direction of travel of the car takes place. The remainder of the supporting device comprises two spring arms 57 extending in opposite directions from the arm 55, each terminating with a ring receiving device 58 shown in Figs. 5 and 8, this device providing a spring closed eye adjacent the free end of the spring arms 57. To provide greater resiliency, the arms 57 are preferably formed with a coil 59 intermediate the ends of the arms. If desired, the arm 55 may be dispensed with, and a pin 60 within which the spring arms 57 are secured may be employed, this construction being indicated in Fig. 8.

As the arms 55 are not secured within the members on which they are mounted, being simply passed into openings prepared therefor, it will be readily understood that this supporting device may be removed as an entirety for the purpose of placing the mail bag in position therein, after which the device may be placed in position. When so placed, the catching device grips the mail bag at its middle, and carries the ends of spring arms 57 in the direction of travel of the coöperating parts, with the result that the spring arms are given a resilient movement somewhat in the nature of a pivotal movement tending to carry the free ends of the spring arms to a position where the rings 61 of the mail bag will be carried over such free ends, the eye formed at such free end permitting the bag to pass, thereby allowing the catching device to remove the bags without liability of breaking the parts, this ease of removal being facilitated by reason of the fact that the pull on the bag will tend to close the spring arms toward each other. This particular form of supporting device is especially advantageous in that it is yielding in all directions; it retains the bag in proper position owing to the tension of the arms, permits of the arms passing to a position approximating a vertical line when the bag has been released, thereby causing the device to extend in close proximity to the face of the car after the bag has been released, and which, while durable in structure, and efficient in operation, is of relatively light weight and neat and attractive in appearance.

Having thus described the invention, what is claimed as new is:

1. A bag catching device comprising a support, a member carried by and pivotally movable on said support on a horizontal axis extending at right angles to the direction of length of the member, a relatively fixed arm extending forwardly from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member, said arms extending on the same horizontal plane.

2. A bag catching device comprising a support, a member carried by and pivotally movable on said support on a horizontal axis extending at right angles to the direction of length of the member, a relatively fixed arm extending forwardly from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms, in rear of the forward end of the member, said arms extending on the same horizontal plane and being curved outwardly from their points of connection with the member to provide an open mouth at the forward end of the device.

3. A bag catching device comprising a support, a member carried by and pivotally movable on said support on a horizontal axis extending at right angles to the direction of length of the member, a relatively fixed arm extending forwardly from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member, said support and member being complementally formed to limit the rotative movement of the member.

4. A bag catching device comprising a support, a member carried by and pivotally movable on said support on a horizontal axis

extending at right angles to the direction of length of the member, a relatively fixed arm extending forwardly from the rear end of the member, an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member, said support and member being complementally formed to limit the rotative movement of the member, and means for securing said member in either extreme of its rotative movement.

5. A bag catching device comprising a support, a member pivotally mounted on said support, said member having an opening adjacent its rear end, a relatively fixed arm extending forward from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm having its free end extending through said member opening and having a stop carried thereby to normally retain said end within the opening, said pivoted arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member.

6. A bag catching device comprising a support, a member pivotally mounted on said support, said member having an opening adjacent its rear end, a relatively fixed arm extending forward from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm having its free end extending through said member opening and having a stop carried thereby to normally retain said end within the opening, and a spring carried by said pivoted arm and said member to normally retain said arms in contact.

7. A bag catching device comprising an arm-supporting member, an arm extending forwardly from the rear end of the member, said arm and member being pivotally connected and also having a pin connection for normally retaining said arm fixed with respect to the member, the disconnection of the pin connection permitting a pivotal movement of said arm, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to normally provide contact of both arms in rear of the forward end of the member, the rendering of the relatively fixed arm free to be moved pivotally permitting disengagement of the caught bag from the catching device when normal movement of the tensioned arm is insufficient to permit such removal.

8. A bag catching device comprising an arm-supporting member, a relatively fixed arm extending forwardly from the rear end of the member, said arm projecting laterally and then forwardly in a general direction inclined outwardly relative to the direction of length of the member, a spring-supported arm pivotally secured to the forward end of the member and extending rearwardly, said latter arm having its general direction of length inclined outwardly from its pivot point and having its free end bent toward said member, said bent portion extending into juxtaposition to the laterally extending portion of the relatively fixed arm, said arms being normally in contact in rear of the forward end of the member.

9. A bag catching device comprising an arm-supporting member, a relatively fixed arm extending forwardly from the rear end of the member, said arm projecting laterally and then forwardly in a general direction inclined outwardly relatively to the direction of length of the member, a spring-supported arm pivotally secured to the forward end of the member and extending rearwardly, said latter arm having its general direction of length inclined outwardly from its pivot point and having its free end bent toward said member, said bent portion extending into juxtaposition to the laterally extending portion of the relatively fixed arm, said arms being normally in contact in rear of the forward end of the member, said arms being curved in the direction of their length to provide an extended bag engaging face on each arm.

10. A bag catching device comprising a support, an arm-supporting member, a headed spindle carried by the support, the head of the spindle having an opening extending at right angles to the direction of length of the spindle, said opening being adapted to receive said member pivotally, said spindle being mounted on the support, said spindle and opening permitting pivotal movement of the member into positions at right angles to each other, a relatively fixed arm extending forward from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member.

11. A bag catching device comprising a support, an arm supporting member, a headed spindle carried by the support, the head of the spindle having an opening extending at right angles to the direction of length of the spindle, said opening being adapted to receive said member pivotally, said spindle being mounted on the support, said spindle and opening permitting pivotal movement of the member into positions at right angles to each other, said member and support having complemental means to limit the pivotal movement of the member in each of said directions, a relatively fixed arm extending forwardly from the rear end of the member, and an arm pivotally connected to the for-

ward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member.

12. In a mail bag catching apparatus, a bag catching device comprising a support, a member carried by and pivotally movable on said support on a horizontal axis extending at right angles to the direction of length of the member, a relatively fixed arm extending forwardly from the rear end of the member, and an arm pivotally connected to the forward end of the member and extending rearwardly, said latter arm being controlled tensionally to provide contact of both arms in rear of the forward end of the member, said relatively fixed arm carrying a removable bag delivering device.

13. In a mail bag catching apparatus, the combination with a mail car having a door, of a member secured at each side of the door way, a support of less length than the width of the door way, said support having a pin connection with each member, the removal of either pin permitting a pivotal movement of the support with the other pin as the pivot, and a bag catching device carried by and movable with said support, said device being positioned to permit movement of the support within the car upon removal of the pin connection at one end of the support but prevent such movement if the other pin be removed.

14. A mail bag delivering device comprising a support, a member removably mounted in said support, a pair of resilient arms secured to said member and extending in opposite directions therefrom when in open position, and bag retaining devices located at the outer ends of said arms, each of said arms having a spring coil intermediate its ends.

15. A mail bag delivering device comprising a support, a member removably mounted in said support, a pair of resilient arms secured to said member and extending in opposite directions therefrom when in open position, and bag retaining devices located at the outer ends of said arms, each of said arms having a spring coil intermediate its ends, said coil having its axis extending in the direction of travel of the mail car.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE W. POMEROY.

Witnesses:
WM. T. WILSON,
THOMAS H. WILSON.