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Fig. 1.

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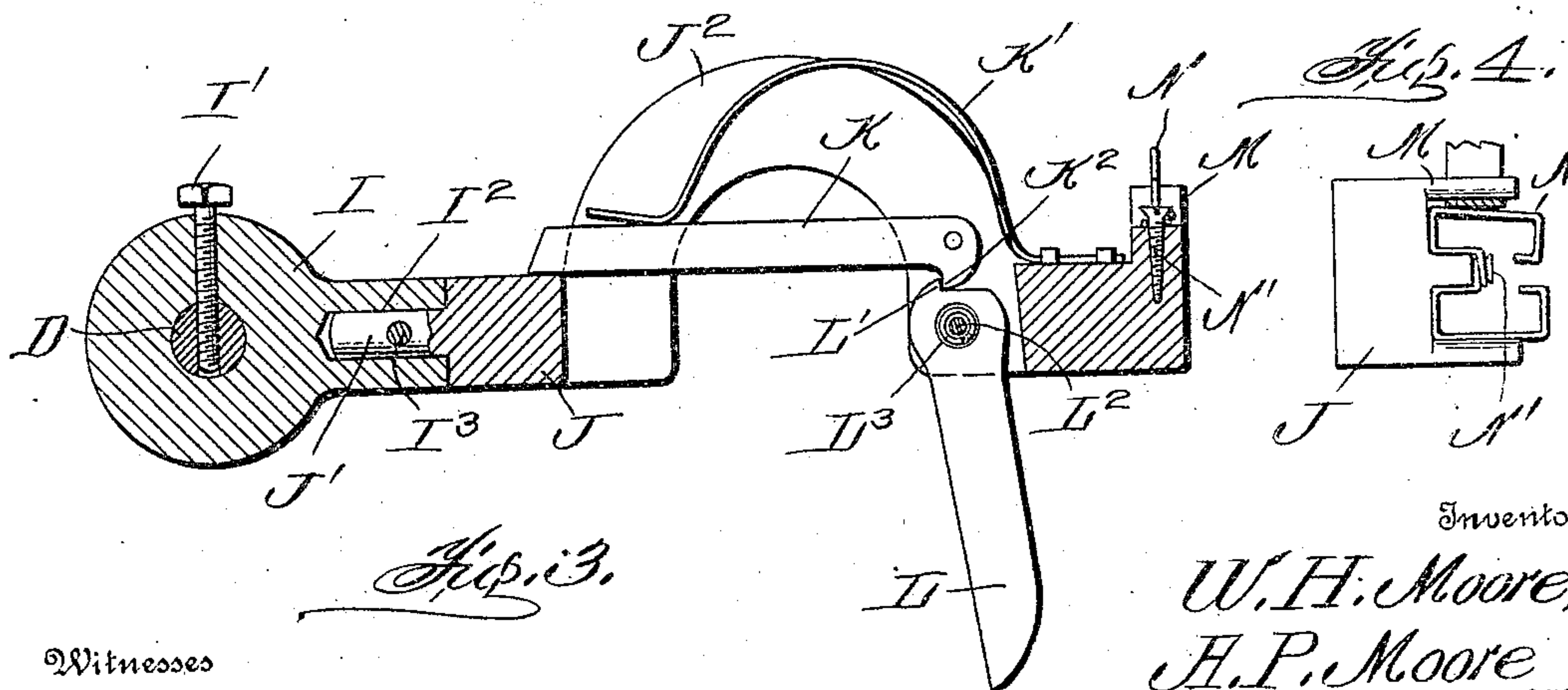
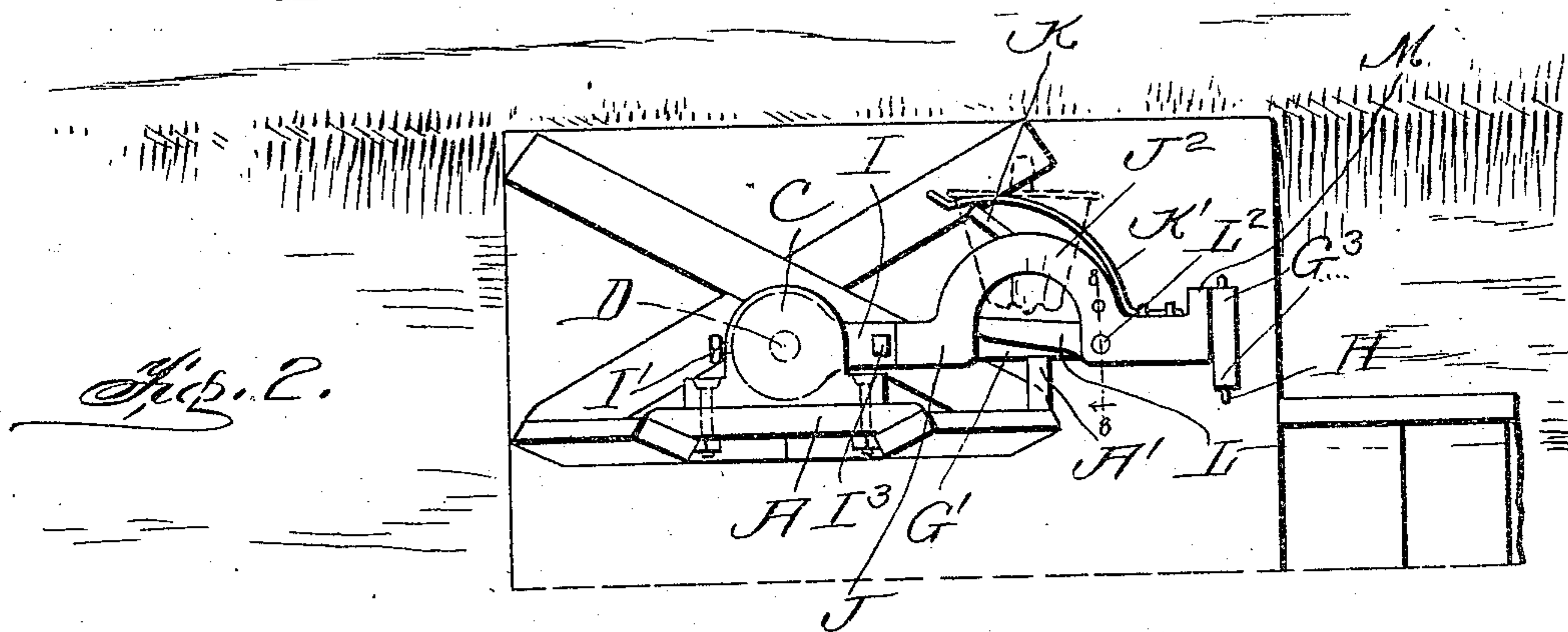
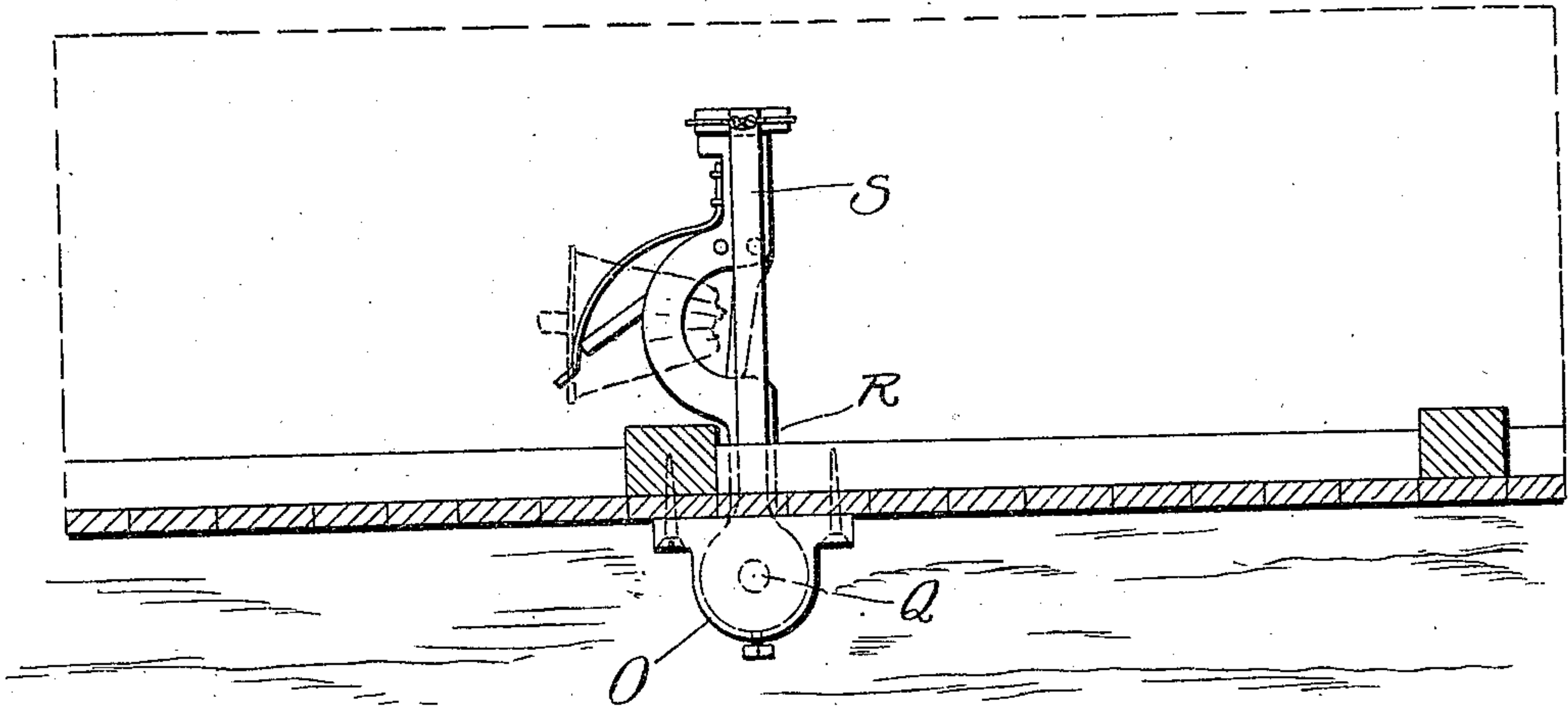
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940,887.

Patented Nov. 23, 1909.

3 SHEETS—SHEET 2.



Witnesses

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W. H., A. P. & A. MOORE.
MAIL BAG CATCHER AND DELIVERER.
APPLICATION FILED MAR. 13, 1909.

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3 SHEETS—SHEET 3.

Fig. 5.

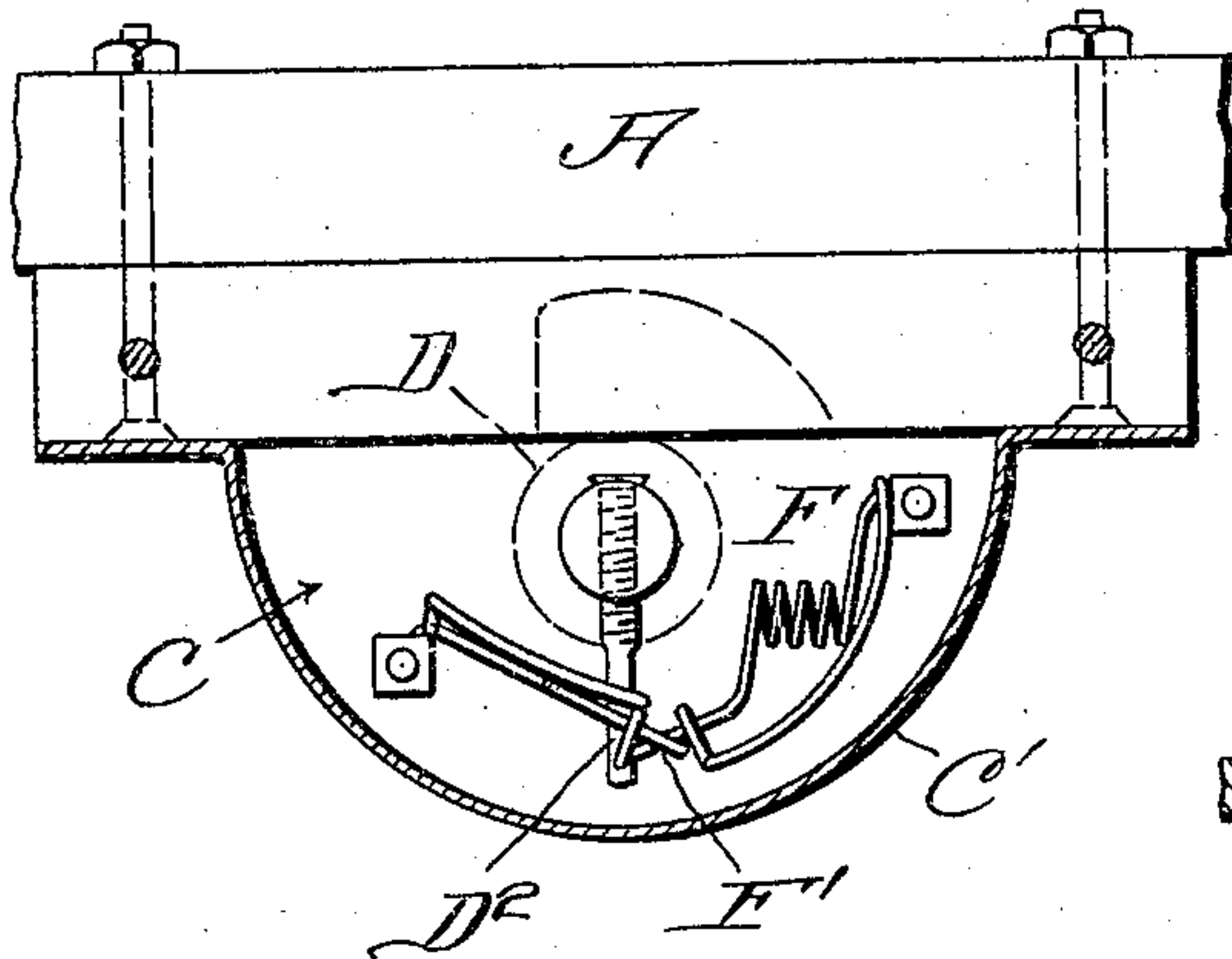


Fig. 7.

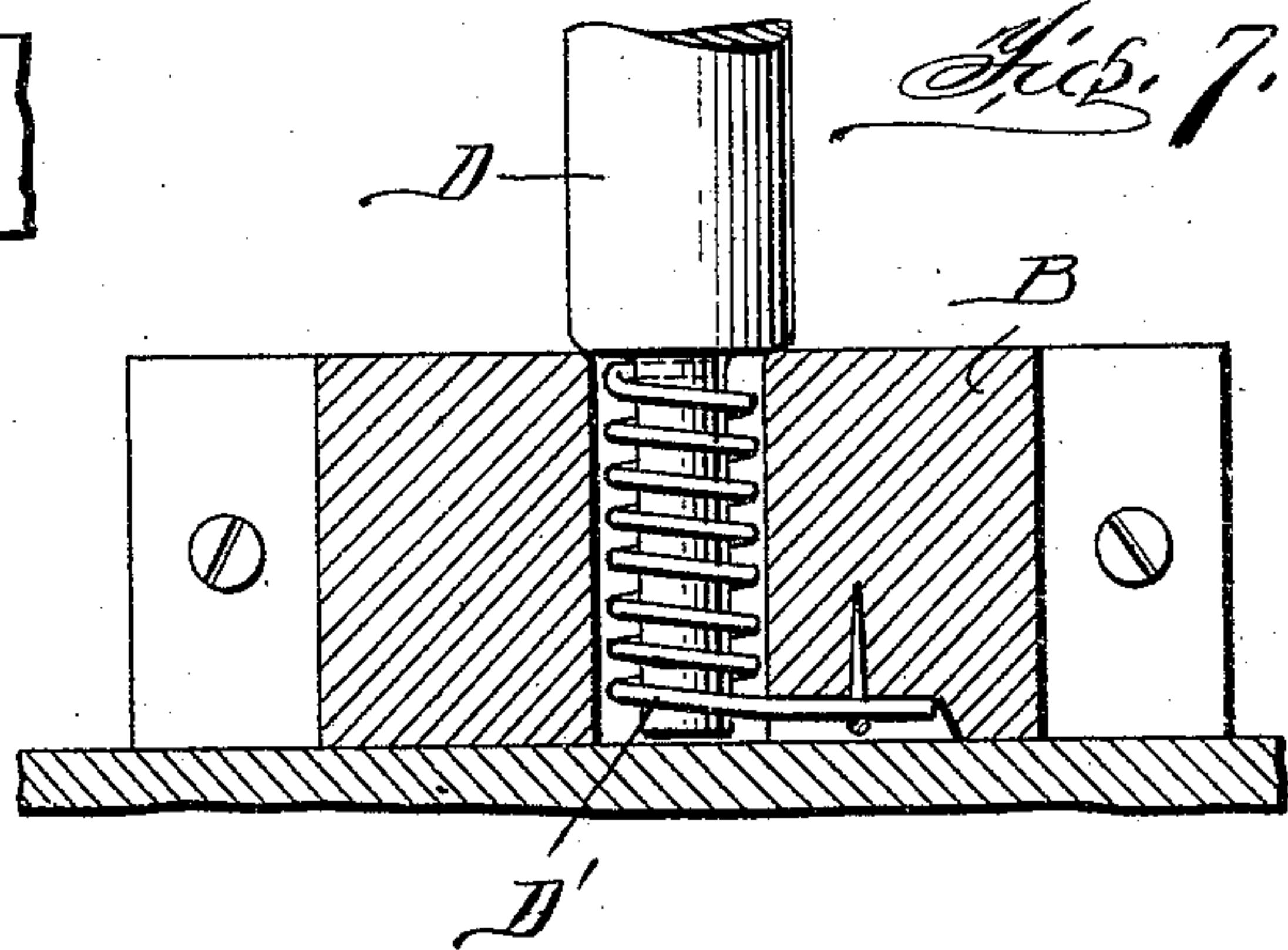


Fig. 6.

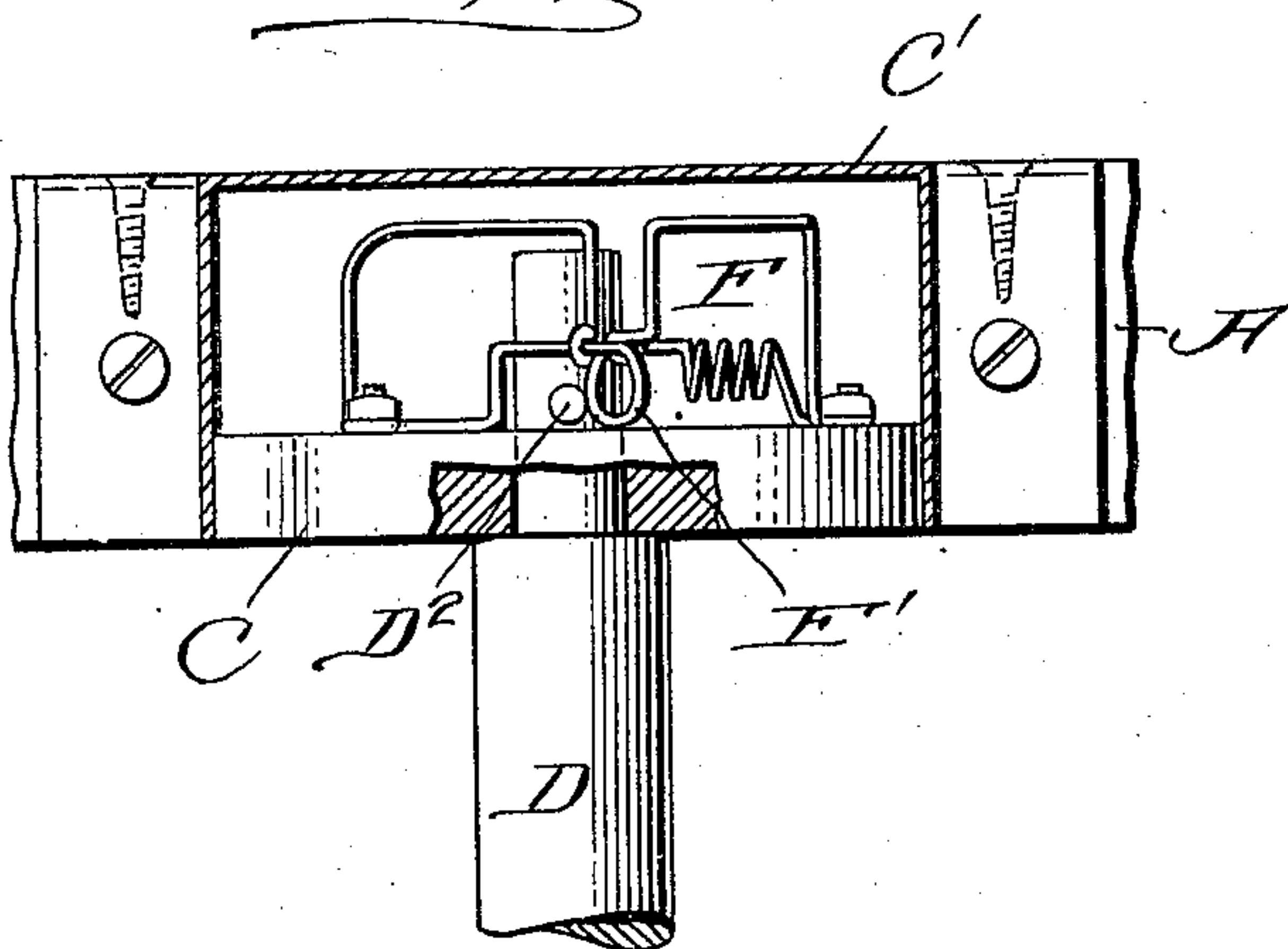
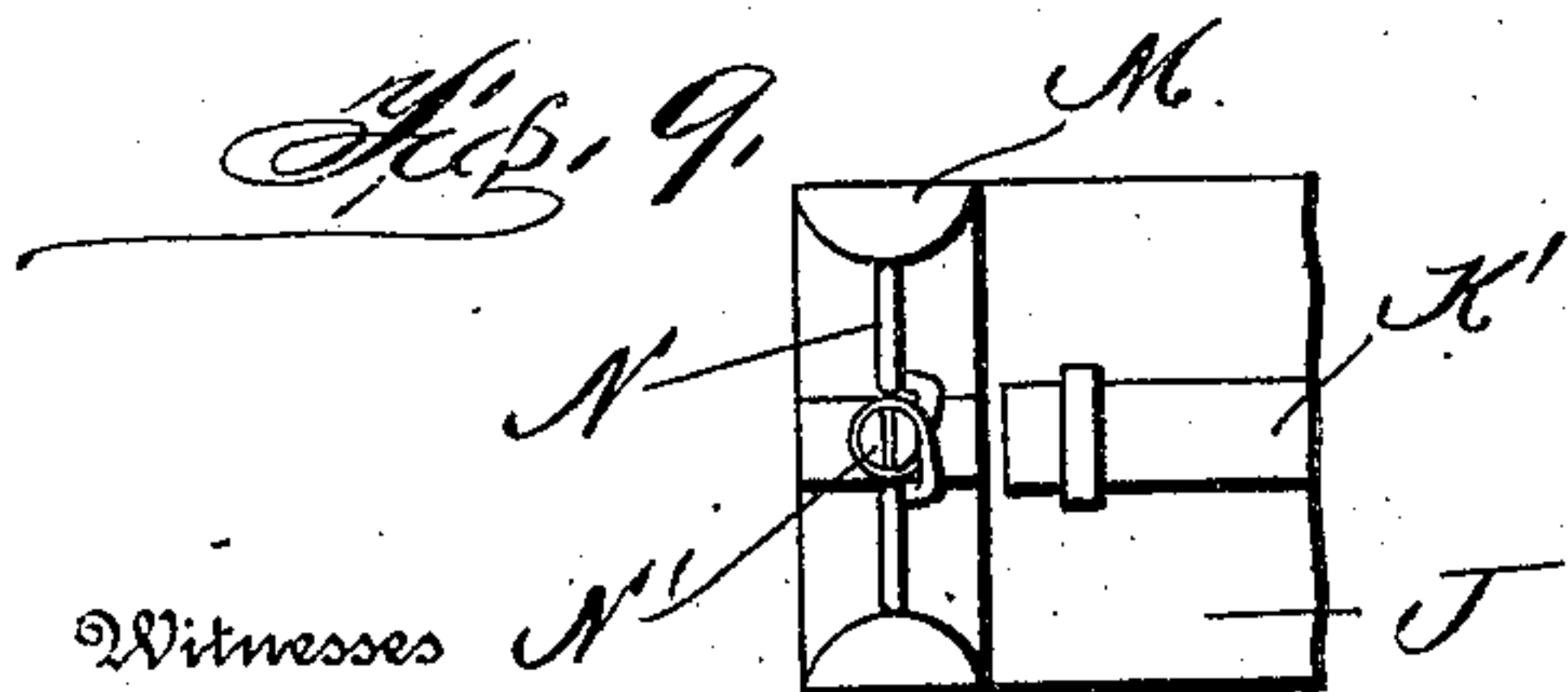
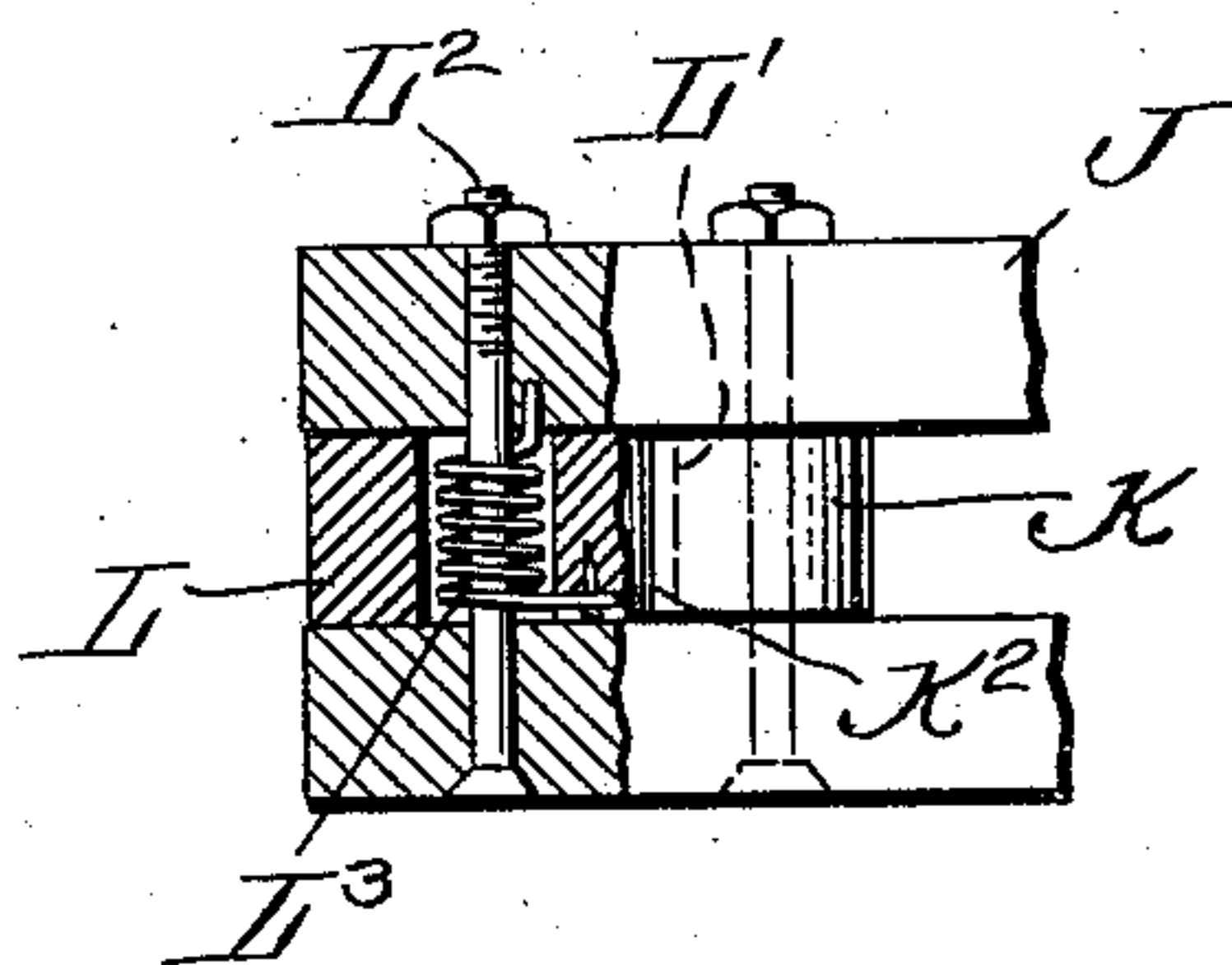
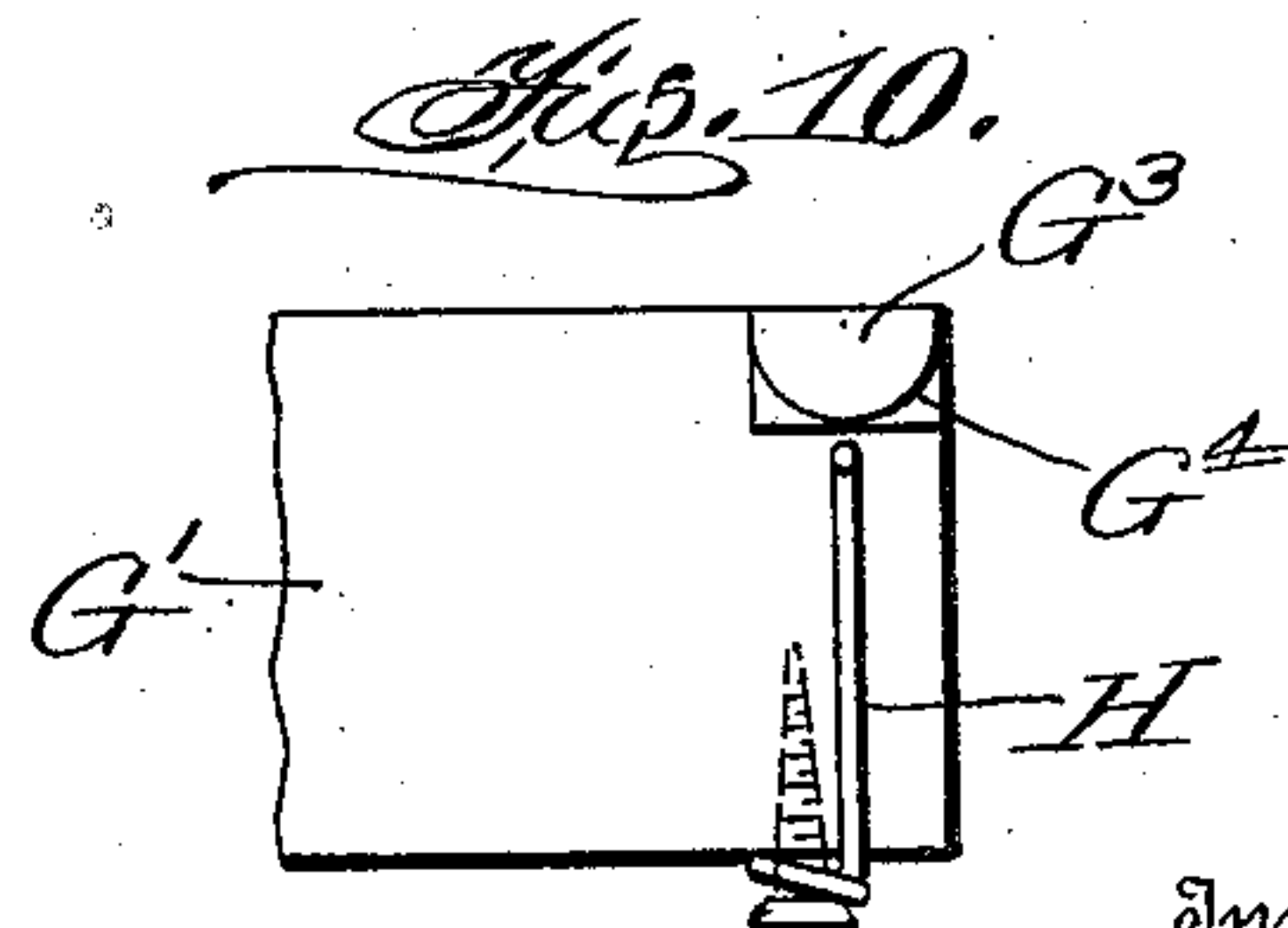


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM H. MOORE, ALBERT P. MOORE, AND ARCHIBALD MOORE, OF TOLEDO, OHIO.

MAIL-BAG CATCHER AND DELIVERER.

940,887.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed March 13, 1909. Serial No. 483,301.

To all whom it may concern:

Be it known that we, WILLIAM H. MOORE, ALBERT P. MOORE, and ARCHIBALD MOORE, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Improvement in Mail-Bag Catchers and Deliverers, of which the following is a specification.

10 This invention relates to certain new and useful improvements in mail bag catchers and deliverers, the object being to provide a device by means of which a mail bag can be delivered from a moving train and at the same time one will be caught in such a manner that the bag will be thrown into the car so that it can be readily removed.

Another object of our invention is to provide a catching arm with a trip mechanism which is operated by the bag so as to release a spring finger which closes over the bag and holds the same thereon.

25 A further object of the invention is to provide means for holding the arms in position to deliver and catch a bag and at the same time said means will be released as the bag is brought into engagement with the arms so as to allow the arms to swing back so that the bag can be removed.

30 A still further object of our invention is to provide a mail bag catcher and deliverer which is so constructed that the arms of the respective members can be readily reversed so that it can be used on a car going in either direction.

35 A still further object of our invention is to provide a frame and a car with a spring actuated shaft, each of which is provided with a catching arm and a holding arm arranged in vertical alinement on the respective shafts and provided with means for holding a bag in position to be caught.

40 Another object of the invention is to provide a mail bag catcher and deliverer which is exceedingly simple and cheap in construction and one which is composed of a few parts which are so arranged and connected that they are not likely to get out of order when in use, and at the same time said parts being sufficiently strong to stand the shock of the bag when it is being caught.

50 With these various objects in view, our invention consists in the novel features of construction, arrangement and combination

of parts hereinafter fully described and pointed out in the claims.

In the drawings forming a part of this specification: Figure 1 is a perspective view of our improved mail bag catcher and deliverer. Fig. 2 is a top plan view of the same in a closed position. Fig. 3 is a horizontal section through the catching arm. Fig. 4 is an end view of the same. Fig. 5 is a horizontal section through one of the bearings. Fig. 6 is a front elevation partly in section of the same. Fig. 7 is a vertical section through one of the lower bearings. Fig. 8 is a section taken on the line 8—8 of Fig. 2. Fig. 9 is a rear elevation of the catching arm, and Fig. 10 is a detail front elevation of the holding arm.

In carrying out our invention, we employ a frame A adapted to be arranged along side of a track in the ordinary manner, said frame being provided with bearings B and C in which is mounted a vertical shaft D to the lower end of which is connected a coil spring D' within the bearing B and the shaft is provided with a pin D² within the bearing C forming substantially a pawl which co-acts with a spring member F arranged within the bearing C and is provided with a loop F' which co-acts with the pin D² so as to hold the shaft in a certain position for the purpose hereinafter fully described. The spring member F is preferably formed of wire and is secured within the bearing by bolts and is provided with coiled portions so as to allow the loop portion F' to yield when the shaft is moved suddenly so as to allow the pawl to ride under the same. The bearing C is inclosed by a cover C' so as to protect the spring member and bearing from the weather and at the same time provide means for oiling the same or replacing a spring if it should accidentally become broken.

Arranged on the shaft D adjacent its lower end is a sleeve G provided with a bore G' through which is adapted to extend a pin G² which fits within the opening of the shaft D so as to hold the sleeve on the shaft in the proper position, and the sleeve G is provided with an arm G' having laterally projecting end portions G³ which are cut away as shown at G⁴ against which spring loop members H are adapted to bear, said spring members being secured to the under

side of the arm by screws H' and it will be seen that when the strap of a bag is placed over the laterally projecting ends of the arm G', the spring members will bear against the same and hold the loop in position thereon in such a manner that it can be readily pulled off the same when it is caught by a catcher as will be hereinafter fully described.

Arranged on the shaft adjacent its upper end is a sleeve I which is also provided with a bore through which extends a pin I' adapted to fit in an opening formed in the shaft so as to hold it thereon in its proper position and the sleeve I is provided with a socket portion I² in which is adapted to fit the tongue J' of an arm J, said tongue being provided with an opening adapted to aline with an opening in the socket through which a pin I² is adapted to fit for locking the tongue within the same, and it will be seen by this arrangement that the arm J can be readily reversed in order that the same can be used in going in either direction. The arm J is provided with a bowed portion J² and is bifurcated in which bifurcation is mounted a pivoted tripping finger K which is engaged by a bowed spring K' and is provided with a shoulder K² adapted to co-act with a shoulder L' of a pivoted locking finger L which is mounted on a bolt L² and is provided with a coil spring L³ one end of which is connected to the locking finger L and the other to the arm J, said locking finger being adapted to be thrown out into such a position that the shoulder of the same will co-act with the shoulder of the tripping finger and hold the same outwardly and as the bag strikes the tripping finger, it will release the locking finger so that the same will be forced over the loop of the bowed portion of arm J against the bag which has been caught thereon and hold the same whereby all danger of the bag slipping off the arm is prevented. The end of the arm J is provided with spaced rearwardly projecting shoulders M which are rounded and against which are adapted to bear spring loop members N carried by a screw N', said projecting members being adapted to receive the upper loop of the mail bag which is gripped by the spring members so as to hold the same in position thereon and it will be seen that we have provided two of these projections so that when the arm is reversed the member not in use will be brought into use.

The frame A is provided with a spring buffer A' against which the lower arm of the device is adapted to strike when it is thrown back by the coil spring and in operation, the shaft is turned so as to bring the pin of the same under the spring loop F' of the spring member F which will hold the arms in an outward position and the bag to be delivered to the train is placed over the projecting members of the respective arms under

the spring loops and as the bag is caught by the arm with the bowed portion, it is forced around a slight distance and when released, the spring of the bearing B will have sufficient force to force the pin under the spring loop of the spring member F which throws the lower arm against the spring buffer so that the bag can be readily removed from the side.

The catcher and deliverer carried by the car is substantially the same as the catcher and deliverer heretofore described and comprises upper and lower bearing members O and P in which is mounted a spring actuated shaft Q carrying arms R and S constructed in the same manner as the arms G² and J, having the same holding means and catching means, but being arranged on a shaft in the reverse position so that it will fit between the arms G² and J in order that the bag can be caught and one delivered at the same time. The shaft is also locked by a spring member which is of exactly the same construction as the spring member F and it will be seen that when a bag is caught by the arm S, the pin carried by the shaft within the bearings O and P will be carried under the spring member so as to allow the arms to swing within the door of the car which enables the bag to be removed so that all danger of the mail clerk being injured by reaching out of the car and removing the bag from the catcher as is the case with mail bag catchers now in use, is prevented. The construction of the catcher and deliverer carried by the car is identical with the construction of the catcher and deliverer carried by the frame with the exception of the reversed position of the arm and it is not thought that it is necessary to go into detail in describing these parts as the construction of the same can be readily understood from the description heretofore given.

It will be seen that it will be necessary to have the frame which is arranged along side of a track elevated to the proper position so that the arms of the respective catchers and deliverers will be in different horizontal planes so that all danger of the arms striking one another is prevented and at the same time it will be seen that by reversing the catching arm from the shaft carried by the frame and the shaft carried by the car, the device can be used for catching and delivering mail on a car going in either direction.

The operation of the device is as follows: The arms of the respective shafts are swung outwardly so as to extend laterally from the stand and car, the shaft being turned until the pins carried thereby are brought under the loops of the spring members which will hold the same in that position, it of course being understood that the loops of the mail bags have been previously put in position on

the arms and as the train passes the arms carried by the frame, the bag carried by the arms of the train will be brought into engagement with the tripping finger of the arm of the frame which trips the locking finger so as to lock the bag thereon and the same operation occurring on the arm carried by the train so that the respective bags will be held by the respective arms and swung into such a position that they can be readily removed.

In the drawings, we have shown our improved mail bag catcher and deliverer arranged on a car which is adapted to travel on a single track, but it is of course understood that the position of the arms can be readily reversed so that the catcher and deliverer would operate substantially in the same manner on a train going in the reverse direction.

While we have shown and described a certain peculiar construction of arm for holding the bag, it is of course understood that various other forms can be used, but we have found by experimenting that spring loops hold the straps of the bag in position so that all danger of the bags becoming accidentally detached therefrom is prevented and at the same time the spring yielding sufficiently to allow the straps to pass from under the same when the bag is caught by one of the catching arms.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. In a mail bag catcher and deliverer, the combination with a frame adapted to be arranged alongside of a track, of a spring actuated shaft carried by said frame provided with a catching and a holding arm, means for holding said shaft in position whereby said arms will extend laterally therefrom with respect to the frame, and duplicate arms carried by the shaft mounted on the car co-acting with said arms.

2. In a mail bag catcher and deliverer, the combination with a frame adapted to be arranged alongside of a track, of a spring actuated shaft carried by the frame, a catching and a holding arm mounted on said shaft, said catching arm being provided with a tripping and a locking finger, and means for locking said shaft so as to hold said arms at right angles to the frame.

3. A mail bag catcher and deliverer comprising a shaft, a spring surrounding one end of said shaft for operating the same, a pin carried by the shaft, a spring member co-acting with the said pin for normally holding said shaft in adjusted position, and a catching and a holding arm carried by said shaft for catching and holding a bag whereby the pin of the shaft will be thrown from under the spring member when the arm is swung by the force of the bag.

4. In a mail bag catcher and deliverer, the combination with a frame carrying a spring actuated shaft, a catching and a holding arm fixed on said shaft, said catching arm being provided with a tripping and a locking finger, and means for holding said shaft against the tension of said spring whereby said arms will be held in position to catch and deliver a mail bag.

5. In a mail bag catcher and deliverer, the combination with a frame carrying a spring actuated shaft, a catching and a holding arm fixed on said shaft, said catching and holding arms co-acting with a catching and a holding arm carried by a spring actuated shaft mounted on the side of a car whereby a mail bag can be caught and delivered at the same time.

6. A mail bag catcher and deliverer comprising bearings, a spring actuated shaft mounted in said bearings provided with a catching and a holding arm, said catching arm being provided with a bifurcated bowed portion, a spring actuated tripping finger mounted in the bifurcation of the bowed portion, and a spring actuated locking finger adapted to be released by the tripping finger so as to hold a bag within the bowed portion of the arm.

7. A mail bag catcher and deliverer comprising bearings having a spring actuated shaft mounted therein, a pin carried by said shaft within one of said bearings, a spring member for engaging said pin, a catching and a holding arm fixed on said shaft whereby said shaft will be oscillated by the blow of the bag so that when it is released the tension of said spring will carry the pin of the shaft under the spring member.

8. In a mail bag catcher and deliverer, the combination with a spring actuated shaft, of means for holding said shaft in a certain position, a holding and a catching arm fixed on said shaft, said catching arm being provided with means for holding a bag and a tripping and locking finger carried by the catching arm for holding a bag after it has been caught.

9. A mail bag catcher and deliverer comprising a spring actuated shaft carrying a catching and a holding arm, means for holding said shaft against the tension of the spring whereby said arms will be held outwardly therefrom, and a spring actuated tripping finger provided with a shoulder co-acting with a locking finger carried by the catching arm for holding a bag after it has been caught.

10. In a mail bag catcher and deliverer, the combination with a spring actuated shaft provided with means for locking the same against the tension of the spring, a holding arm fixed on said shaft, a sleeve provided with a socket fixed on said shaft, a catching arm provided with a tongue secured

within the socket, said catching arm being provided with a bifurcated bowed portion, a tripping finger mounted within the bifurcation of the bowed portion normally held across the loop of the same by a spring, and a locking finger adapted to be released by the tripping finger for closing said loop.

11. In a mail bag catcher and deliverer, the combination with a catching arm having a bifurcated bowed portion, a tripping finger mounted within the bifurcation, a spring for holding said tripping finger in position, a locking finger held in an outward position by said tripping finger whereby said locking finger will be forced across the loop of the bowed portion when the tripping finger is struck by a bag.

12. In a mail bag catcher and deliverer, the combination with a catching arm having means at its end for supporting a bag, said catching arm being provided with a bowed portion, a spring actuated tripping finger mounted within said arm provided with a shoulder, and a spring actuated locking finger provided with a shoulder co-acting with the shoulder of the tripping finger whereby said locking finger will be forced across the loop of the arm when the tripping finger is struck by a bag.

13. In a mail bag catcher and deliverer, the combination with bearings carrying a spring actuated shaft, of spring means for holding said shaft against the tension of the

spring, a holding arm fixed on said shaft and a reversible catching arm carried by the shaft provided with means for holding a bag at its end.

14. In a mail bag catcher and deliverer, the combination with a spring actuated shaft, of a holding arm fixed on said shaft, a sleeve fixed on said shaft provided with a socket, a catching arm provided with a tongue adapted to be locked within said socket by a pin, means for locking said shaft against the tension of the spring whereby said arms will be held in an outward position, and means carried by the catching arm for locking the bag over the same after it has been caught.

15. In a mail bag catcher and deliverer, the combination with a spring actuated shaft carrying means for locking the same against the tension of the spring, a holding arm provided with means for holding a bag upon opposite sides, a catching arm carried by the shaft provided with means for supporting a bag at its end, said catching arm being provided with a bowed portion, having a tripping and a locking finger whereby the bag will be locked in the bowed portion after it has been caught.

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Witnesses:

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