

(No Model.)

J. F. MAINS.
MAIL BAG CATCHING FORK.

No. 435,508.

Patented Sept. 2, 1890.

Fig. 5.

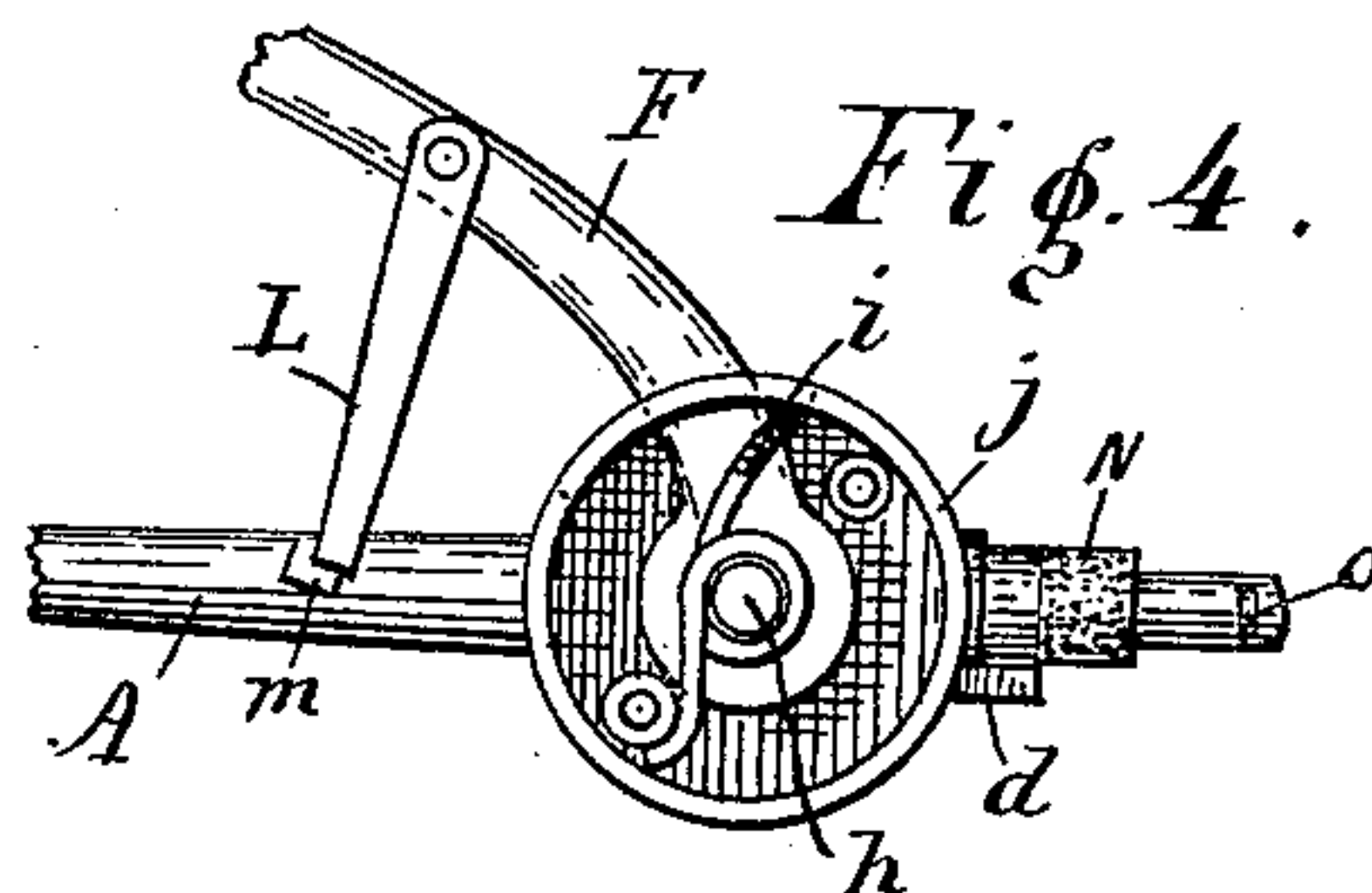
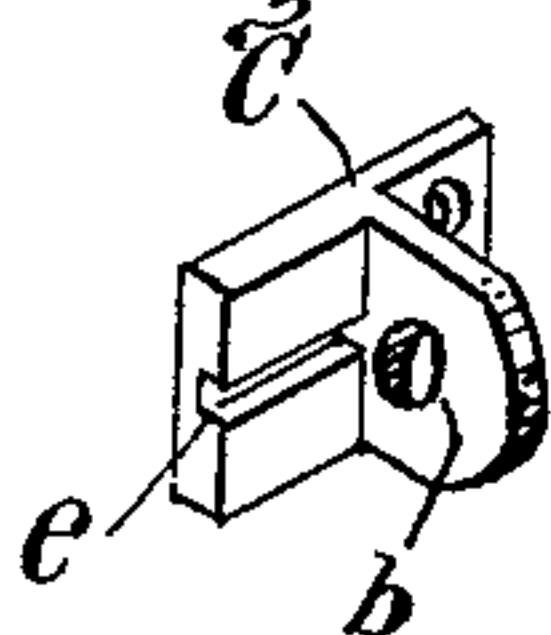


Fig. 3.

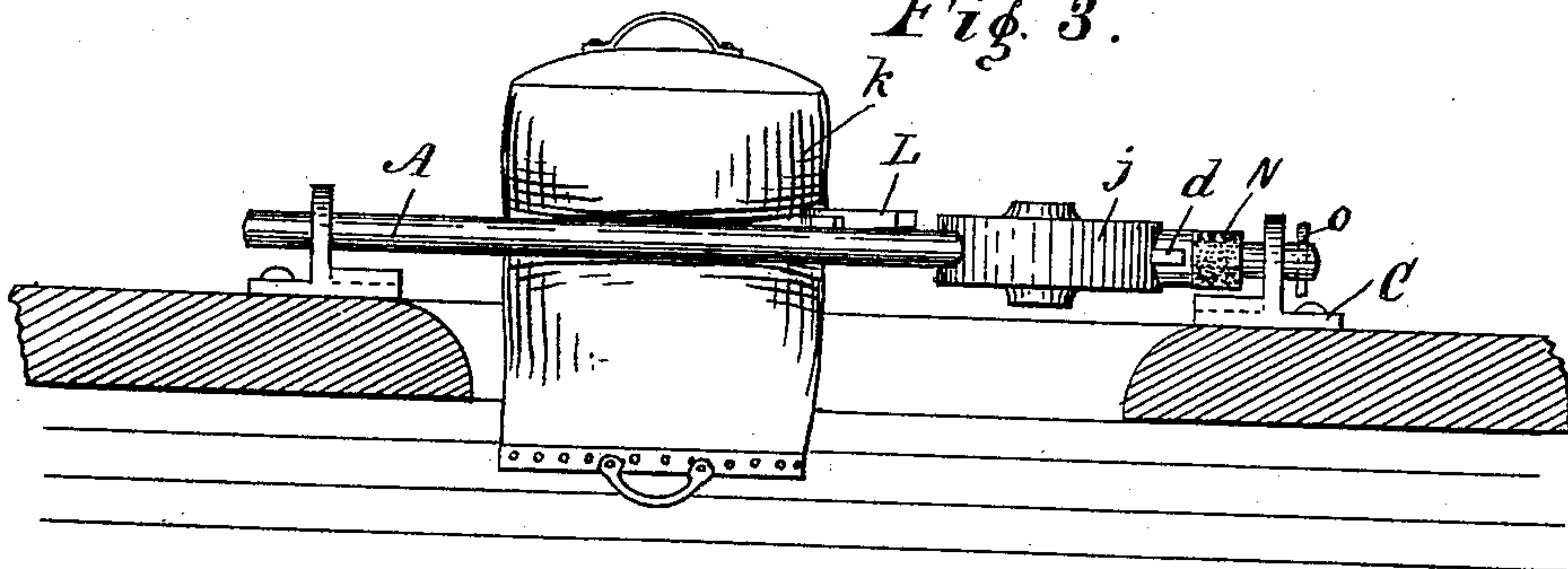


Fig. 2.

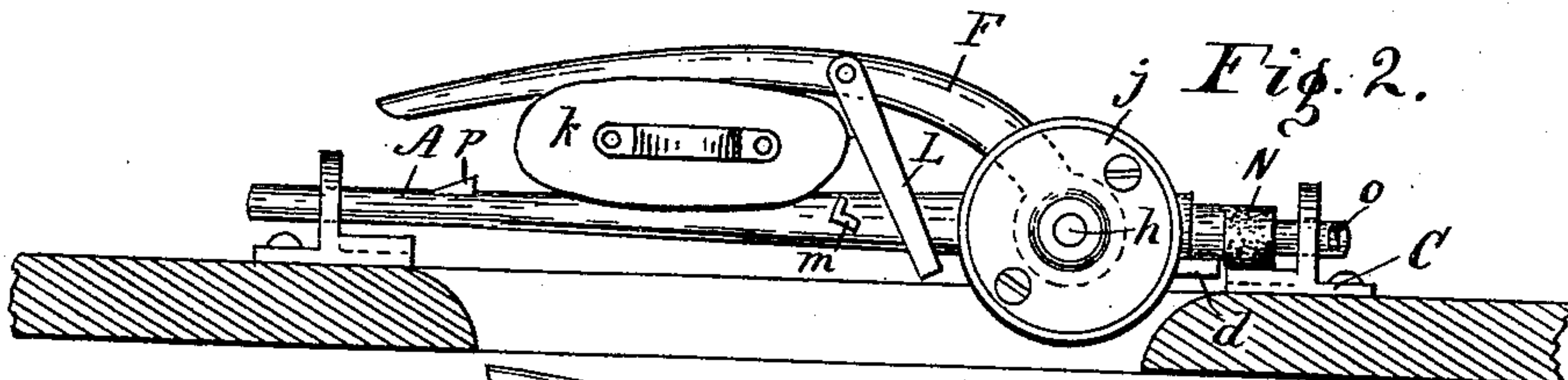
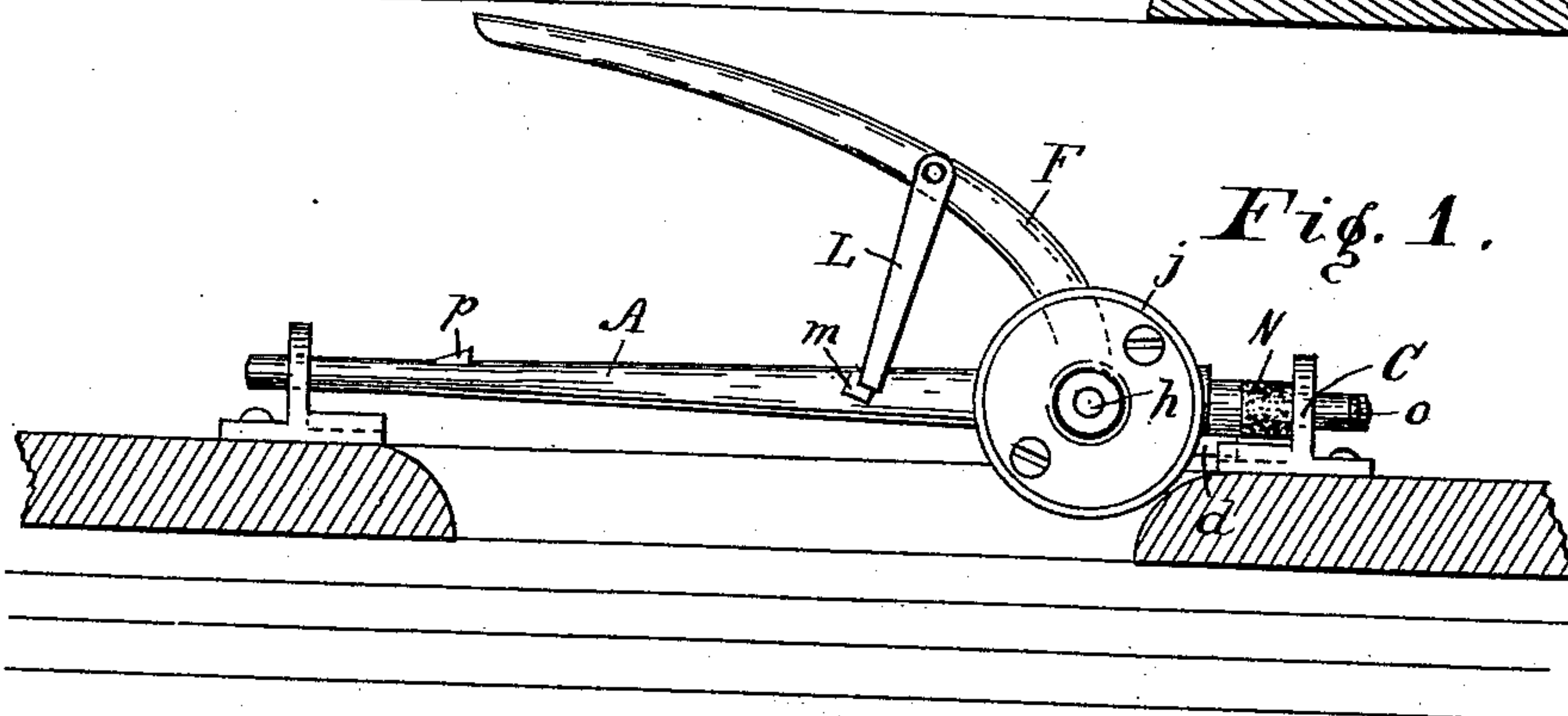


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN F. MAINS, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF TWO-THIRDS TO
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MAIL-BAG-CATCHING FORK.

SPECIFICATION forming part of Letters Patent No. 435,508, dated September 2, 1890.

Application filed January 13, 1890. Serial No. 336,785. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. MAINS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Mail-Bag-Catching Fork, of which the following is a specification.

My invention relates to an improved device for catching mail-bags either upon or from a car in motion.

The objects of my improvement are to prevent the mail-bag from rebounding out of the catching-fork and to cause the bag when caught to be automatically swung onto a platform or into a car, as the case may be, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a plan showing the catching-fork set to receive the bag. Fig. 2 represents a plan showing the bag caught by the fork and ready to swing into the car. Fig. 3 represents a plan showing the fork at rest after receiving the bag. Fig. 4 represents a plan of the fork, showing the interior of its joint. Fig. 5 represents a view in perspective of one of the brackets in which the catching-fork is mounted.

In the drawings, A is a bar having at each end a cylindrical portion adapted to slide longitudinally and to turn in bearings like *b*, formed on a supporting-bracket C, Fig. 5. One end of bar A is provided with a short projecting rib *d*, which is adapted to enter and slide easily in a groove *e*, formed in the face of bracket C, the purpose being to prevent bar A from turning in its bearings when the rib is engaged with the groove.

F is a slightly-curved arm pivoted at one end to bar A at *h*. Arm F is drawn normally toward bar A by a stiff spring *i*, mounted in a hollow casing *j*, formed on the bar and surrounding the pivot *h*. A clamp is thus formed which is adapted to embrace and hold a filled or partially-filled mail-bag.

For the purpose of holding the free end of arm F away from bar A, and thus forming a fork in which the bag *k* may be received, and which will be automatically closed on the entrance of the bag, I mount between the bar and the arm near their joint a trip-lever L.

One end of lever L is pivoted to the bar or to the arm, and the other rests against a stop *m*, projecting from the other member, the arrangement being such that the lever stands across the path of the incoming bag, so as to hold the fork open, and its free end is disengaged from the stop by the impact of the bag against the edge of the lever.

The catching-fork is mounted across a car-door by means of a pair of brackets like C, secured to the side of the car-door, the brackets being alike, so that the bar A may be turned end for end in the brackets and present the open end of the fork always toward the direction in which the car is moving.

Bar A is provided at its rear end with an elastic buffer N, preferably of rubber, and the bar is secured in its bearings by a cotter-pin *o*, passing through the bar outside of the bearing, the arrangement being such that when the end of buffer N rests against the inner face of the bracket the rib *d* will rest in the groove *e*, and there will then be sufficient space between the outer face of the bracket and the cotter-pin to allow a longitudinal movement of the bar sufficient to draw the rib out of the groove.

For the more secure retention of the mail-bag when caught the edge of bar A, opposed to the arm F, may be provided with one or more inwardly-inclined teeth, as at *p*.

In operation the mail-bag is suspended at a station in the usual well known or any other suitable manner, so that the middle of the bag will be about on a line with bar A on the car and within reach of the arm F when extended. As the car approaches the station, arm F is extended and held in position by engaging the free end of the trip-lever L with stop *m*. Bar A is now turned so that rib *d* enters groove *e*, thus holding arm F extended outward at an angle with the side of the car, the open end of the angle being toward the suspended mail-bag. As the car passes the bag, the bag enters the angle between bar A and arm F, and lever L, coming in contact with the bag, is disengaged from stop *m*, arm F is released, and the bag is grasped between arm F and the bar by the tension of spring *i*. The shock of contact with the bag compresses buffer N and the recoil of the buffer throws

rib *d* out of groove *e*, thus leaving the bar free to yield to the weight of the bag and turn on its axis, thus swinging the lower end of the bag into the car in the position shown in Fig. 3. It is obvious that the fork may be used to receive a mail-bag in like manner from a moving car by mounting the fork on a frame beside the track and suspending the bag from the car.

10 I claim as my invention—

1. In a mail-bag-catching fork, the combination of bar A, adapted to slide and to turn in fixed bearings at each end and having the hollow casing *j* formed integral therewith and provided with stop *m*, arm F, pivoted to the bar within said casing, spring *i*, mounted within the casing and arranged to engage and control the arm, and trip-lever L, pivoted to the bar and arranged to engage the stop.

2. In a mail-bag-catching fork, the combination of the bar A, having cylindrical ends and provided with the projecting rib *d*, the swinging spring-controlled arm pivoted to the bar, the trip-lever arranged to hold said arm extended, the elastic buffer N, mounted on bar A, and the bracket C, forming a bearing for the end of the bar and provided with the groove *e*, adapted to receive the rib *d*, all arranged to co-operate in the manner specified, whereby the buffer is compressed by the impact of the mail-bag and the rib is disengaged from the groove by the recoil of the buffer, as and for the purpose set forth.

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Witnesses:

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