

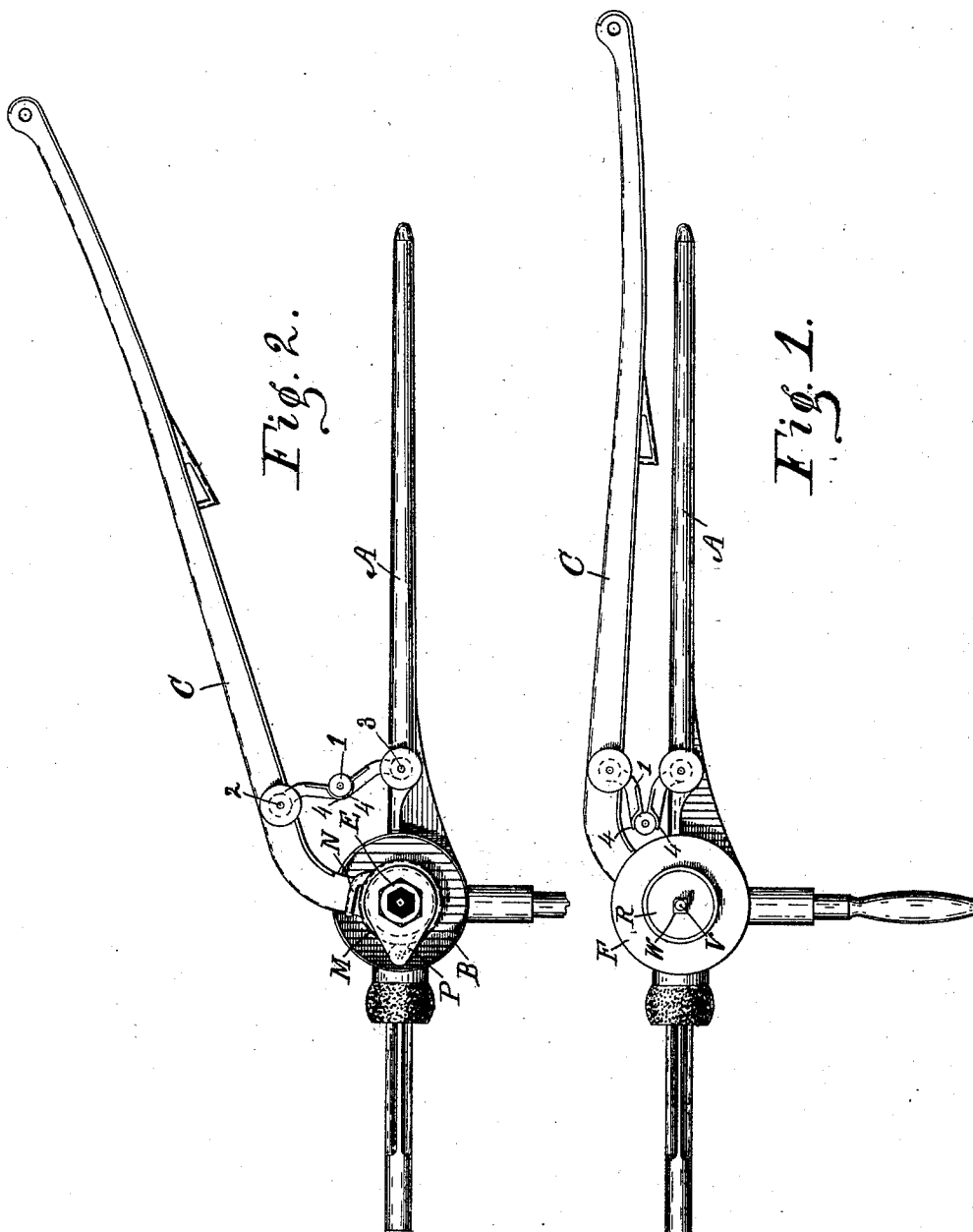
(No Model.)

2 Sheets—Sheet 1.

J. F. MAINS.
MAIL BAG CATCHING FORK.

No. 468,811.

Patented Feb. 16, 1892.



WITNESSES:
A. M. Hood
F. B. Stratford

INVENTOR
John F. Mains.
BY
H. P. Hood,
ATTORNEY.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 8.

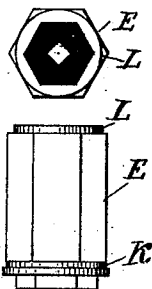
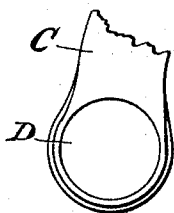


Fig. 4.

Fig. 5. Fig. 6.

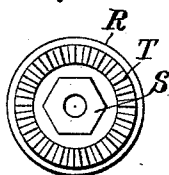
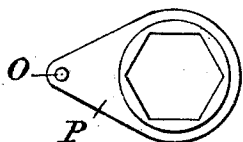


Fig. 7.

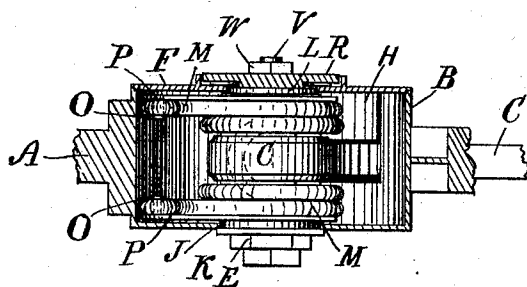
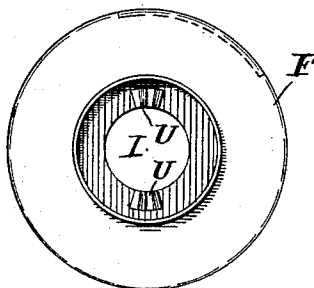


Fig. 3.

WITNESSES:

A. M. Hood,
J. B. Stetson.

INVENTOR

John F. Mains

BY

H. P. Hood,

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN F. MAINS, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE MAINS PATENT MAIL CATCHER AND DELIVERER COMPANY, OF SAME PLACE.

MAIL-BAG-CATCHING FORK.

SPECIFICATION forming part of Letters Patent No. 468,811, dated February 16, 1892.

Application filed August 31, 1891. Serial No. 404,183. (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 improvement in mail-bag-catching forks for which Letters Patent No. 435,508 were granted to me September 2, 1890. The catching-fork shown and described in the above Letters Patent consists, essentially, of a bar adapted to be mounted on the side of a railway-car, an arm pivoted to said bar so as to swing thereon in substantially the same plane, a spring arranged to draw the free end of the arm toward the bar, and a trip-lever arranged to hold the arm extended so as to receive the mail-sack and to be disengaged by the impact of the sack so as to allow the arm to close upon the bar.

The objects of my present improvement are, first, to provide a more sensitive trip-lever for holding the arm extended, and, second, to provide means for regulating the tension of the spring which controls the catching-arm.

The accompanying drawings illustrate my invention.

Figure 1 is a plan of the catching-fork, showing the pivoted arm closed upon the bar. Fig. 2 is a plan of the catching-fork, showing the arm extended and the cover of the spring-chamber removed. Fig. 3 is a section at *a*, Fig. 1, on an enlarged scale. Fig. 4 represents a side elevation of the pivot on which the catching-arm is mounted. Fig. 5 represents a plan of one of the plates to which the spring is secured. Fig. 6 represents a plan of the under side of the ratchet-plate which holds the spring in tension. Fig. 7 is a plan of the upper side of the cover of the spring-chamber. Fig. 8 is a plan of the pivoted end of the catching-arm.

In the drawings, A indicates a cylindrical bar having formed therein a hollow chamber B and adapted to be mounted in bearings on the side of a railway-car in the usual well-known manner.

C indicates the catching-arm, provided at one end with an eye D, which is adapted to re-

ceive and turn upon a hollow pivot E, which is mounted centrally in the chamber B. The open top of chamber B is closed by a circular plate F, having on its under side a flange H, which projects downward and forms, when in position, a part of the circular wall of chamber B. Plate F is provided with a central circular opening I, and there is a corresponding opening J in the bottom of chamber B. The principal portion of the hollow pivot E is hexagonal in cross-section, both internally and externally. It is, however, provided at its opposite ends with cylindrical journals K and L, which fit, respectively, the openings I and J, the arrangement being such that when in position in chamber B the pivot E turns easily in the bearings formed in the top and bottom of chamber B and the eye D of arm C turns easily on pivot E.

The free end of arm C is drawn normally with a strong pressure toward bar A by means of a coiled spring M, having a central loop N, which embraces the arm and having its opposite ends secured to pins O O, projecting from a pair of plates P P, which are mounted upon the pivot E, near its opposite ends, so as to turn therewith, the arrangement being such that when pivot E is turned in its bearings the tension of the spring M upon arm C may be increased or diminished.

For the purpose of retaining pivot E in a fixed relation to the chamber B when the proper tension has been given to the spring M, I provide a circular plate R, having on its under side a central hexagonal hub S, adapted to engage the correspondingly-shaped interior of the open end of pivot E, and having also on its under side a series of ratchet-teeth T, adapted to engage corresponding teeth U on the upper side of plate F, which forms the top of chamber B. Ratchet-teeth T and U are held in engagement by means of a bolt V, which passes longitudinally through pivot E and plate R and is provided with a nut W. By this construction, nut W being loosened, so as to permit teeth T to ride over teeth U, and a wrench being applied to the lower projecting end of pivot E, the pivot may be turned, carrying with it plate R and the plates P, thus giving the required tension to spring M, the

pivot E being retained in position by the tightening of nut W.

For the purpose of holding arm C extended to receive the mail-bag I provide the toggle-joint lever 1, which is pivoted at its opposite ends, respectively, to the opposed sides of arm C and bar A at 2 and 3. The members of lever 1 are provided at their meeting ends with shoulders 4 4, which limit the movement of the toggle-joint when the lever is extended, so that the pivot of the joint passes beyond a line drawn between the pivots 2 and 3.

In the device shown in my above-mentioned Letters Patent the pivoted arm was held extended by means of a trip-lever pivoted at one end to the catching-arm and engaging with its free end a stop formed on the bar A. It was found in practice that it was difficult to trip the lever, because of its excessive friction upon the stop, and also difficult to quickly set it for action. By use of the toggle-joint lever above described having the shoulders 4 4 I am enabled to extend the catching-arm quickly, hold it securely, and trip it with certainty.

In operation, the catching-fork being mounted upon the side of a railway-car and arm C

being extended, as shown in Fig. 2, and held so as to project horizontally from the side of the car, the mail-sack enters between arm C and bar A, comes in contact with and trips the toggle-joint lever 1, and arm C is then drawn forcibly toward bar A by spring M, thus securely grasping and holding the sack.

I claim as my invention—

The combination of the bar having the spring-chamber formed therein, the pivot mounted in said chamber, the catching-arm mounted on said pivot so as to turn thereon, the coiled spring arranged to engage said arm, the plates secured to the pivot so as to turn therewith and arranged to receive and hold the ends of said spring, the plate adapted to engage the pivot so as to turn therewith and provided with ratchet-teeth which engage the top of the spring-chamber, and the bolt passing through the pivot and arranged to clamp said ratchet-plate to the spring-chamber, all combined and arranged to co-operate substantially as set forth.

JOHN F. MAINS.

Witnesses:

H. P. HOOD,
A. M. HOOD.