

No. 870,879.

PATENTED NOV. 12, 1907.

H. W. GRAFF,
MAIL POUCH CATCHING DEVICE.
APPLICATION FILED SEPT. 9, 1907.

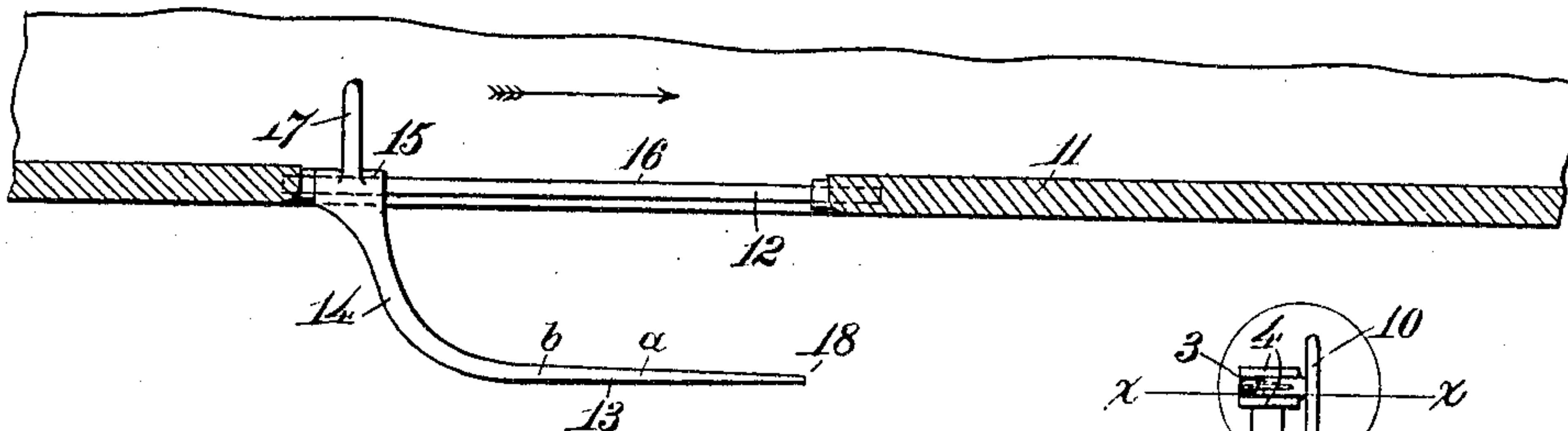


Fig. 1.

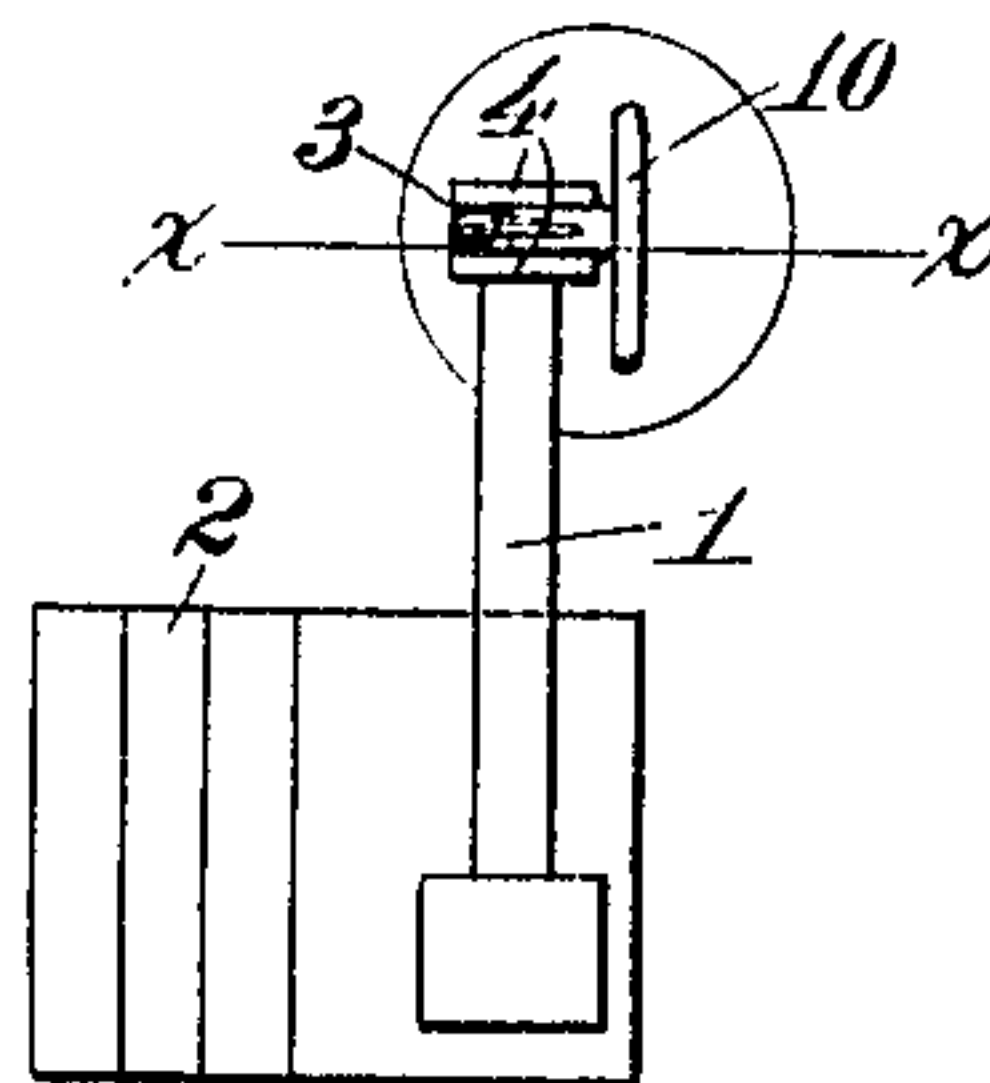


Fig. 2.

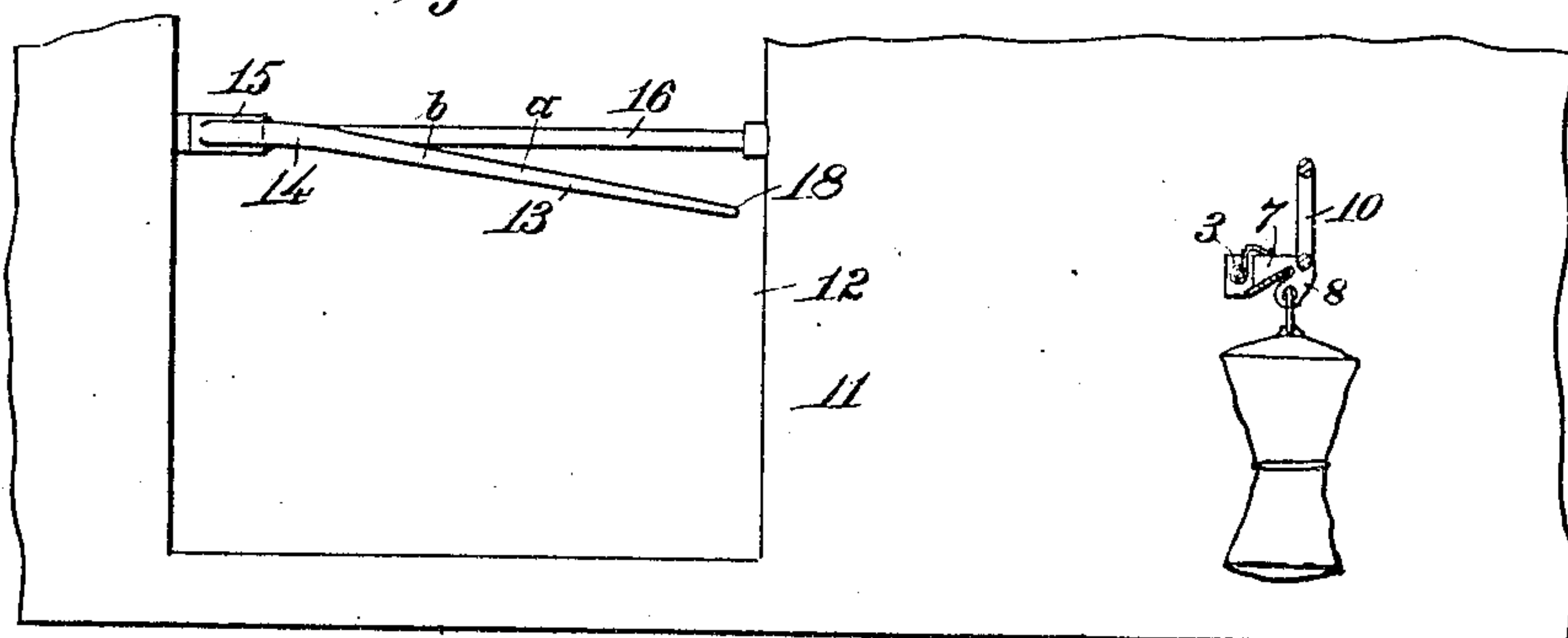


Fig. 3.

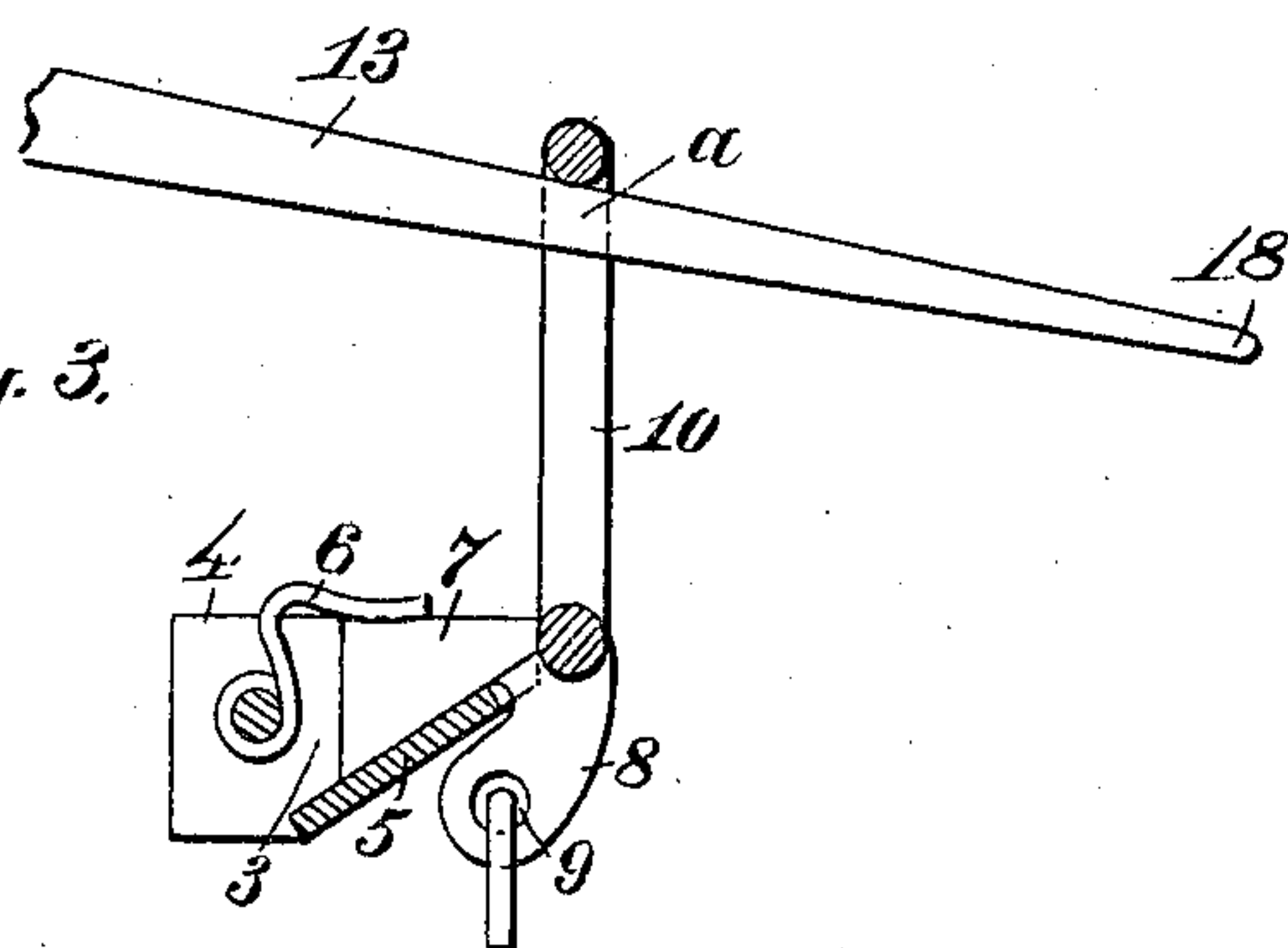
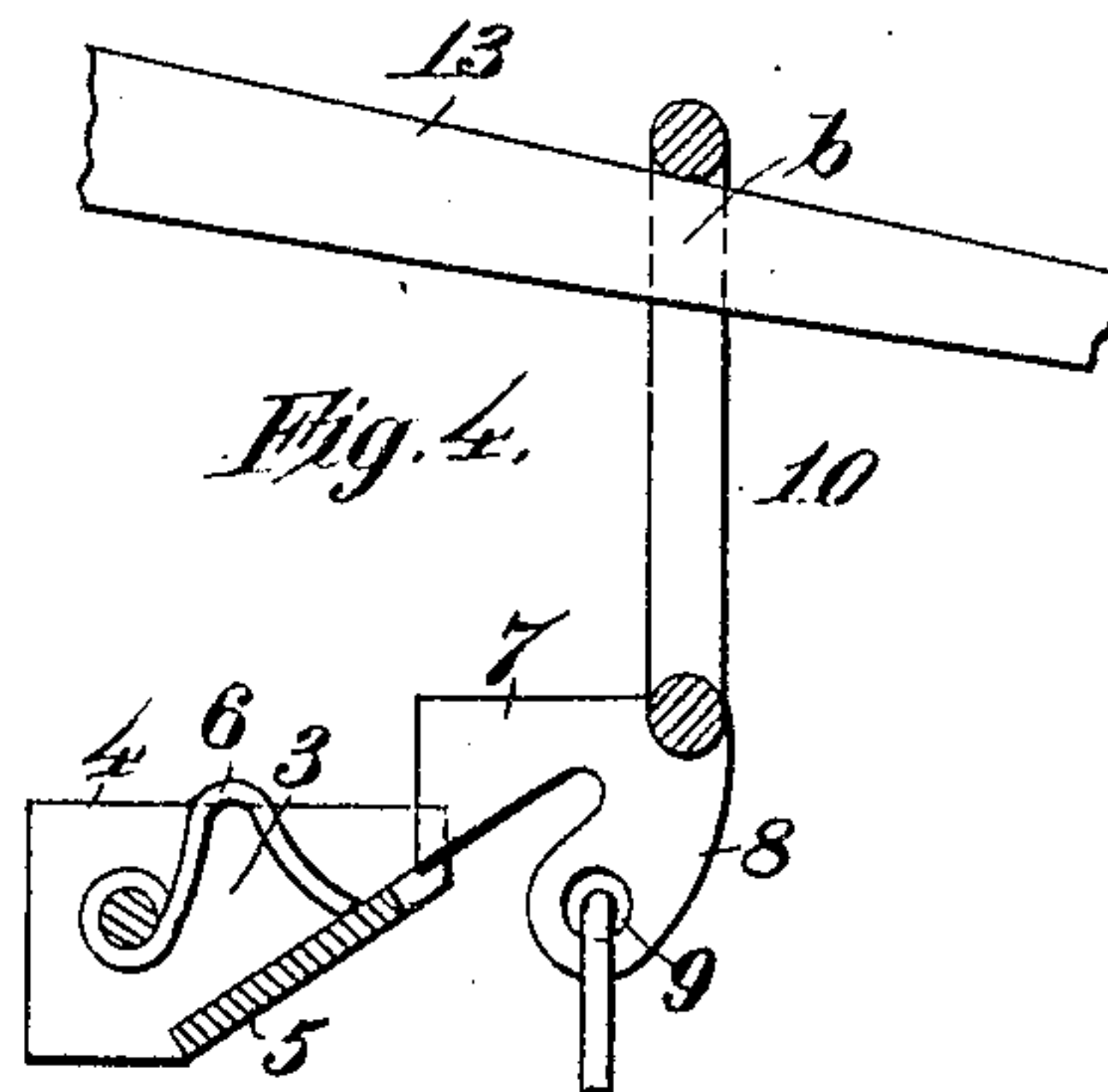


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY W. GRAFF, OF CHICAGO, ILLINOIS.

MAIL-POUCH-CATCHING DEVICE.

No. 870,879.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed September 9, 1907. Serial No. 391,951.

To all whom it may concern:

Be it known that I, HENRY W. GRAFF, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mail-Pouch-Catching Devices, of which the following is a specification.

My invention relates to devices for catching mail pouches by a rapidly moving train, from the cranes at the various stations along the line.

10 With the system now in general use, the mail pouch is suspended between two clamps arranged at the end of the arms of the crane, and the car is equipped with a catching arm which projects outwardly and forwardly from the car door and, which grasps the pouch about 15 the middle, tearing it loose from the clamps on the crane arms. The inertia of the mail laden pouch and the momentum of the car, jams the pouch forcibly into the angle between the arms and its pivot rod. The destructiveness of such a system is apparent and the 20 pouches soon become so worn and torn as to prevent them from being maintained in service until they undergo expensive repairs.

The objects of my invention are, to provide means for delivering mail pouches from a crane to a rapidly 25 moving car in such a manner as to gradually impart velocity to the pouch in order to avoid excessive or injurious strains thereon, and to provide means for delivering the mail pouches in such a manner as to avoid having the catching arm on the car contact the 30 pouch.

A further object of my invention is to provide a device as mentioned, which may be installed without much change in the present equipment.

Other objects will appear hereinafter.

35 With these objects in view my invention consists generally in a crane provided with a socket at its end, a transfer device comprising a block portion adapted to fit within said socket, means for attaching or suspending the pouch therefrom, an upwardly extending 40 ring, and a catching or receiving arm pivotally mounted upon the car, said arm comprising an inclined straight portion arranged parallel to the sides of the car and adapted to engage the ring of the transfer device to lift the block gradually from the socket and a curved 45 portion to receive said ring after the block is entirely free from the socket and to gradually increase the momentum of the pouch to prevent shock as will be hereinafter fully described.

My invention further consists in various details of 50 construction and arrangements of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a 55 part of this specification and in which,

Figure 1 is a diagrammatic plan view of a portion of a mail car equipped with the catching device and also illustrating the crane with the mail pouch suspended therefrom, Fig. 2 is a side view of the portion of the car shown in Fig. 1 and illustrating the socket at the 60 end of the crane arm in section, the section being taken on the line $x-x$ of Fig. 1, Fig. 3 is a section through the socket, upon an enlarged scale illustrating the transfer device in position thereon and the catching arm in the position where it begins to lift the block 65 from the socket, and Fig. 4 is a similar view illustrating the position of the several parts at the moment the block leaves the socket.

Referring to the drawings, 1 indicates the arm of the crane approached by the usual steps, 2. Upon the 70 end of the arm, 1 is arranged a socket, 3 defined by the parallel side walls, 4 and the inclined bottom, 5 and which is adapted to receive the block portion of the transfer device.

6 indicates a spring arranged upon the socket portion 75 and adapted to bear upon the block of the transfer device to prevent the same from being accidentally dislodged. The transfer device comprises the block portion, 7 a depending lug, 8 having an eye, 9 by which the pouch is connected to the transfer device and an up- 80 wardly extending ring, 10. The block portion, 7 is shaped to conform to the socket, 3, and the ring, 10 is arranged so as to stand in a plane transverse or at right angles to the direction of the car.

11 indicates a portion of the side of a car and 12, a 85 doorway therein and within said doorway is arranged the catching device. This comprises an arm having a straight portion 13 and a curved portion, 14. The inner end of the arm is provided with a sleeve, 15 by which the arm is pivotally mounted upon the trans- 90 verse bar or rod, 16.

17 indicates a handle by means of which the postal clerk may operate the arm. The straight portion, 13 of the arm extends forwardly and downwardly in a plane parallel to the side of the car and the several parts 95 of the device are so positioned that the forward point, 18 of the arm will enter the ring, 10 at substantially the central point. As the straight portion of the arm moves forwardly through the ring it engages the upper portion thereof and on account of its inclination, gradually 100 raises the ring lifting the block, 7 out of the socket, 3 by sliding it along the inclined bottom, 5. While removing the block from the socket, the ring, 10 moves along the straight portion of the arm from substantially the point, *a* to the point, *b* and the friction of the arm 105 on the ring begins to move the pouch forwardly in the direction which the car is traveling. After the block leaves the socket, the ring with the suspended mail pouch continues to move upwardly on the arm and passes on to the curved portion, 14. As the ring moves 110

upwardly along the straight inclined portion, 13, its relative movement with regard to the arm is gradually lessened and the curved portion brings it to a final stop with relation to the car, without shock. However, it is obvious that the gradual lessening of the relative movement between the pouch and the arm means a gradual increase of actual velocity of the pouch until its velocity equals that of the car. By employing the transfer device described, the catching device does not come in contact with the pouch, and as the pouch and the transfer device are transferred from the crane to the car without shock, the period of usefulness of the pouch is materially increased, and the cost of maintaining the pouches in service is reduced to a minimum. Further, it is obvious that but little change in the equipment is necessary.

Having described my invention what I claim as new and desire to secure by Letters Patent is;

1. In a device of the class described, a crane having a socket arranged on the end thereof, in combination with a

transfer device adapted to be secured to a mail pouch and comprising a block adapted to fit within said socket, means for securing the pouch thereto and a ring extending upwardly from said block, and a catching arm arranged upon a car and comprising a forwardly and downwardly inclined straight portion, adapted to engage said ring and an inwardly extending portion, substantially as described. 25

2. In a device of the class described, a crane having a socket, arranged at the end thereof, in combination with a transfer device comprising a portion adapted to fit within said socket, a ring extending upwardly therefrom and means for attaching the mail pouch thereto, and a catching device pivotally arranged upon a car and adapted to be extended therefrom to catch the transfer device and pouch, said catching device comprising an arm having a straight portion which is forwardly and downwardly inclined to engage said ring, when in extended position, and a curved portion extending inwardly through the car, substantially as described. 30 35

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses. 40

HENRY W. GRAFF.

Witnesses:

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