W. T. O'HARA.

MAIL CATCHING AND DELIVERING DEVICE.

APPLICATION FILED FEB. 26, 1912.

1,042,256. **Patented Oct. 22, 1912.**

3 SHEETS—SHEET 1.

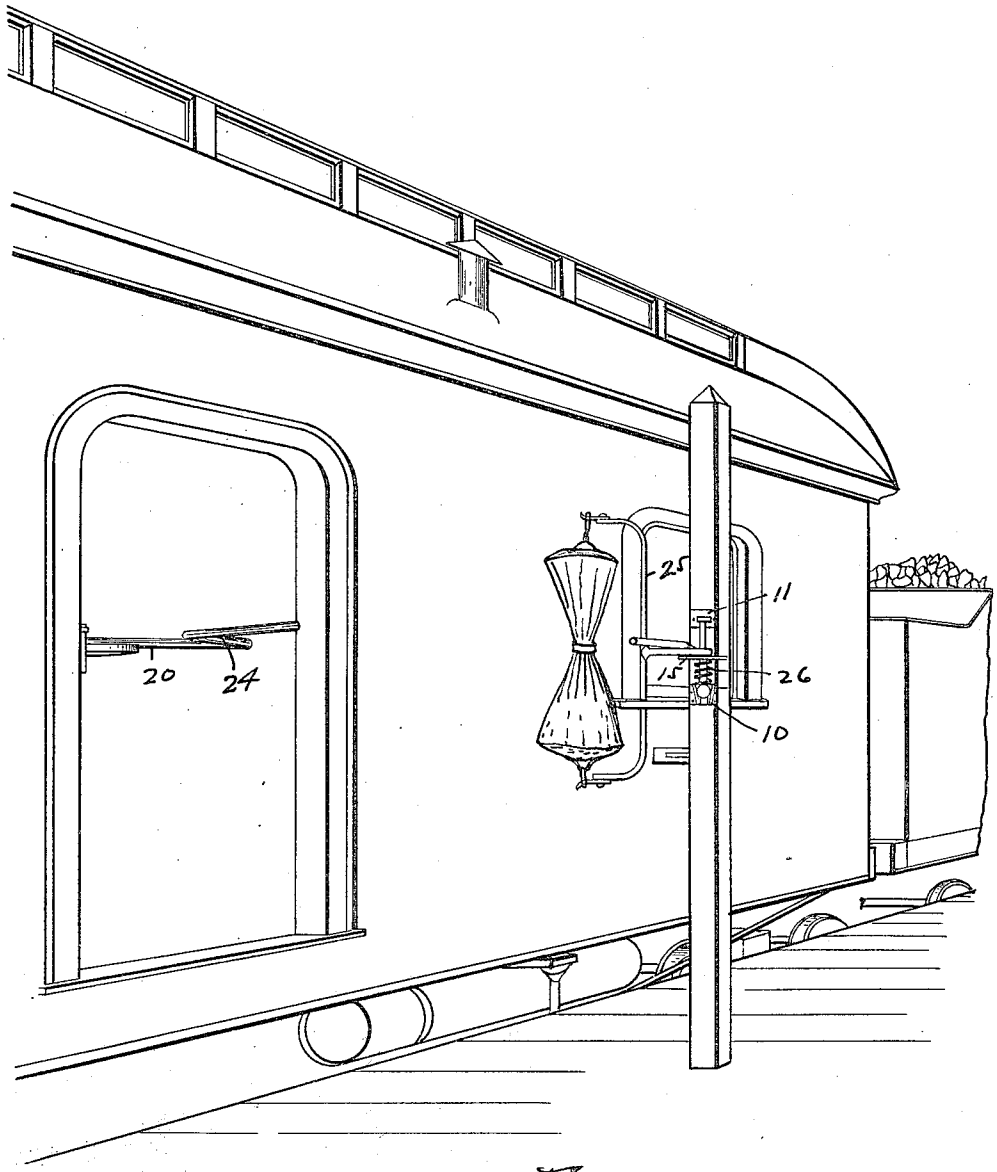

Fig. 1.

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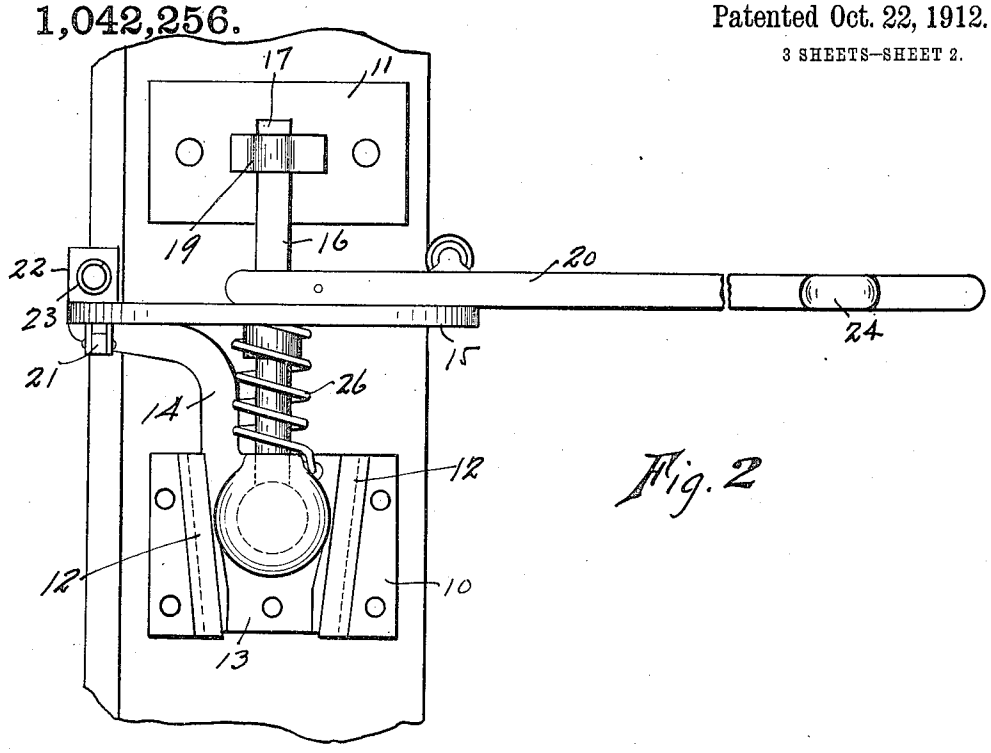

Fig. 2

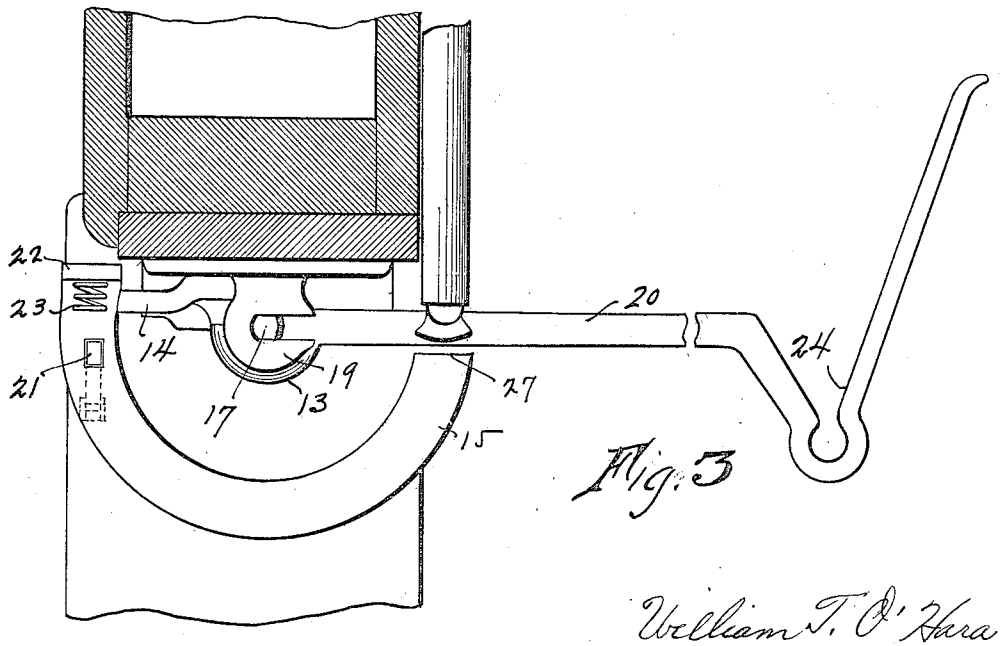

Fig. 3

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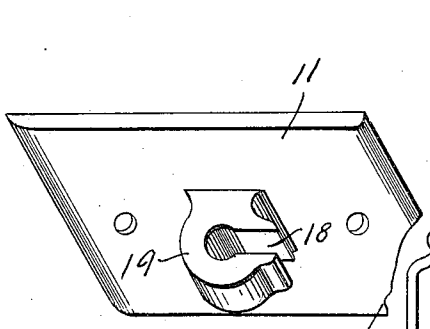

Fig. 8

Fig. 4

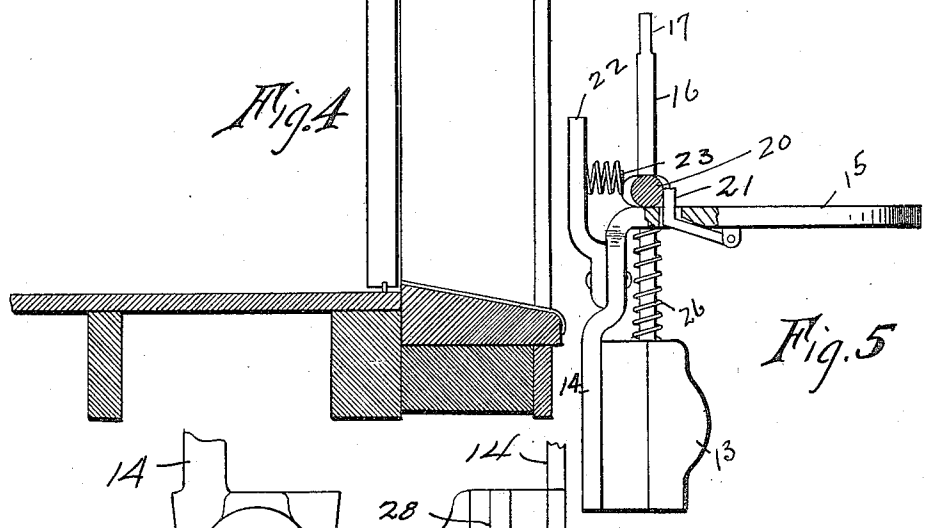

Fig. 5

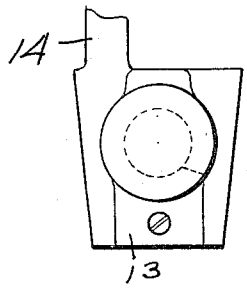

Fig. 7

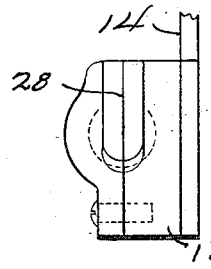

Fig. 6

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UNITED STATES PATENT OFFICE.

WILLIAM T. O'HARA, OF SPOKANE, WASHINGTON, ASSIGNOR OF ONE-THIRD TO HENRY S. SCHOPF, OF SPOKANE, WASHINGTON.

MAIL CATCHING AND DELIVERING DEVICE.

1,042,256. Specification of Letters Patent. Patented Oct. 22, 1912.

Application filed February 26, 1912. Serial No. 679,983.

To all whom it may concern:

Be it known that I, WILLIAM T. O'HARA, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Mail Catching and Delivering Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to mail catchers and deliverers and has for an object to provide a device operable upon either a car or a pillar and having improved means for swinging and moving out of the way of danger when the bag has been delivered and of moving into the car when carried by the car or away from the track when carried by the pillar when the bag has been received.

A further object of the invention is to provide an arm adapted to deliver or catch a mail bag with improved means for swinging the arm to a diametrically opposite position and dropping the same from the elevated position in which it is held when in operation.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter more fully described and claimed.

In the drawings:—Figure 1 is a fragmentary perspective view of a conventional mail car showing the operation of the device thereon. Fig. 2 is a detail enlarged view showing the catcher in side elevation swung into the car. Fig. 3 is a view in top plan of the catcher swung into the car. Fig. 4 is a view in side elevation showing the delivering apparatus swung out of the car in position to deliver the bag. Fig. 5 is a view in elevation showing the catching or delivering arm in section. Fig. 6 is a view in edge elevation of the socket for containing the universal joint. Fig. 7 is a view in front elevation of the universal joint. Fig. 8 is a perspective view of the top plate and keeper.

Like characters of reference indicate corresponding parts throughout the several views.

The improved apparatus which forms the subject matter of this application comprises two plates, indicated in their entirety at 10 and 11, adapted to be secured to the frame of a car door or to a pillar adjacent the track as shown in Fig. 1. The plate 10 is provided with flange ribs 12 proportioned to receive the universal joint block 13. The block 13 is provided with an arm 14 which extends upwardly and carries a segment 15 having its axis coinciding with the bearing of the socket block 13.

Within the socket of the block 13 a shaft 16 is journaled standing normally upright and having at its upper end a reduced extremity 17 adapted to pass through a passage 18 in the bearing block 19 which said bearing block 19 is carried by the plate 11. Rigidly secured to the shaft 16 is an arm 20 sliding about on the segment 15 and when in such position upon such segment 15 the shaft 16 is in vertical position. At one extremity the segment 15 is provided with a detent or keeper 21 and with an upstanding abutment 22 carrying a spring 23. The relative positions of the keeper 21 and spring 23 are such that when the arm 20 is swung to pass back of the keeper 21 the spring 23 is placed under tension so that the tension of such spring holds the arm normally against the keeper 21 with sufficient friction to prevent the keeper from dropping. The extremity of the arm 20 carries in one instance a hook 24 and in another instance a yoke 25, the former being employed for catching and the latter for delivering. With the arm extended as shown in Figs. 4 and 5 the impact of catching or delivering will move the arm 20 about the shaft 16 as its axis and compress the spring 23. The compression of the spring 23 will permit the kepeer 21 to drop by gravity so that upon the rebound the movement of the arm 20 around upon the segment 15 will be assisted initially by the spring 23. The shaft 16 is also provided with a spring 26 which is under tension when the arm is extended in catching or delivering position and continues the rebound of the arm for catching or delivering. The end of the segment 15 stops short at 27 of the full travel of the arm 20 so that when the arm 20 passes such end 27 of the segment 15 it is free to drop over such extremity. It is further free to drop by reason of the reduced end 17 of the shaft 16 passing outwardly through the opening 18 of the bearing block 19 and by the further reason that the universal joint block 13 has an opening 28 which permits

the shaft 16 to incline from the vertical as shown in the figures. This action permits the arm to drop inside of the car or out of the side of the pillar opposite the track to deliver the bag safely within the car or away from the danger zone adjacent the tracks on the catching device and to retract the delivering device from harm's path after delivery is accomplished. The dropping of the arm as illustrated also prevents a second rebound by which the bag is thrown again out of the car or again toward the track as often results from catching and delivering apparatus ordinarily employed.

It will be apparent that as the shaft 16 is removable from the bearing 19 carried by the plate 11 and the bearing blocks 13 removable from the plate 10, the devices provided with the delivering yoke and the catching hooks will be interchangeable upon the car as well as upon the pillars to which the devices may be attached.

I claim:—

1. In a device of the class described, an arm journaled to rotate on a vertical axis, a segment positioned to support the arm throughout the major portion of its travel but stopping short of one extremity, and means permitting the arm to drop over the extremity when reaching such extreme of movement.

2. In a device of the class described, a shaft vertically journaled, means to hold the shaft in such vertical position in all but one point in its rotation, an arm disposed at right angles to the shaft, means to retain the shaft yieldingly at a point diametrically opposite the point at which the shaft leaves the vertical, and means to move the arm to the point when the shaft leaves the vertical.

3. In a device of the class described, a ball and socket joint, a shaft carried by the ball, an arm carried at right angles to the shaft, a segment horizontally positioned and disposed to support the arm, and a bearing box for the shaft positioned to release the shaft when the arm has passed beyond the end of the segment.

4. In a device of the class described, a shaft journaled normally vertical with a ball and socket joint, an arm carried at right angles to the shaft, a segment positioned with the shaft as its center and to support the arm, means at one extremity of the segment for holding the arm stationary, and means for dropping the shaft and arm when the arm has passed beyond the other extremity of the segment.

5. In a device of the class described, a keeper, a socket block removably carried by the keeper, a shaft journaled in the block with a ball and socket joint, a segment carried by the block and disposed in a horizontal plane, an arm carried by the shaft and supported to travel upon the segment in a horizontal plane, means at one extremity of the segment for holding the arm against movement, and a bearing for the upper end of the shaft adapted to release the shaft when the arm has passed over the opposite extremity of the segment.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM T. O'HARA.

Witnesses:
H. E. SMITH,
NETTIE KING.