

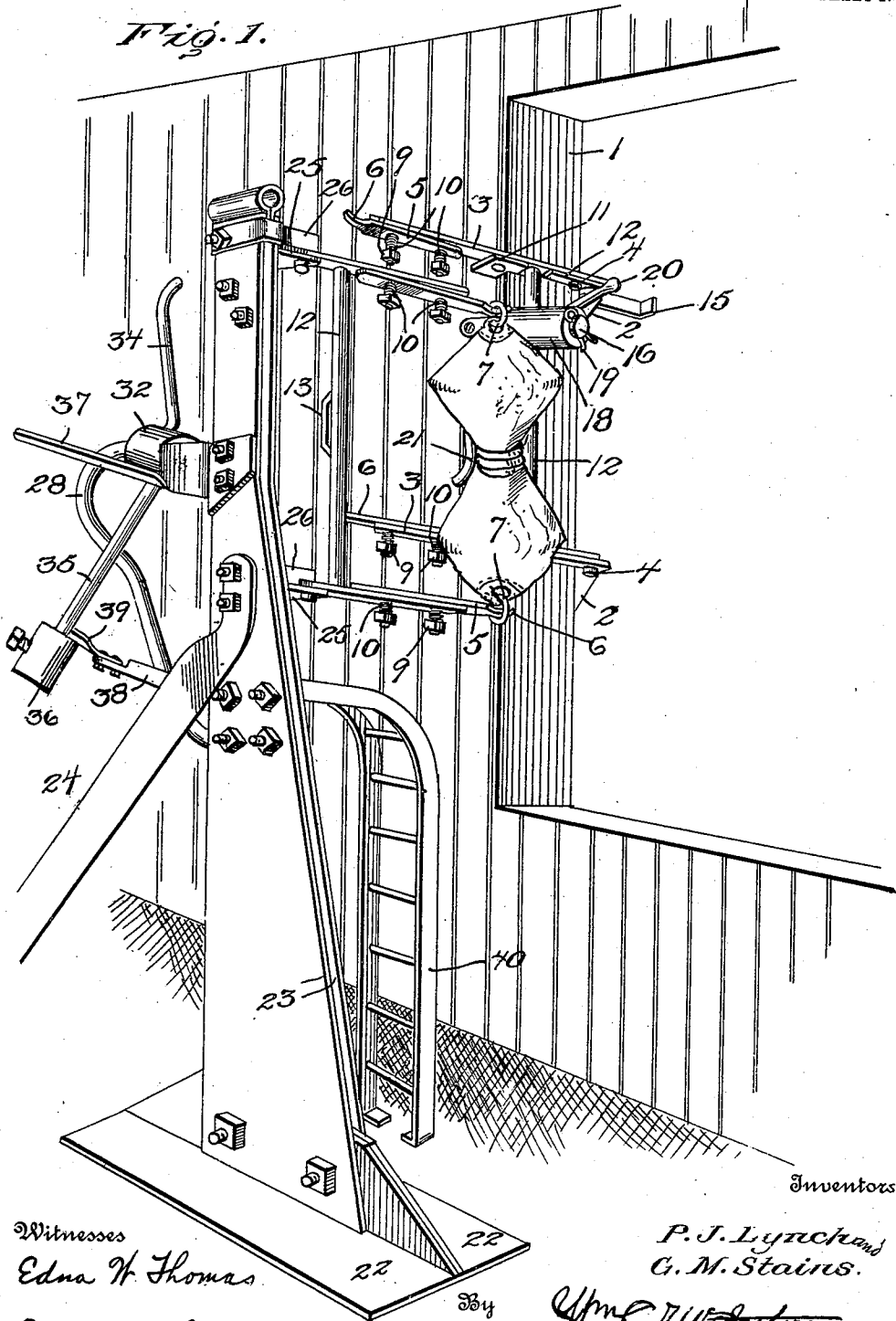
G. M. STAINS & P. J. LYNCH.
MAIL BAG CATCHER AND DELIVERER.
APPLICATION FILED NOV. 3, 1910.

988,221.

Patented Mar. 28, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



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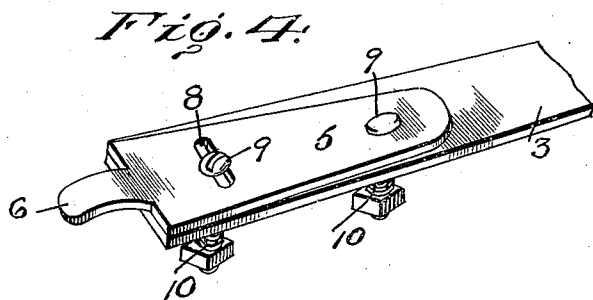
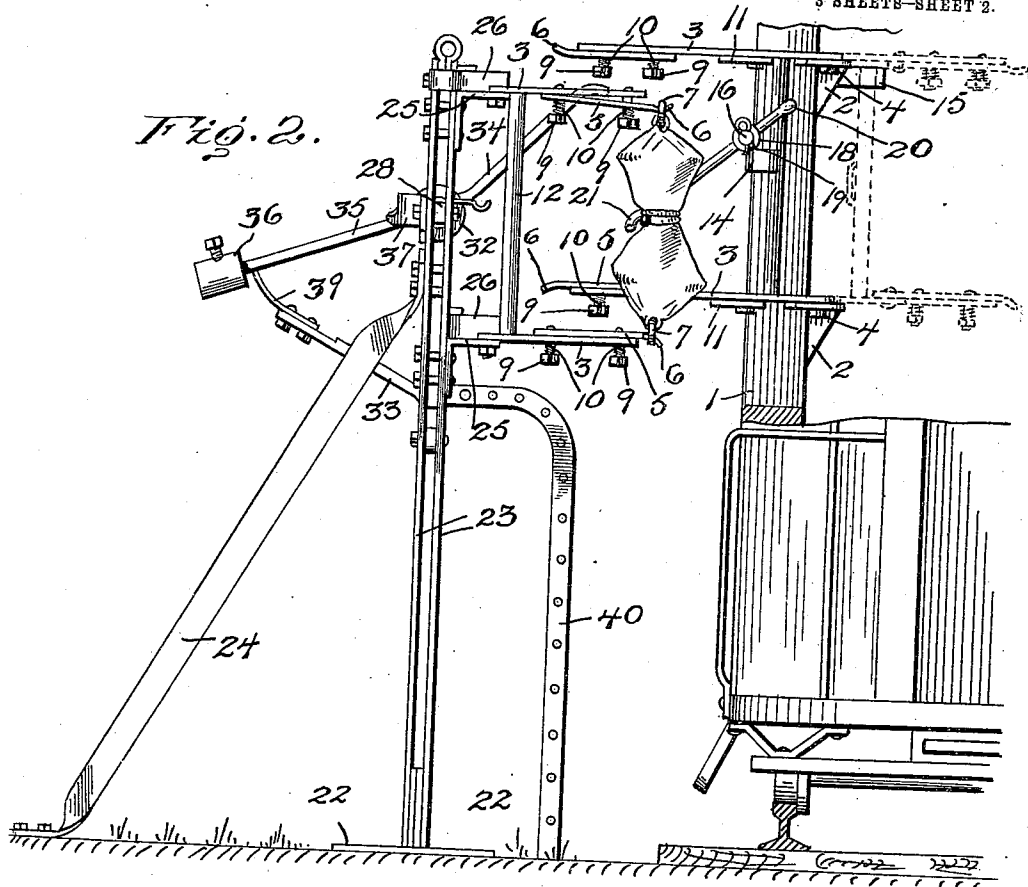
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3 SHEETS-SHEET 2.



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3 SHEETS-SHEET 3.

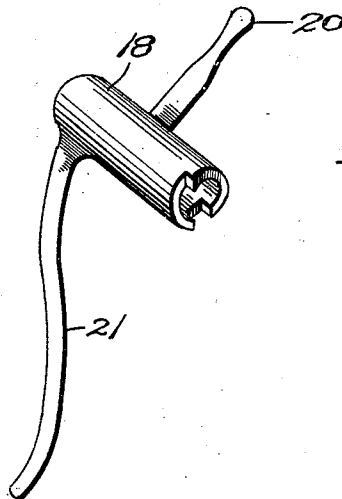
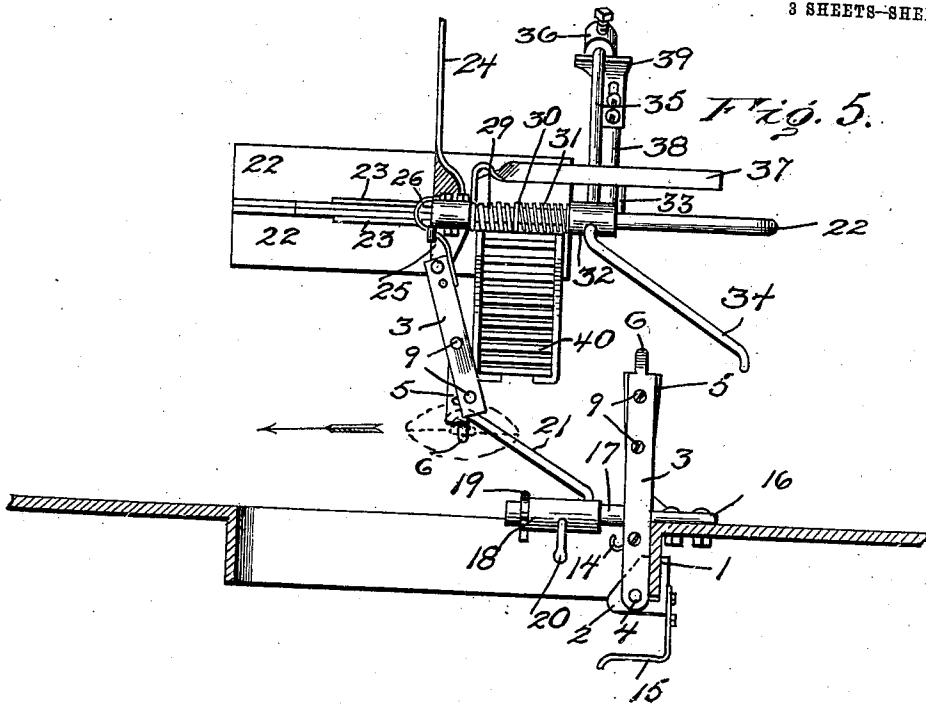


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE M. STAINS, OF WOODLAWN, AND PHILIP J. LYNCH, OF SHOUESTOWN,
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MAIL-BAG CATCHER AND DELIVERER.

988,221.

Specification of Letters Patent. Patented Mar. 28, 1911.

Application filed November 3, 1910. Serial No. 590,586.

To all whom it may concern:

Be it known that we, GEORGE M. STAINS and PHILIP J. LYNCH, citizens of the United States, residing at Woodlawn and Shousetown, respectively, in the counties of Beaver and Allegheny, respectively, and State of Pennsylvania, have invented certain new and useful Improvements in Mail-Bag Catchers and Deliverers; and we 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.

The device relates to improvements in mechanisms for delivering and receiving mail bags from a moving car.

The invention is a combination of improvements forming an efficient and reliable mail bag transferring device, one part being attached to the mail car door and the other mounted upon a frame work beside the track.

An important improvement over other similar devices is the spring arrangements by which the bag-holding arms are held in either of two positions, the one for placing the bags in position on the arms and the other for holding them in position for delivery. By this method the arms are held comparatively firm in these two positions, and it is not necessary to depend on friction of the connections or resort to braces or catches to keep them in their desired places. The snaps on which the mail bag rings slide are so constructed as to release the rings instantly under the proper pressure supplied by the receiving arms. The construction of the ring retaining snap is exceedingly simple and inexpensive to manufacture, requiring, as it does, but one piece to be specially manufactured, the other parts being standard bolts and coil springs.

The receiving arm mounted at the side of the track is so constructed that after catching the bag it is swung over an arm on which it rests, thus preventing its falling to the ground and being sucked under the wheels. By means of this device the heavy unmanageable weight on the end of the receiving arm is eliminated, and a weight of nine or ten pounds is sufficient for operating the arm at the maximum speed now attained by mail cars.

The car device is entirely operated from

the inside, a handle being provided inside the door by which the bag holding arms are swung in or out. The handle on the receiving arm is also situated within the door, thus eliminating any possible danger to the operator.

The construction of the tower or frame at the side of the track is very simple and rigid, as well as attractive in appearance. In this, a preferred form of the invention, the complete outfit is made of metal, thus making it very durable and indestructible.

With the above and other objects in view this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which—

Figure 1 represents a perspective view of the device in use; Fig. 2 is an end elevation; Fig. 3 is a perspective view of the receiving arm as used on a car, removed from its shaft; Fig. 4 is a perspective view showing the construction of ring holding snaps or fingers, and Fig. 5 is a top plan view showing the method by which the leaf springs hold the track delivering arms in the two required positions.

Referring to the drawings by characters of reference, the numeral 1 represents the door frame of a mail car, on which is fastened two brackets 2, on which in turn are pivoted the arms 3 by means of pins, bolts, or other suitable fastenings 4. On the outer ends of the arms 3 are fastened plates 5, formed with extensions or fingers 6 for retaining the rings 7 of the mail bag, and having a slot 8 cut near the end to allow the end of said plate to swing through a small arc, thus allowing the fingers to point in the direction in which the bag is to be taken off. The plates 5 are fastened to the arms 3 by means of bolts 9, the one forming a pivot, and the other by means of the slot 8, limiting the arc through which the plate 5 can swing. Coil springs 10 are placed on the bolts 9 under the nut, so as to allow a slight vertical play of the extensions 6 on the plates 5, this action of the springs tending to hold the rings 7 of the mail bags from slipping off, and giving an automatic adjustment for different length bags. Stops 11 are attached to the arms 3 for limiting the outward swing of said arms.

An upright or spacing member 12 is attached between the arms 3, providing a brace for keeping said arms the right distance apart, as well as strengthening the structure. A handle 13 is attached to the upright 12, so that the arms may be swung out or in through the car door, while the operator is entirely within the car. A flat leaf spring 14 is attached to the outside of the door frame 1, and so shaped that it bears against the upright 12, thus providing sufficient friction to hold said upright in its extreme outward position unless released by the handle 13. A flat leaf spring 15 is attached to the inside of the door frame 1 near the top, and is so shaped that it bears against the upright 12 when same is at its extreme inward position, and holding the frame fixed in this position until the operator wishes to swing said arm outside the car.

A shaft 16 is suitably fastened to the door frame 1, and has mounted on it a spacer or washer 17 and a bag receiving cylinder 18, a stop pin 19 being inserted through the end of said shaft. The bag receiver consists of the cylindrical part 18, from which extends a handle 20, and the receiving arm 21, which strikes against the bag to be received, the velocity of the arm causing the bag to slide up to the cylinder 18 and is there held until removed by the operator. The cylinder 18 is so notched, as shown in Fig. 3, as to provide limiting stops when brought in contact with the pin 19 for the outward and inward swing of the receiving arm 21.

The track delivering and receiving device consists of an angle iron base 22, resting on some suitable foundation. To the outside of the upwardly extending sides of the angles 22 are fastened two upright plates 23, a brace 24 being fastened to the upright plate, with its lower end on the ground some distance from the base, thus providing sufficient stiffness to the structure. Two brackets 25 are attached to the upright plates 23, and have pivoted to them the arms of the mail bag delivering frame, in the same manner as previously described for the mail car door. In this case, however, the flat leaf springs 26 differ from those on the car frame, in that they are fastened to the upright plates 23 and bear on the flattened ends of the arms 3 in their two extreme positions. A curved support or bracket 28, made of a round metallic bar, the ends of which are fastened within the space between the upright plates 23, and acts as a support or shaft, on which are mounted the coil spring 29, washer 30, the light coil spring 31 and the cylinder 32.

A stop or pin 33 is inserted in the bracket 28 to limit the outward motion of the cylinder 32. Fastened into the cylinder 32 is an arm 34 for receiving the mail bags, and an

arm 35, provided at its end with a weight 36, for the purpose of throwing up the receiving arm 34, and thus causing the mail bags to fall over upon a receiving or holding bracket 37, which is fastened to the upright plates 23. An arm 38, one end of which is fastened within the upright plates 23, has on its other end an adjustable shoe 39, for holding the weight 36 when in the position for receiving mail bags. When the mail bag strikes the receiving arm 35 it slides the cylinder 32 on the bracket or shaft 28, the springs acting as cushions until the weight falls off the adjustable shoe 39, allowing the arm 38 to drop, and thus throwing the sack upon the receiving bracket 37. A ladder 40, the upper end of which is attached to the arm 38, is furnished to provide an extra brace for the structure, as well as for the convenience of the operator. A hook 41 is attached to the upright plates 23 for holding a lantern.

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

1. In a device such as described, consisting of mail bag receiving and delivering arms suitably mounted, one set upon the car door frame and the other beside the track, the receiving arm attached to the car door frame, consisting of a shaft attached to said door frame, having a stop pin passed through its outer end, a washer or spreader mounted on said shaft, a cylinder mounted upon said shaft, having attached thereto a handle and bag receiving arm, the end of said cylinder being notched to provide, when brought in contact with the stop pin, a limited swing of said cylinder about the shaft.

2. In a device such as described, consisting of mail bag receiving and delivering arms, one set mounted upon the car door frame, and the other being mounted upon a suitable upright support on the ground adjacent the track, an arm or bracket attached to said support, a receiving and weight supporting arm journaled upon said bracket, and a bag holding arm attached to the upright support for the purpose of holding bags when thrown upon it by the action of the bag receiving arm.

3. In a device such as described, consisting of mail bag receiving and delivering arms, one set mounted upon the car door frame and the other being mounted upon a suitable upright support placed on the ground adjacent the track, an arm or bracket attached to said support, receiving and weight supporting arms journaled upon said bracket, and a bracket attached to the upright frame, attached to the upper end of which is an adjustable shoe for maintaining the weight at the proper angle to the perpendicular when the device is set to receive a mail bag.

4. In a device such as described, consisting of mail bag receiving and delivering arms mounted on suitable supports, fingers attached to the delivering arms, and each of
5 said fingers pivoted at their inward ends on a bolt, the outer ends formed into a mail bag engaging point, a slot cut at an intermediate point, a bolt passed through said slot and a
10 hole in the arm, thus giving a limited swing to the finger, and springs placed on the bolts

between the nuts and the delivering arms to allow a vertical adjustment of the fingers.

In testimony whereof we affix our signatures in presence of two witnesses.

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PHILIP J. LYNCH.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents.
Washington, D. C."
