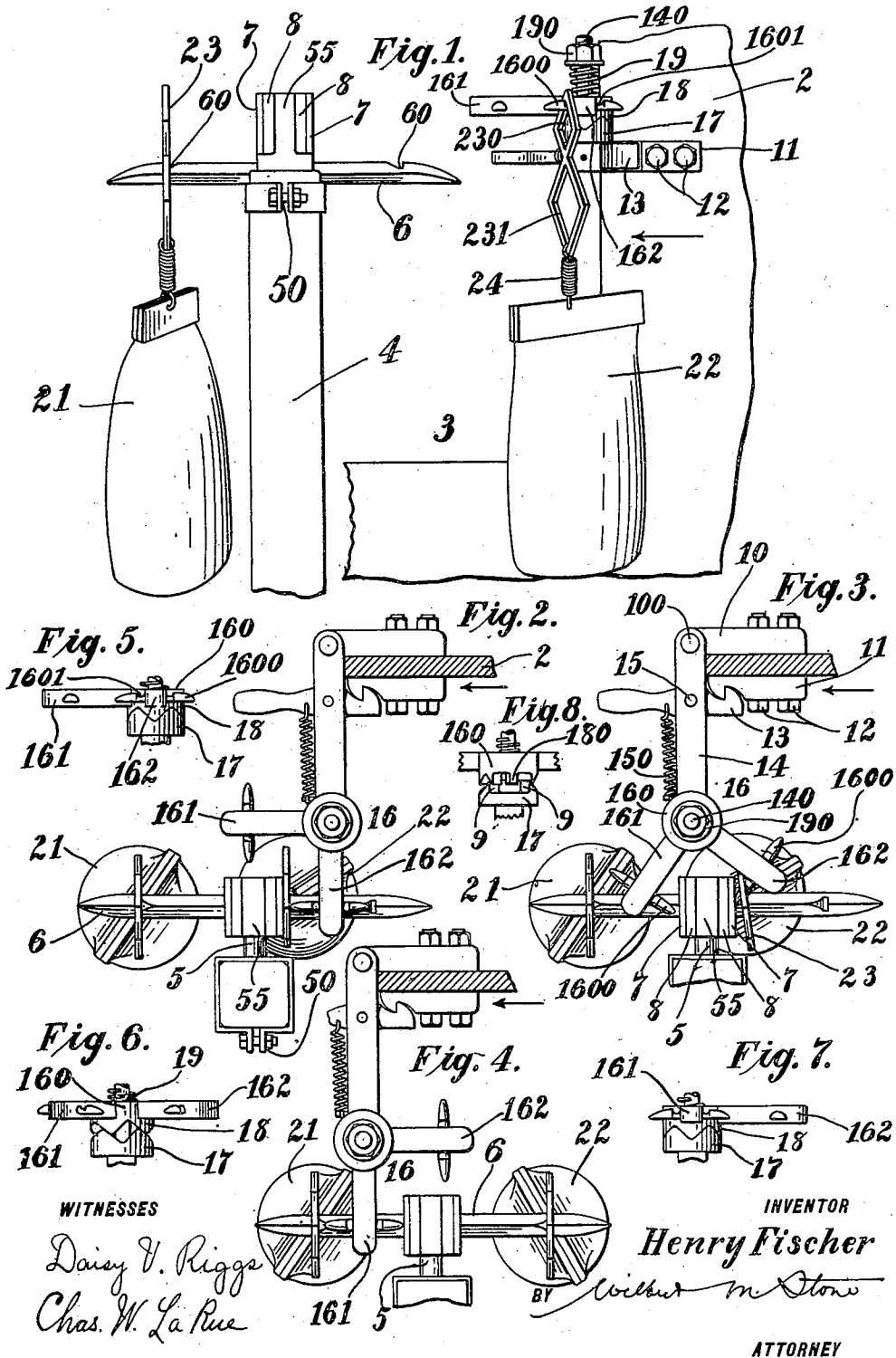


MAIL BAG CATCHING AND DELIVERING APPARATUS.

988,260.



UNITED STATES PATENT OFFICE.

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MAIL-BAG CATCHING AND DELIVERING APPARATUS.

988,260.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY FISCHER, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Mail-Bag Catching and Delivering Apparatus, of which the following is a specification.

This invention relates to mail bag catching and delivering apparatus and particularly to that class thereof provided for catching mail bags by a moving car and delivering mail bags therefrom.

The object of my invention is to provide means of the class specified which is simple in construction, efficient in action and continuously reliable in the severe service to which such devices are necessarily subjected.

With these ends in view my improved apparatus comprises means illustrated in their preferred form in the drawing accompanying this specification wherein,—

Figure 1 is a side elevation thereof. Figs. 2, 3 and 4 are plan views showing successive positions of my apparatus in operation. Figs. 5, 6 and 7 are elevations of details corresponding in positions with Figs. 2, 3 and 4 respectively. Fig. 8 is a rear elevation corresponding with the front elevation of Fig. 6 of a detail of my apparatus.

The car body on which the traveling parts of my improved apparatus are mounted is indicated by 2 the door opening by 3. Post 4 is suitably supported on the ground or station platform, not shown, adjacent to the track on which car 2 runs. Projecting from said post toward the path of the car is bracket 5. Said bracket is preferably adjustably attached to post 4 as by clamp 50. Receiving and delivering bar 6 projects horizontally in opposite directions from post 55 on the outer end of bracket 5 and said bar is arranged parallel with the direction of travel of car 2. Said bar 6 is preferably angular in cross section and preferably arranged with one of its angles at the top. Said bar 6 is pointed at each end and its top angular edge may be provided with notches as 60 for retaining the bag holding device thereon. Post 55 of bracket 5 is provided at its upper end with bumper plates 7, 7 preferably yieldably mounted as on rubber seats 8, 8.

Referring now to the traveling parts of my apparatus, pivotal support 10 is suitably located to the inside of car wall 2 adjacent to

door opening 3. On the outside of said wall 2 opposite support 10 is located hooked member 11. Support 10 and hooked member 11 may conveniently be held in position by one set of bolts as 12, 12. Pivotally mounted at 100 in support 10 is arm 14 having hooked latch 13 pivoted at 15 thereon. Said hooked latch 13 is provided for engagement with hooked member 11 for holding arm 14 locked in its outer and operative position. Said latch may be urged to engagement with hooked member 11 by means of spring 150. By releasing said hooked latch from engagement with hooked member 11 arm 14 and the mechanism mounted thereon may be swung into the car so that it will not interfere with the closing of the car door.

Mounted on vertical pivot 140 on the outer end of arm 14 is bell-crank 16 comprising arms 161, 162 preferably projecting at right angles to each other in the horizontal plane. Projecting horizontally from each side of arm 161, 162 respectively are horns 1600 having notches 1601 in the upper side thereof for retaining bag-holders 23.

Arm 14 is provided at its outer end with fixed cam 17 concentric with pivot 140 for engagement with complementary cam 18 formed in the under face of hub 160 of bell-crank 16. Cam 18 is urged to engagement with cam 17 by means of spring 19. Said spring may be adjusted by means of nut 190 on pivot post 140. Said cams 17, 18 and spring 19 are efficient to retain bell-crank 16 in either of its extreme positions (Figs. 2 and 4) and to urge said bell-crank toward either of those positions when it is slightly one side or the other of mid position therebetween (Fig. 3) respectively. For limiting the movement of bell-crank 16 depending ear 180 of hub 160 alternately engages upstanding ears 9 on the rear of cam 17 (Fig. 8). For supporting the mail bag as 21, an 8 shaped holder 23 preferably angular in construction is provided. The upper loop 230 is preferably somewhat smaller than lower loop 231. Attachment may be made between the lower end of loop 231 and the mail bag by yieldable means such as spring 24.

The operation of my improved apparatus is as follows: Arm 14 being swung out and locked in position (Figs. 1 and 2) a mail bag or other article which it is desired to deliver from the moving car is attached to

lower loop 231 of 8 shaped holder 23. Upper loop 230 of said holder is then placed over forward horn 1600 of arm 162 of bell-crank 16, said bell-crank being positioned relative to arm 14 as in Figs. 1 and 2. If it is desired to pick up mail bag 21 in the same operation said bag is attached to another 8 shaped holder 23 and hung from the forward horn of bar 6 on post 4, with upper loop 230 resting in forward notch 60 of said bar 6. Car 2 thereupon moving forward to the position of Fig. 2 lower loop 231 of that 8 shaped holder 23 having bag 22 attached thereto passes onto the rearward end of bar 6 and forward horn 1600 of arm 162 strikes against rearward bumper plate 7 (Fig. 2). The engagement of said horn and bumper plate causes bag holder 23 to leave horn 1600 and impinge against said bumper plate; immediately thereafter the continued forward movement of car 2 causes bell-crank 16 to turn in an antilockwise direction (Figs. 3, 6 and 8) and by the action of cams 17, 18 to lift from its seat. Arms 161, 162 then straddle post 55 (Fig. 3) and continuing their rotary movement about pivot 140 reach the position of Fig. 4 when depending ear 8 engages one of ears 9 on the rear of cam 17 thus limiting the movement of bell-crank 16. Cams 17, 18 also prevent any rebound of said bell-crank. Thereupon forward horn 1600 of arm 161 is ready to enter upper loop 230 of holder 23 carrying bag 21. The continued onward movement of car 2 causes said horn 1600 to enter said upper loop 230 and carry holder 23 and bag 21 off from the forward portion of delivery bar 6. Holder 23 and bag 21 may then be removed from said horn 1600 and taken into the car.

My improved apparatus is operable equally well in the opposite direction from that described, as will be obvious to anyone skilled in the art to which it pertains. It will also be apparent to one skilled in the art that my improved apparatus is operable in case the parts illustrated as fixed to the car body 2 be permanently supported from the ground and those parts herein illustrated as supported from the ground be attached to the moving car, always provided that the various coacting parts be maintained in their illustrated relative positions.

I claim:

1. In a mail bag catcher and deliverer for cars the combination of a support on the car, a bell crank pivotally mounted on the support, a cam on the bell crank, a complementary cam on the support and a spring for urging said cams to coact.
2. In a mail bag catcher and deliverer for

cars the combination of a support on the car a bell crank pivotally mounted on the support, and spring actuated cam mechanism for retaining said bell crank at either end of its arc of movement.

3. In a mail bag catcher and deliverer for cars the combination of a bell-crank pivotally supported from the car, bag supporting means on the bell-crank arms and means for retaining said bell-crank at either end of its arc of movement and for urging it toward one or the other of those positions when therebetween.

4. In a mail bag catcher and deliverer for cars the combination of a bell-crank pivotally supported from the car, bag supporting means on the bell-crank arms, yieldable means for retaining said bell-crank at either end of its arc of movement and for urging it toward one or the other end thereof when therebetween, and means for limiting said arc of movement.

5. In a mail bag catcher and deliverer for cars the combination of a support on the car, a bell crank pivotally mounted on the support, a cam on the bell crank a complementary cam on the support, means to cause said cams to coact, bag supporting means on each arm of the bell crank and a double-ended receiving and delivering bar supported from the ground for coaction with the bell crank.

6. In a mail bag catcher and deliverer for cars the combination of an arm projecting from the car, a bell-crank pivotally mounted on the outer end thereof, bag supporting means on each bell-crank arm, means for limiting the movement of the bell crank, means for retaining the bell-crank in either of its extreme positions and means supported from the ground for coaction with said bell-crank for receiving and delivering the mail bags.

7. In a mail bag catcher and deliverer for cars the combination of an arm projecting from the car, a bell-crank pivotally mounted on the outer end of said arm, bag supporting means on each of the bell-crank arms, a double ended receiving and delivering bar fixed beside the track on which the car is operated and positioned for coaction with said bell-crank for receiving and delivering mail bags from and to said bell-crank respectively.

Signed this seventeenth day of April, 1909, at Paterson, New Jersey, before two subscribing witnesses.

HENRY FISCHER.

Witnesses:

A. G. OATMAN,
EDWARD A. CUNNINGHAM.