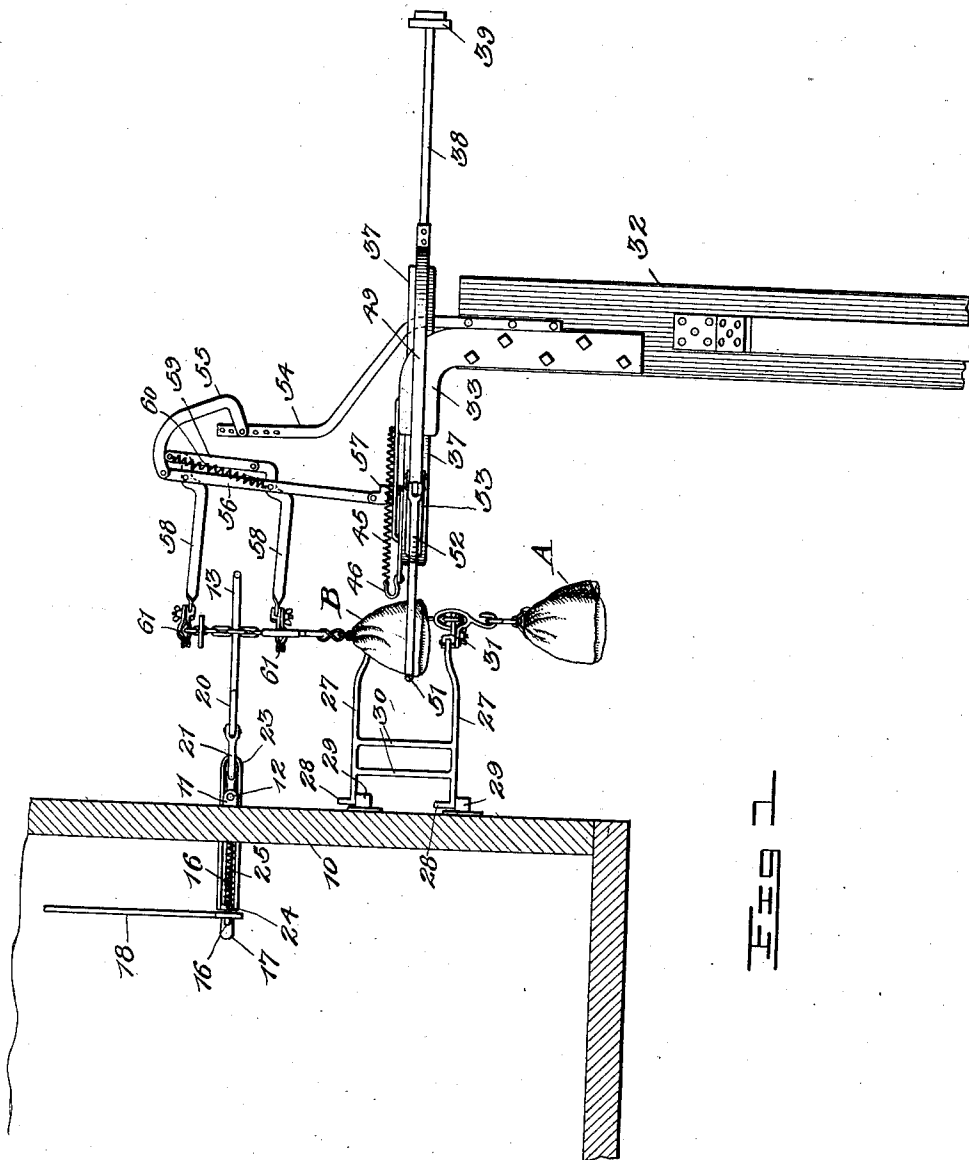


G. W. POMEROY.
MAIL BAG CATCHER AND DELIVERER.
APPLICATION FILED SEPT. 13, 1913.

1,094,095.

Patented Apr. 21, 1914.

3 SHEETS-SHEET 1.



Witnesses

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3 SHEETS—SHEET 2.

Fig 2

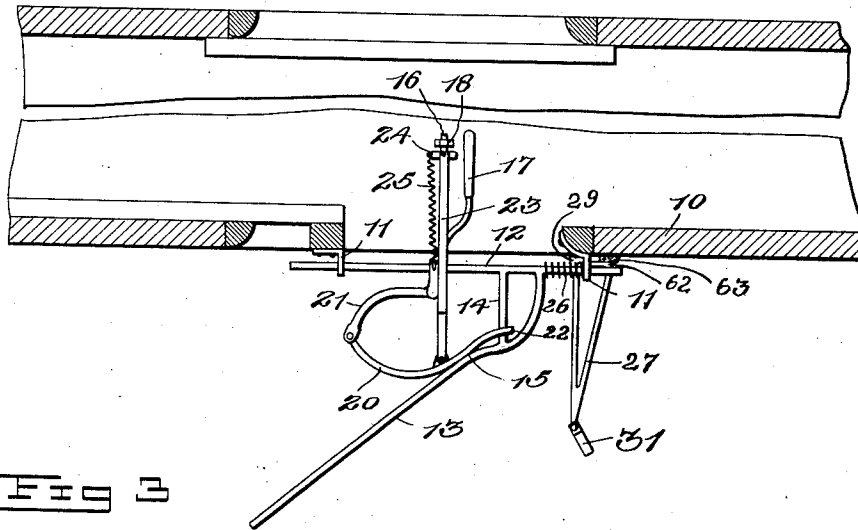
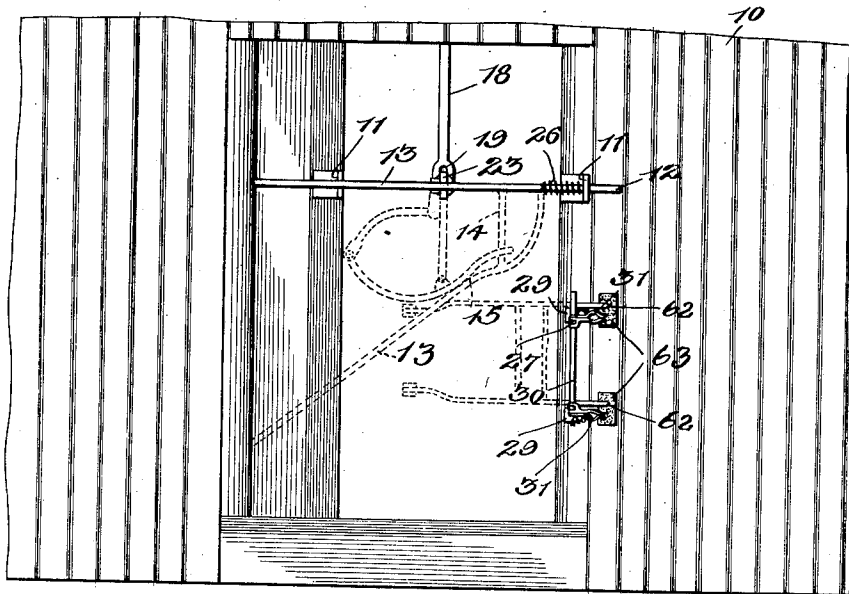


Fig 3



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3 SHEETS—SHEET 3.

Fig 4

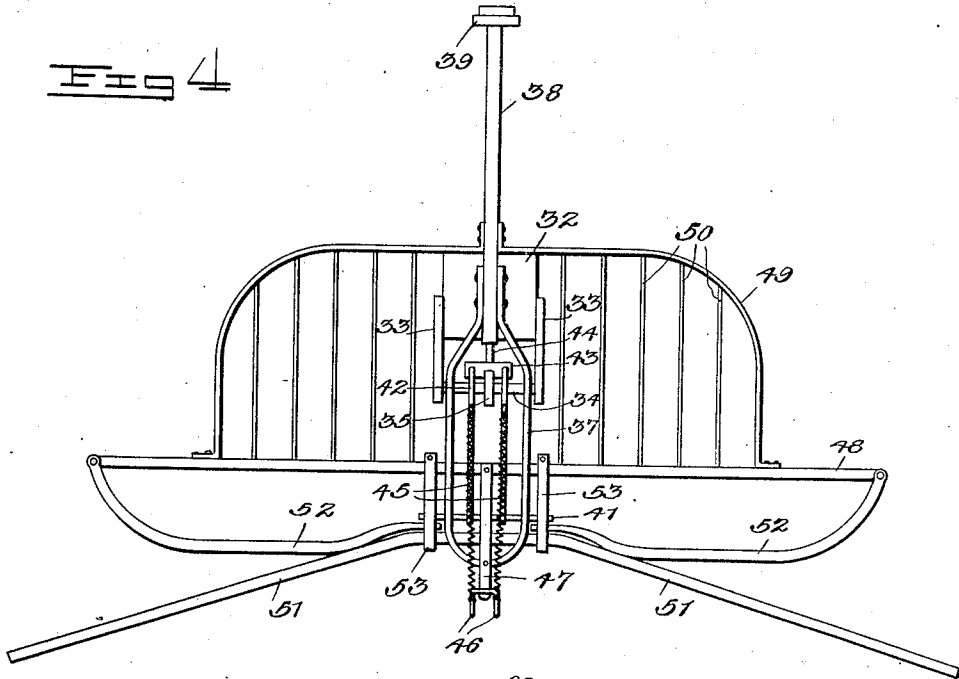
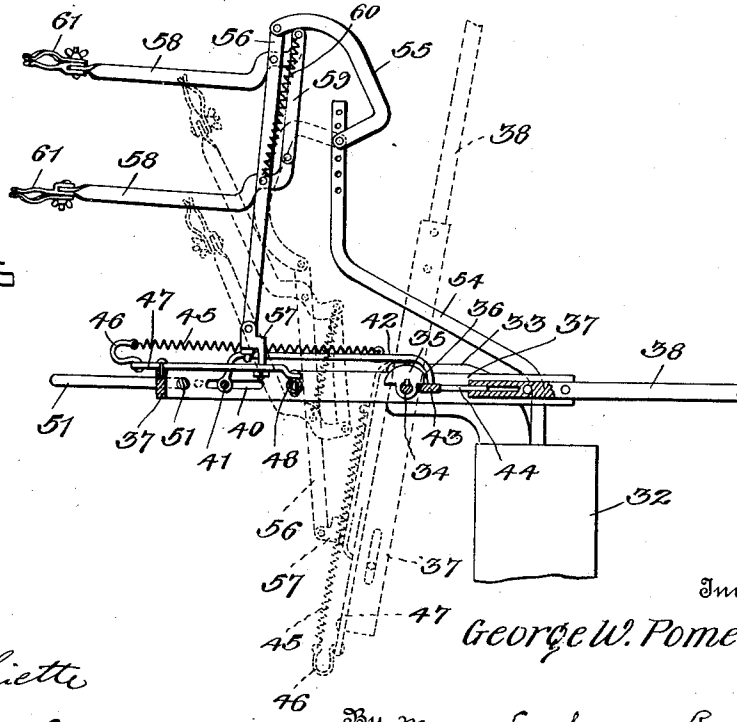


Fig 5



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UNITED STATES PATENT OFFICE.

GEORGE W. POMEROY, OF BUTTE, MONTANA.

MAIL-BAG CATCHER AND DELIVERER.

1,094,095.

Specification of Letters Patent.

Patented Apr. 21, 1914.

Application filed September 13, 1913. Serial No. 789,580.

To all whom it may concern:

Be it known that I, GEORGE W. POMEROY, a citizen of the United States, residing at Butte, in the county of Silverbow and State of Montana, have invented new and useful Improvements in Mail-Bag Catchers and Deliverers, of which the following is a specification.

The mechanism of this invention is of the type particularly adapted for use in connection with the delivery and collection of mails between small stations and passing trains. This mechanism is of the well known forked type combined with chain suspension of the mail bags to be delivered and collected, and embodies certain hereinafter pointed out improvements over prior devices of this nature.

Among the objects of this invention are a simplified construction without sacrificing any of the features found convenient and necessary for the use and operation of this class of devices; a durable and positively acting structure which may be economically installed, and a structure wherein the working parts thereof are protected as far as possible and without hindering the free operation of the same.

Other objects and advantages of this invention will be pointed out in the following detail description of the present embodiment thereof, the same being illustrated in the accompanying drawings in which—

Figure 1 is a side elevation of the apparatus as applied to a car and a crane, the apparatus being shown in position for transferring the mail bags between the train and the crane. Fig. 2 is a top plan view of the car fork in set up position to receive a mail bag, a fragmentary view of the car being shown in section. Fig. 3 is a side elevation of a portion of a car showing the car fork in the raised position of Fig. 2 and showing the mail bag support extended, the dotted lines disclosing the car fork dropped down in inoperative position. Fig. 4 is a top plan view of the crane in position to receive a mail bag. Fig. 5 is a side elevation of the same partly in section, the dotted lines showing the crane in dropped position when out of use.

Referring to these figures wherein like parts are designated by similar characters of

reference throughout the several views, and referring particularly to Figs. 1, 2 and 3, 10 designates the car provided at the opposite sides of the doorway thereof with brackets 11. The car fork of this invention comprises a swinging frame having a rod 12 mounted near its opposite end for rotation in the opposite brackets 11, the rod 12 preferably having a longitudinal sliding movement in the brackets 11 for a purpose hereinafter brought out. The rod 12 carries an outer fork arm 13 projecting outwardly and forwardly from the rod 12 at a point near its rear end, the arm 13 being reinforced by a bar 14 extending from the rod 12 directly outward and joining the arm 13 at a point forwardly of its juncture with the rod 12. This structure is disclosed to advantage in Fig. 2 of the drawings, and wherein it will be seen that the arm 13 is offset inwardly at its intermediate portion to provide a retaining lip 15 for engagement with the mail bag chain as hereinafter pointed out. The rod 12 is further provided intermediate its ends with an arm 16 projecting from the rod diametrically opposite to the fork arm 13. Offset laterally from one side of the arm 16 is a handle 17 adapted to be grasped by the operator to swing the car fork upon the brackets 11. A spring latch 18 carried by the car 10, preferably depends from the top of the car and registers at its lower end with the inner extremity of the arm 16. As may best be seen in Fig. 3, the latch 18 is apertured at its lower end as at 19 to receive the extremity of the arm 16 for the purpose of holding the arm from turning after the car fork has been adjusted into horizontal position as shown in Figs. 1, 2 and 3. The frame of the car fork is provided with an inner or second arm 20 hinged at its forward end upon a finger 21 extending forwardly from the base of the arm 16 and rod 12. The second fork arm 20 is curved in such a manner that its bulged part contacts with the lip 15 when the fork arm 20 is swung out against the outer fork arm 13. The inner arm 20 is provided upon its free end with a guide 22 preferably forked, and engaging about the brace 14, so as to steady the arm 20 in its swinging movement. The guide 22 is curved inwardly from the arm 13 so as to provide between the guide

22 and the arm 13 a loop for the reception of the mail bag chain. A yoke 23 straddles the rod 12 and arm 16, and extends in the longitudinal direction of the arm. The yoke 23 is hinged at its outer end upon the intermediate portion of the inner fork arm 20 and is secured at its inner end to a collar 24 slidable upon the arm 16. A spring 25 is secured at its inner end to the collar 24 and at its outer end to the rod 12 and exerts a tension upon the collar 24 and yoke 23 to yieldingly hold the fork arm 20 outwardly against the fork arm 13.

It will be noted particularly from Figs. 1 and 2, that the collar 24 is located in close proximity to the lower end of the latch 18 and that any slight movement imparted to the arm 20 to move it inwardly forces the collar 24 against the latch 18 and frees the arm 16 from the latch. Such operation allows the car fork to swing down into vertical position as shown in dotted lines in Fig. 3. If preferred a spring 26 or other device may be placed upon the rod 12 between the rear bracket 11 and the fork arm 13 to take up jar incident to the sudden impact of the mail bag against the fork. Positioned preferably beneath the rear bracket 11 is the mail bag support used in the delivery of a mail bag to the crane. This support, as disclosed in Figs. 1 and 3, comprises parallel bars 27 with vertical pins 28 upon their inner ends for engagement in eyes 29 secured against the side of the car. The bars 27 are held in fixed relation to each other by braces 30, or other suitable means which produce a rigid supporting frame. Upon the outer end of each of the bars 27 is disposed, preferably adjustably, a clamp 31 extending outwardly and rearwardly from the bar 27. These clamps 31 are arranged preferably one above the other and are adapted to receive portions of the mail bag chain so as to hold the latter in stretched position and vertically to be caught by the crane as hereinafter set forth. Since the pins 28 of the support are mounted in the eyes 29, the support is permitted to swing upon the eyes so that the support may be drawn in against the side of the car.

The crane of this invention, which co-operates with the above described car fork, comprises a post 32 rising from the road bed at one side of the track and carrying a pair of upwardly extending and inwardly curved bracket plates 33 at the upper end of the post. A transverse bar 34 is rigidly mounted in the ends of the bracket plates 33, the bar 34 being mounted so that it will not turn and being provided at its middle portion with a segment 35 provided with a downwardly facing shoulder 36 at its inner side. A loop frame 37 is mounted toward one end for rotation upon the bar 34 and

carries at said end a beam 38 provided upon its extremity with counter-balancing sides 39 adapted to offset the weight of the outer end of the crane hereinbefore described. The loop frame 37 projects outwardly from the bar 34 to a considerable distance and is provided in its opposite sides with a pair of registering and longitudinally extending slots 40 receiving the opposite ends of a tripper rod 41. The tripper rod 41 carries a pair of inwardly extending bars 42 secured at their inner ends upon a latch 43 adapted to engage beneath the shoulder 36 and hold the loop frame 37 in raised position. The latch 43 is provided with a guide pin 44 projecting into the recessed inner end of the beam 38 to hold the latch from rising when released from the shoulder 36. The bars 42 each carry a spring 45 extending outwardly to the end of the frame 37 where each spring is secured to a hook 46 carried upon the outer end of a bar 47 projecting longitudinally within and beyond the frame 37. The bar 47 is secured to the frame 37 in fixed relation thereto and is adapted to swing therewith. A rail 48 extends transversely through the intermediate portion of the frame 37 and is secured at its middle portion to the inner end of the bar 47. The rail 48 projects at either side from the frame 37 to a considerable distance and carries a fender 49. The fender 49 is shown in the present instance as comprising a pair of flat metallic strips extending from the opposite ends of the rail 48 to the middle portion of the beam 38. A plurality of spaced apart parallel rods 50 are secured at their opposite ends in said metallic strips and the rail 48 respectively. The frame 37 is provided upon its outer end with a double forked arm 51, the same passing transversely through the frame 37 in parallelism with the rail 48 and having its opposite ends diverging outwardly from the rail 48 and extending a short distance beyond the extremities of the same. This construction is shown to advantage in Fig. 4 of the drawings. An inner fork arm 52 is pivoted to each end of the rail 48, the inner forked arms 52 extending toward the frame 37 and being curved outwardly into proximity to the ends of the outer arm 51. The inner free ends of the fork arms 52 are offset inwardly to provide spaces or loops for the reception of mail bag chains, and also to provide abutments for engagement with the tripper rod 41 when the arms 52 are swung away from the arm 51 as the mail bag chains pass between these arms. The rail 48 carries a pair of guiding straps 53 which project forwardly in parallelism with the frame 37 and pass against the upper and lower sides of the outer arm 51, the inner arm 52 and the tripper rod 41 at each side of the frame

37. The straps 53 admit of the free movement of the arms and the tripper rod and at the same time hold the same from displacement.

5 Fixed upon the post 32 of the crane is an arm 54 which rises from the post and is offset outwardly toward the track. An arched lever 55 is hinged at one end adjustably upon the upper end of the arm 54, while to the
10 opposite end of the lever 55 is pivoted a depending bar 56. The bar 56 is hinged at its lower end upon a bracket 57 fixed to the bar 47 carried upon the frame 37. From Fig. 5 it will be seen that when the frame 37 is
15 swung down to the dotted line position the depending bar 56 will be drawn down thereby and will swing the arched lever 55 down into the dotted line position shown. The depending bar 56 is provided with a pair of
20 outwardly extending supporting arms 58 hinged in spaced relation upon the bar 56, and have their inner ends projecting beyond their pivotal connections with the bar 56. A link 59 connects the inner ends of the
25 arms 58 insuring the movement of the arms in parallelism with one another. A spring 60 is secured at one end to the link 59 and at its opposite end to the bar 56 and exerts a tension on the link 59 to raise the arms 58
30 and fold the same upwardly out of the way when it is not desired to deliver a mail bag to the train. The outer ends of the arms 58 are provided with adjustable clamps 61 for engagement with the chain of the mail bag
35 to be delivered to the train. From Fig. 5 it will be noted that when the mail bag support of the crane is elevated into operative position the upper end of the link 59 strikes the arched lever 55 and limits the downward
40 swinging of the arms 58 so as to support the mail bag in proper position.

From the foregoing description taken in connection with the accompanying drawings, the following described operation of the device will be readily understood. Referring
45 to Figs. 1 and 3, when the car 10 approaches a crane and it is desired to discharge a mail bag A, the support 27 is swung out at the side of the car after the usual chain of the
50 mail bag A has been secured upon the clamps 31. With reference to Figs. 1, 4 and 5, it will be noted that when the car 10 reaches the crane the chain of the mail bag A is in the path of the fork arm 51 of the crane and
55 that the chain slides inwardly against the fork arm 51 and will strike the free end of the inner fork arm 52, swinging the same inwardly and effecting the gripping of the chain between the fork arms. At this time
60 the chain is drawn out of engagement with the clamps 31 of the car bracket. Also, the inner movement of the fork arm 52 causes the latter to strike against the tripper rod 41 which moves the bars 42 inwardly and
65 displaces the latch 43 from beneath the

shoulder 36. The weight of the mail bag between the fork arms 51 and 52 now swings the frame 37 down about the stationary rod 34 as a pivot, into the position disclosed in dotted lines in Fig. 5. When it is desired to
70 deliver a mail bag to the car 10 from the crane, and assuming the crane to be in the position shown in Figs. 1, 4 and 5, or in elevated position, the mail bag B is suspended by its chain upon the clamps 61 so
75 that the chain is stretched vertically by the clamps. The link 59 strikes the arched lever 55 and holds the mail bag in hanging and extended position as may be seen in Fig. 1. As the car 10 approaches the crane the op-
80 erator grasps the handle 17, Figs. 1, 2 and 3, and swings the car fork into raised position as shown to advantage in Fig. 1. As soon as the car fork reaches its horizontal position the latch 18 snaps over the end of the
85 arm 16 and locks the car fork in position. As the car 10 moves past the crane, the fork arm 13 engages between the supporting arms 58 of the crane and strikes the chain of the mail bag B, drawing the chain away from
90 the clamps 61 and between the fork arm 13 and the inner fork arm 20. As the chain passes between the fork arms 13 and 20, the fork arm 20 is swung inwardly and pushes the yoke 23 toward the extremity of the
95 arm 16. This movement slides the sleeve 24 over against the latch 18 and forces the latch from engagement with the arm 16. As the arm 16 is released from the latch the train
100 fork falls with the mail bag B into the dotted line position shown in Fig. 3 of the drawings. The spring 25 immediately returns the sleeve 24, yoke 23 and the inner fork arm 20 to their normal position. As is
105 usual, the mail bag chains are provided with the disks or plates near their upper ends, as is shown in Fig. 1, so as to hold the chains from slipping down between the forks of the car and the crane.

As soon as the mail bag B is released
110 from the arms 58, the spring 60 draws the link 59 down from engagement with the arched lever 55 and swings the arms 58 up out of the way as is shown in dotted lines in Fig. 5. When the crane is released from
115 the segment 35 and caused to swing down, as shown in Fig. 5, in dotted lines, the bar 56 is drawn down with the crane and pulls with it the arched lever 55 which holds the bar 55 close against the crane and out of the
120 way when the apparatus is inoperative. Since the arched lever 55 is adjustably connected to the upper end of the arm 54 by means of the row of openings shown, the depending bar 56 may be adjusted into the
125 desired angle and consequently move the supporting arms 58 toward or from the crane as desired.

It will be observed from Figs. 2 and 3 of the accompanying drawing that the car 130

bracket 27 is provided upon its inner end with rearwardly extending shoulders 62 at the inner ends of the arms constituting the car bracket. When the arms 27 are swung out into the position shown in Figs. 2 and 3 the shoulders 62 strike rebound blocks 63, formed preferably from rubber although any other suitable material may be used, secured to the side of the car 10. When the car bracket 27 is in extended position to support a mail bag A, as shown in Fig. 1, the bracket remains in such position until the train passes the crane fork. The impact of the crane fork striking the bag A and seizing the same is exerted through the bracket 27 to the shoulders 62 causing the same to press into the blocks 63, and the sudden release of the mail bag from the bracket 27 frees the latter and the rebound blocks 63 throw the bracket 27 inwardly against the car, as shown in dotted lines in Fig. 3. The car bracket is so positioned with respect to the car fork that the bracket first swings inwardly against the car, and then the car fork, upon receipt of a mail bag, drops down into the dotted line position shown in Fig. 3 and crosses the upper arm of the car bracket 27 and prevents the same from swinging outwardly into extended position. This interlocking of the bracket and the car fork is shown in dotted lines in Fig. 3.

What is claimed is—

1. In a mail bag deliverer and catcher, a car fork adapted for securement to a car and to be swung down against the car, a mail bag support mounted upon the car in proximity to the car fork and adapted to be swung against the car, and a crane adapted to be positioned near the path of the car and having a fork frame adapted to swing down away from the car by the weight of a mail bag and a mail bag support connected to the fork frame to swing down therewith.

2. In a mail bag catcher and deliverer, a crane comprising a post, a frame hinged on said post, a shoulder on the post, latching mechanism on the frame for engagement with said shoulder to hold the frame in a horizontal position on the post, a pair of stationary fork arms on the frame, a pair of movable fork arms on the frame for coöperation with the stationary fork arms to catch mail bags, and latch releasing means on the frame in the path of said movable fork arms and adapted to release the frame upon the inward movement of either of said movable fork arms.

3. In a mail bag catcher and deliverer, a crane comprising a vertical post, a frame hinged upon the post, a latch in the frame for engagement with the post to hold the frame in a horizontal position, fork arms on the frame adapted to open and close to receive a mail bag, and connecting means between the fork arms and said latch for op-

erating the latter upon receipt of the mail bag by the fork arms to release the frame and admit of the same swinging down.

4. In a mail bag catcher and deliverer, a post, a frame hinged upon the post, a latch on the frame for engagement with the post to hold the frame in horizontal position, a stationary fork arm on the frame, a movable fork arm on the frame having connection with said latch and adapted to be moved upon the receipt of a mail bag between said fork arms whereby to release said frame and permit the same to swing down against the post, and a hinged mail bag support mounted on the post and having connection with said frame and adapted to swing down into inoperative position upon the release of said frame.

5. In a mail bag catcher and deliverer, a post, a frame hinged on the post, mail bag receiving forks carried by the frame, a latch on the frame adapted to engage said posts, a connection between said latch and said fork arms adapted to release the latch from the post upon the receipt of a mail bag whereby said frame is permitted to swing down against the post, an arm rising from the post above said frame, a lever hinged upon the upper end of the arm, a bar hingedly connected at one end to the free extremity of the lever and at its opposite end to said frame, and a pair of mail bag supporting arms projecting outwardly from said bar.

6. In a mail bag catcher and deliverer, a crane having a frame adapted to swing down by gravity, a latch on the frame for holding the same in horizontal position, fork arms on the frame for the reception of a mail bag and having connection with said latch to release the frame upon the receipt of a mail bag, and a foldable mail bag support connected to the frame adapted to fold into inoperative position upon the release of said frame.

7. In a mail bag catcher and deliverer, a crane comprising a post, a frame hinged on the post, mail bag receiving forks on the frame, a latch on the frame for engagement with said post for holding the frame in horizontal position and having connection with said forks for releasing the latch from the reception of the mail bag, an arm rising from the post above said frame, an arched lever hinged upon the arm, a bar pivoted to the free extremity of said lever at its upper end and having hinged connection with the frame at its lower end, a pair of arms hinged upon said bar and adapted to receive a mail bag upon their outer ends, a link connecting the inner ends of the arms for holding the same in parallelism with one another, and a spring secured at one end to the link and at its opposite end to said bar and adapted to normally hold said arms in raised position, said link being adapted to

strike said arched lever to hold said arms in horizontal position in supporting a mail bag.

8. In a mail bag catcher and deliverer, a crane having a hinged fork frame, a separate hinged mail bag supporting frame arranged above said fork frame and having connection therewith to move with the fork frame, pivoted arms on said mail bag supporting frame for engagement with a mail bag, and a spring connected to said arms adapted to swing the latter up into inoperative position upon the release of a mail bag therefrom.

9. In a mail bag catcher and deliverer, a crane having a fork frame adapted to be held in a horizontal plane, a separate supporting frame arranged above the fork frame and having a connection therewith, movable arms outstanding from said support frame and adapted to receive a mail bag, and means connected to said arms adapted to swing the same into inoperative position upon the release of a mail bag therefrom.

10. In a mail bag catcher and deliverer a pair of spaced apart brackets adapted for securement upon a car, a rod pivotally engaging at its opposite ends in said brackets, an outer fork arm projecting from the rod and extending outwardly and forwardly from the car, an inwardly extending arm on said rod, a latch on the car for engagement with said inwardly extending arm when in horizontal position, a sleeve on said arm, a yoke pivoted to the sleeve and extending longitudinally of the arm, an inner fork arm pivoted upon said rod and having connection with said yoke, and a spring secured at one end to said sleeve and at its opposite end to said rod and adapted to normally hold said inner fork arm against said outer fork arm, the reception of a mail bag between said fork arms being adapted to move said arm inwardly and force said sleeve against the latch whereby to release the latter from the inwardly extending arm.

11. In a mail bag catcher and deliverer an outer fork frame adapted for hinged connection with a car, an arm on said frame, a latch on the car for engagement with said arm to hold the frame in horizontal position, a sleeve on said arm, an inner fork arm hinged upon said frame and having connection with said sleeve whereby to move the same with said inner fork arm, and a spring connected at one end to said sleeve and at its opposite end to said frame whereby to urge said inner fork arm outwardly.

12. In a mail bag catcher and deliverer, a car fork comprising an outer fork frame adapted to be hinged to a car and having an inwardly extending arm, a latch on the car for engagement with said arm to hold the frame in horizontal position, a movable fork arm on the frame for coöperation with

the outer fork arm to receive a mail bag, releasing means connected to said movable fork arm for engagement with the latch, and a spring carried upon the inner side of the frame and having connection with said releasing means for urging said movable fork arm outwardly.

13. In a mail bag catcher and deliverer, a car fork comprising a swinging frame for attachment to the side of a car and having an arm at its inner side, a latch within the car adapted to receive the extremity of the arm when the fork is raised, a movable fork arm mounted on the fork, latch releasing means connected to the movable fork arm and extending into the car for engagement with the latch, and a spring carried by the car fork within the car and having connection with the movable arm for urging the same outwardly.

14. In a mail bag catcher and deliverer, a crane comprising a post, a rod fixed across the upper end of the post and having a shoulder intermediate its ends, a frame hinged upon said rod, a tripper rod mounted transversely in the outer end of the frame, a pair of bars carried upon the tripper rod and extending backwardly to said shoulder, a latch mounted on said bars and adapted to engage beneath said shoulder whereby to support said frame in extended position, springs secured at one end to said bars and at their opposite end to the frame and adapted to yieldingly hold the latch beneath said shoulder, a counter-balancing beam projecting from the inner end of the frame, a guide pin on the latch slidably engaging in the end of the beam to guide the latch in its movements, a rigid fork arm on the frame and a movable fork arm on the frame bearing on the tripper rod for coöperation with the rigid arm to receive a mail bag, the movable arm being adapted to yield upon the receipt of a mail bag and retract the tripper rod whereby to release the latch from said shoulder and admit the frame to swing down.

15. In a mail bag catcher and deliverer, a car fork extending out from the car, a mail bag support arranged beneath said fork and extending outwardly from the car to support a mail bag, a crane having a fork adapted to receive the bag from said support and having a bag support to deliver a bag to said car fork, and means associated with said support on the car for swinging the support inwardly against the car immediately upon the delivery of the mail bag to the crane, said car fork being adapted to subsequently drop down against the car and overlap said support to hold the latter against the car.

16. In a mail bag catcher and deliverer, a mail bag support adapted to be hinged to a car, and a re-bound block carried upon the

car adapted to receive thereagainst said support when extended, said support being adapted to be pressed against said block upon the delivery of a mail bag from the support, said block being adapted to throw
5 said support inwardly against the car immediately upon the release of the mail bag.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE W. POMEROY.

Witnesses:

MAUD E. CLINTON,
ROY F. MCGAUGHEY.

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