

(No Model.)

3 Sheets—Sheet 1.

C. F. SLIGER.
MAIL BAG CATCHER AND DELIVERER.

No. 535,300.

Patented Mar. 5, 1895.

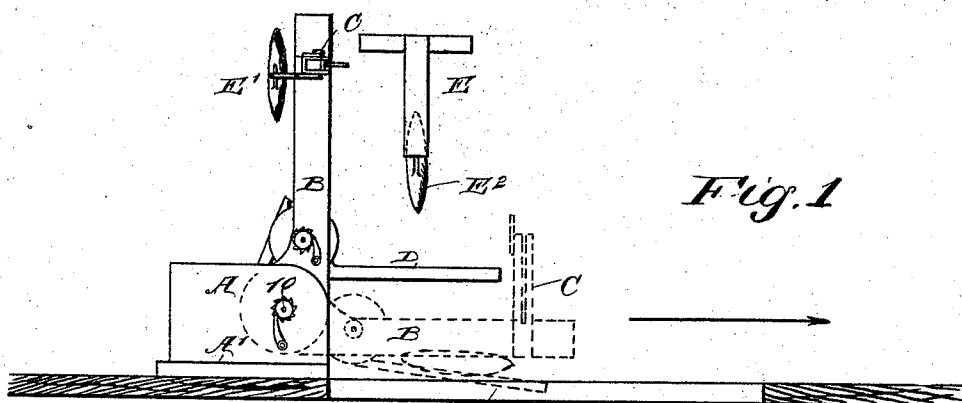


Fig. 1

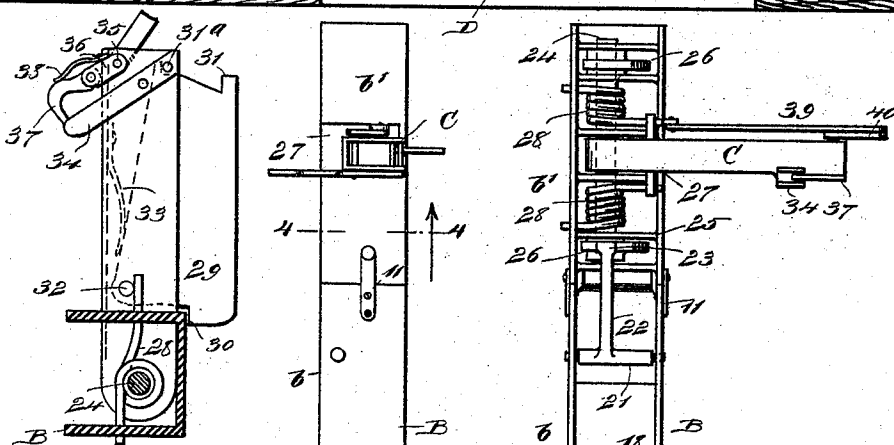


Fig. 2

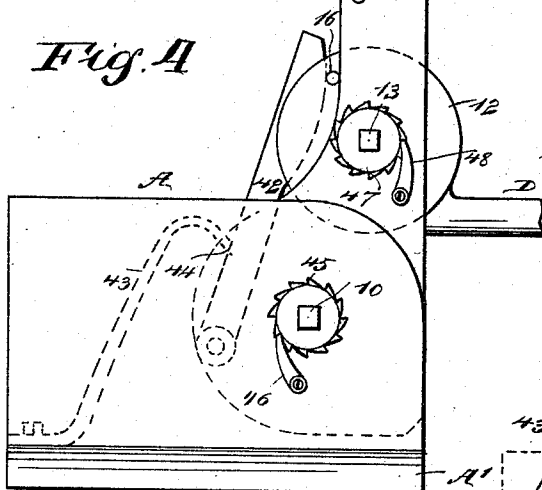


Fig. 3

WITNESSES:
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Fig. 2

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ATTORNEYS.

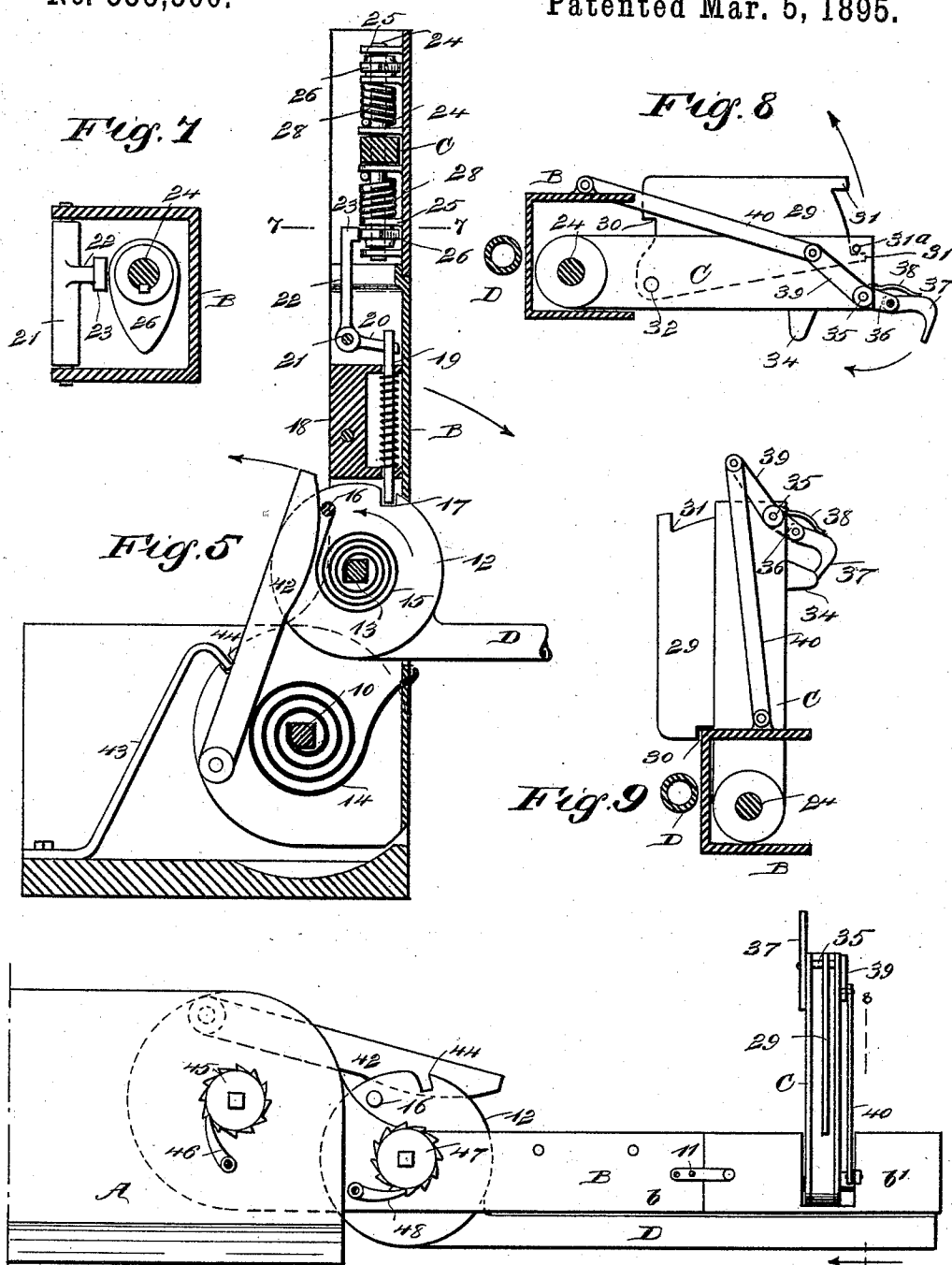
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3 Sheets—Sheet 2.

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WITNESSES:

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Fig. 6

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(No Model.)

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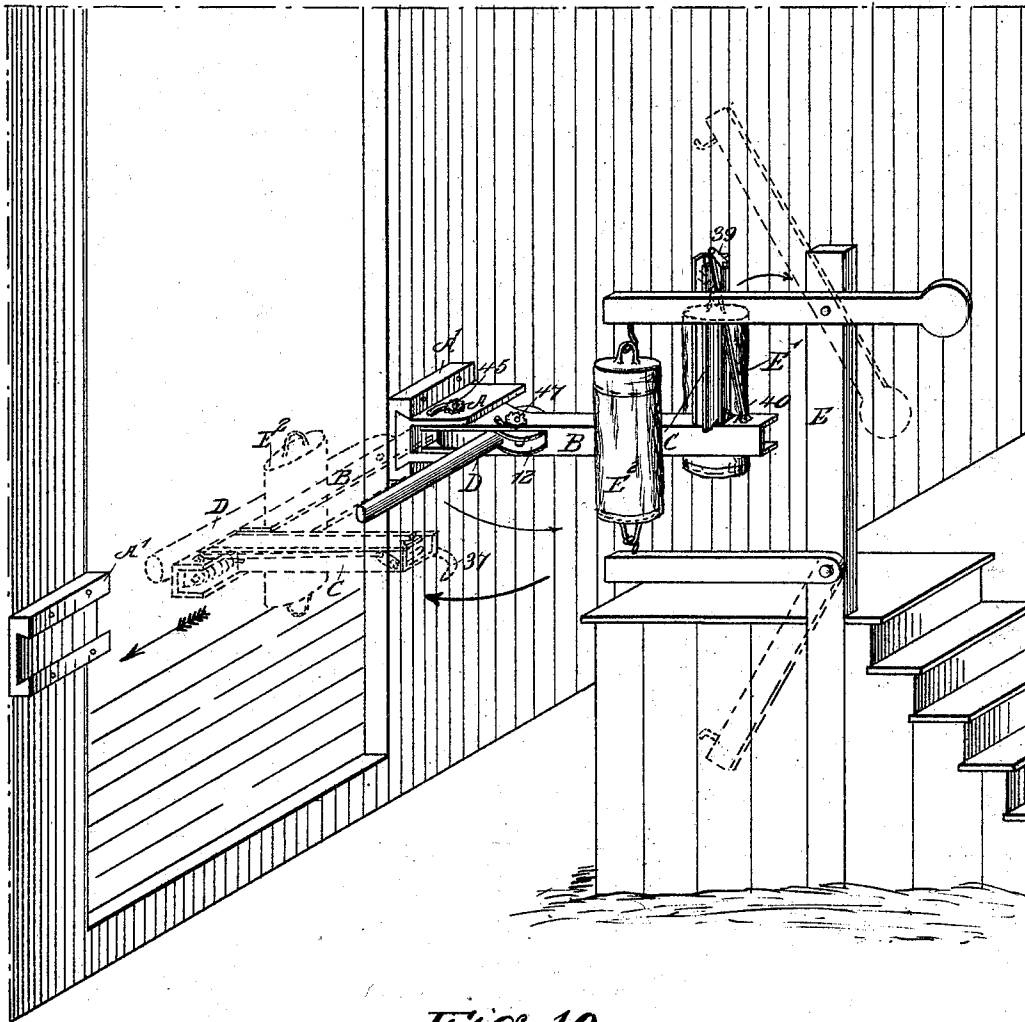


Fig. 10

WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES F. SLIGER, OF SAN ANTONIO, TEXAS.

MAIL-BAG CATCHER AND DELIVERER.

SPECIFICATION forming part of Letters Patent No. 535,300, dated March 5, 1895.

Application filed July 3, 1894. Serial No. 516,454. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. SLIGER, of San Antonio, in the county of Bexar and State of Texas, have invented a new and Improved Mail-Bag Catcher and Deliverer, of which the following is a full, clear, and exact description.

My invention relates to a device capable of catching or transferring mail bags from a mail bag hanger to the mail car while the car is in motion, the device also acting to deliver a mail bag at the same station, if necessary, one operation in no manner interfering with the other.

Another object of the invention is to provide a device of the character above set forth, which may be used at either side of a door opening in a car, and which will be exceedingly simple, durable and economic in its construction and entirely automatic in its operation.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the device attached to a car, the device being shown in positive lines in position to deliver a sack and to receive one, and in dotted lines the device is illustrated in the position it assumes when delivering the sack caught from the hanger, to the doorway of a car. Fig. 2 is a plan view of the device in operative position. Fig. 3 is a rear elevation thereof, in the position shown in Fig. 2. Fig. 4 is a transverse section taken essentially on the line 4—4 of Fig. 2. Fig. 5 is a horizontal section through the catcher arm and body portion of the device. Fig. 6 is a plan view of the device with the delivery arm in tripped or horizontal position. Fig. 7 is a transverse section, taken essentially on the line 7—7 of Fig. 5. Fig. 8 is a detail view of the delivery arm, the hook being in open position and the arm proper horizontally located. Fig. 9 is a view similar to Fig. 8, the arm being shown in operative position and the hook closed. Fig. 10 is a per-

spective view showing the invention applied to a car and in the act of delivering one bag and catching another.

The invention may be said to consist primarily of a base A, a catcher arm B, a delivery arm C and a retaining arm D. The base A is usually made rectangular in cross section, and is provided with an interior chamber open at the front and at one or both ends, the back of the base being made more or less dove-tailed, in order that it may fit in correspondingly-shaped sockets A', four of which sockets or receivers are upon a car, one at each side of each car door, since the device is intended to be shifted as occasion may demand.

The catcher arm B, is preferably somewhat inverted U-shaped in cross section, comprising a front wall and a top and bottom wall, the rear portion being substantially open, as shown in Fig. 3. The catcher arm is preferably made in two sections, a body section *b* and an extension section *b'*, the two sections being connected by a latch 11 of any approved construction. The object of making the catcher arm in two sections is that the delivery arm may be shifted as it is carried by the extension section, in order that the said delivery arm may be made to work in direction of either end of the car. The inner end of the body of the catcher arm is enlarged, and is pivoted in the base A by a pivot pin 10. This pivot pin is loosely passed through the catcher arm mounted to turn loosely in the base.

The retaining arm D is provided with a circular enlarged inner end, formed substantially of two disks 12, and this arm is pivoted in the catcher arm by passing a pivot pin 13 loosely through the catcher arm and through the disk end of the retaining arm.

A spring 14, is coiled around the pivot of the catcher arm between its members, the spring being secured at one end to said pivot and at its opposite end to the outer face of the said arm, as illustrated best in Fig. 5, the tendency of the said spring being to throw the catcher arm parallel with the base, as shown in dotted lines in Fig. 1, or across the door opening. A similar spring 15, is made to control the retaining arm, being secured at one end to the pivot 13 of said arm, be-

tween the disks 12, and the opposite end of the spring is attached to a pin 16 connecting the two disks near their peripheries, as is likewise shown in Fig. 5. The lower disk 12 of the retaining arm is provided with a recess 17, and in front of this recessed portion of the disk a block 18 is located in the catcher arm, carrying a spring-controlled bolt 19, and the spring of the bolt serves to normally force said bolt to an engagement with the periphery of the said lower disk of the retaining arm, in order that when the arm is at a right angle to the catcher arm the bolt will enter the recess 17 and preserve such position. The bolt 19 is operated by a finger 20, adapted to draw it out from the recess 17, which finger is attached to a rock shaft 21, transversely journaled in the catcher arm at its rear, and the said rock shaft is provided with a finger 22, extending outwardly and longitudinally of the catcher arm, terminating at its outer end in a head 23, extending within the catcher arm transversely thereof, as shown in Fig. 5. The longer finger 22 extends over and into the extension *b'* of the catcher arm, and in this extension upon its forward surface, a series of bearings 25 is arranged, preferably in pairs, three pairs being illustrated. A cam 26, shown best in Fig. 7 and of substantially a heart or elliptical shape, is located between each outer and inner pair of the bearings and secured upon a shaft 24, held to turn in said bearings and extending through all of them.

The delivery arm is shaped substantially in cross-section like the catcher arm, the forward face of the delivery arm being however open, as shown at 27, and the said delivery arm is secured upon the shaft 24 between the bearings of the intermediate set, and springs 28, are coiled around the shaft between the outer set of bearings and the intermediate bearings and the inner set of bearings and intermediate bearings, one end of each spring being attached in any approved manner to the sides of the delivery arm; and the tendency of these springs is to throw the delivery arm inward at a right angle to the catcher arm, as shown in Fig. 6. A latch 29, which is in the nature of a plate, is located in the framing of the delivery arm longitudinally thereof, the lower end of the latch being provided with a recess 30 adapted for engagement with the upper forward corner of the catcher arm, acting when in such contact to maintain the delivery arm in a vertical position at right angles to the catcher arm, as shown in Figs. 1, 2, 3 and 4. The upper end of the latch 29 is provided with opposing studs 31, which limit the upward movement of the latch in the delivery arm by contact with a pin 31^a, located at its open side; and the lower inner end of the latch is pivoted within the framing of the delivery arm by a pin 32, as shown in Fig. 4, and the latch is normally held in an outer position by a spring 33, shown in dotted lines in the same figure. A keeper 34, is secured

to one side of the delivery arm, extending beyond its rear or closed face, and at the outer or upper end of the said delivery arm, near its closed face, a shaft 35, is located, and at one end of this shaft a link 36 is secured, having pivotally connected with it a hook 37, adapted when the arm is in a vertical position to engage with the keeper 34, being held in position for engagement by a spring 38, whereby the hook may be removed from the keeper independent of its automatic closing mechanism, thus permitting a bag to be inserted or removed if desired, since the bag *E'* to be delivered is to be carried by the hook when it is in engagement with the keeper.

The automatic operating mechanism of the hook consists of a link 39, attached to the opposite end of the shaft 35, as shown in Figs. 8 and 9, the said link being pivotally connected with a longer link 40, having its opposite end pivoted upon the upper surface of the catcher arm.

A lever 42 is fulcrumed upon preferably the lower member of the inner end of the catcher arm, as shown in Fig. 5, the said lever being provided with a cylindrical surface engaging with the stud 16 on the retaining arm; and the lower member of the catcher arm at its inner end is made circular or cylindrical, and is provided with a recess 44, adapted to receive a spring 43 attached to the base, the spring being adapted for engagement with the rear edge of the lever 42. The spring upon the pinion 10 may be wound up, if required, by means of a wrench or key applied to its upper end, which is squared, the said upper end being likewise provided with a ratchet wheel 45, engaged by a pawl 46 located upon the base; and the spring of the retaining arm may be wound in like manner by applying a suitable implement to its upper end, and the pivot 13 of this arm is provided with a ratchet wheel 47, engaged by a pawl 48, pivoted upon the catcher arm.

In the operation of this device, before the car approaches a station at which mail is to be delivered and where a mail bag hanger *E* is located, supporting the mail bag *E'* to be gathered, the catcher arm is carried to the position shown in positive lines in Fig. 1, namely, at a right angle to the side of the car, and when the arm is carried to this position the spring latch 43 will have entered the recess 44 in the catcher arm, maintaining it in such position. The retaining arm is carried at a right angle to the catcher arm, as is also shown in positive lines in Fig. 1, and the bolt 19 will enter the recess 17 in the retaining arm, maintaining it in the position in which it has been placed, and the delivery arm is carried to a vertical position, whereupon its latch 29, will engage with the catcher arm and hold it in such position. When carrying the delivery arm to its upper position, the links 39 and 40 will act to automatically close the hook 37 down upon the keeper 34, and passing through the ring of the mail bag *E'*

to be left at the next station if mail is to be delivered there. When the car approaches the mail bag hanger E, the latch 29 will strike the upper horizontal arm of the hanger, and will be disengaged from the catcher arm, at which time the springs 28 will act to throw the delivery arm rearward to a horizontal position, as shown in Fig. 6, and the hook will be carried out from the keeper and the bag relieved from connection with the delivery arm. The action of the springs 28 will serve also to turn the shaft 24 in the catcher arm and revolve the cam 26 sufficiently to cause the arm 22 of the rock shaft 21 contacting with the cam to be carried rearward, thus drawing the bolt 19 from engagement with the retaining arm D. At this time the mail bag upon the hanger E will be engaged by the catcher arm, and the retaining arm being freed from the bolt 19 will be forced to the parallel position with the catcher arm by its spring 15. The retaining arm will therefore clamp the bag in engagement with the catcher arm, as shown in dotted lines in Fig. 1, and the movement of the retaining arm to accomplish this holding position with relation to the mail bag, will cause the stud 16 of the retaining arm to force rearward the lever 42, causing the said lever to carry the spring latch 43 from engagement with the catcher arm, whereupon the spring 14 of the latter arm will act and carry it across the door opening, as likewise shown in Fig. 1, enabling an attendant to readily remove the bag and set the device for operation at the next gathering or delivering station.

Two cams 26 are provided in the drawings in order that the extension *b'* of the catcher arm may be reversed and cause the delivery arm to operate from either side of the door.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A mail bag catcher comprising a base, a catcher arm pivoted at its inner end thereon, a spring for throwing the catcher arm inwardly, a latch for locking the said arm in its outermost position, a retaining arm pivoted at its inner end to the catcher arm, a spring to throw the retaining arm toward the catcher arm, a releasing mechanism actuated from the inner end of the retaining arm to release the said latch and permit the catcher arm to be thrown by its spring toward the car, a locking device mounted on the catcher arm and engaging the retaining arm when swung away from the catcher arm and a releasing mechanism mounted on the catcher arm to release the latch of said retaining arm, substantially as shown and described.

2. In a mail bag catcher, a base, a catcher arm pivoted in the base, having spring-controlled movement, a latch having locking engagement with the inner end of the catcher

arm, a spring controlled retaining arm pivoted in the catcher arm, a releasing device mounted on the catcher arm operated by the inner end of the retaining arm and operating upon the latch of the catcher arm, a locking device engaging with the retaining arm, and a releasing mechanism carried by the retaining arm and operating upon the said locking device, substantially as and for the purpose set forth.

3. In a mail bag catcher and deliverer, a spring-controlled catcher arm, a retaining arm carried by the catcher arm, a locking mechanism for the catcher arm, controlled by the retaining arm, a delivery arm fulcrumed upon the catcher arm, a locking device engaging with the retaining arm, a trip connection between the locking device and the delivery arm, a carrier located upon the delivery arm, and a trip whereby the carrier is thrown in open position, substantially as shown and described.

4. In a mail bag catcher and deliverer, the combination, with a catcher arm, spring controlled and provided with a locking device, a retaining arm likewise spring-controlled and provided with a locking device, and a releasing connection between the locking device of the catcher arm and the retaining arm, of a delivery arm pivoted upon the catcher arm, provided with a latch adapted to hold it in a predetermined position, a latch likewise serving as a trip, springs acting to carry the delivery arm from a delivery position to a position of rest, carriers adapted to hold a mail bag, operated by the movement of the delivery arm, and a releasing connection, substantially as shown and described, between the delivery arm and a locking device of the retaining arm, as and for the purpose set forth.

5. In a mail bag catcher and deliverer, the combination, with a catcher arm, spring-controlled and provided with a locking device, a retaining arm likewise spring-controlled and provided with a locking device, and a releasing connection between the locking device of the catcher arm and the retaining arm, of a delivery arm pivoted upon the catcher arm and provided with a keeper, a hook for engagement with the keeper, and a shifting connection between the hook and the catcher arm, a shaft upon which the delivery arm is mounted, the said shaft being spring-controlled, a latch carried by the delivery arm and adapted for engagement with the catcher arm, holding the former in position for delivering, a cam carried by the said shaft, and a releasing device operated by the cam and operating upon the locking device of the retaining arm, as and for the purpose set forth.

CHARLES F. SLIGER.

Witnesses:

ALBERT HAZLETT,
EDWIN T. ANDERSON.