No. 721,550. PATENTED FEB. 24, 1903.

F. M. EDWARDS.

MAIL DELIVERER.

APPLICATION FILED AUG. 11, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

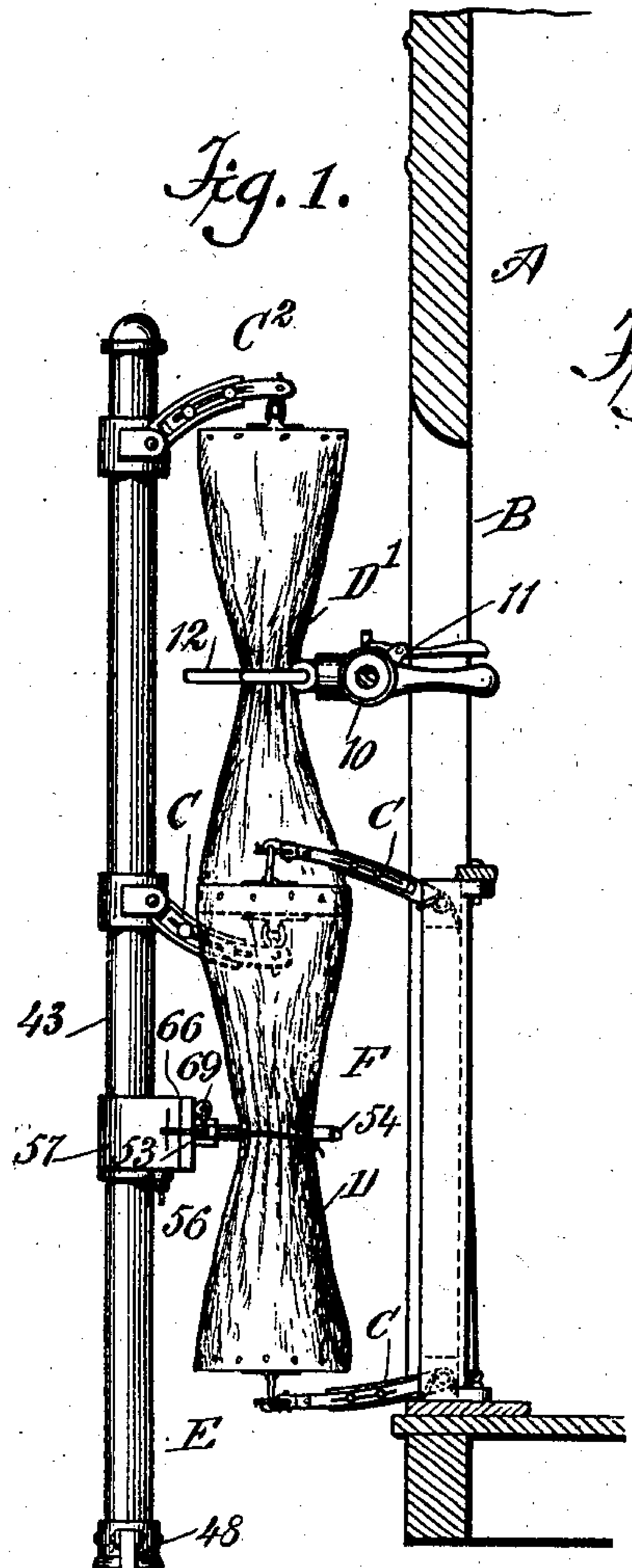


Fig. 2.

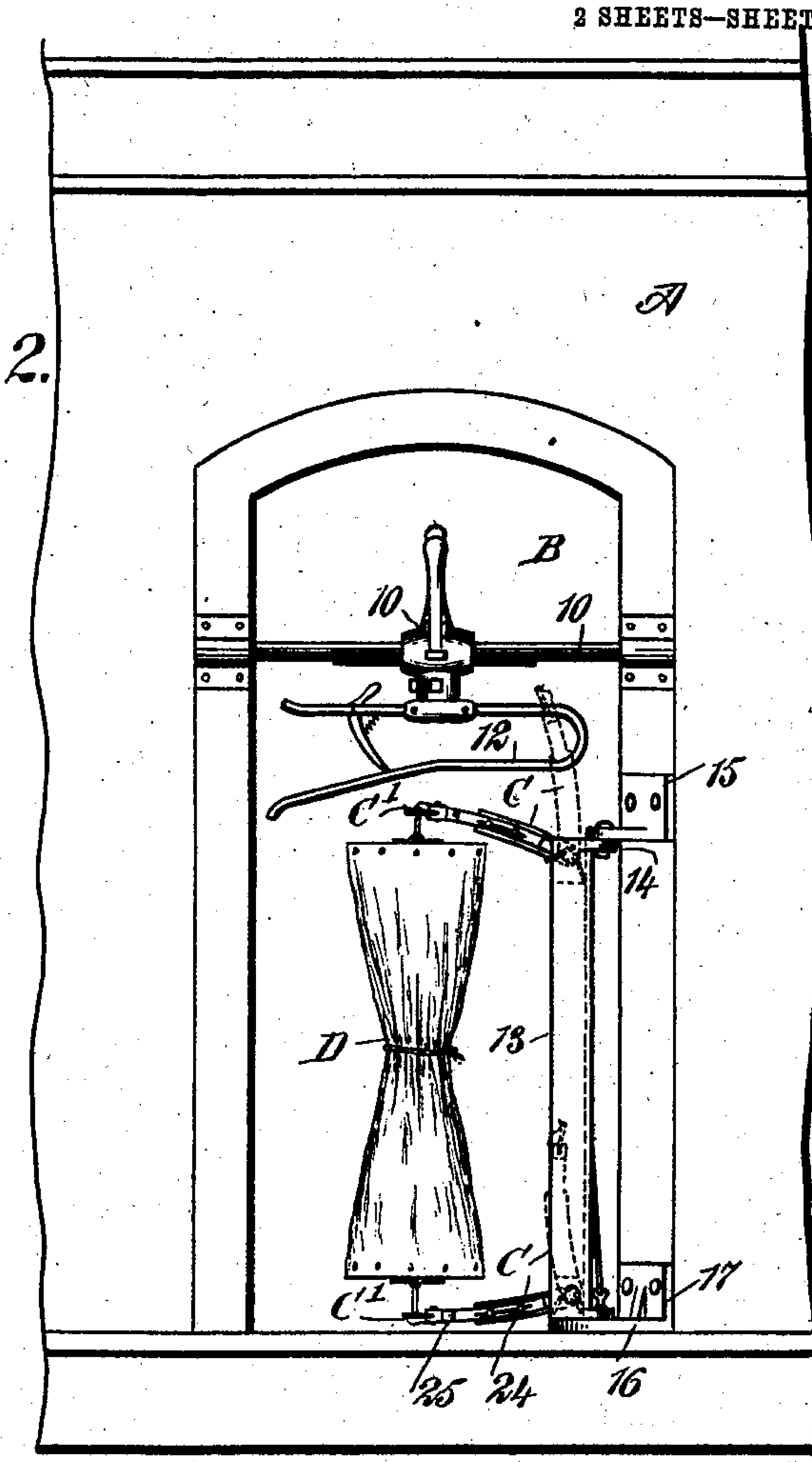


Fig. 4.

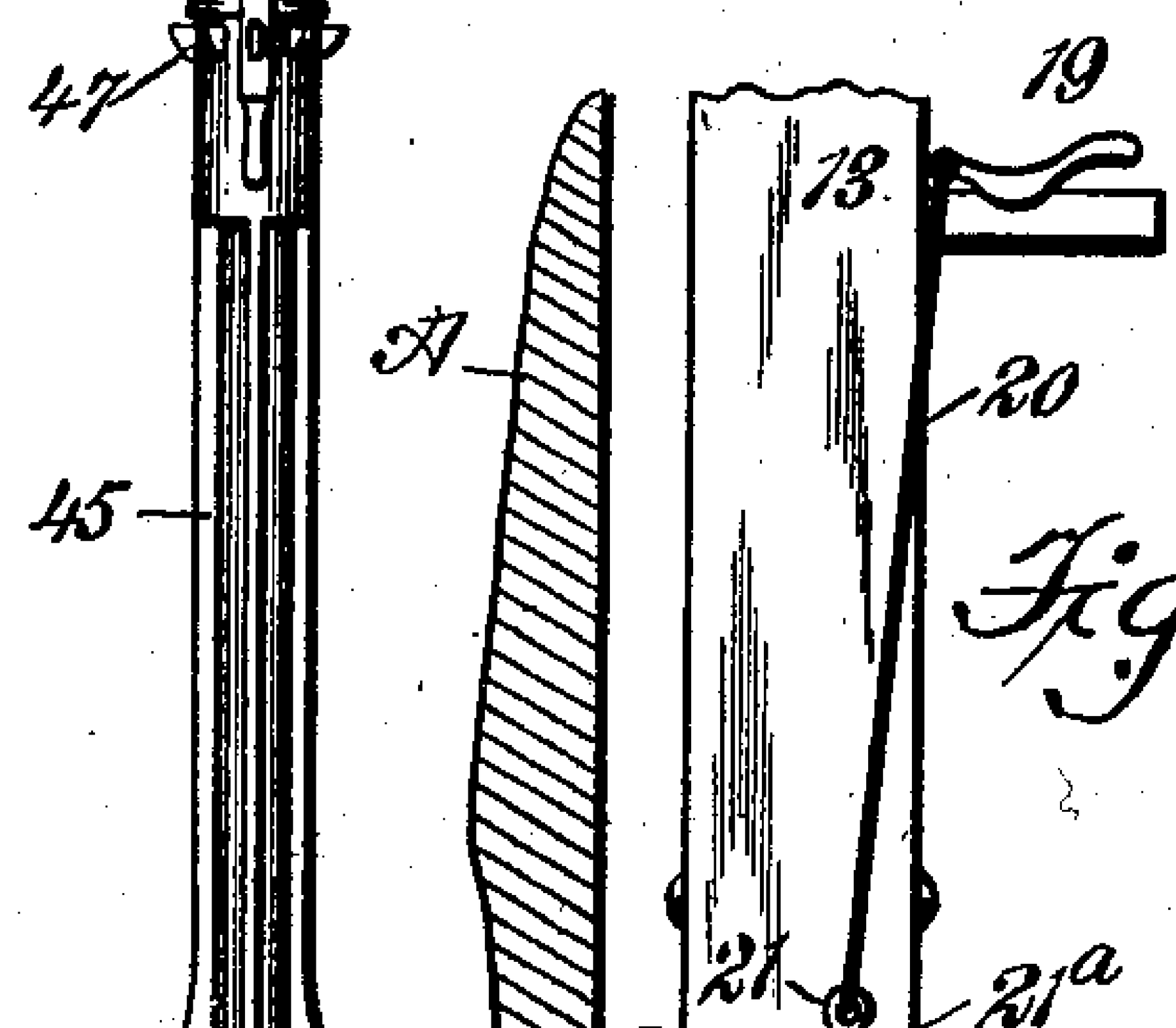
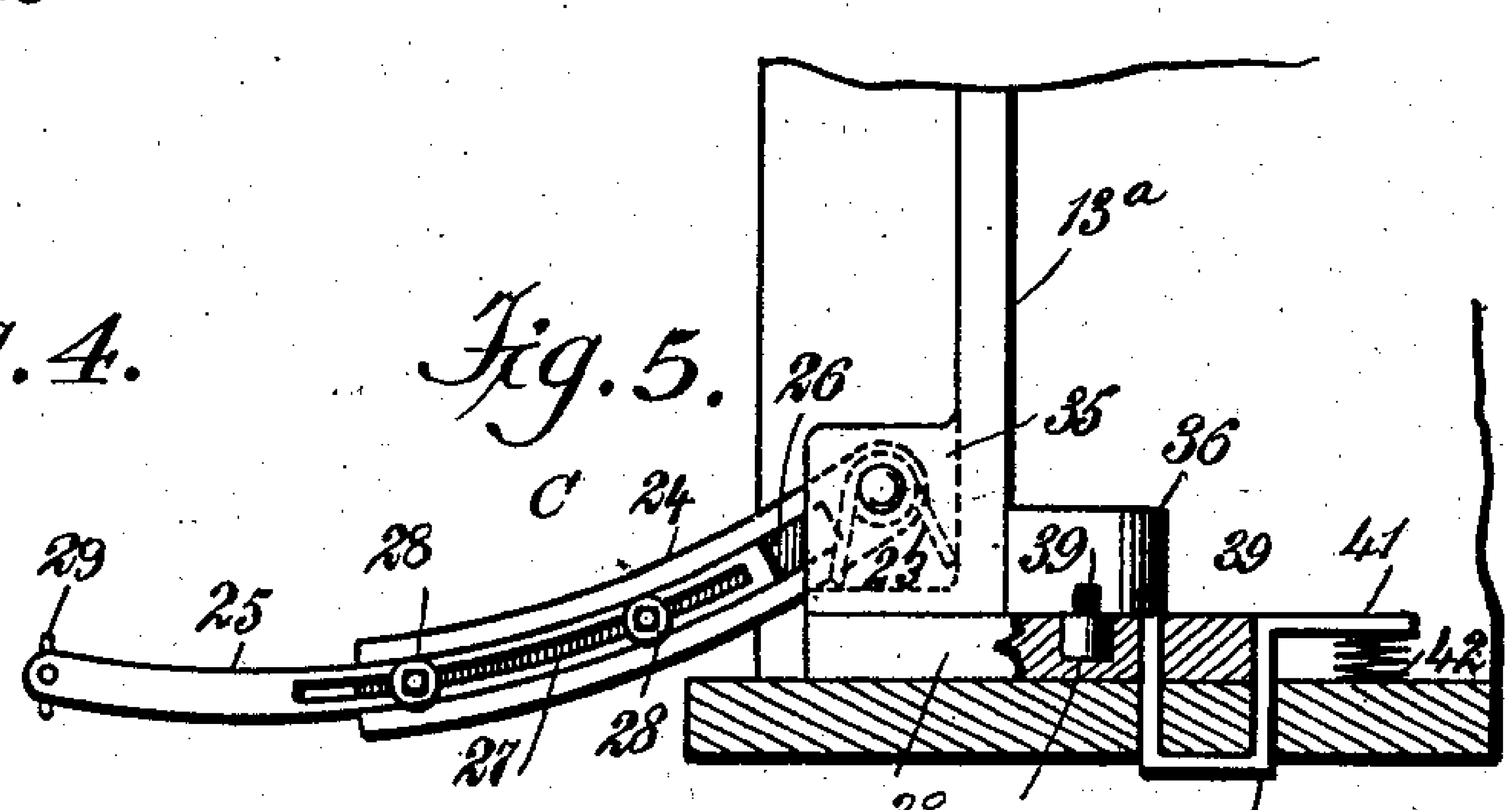


Fig. 5.



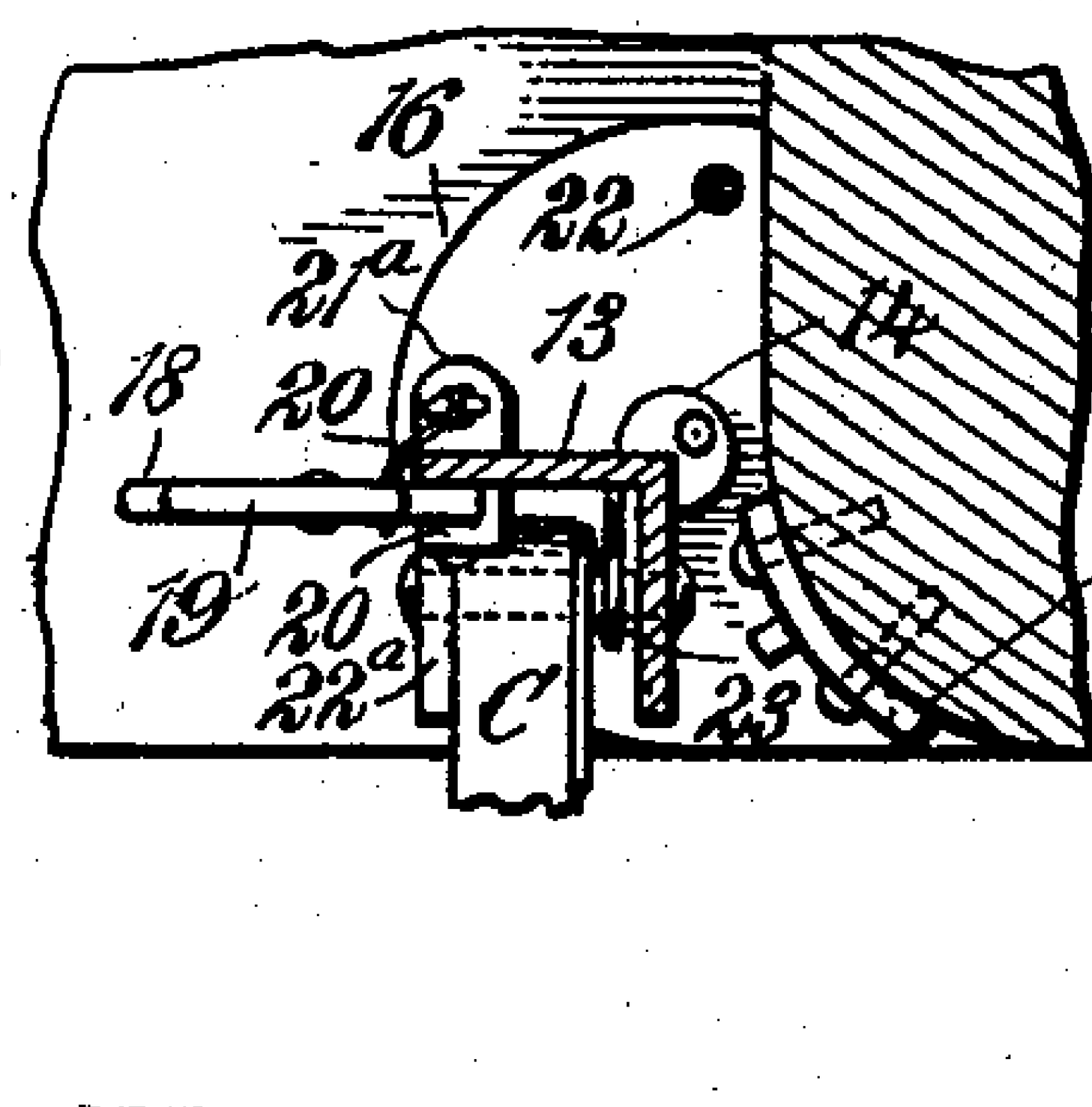


Fig. 3.

WITNESSES:

A. R. Appleman Jr.

[illegible signature]

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BY Munn & Co.

ATTORNEYS.

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No. 721,550. PATENTED FEB. 24, 1903.

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MAIL DELIVERER.

APPLICATION FILED AUG. 11, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 11.

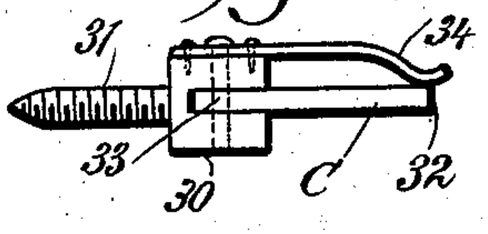
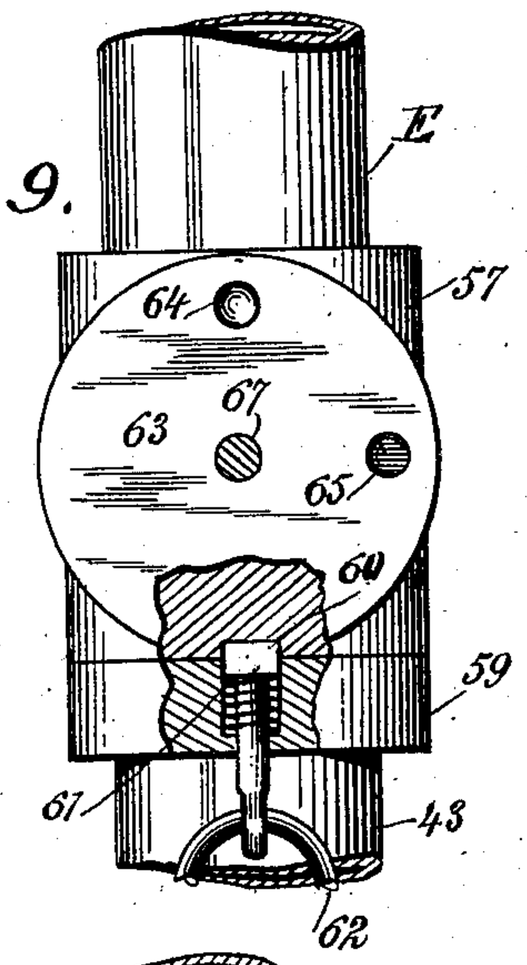


Fig. 9.



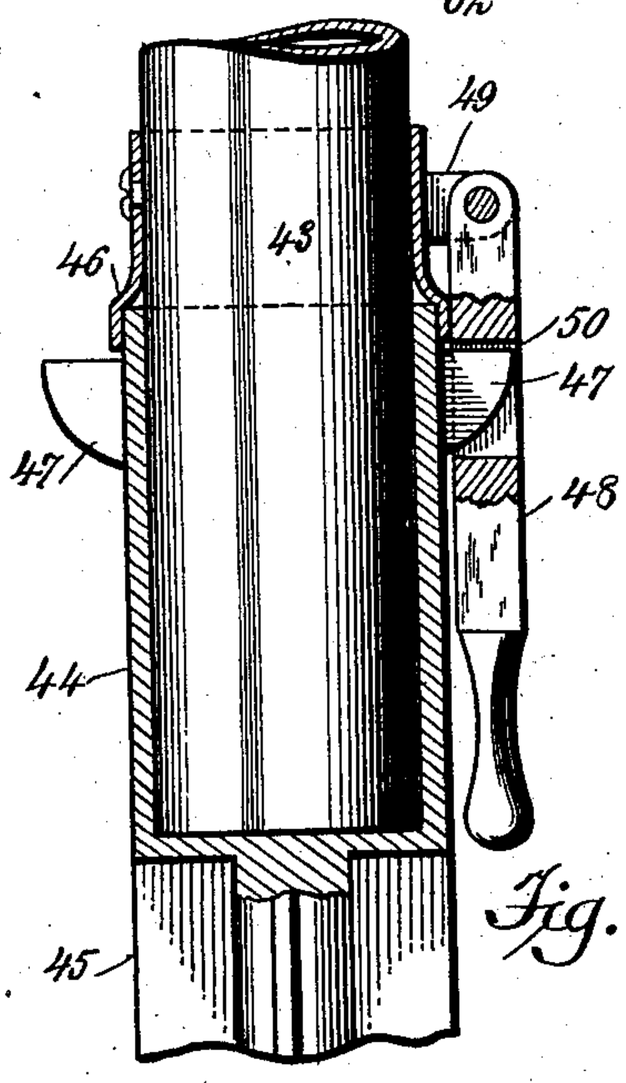
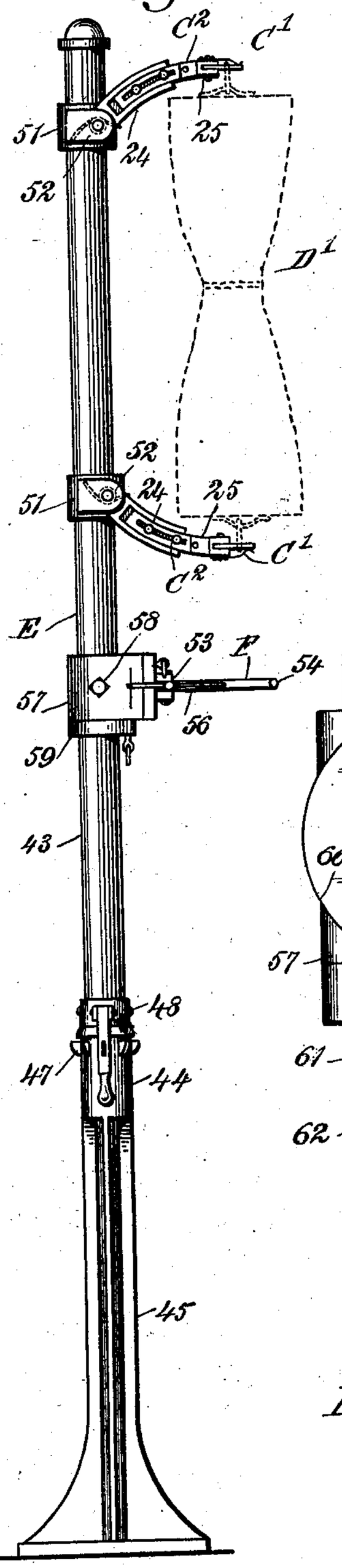


Fig. 10.

Fig. 6.



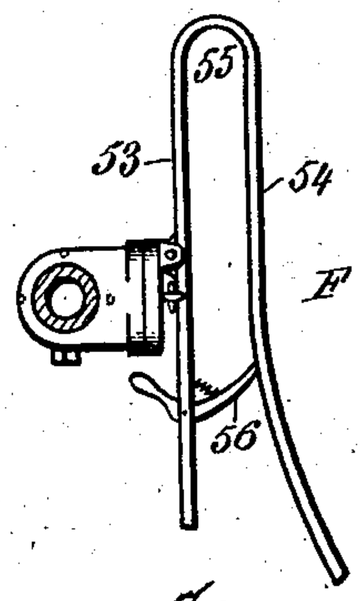
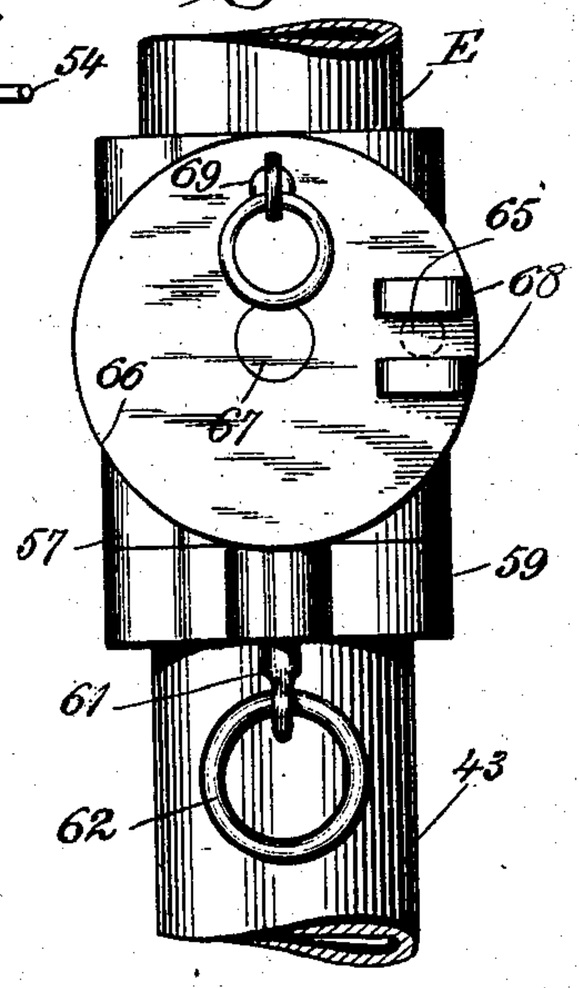


Fig. 7.

Fig. 8.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANCIS M. EDWARDS, OF NEW YORK, N. Y.

MAIL-DELIVERER.

SPECIFICATION forming part of Letters Patent No. 721,550, dated February 24, 1903.

Application filed August 11, 1902. Serial No. 119,231. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. EDWARDS, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Mail-Deliverer, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a simple, durable, and economic mail-deliverer capable of ready attachment to the door-jamb of any mail-car and which will not interfere with the use of the door, and, furthermore, to so construct the device that a mail-bag may be quickly and conveniently attached thereto at the top and bottom of the bag, the fastening device employed offering no obstruction to the safe and expeditious removal of the bag from the deliverer in the customary manner.

Another purpose of the invention is to provide a means whereby to hold the deliverer parallel with the side of the car within the doorway or extending out from the doorway at right angles to the side of the car.

Another purpose of the invention is to provide a crane especially adapted for use in connection with the deliverer and having the same character of supporting-arms for the bag as those employed upon the deliverer.

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 characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through a side of a mail-car and the doorway in which the deliverer is located, showing the deliverer holding a mail-bag in its outer or delivering position, and a side elevation of a crane, represented as about to receive the delivered bag and about to deliver the bag to the catcher-arm of the mail-car. Fig. 2 is a side elevation of a portion of a mail-car and its side doorway and a front elevation of the deliverer holding a mail-bag within the doorway. Fig. 3 is a transverse section taken between the top and bottom of the deliverer when in its outer position. Fig. 4 is a vertical sectional view of a portion of the car and a side elevation of a portion of the mail-deliverer. Fig. 5 is a sectional view of a part of a mail-car and a sectional side elevation of the lower portion of a slightly-modified form of the mail-deliverer. Fig. 6 is a side elevation of a mail-crane used in connection with the deliverer. Fig. 7 is a transverse section through the crane and a plan view of the receiving-arm thereof. Fig. 8 is an enlarged side elevation of that portion of the crane to which the receiving-arm is attached. Fig. 9 is a sectional side elevation of the parts shown in Fig. 8, the pivot-plate for the receiving-arm being removed. Fig. 10 is a sectional side elevation of the lower adjustable portion of the crane, and Fig. 11 is a side elevation of the bag-retaining member of the delivery-arms for the crane.

A represents a side of the mail-car, and B the side doorway through which the mail-bags are received and from which the mail-bags are delivered. At the upper portion of the doorway a fixed shaft or rod 10 is secured, and on the said rod a carrier 11 is mounted to slide and turn. This carrier supports a mail-catcher 12, which mail-catcher and carrier form the subject-matter of a separate application filed concurrent herewith.

The mail-deliverer consists of an upright body-section 13, which is usually made of angle-iron, as is shown in Fig. 3; but it may be otherwise constructed, and at the intersection of the members of the said upright or body 13 upper and lower lugs 14 are produced, the upper lug having a hinged or pivotal connection through the medium of a suitable pin with an angular bracket 15, secured to the door-jamb of the door-opening B, and the lower lug 15 is pivotally attached to the horizontal member 16 of an angular bracket 17, also secured to the door-jamb. The said horizontal member 16 of the lower bracket 17 is more or less segmental and rests upon the floor of the car at the aforesaid door-opening B.

The upright standard or body-section 13 of the mail-deliverer is provided about centrally or at any desired point between its top and bottom portions with a handle 18, which handle extends out from the member of the body 13 which faces the inside of the car when

the mail-deliverer is in delivering position, as is shown in Fig. 3, and upon this handle 18 a lever 19 is fulcrumed, adapted to be operated by the hand gripping the handle, or the said lever 19 may be fulcrumed directly to the standard or body 13, if desired, as is shown in Fig. 3. From one end of the said lever 19 a chain or cord 20 or its equivalent extends downward to an engagement with a spring-latch lug 21, which spring-latch lug extends through a second bottom lug 21^a, extending from the inner surface of the member of the standard or body which faces the inside of the car when the mail-deliverer is in delivering position, as is shown in Fig. 3. This spring-latch lug is adapted to enter any one of two or more recesses or apertures 22, produced in the bottom member 16 of the lower pivotal bracket 17 for the device. When the mail-deliverer is in delivering position, as is shown in Fig. 3, the spring-latch lug 21 will enter the outermost aperture or recess 22, and when the said mail-deliverer is brought within the door-opening B and is practically out of use the said spring-latch lug 21 will enter the innermost recess or aperture 22. In this manner the device may be readily shifted from an inner to an outer position and will be securely held in either of the two positions.

Arms C for supporting a mail-bag E are pivoted at the top and at the bottom of the upright or body 13, and under the construction of the body 13, as is illustrated in Fig. 3, the pivot-pins for the arms C extend through what may be termed the "outer" member of the body 13 and lugs 22^a, formed upon or attached to the inner member of said body. Springs 23 are coiled around the pivot-pins for the arms C, engaging at one end with the body-standard 13 and at their opposite ends with the arms C, the engagement of the springs with the arms C being such that said springs tend to normally force the arms C upward to a substantially vertical position, as is shown in dotted lines in Fig. 2. The arms C are oppositely curved or are curved in direction of each other to a greater or less extent, and preferably each arm C is made in two sections, an inner section 24 and an outer section 25, adjustable upon the inner section. The inner section 24 of each arm is provided with a longitudinal groove 26, in which the inner end of the outer section is adapted to slide, and the outer section 25 of each arm is provided with a longitudinal slot 27. The two sections of the arms are held in adjusted position by bolts and washers 28, which bolts pass through the slots 27 of the outer sections 25 of the arms C and are preferably secured to the inner sections 24 of said arms. Thus it may be observed that the arms C may be extended as occasion may require.

Each arm C is provided with a device for engagement with the loops at the ends of the mail-bag D. In Fig. 5 I have illustrated the ordinary forked support 29; but the preferred support for the bag D and used in connection with the arms C is designated as C′ and is shown in detail in Fig. 11. It consists of a body-block 30, provided, preferably, with a screw extension 31, so that the bag-supporting device may be attached to the end of the arm C or to a side portion of the arm, as may be found desirable, and a horizontal bar 32 is made to enter a slot in the body-block 30, being pivotally secured in the said slot by a suitable bolt 33, while a spring 34 is attached at one end to the upper portion of the block 30 and extends downward at its opposite end to an engagement with the supporting-bar 32. The loop of a mail-bag D is passed over the supporting-bar 32 and is prevented from accidentally slipping from the said bar by the spring 34; but the moment that the mail-bag D is engaged by a catcher-arm on a crane, for example, the supporting-bars 32 will turn on their pivots and will be disengaged from the retaining-springs 34, enabling the bag to readily slip off from supporting engagement with the said bars.

In Fig. 5 I have illustrated a slight modification in the construction of the body portion of the device, inasmuch as the body 13^a is of a single piece of metal and is provided at the top and bottom with box projections 35, in which the spring-controlled arms C are mounted, the arms being constructed as has been heretofore described. At the upper and lower portions of the body 13^a lugs 36 are formed, provided with pivot-pins 37, which are secured in plates 38, one of which is attached to the bottom of a car and the other to the jamb of the doorway a suitable distance above the floor. The lower lug 36 is provided with apertures 39, corresponding to the apertures or recesses 22 in the bottom bracket 17, heretofore described, and these apertures 39 are adapted to receive a member of a U-shaped lock-lever 40, provided at its opposite member with a horizontal extension 41 above the floor of the car and a spring 42 between the said extension and the floor, so that by pressing down on the extension 41 with the foot, for example, the locking member of the locking device 40 is carried out of engagement with one of the recesses or apertures 39 and may be brought into engagement with the second aperture or recess. Two of the said apertures or recesses are employed, one being brought into use in connection with the locking device 40 to lock the mail-deliverer in an outer or delivering position and the other to lock the mail-deliverer in an inner position within the doorway B.

The crane E, which is used in connection with the mail-deliverer, consists of a body-section 43, preferably tubular, which is mounted to turn in an air-tight manner in a socket-section 44 of the base 45, the body-section of the crane being provided with a dust-cap 46, which extends over the top of the socket, completely closing and sealing it, yet admitting of the body turning in the socket. A series

of exterior circumferentially-arranged lugs 47 is located on the upper portion of the socket-section 44 of the base 45, and a lock-lever 48 is pivoted to the lug extending from the body 43 of the frame of the dust-cap 46, and the said lock-lever is provided with a slot 50 of sufficient size to receive one of the lugs 47, so that when the body of the crane is turned upon the base the lever 48, at such time being out of engagement with the lugs 47, can be quickly carried down to receive a lug in its slot 50, and thus secure the body portion of the crane in its adjusted position.

At the upper portion of the body 43 of the crane E two sleeves 51 are located at suitable distances apart. These sleeves may be either permanently attached to the body portion of the crane or may be adjustably secured thereto. At the same side of each sleeve 51 a bracket 52 is formed, and between each bracket and sleeve 51 a spring-controlled arm C^2 is pivotally mounted, which arms are of the same construction as the arms C, described in connection with the mail-deliverer. Each arm C^2 of the crane is provided at its outer end with a bag-supporting device C', such as has been described and which is shown in Fig. 11, and such bag-supporting devices may be at the outer extremity of each arm or may be attached at the side portions of the arms near their outer ends. These supporting devices C' receive the loops at the ends of the mail-bag D', adapted to be taken into the car through the medium of the catcher-arm carried by the car, whatever the construction of such arm may be. The body portion of the crane is also provided with a catcher-arm F. This catcher-arm consists of two substantially parallel members 53 and 54, connected at one end by a curved member 55, and the outer member 54 of the catcher-arm F at its receiving end is inclined away from the opposing member 53. A spring-controlled finger 56 is pivoted to the member 53 of the catcher-arm and engages with the opposing member 54, and when a bag enters the space between the members of the catcher-arm it forces the locking-finger 56 inward, which finger after the bag has passed turns automatically to its normal position, preventing the bag from leaving the catcher-arm. This catcher-arm F is in a horizontal position when in action and when it is placed to receive the bag; but after the bag has entered the said arm it automatically drops to a vertical position, the bag at such time resting on the connecting member 55. To that end the catcher-arm F is mounted in the following manner:

A sleeve 57 is suitably placed upon the body-section 43 of the crane E, and the sleeve may be held adjustable on the said body-section of the crane by a set-screw 58, as is shown in Fig. 6; but preferably the said sleeve rests upon a collar 59, which is attached to or made integral with the body portion of the crane. In the under portion of the sleeve 57 any desired number of recesses 60 are produced, as is shown in Fig. 9, which recesses are adapted to receive a spring-controlled latch 61, also shown in Fig. 9, carried by the collar 59, which latch is adapted to be withdrawn from locking engagement with the sleeve 57 through the medium of a ring 62 or its equivalent attached to the outer end of the latch, which extends out beyond the bottom of the collar 59, so that the said supporting-sleeve 57 for the catcher-arm F may be laterally adjusted and locked in the desired adjusted position.

At one outer face of the sleeve 57 a plain disk surface 63 is formed, and in this disk surface an upper shallow recess 64 is produced and a lower deeper recess 65, which is at one side of the center of the said disk surface, as is illustrated also in Fig. 9. A disk 66 is mounted to turn in engagement with the disk surface 63 of the sleeve 57 through the medium of a suitable central pivot-pin 67, as is shown in Fig. 8, and this disk 66 is provided with lugs 68, between which lugs the inner member 53 of the catcher-arm F is secured about centrally between the ends thereof. A spring-latch 69 is carried by the disk 66, the latch being capable of being withdrawn from the exterior of the sleeve-support for the said catcher-arm. The inner end of the latch 69 is more or less rounded and is adapted to enter the recesses 64 and 65. When the catcher-arm F is in its horizontal or receiving position, the latch 69 enters the shallow recess 64 in the plain surface of the sleeve 57, and when the bag is received by the catcher-arm the shock incident to such reception will cause the latch 69 to slip out from the shallow recess 64, permitting the disk 66 to turn until the catcher-arm has assumed a vertical position with its closed end downward, at which time the latch 69 will enter the deeper recess 65 and will hold the catcher-arm in its vertical position, the bag being removed therefrom whenever convenient.

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

1. A device for handling mail-bags, consisting of an upright mounted to turn, a locking device for the upright, spring-controlled extensible bag-carrying arms pivotally mounted on the upright and each comprising two curved sections, one of the sections being provided with a longitudinal groove in which the other is adjustably secured, and bag-retaining devices at the outer end portions of the said arms, which retaining devices automatically act to release the bag when the bag is subjected to a withdrawal pressure, as described.

2. A device for handling mail-bags, consisting of an upright mounted to turn, a locking device for the upright, bag-carrying arms curved in direction of each other pivotally mounted upon the upright and each comprising two sections, the inner section being pro-

vided with a longitudinal groove, and the outer one with a longitudinal slot and fitting in the groove of the inner section and bolts securing the sections together, springs acting to normally carry the said arms to a substantially upright position, and means substantially as described for freeing a bag from retaining engagement with the said arms when the bag is subjected to withdrawal pressure, as described.

3. A device for handling mail-bags, consisting of an upright mounted to turn, a locking device for the upright, bag-carrying arms curved in direction of each other and pivotally mounted on the upright, springs acting to normally carry the said arms in an upward direction, and a bag-retaining device connected with the arms, comprising a pivoted bar to receive a loop of a bag and a spring having free bearing upon the outer end portion of the bar.

4. In devices for handling mail-bags, the combination with an upright mounted to turn, and a locking device for the lower portion of the upright, acting at the base portion thereof, of spring-controlled extensible arms pivotally attached to the said upright and each comprising two curved sections one of which is provided with a longitudinal groove in which the end of the other is adjustably held, the springs of the said arms being adapted to normally force the said arms apart, as and for the purpose specified.

5. In devices for handling mail-bags, a mail-deliverer consisting of a pivoted upright, a locking device for the upright, spring-controlled pivoted arms carried by the upright, adapted to hold the mail-bag between them, a crane adapted to act in conjunction with the said mail-deliverer and provided with a catcher-arm mounted to turn upon the crane in a horizontal direction, and likewise mounted to turn automatically in a vertical direction, for the purpose described.

6. In a device for handling mail-bags, a crane, a sleeve mounted to turn on the said crane, a support for the said sleeve, a latch device carried by the support, adapted to enter recesses in the sleeve, the said sleeve being provided with a smooth outer surface having a shallow and a deep recess therein, a plate mounted to turn upon the said recessed face of the sleeve, a spring-latch carried by the said plate, and adapted to enter the said recesses, and a catcher-arm attached to the said plate, substantially as and for the purpose specified.

7. In a device for handling mail-bags, a vertical support, and a catcher-arm mounted to turn upon the support in a horizontal direction and likewise mounted to turn automatically in a vertical direction, as set forth.

8. In a device for handling mail-bags, a vertical support, a sleeve mounted to turn on the support, a disk mounted to turn on the sleeve, and a catcher-arm carried by the disk, as set forth.

9. In a device for handling mail-bags, a vertical support, a sleeve mounted to turn on the support, a disk mounted to turn on the sleeve, a catcher-arm carried by the disk, and means for locking the disk to the sleeve so that it will be automatically released by the weight of the mail-bag carried by the catcher-arm as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS M. EDWARDS.

Witnesses:

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EVERARD BOLTON MARSHALL.