

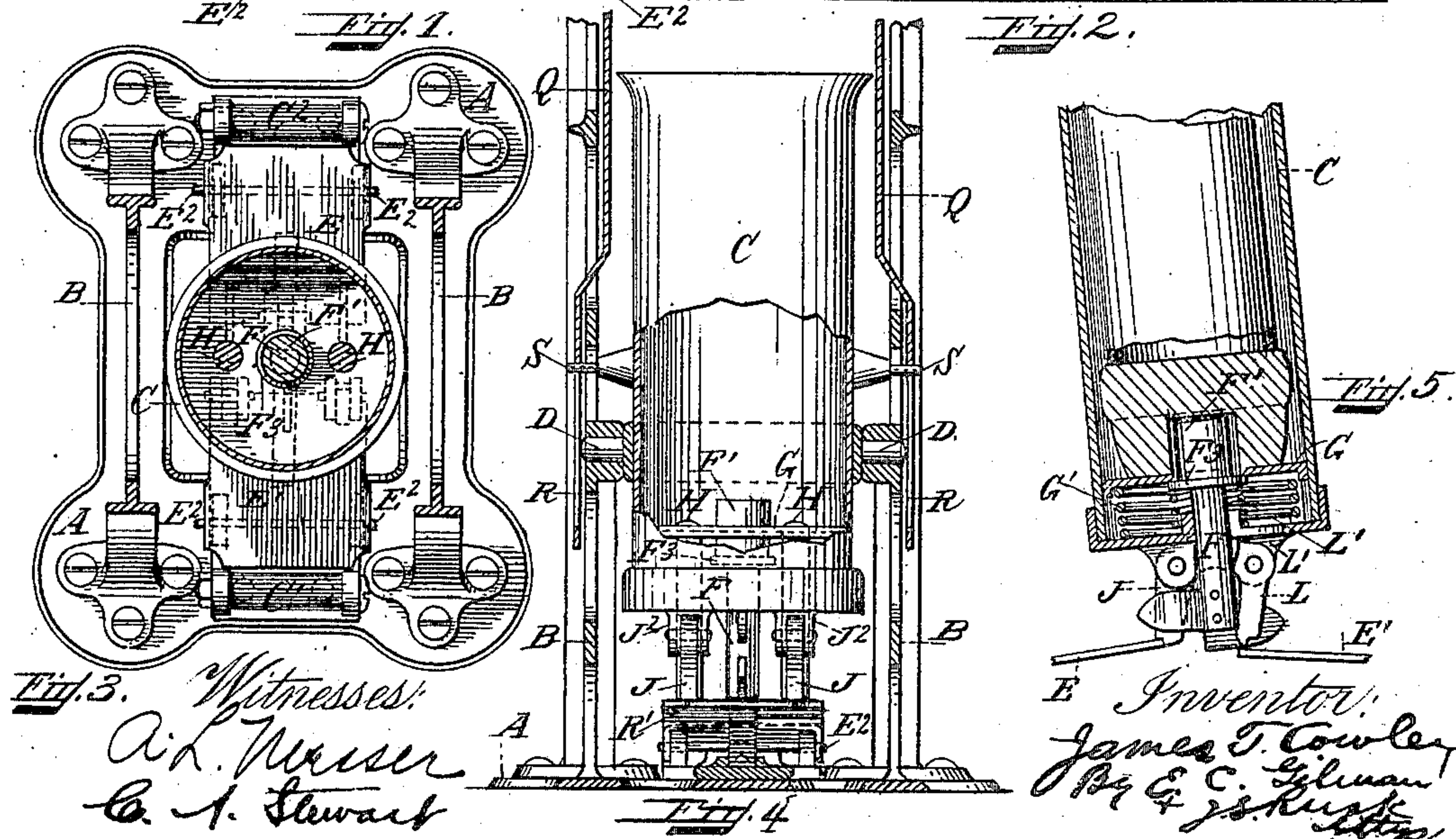
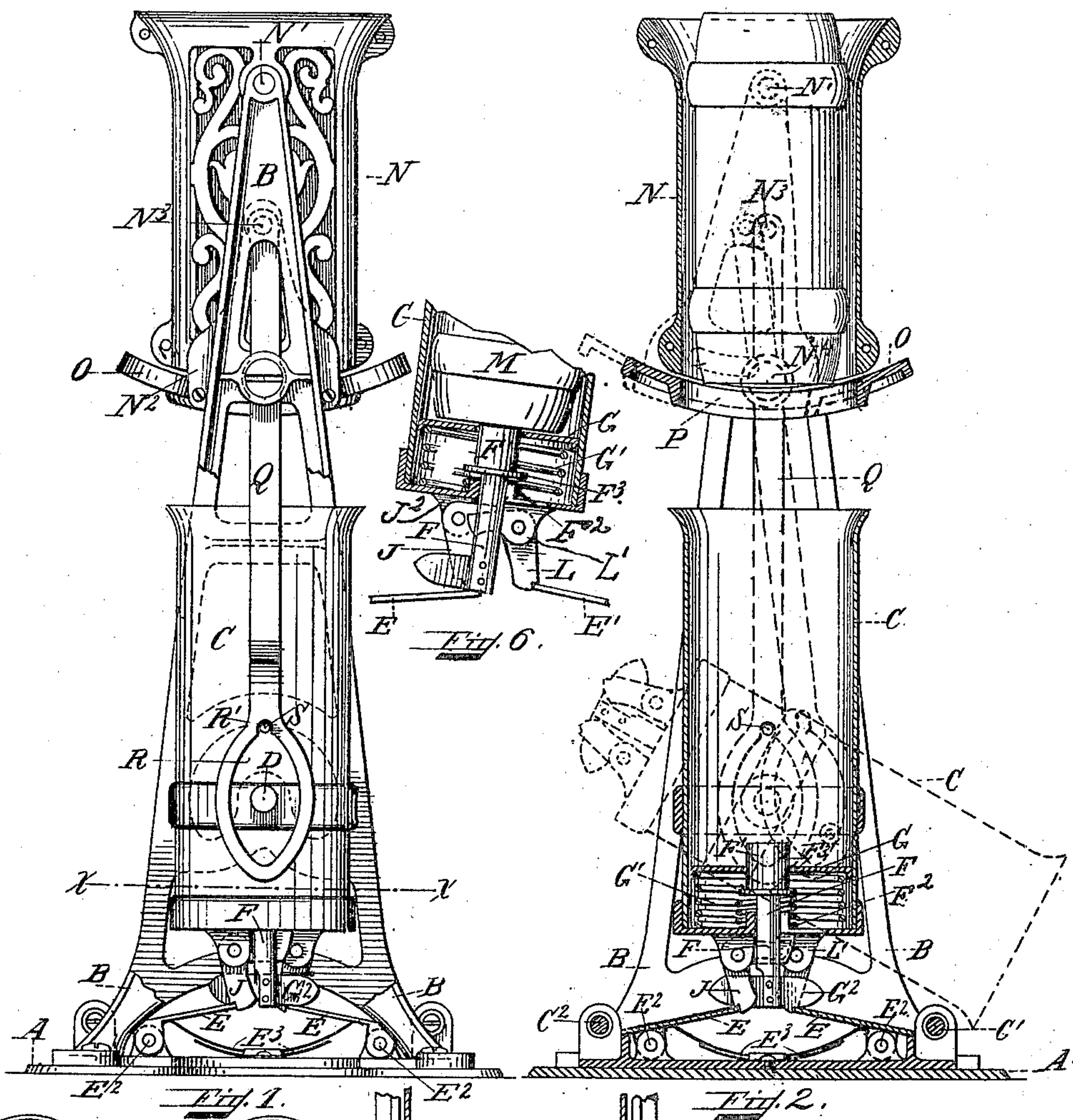
J. T. COWLEY.

PNEUMATIC DESPATCH APPARATUS.

(Application filed Nov. 27, 1899.)

(No Model.)

2 Sheets—Sheet 1.



13. Witnesses:
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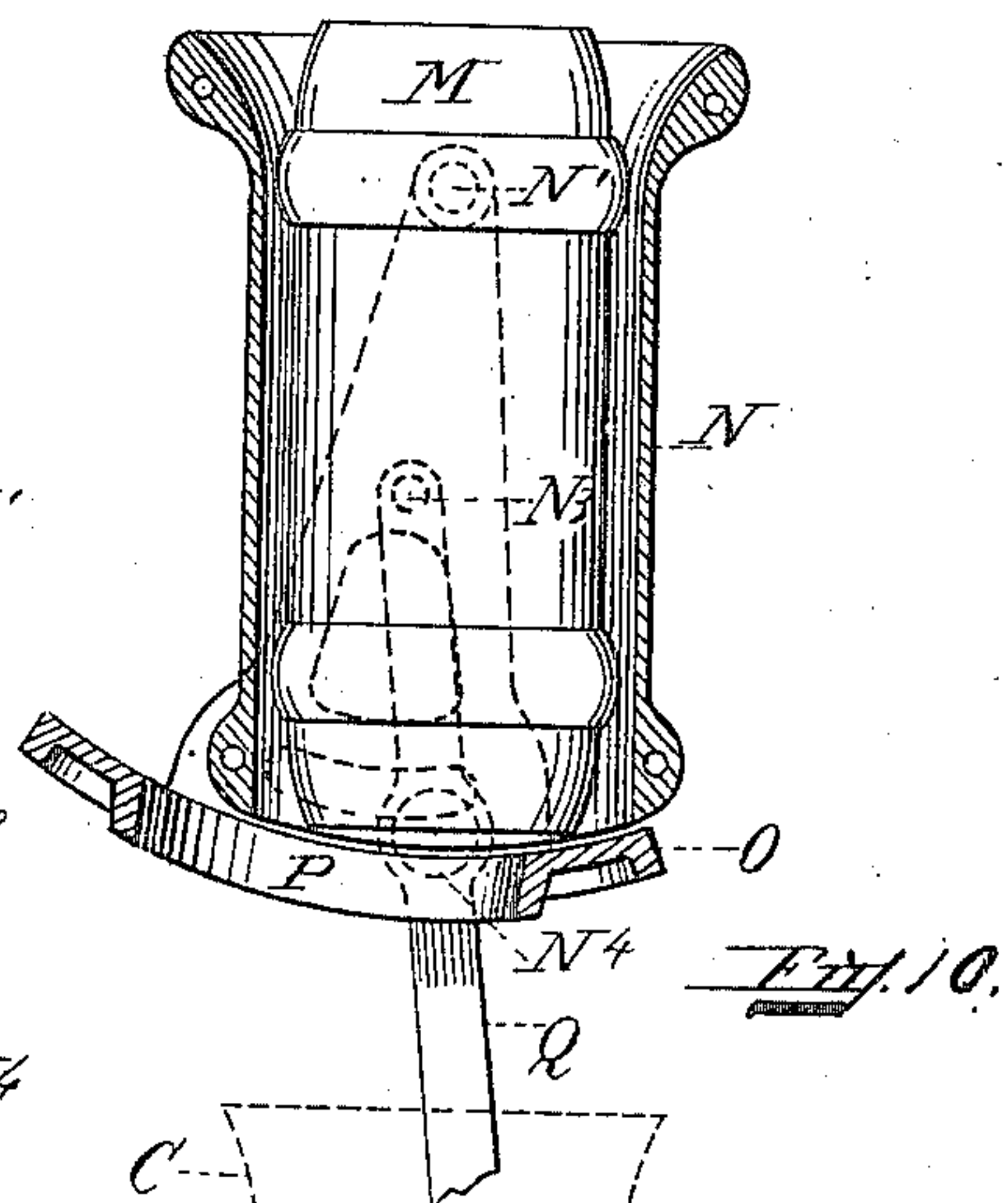
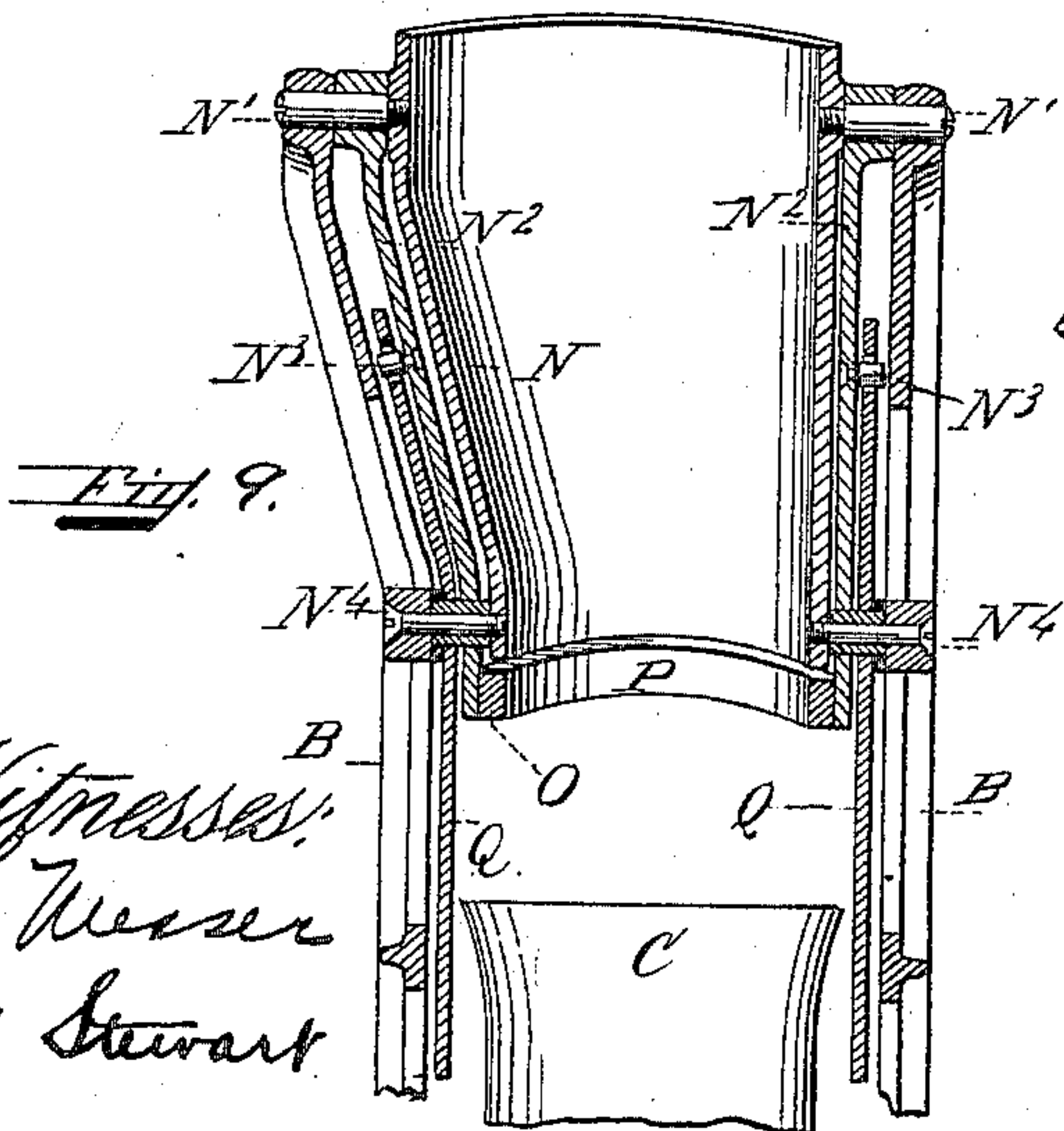
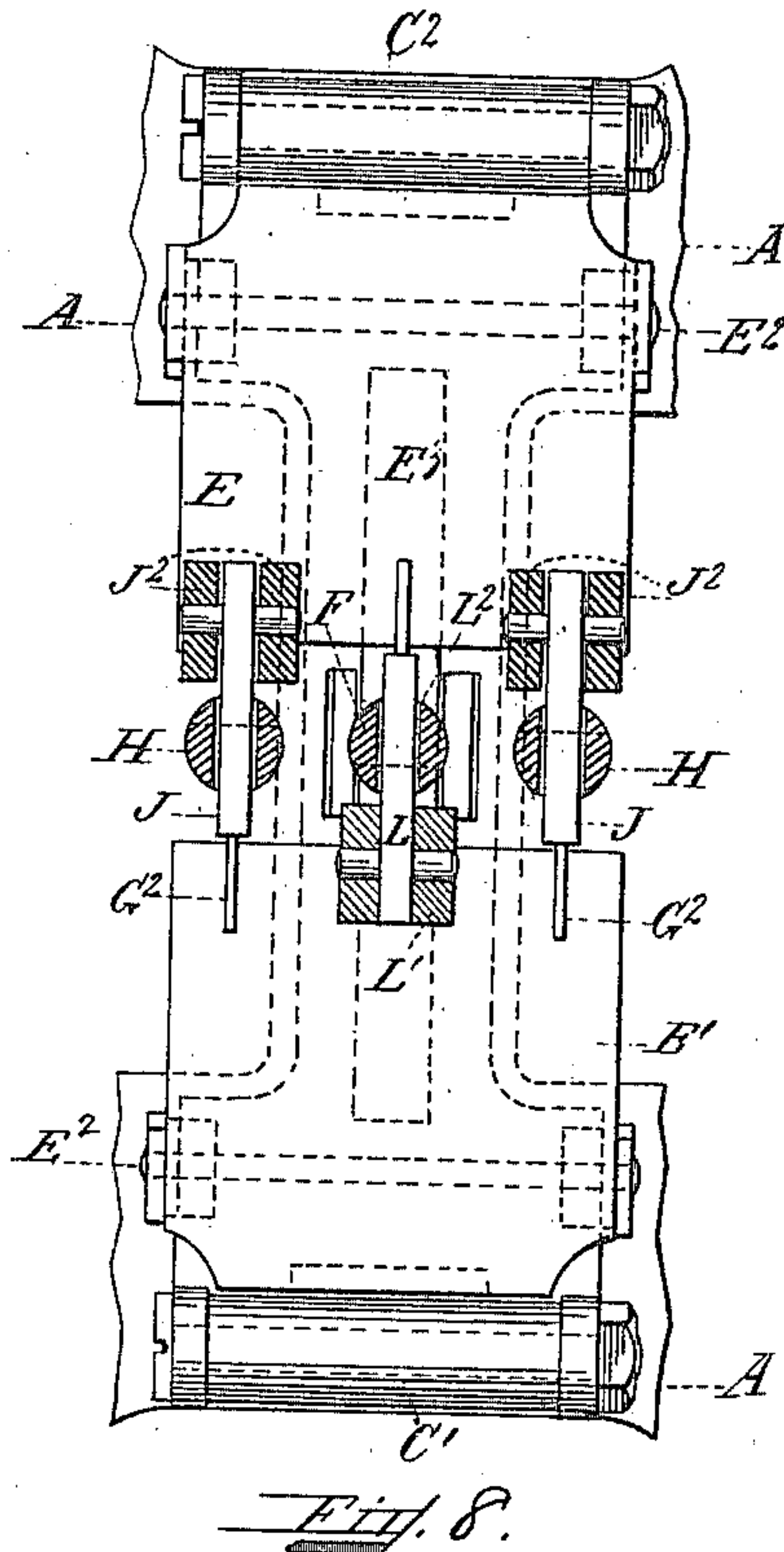
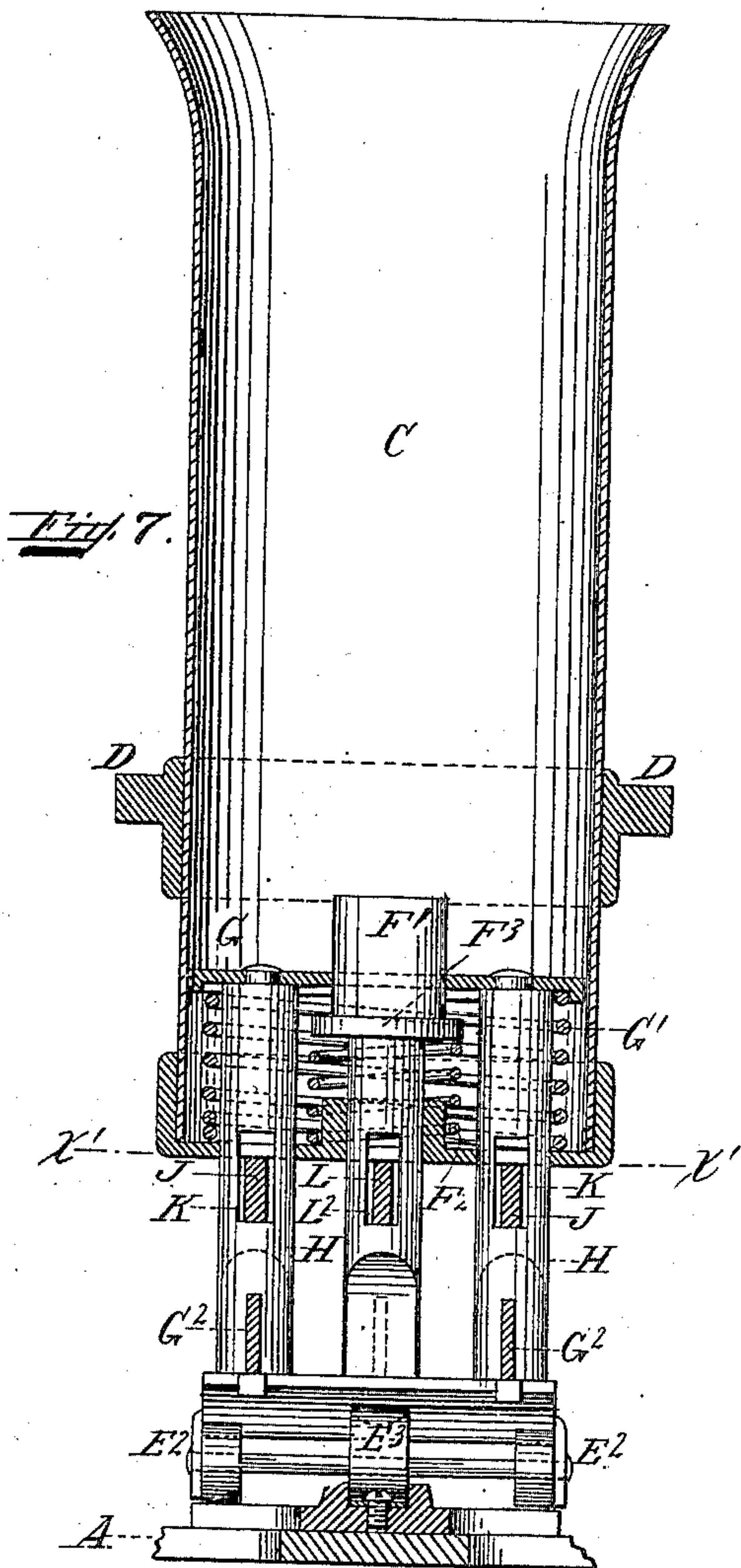
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PNEUMATIC DESPATCH APPARATUS.

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2 Sheets—Sheet 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES T. COWLEY, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE
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PNEUMATIC-DESPATCH APPARATUS.

SPECIFICATION forming part of Letters Patent No. 680,698, dated August 20, 1901.

Application filed November 27, 1899. Serial No. 738,330. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. COWLEY, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Pneumatic-Despatch Apparatus, of which the following is a specification.

This invention relates to improvements in devices for distributing cash or parcel carriers, and relates more particularly to carriers propelled by pneumatic power. In the present system carriers intended for different salesmen are returned from the central or cashier's station through the same tube and are discharged into one receptacle, from which they must be taken by the salesman to whom they belong. In order to avoid confusion and loss of time caused by a salesman opening a carrier intended for another salesman, this device is designed to distribute the carriers belonging to one salesman into one receptacle and into another receptacle for another salesman, so that each salesman receives only his own carriers without loss of time, and it is designed to provide means on the device for preventing two carriers entering the distributor at the same time and to hold the second carrier back until the first carrier has been discharged and the distributor has returned to its normal position.

My invention consists of certain novel features hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which illustrate a construction embodying my invention, Figure 1 is a side elevation of the improved distributor, showing the parts in their normal positions, with part of the frame broken away to show the inside of the distributor. Fig. 2 is a vertical section of the improved distributor, and showing the parts in their normal positions in full lines and certain parts in dotted lines during the delivery of the carrier from the distributor, and showing a carrier in full lines on its way to the distributor. Fig. 3 is a cross-sectional view on the line X X, Fig. 1. Fig. 4 is a detail sectional view of the distributor. Fig. 5 is a vertical sectional view of the receiver as it is moved toward the left to discharge a carrier. Fig. 6

is a vertical sectional view of the receiver as it is moved toward the right to deliver a carrier. Fig. 7 is a vertical section of the receiver and operating parts at right angles to the view of the receiver shown in Fig. 1. Fig. 8 is a longitudinal section on the line X' X', Fig. 7, with the base partly broken away. Fig. 9 is a vertical section of the top of the distributor at right angles to the view shown in Fig. 2. Fig. 10 is a detail sectional view of a part of the top of the distributor, and showing the retaining means moved into position to prevent a carrier entering the receiver.

Like letters of reference refer to like parts throughout the several views.

Secured to the base A are the opposite side arms B, in which is journaled the receiver C by the trunnions D, which are below the longitudinal center of the receiver. At opposite sides of the base A are latch-plates E and E', pivoted at E² to the base A and held in their upper positions by the curved spring E³, the opposite ends of which bear against and hold the plates E and E' in their upper positions, as shown in Figs. 1 and 2.

Passing through the bottom of the receiver C is the trip-rod F, provided with the head F' and collar F³, and between said collar and the bottom of the receiver C is a spring F², which holds said trip-rod in its upward position. (Shown in Figs. 2, 5, and 7.) The plate G is located around the head F' of the rod F above the collar F³ and within the receiver C and movable relatively thereto and is yieldingly held upward by the spring G', located between it and the bottom of the receiver C. On opposite sides of the rod F the trip-rods H extend downwardly from the plate G, to which they are secured, and through holes in the bottom of the receiver, and the free ends are provided with fingers G² in position to press down the plate E' in the operation of the distributor. Pivoted to the lugs J² on the bottom of the receiver C are the angle-levers J, the lower ends of which normally engage the plate E and the upper ends pass through the slots K, formed in the rods H, and it will be seen that these slots are larger than the width of the lever, so that there may be a slight downward movement of the rods

before they engage and operate the levers. The angle-lever L is pivoted to the lugs L' on the bottom of the receiver, and its lower end engages with the plate E', and the upper end passes through the slot L² in the trip-rod F, and this slot, the same as the slots in the rods H, is longer than the width of the lever, so that there may be a slight downward movement of the rod before it operates the lever L. These levers J and L perform two functions. They hold the receiver in its normal position (see Figs. 1 and 2, full lines) and also serve to start the receiver in its tilting movement, and therefore I call these levers the "holding" and "starting" levers.

In connection with this device two forms of carriers are used. One is designed to engage and operate the rod F, as shown in Fig. 6, and the other is designed to engage and press down the plate G without moving the rod F. For this purpose one carrier M has its head flat or solid, so as to engage the trip-rod F, Fig. 6, while the other carrier M' has a hole M² in its head, Fig. 5, into which the head F' of the rod F passes without being moved by the carrier, while the head of the carrier engages the plate G and moves it down to operate the levers J in the rods H. The collar F³ on the rod F is located far enough below the plate G so that the plate G will not move the rod F to operate the lever L during the time the levers J are being operated to tilt the receiver C to the left. In other respects the carriers are of usual construction used in pneumatic-despatch tubes.

Fast to the top of the frame B is a tube N directly in alinement with the receiver C, so that the carriers passing through said tube will pass directly into the receiver. On opposite sides of the tube N and journaled on the pins N' are two plates N², to which is secured at their lower ends the guard O, having a central hole P, through which each carrier passes on its way to the receiver when the guard is in its normal position, as shown in Figs. 1 and 2, full lines. Pivoted at N³ to each plate N² is a lever Q, also pivoted at N⁴ to the side frames B, and said levers extend downwardly, and at their lower ends is provided the oval hole R with an upper recess R', in which in the normal position of the parts the pins S, extending from each side of the receiver, are located.

In operation when a carrier, like M, with a flat head, falls into the receiver it strikes and moves the rod F downwardly, and this movement of the rod forces the plate E down to release said plate from the lower ends of the levers J. At this time the upper end of the slot L² will have reached the lever L, so that by a further downward movement of the rod F the lever L will be rocked, and as it bears against the plate E' it will move the receiver forward to the position shown in Fig. 6, and the receiver is then tilted by the weight of the carrier to the position shown in dotted lines, Fig. 2, and when the receiver reaches

said position in contact with the buffer C' the carrier will be discharged, after which as the lower portion of the receiver overbalances the upper portion it will automatically swing to its normal position to receive the next carrier. When a carrier, like M', falls into the receiver, it will engage the plate G and force the plate E' down, releasing the lever L from the plate E', Fig. 5, when the receiver will be tilted to the left by reason of the levers J being rocked by the rods H and by reason of their lower ends being in contact with the plate E, and the weight of the carrier will tilt the receiver over to the left into contact with the buffer C², when the carrier will be discharged, after which as the lower portion of the receiver overbalances the upper portion it will automatically swing to its normal position to receive the next carrier. It may be stated that the receiver is pivoted at a point above its center of gravity when empty, but below its center of gravity when loaded, so as to tilt when loaded and discharge its load. As the receiver begins to tilt, either to the right or left, as the case may be, it moves with it the levers Q by reason of the pins S working in the slots R', and as the upper end of the levers Q are pivoted to the side plates N², to which the plate O is secured, the hole P in the guard-plate O is moved out of alinement with the hole in the tube N, so that a carrier entering the tube N will be stopped from entering the receiver by the guard O (see Fig. 10) and will be prevented from passing from the tube N until the receiver C has returned to its normal position, when the lever Q will be returned to its normal position, moving with it the guard-plate O to bring the hole P again into alinement with the tube N and allowing the carrier that may be held in the tube N to drop through into the receiver, when the operation will be as above described.

Having thus ascertained the nature of my invention and set forth a construction embodying the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A distributor for cash or parcel carriers comprising a receiver for carriers pivoted at a point which is above its center of gravity when empty but below it when loaded so as to be capable of tilting with the load, means for starting the receiver, devices in the path of the incoming carriers for releasing and actuating the starting means whereby the receiver may be tilted sufficiently to discharge the carrier, a device located adjacent to said receiver and normally out of the path of the traveling carrier, connecting mechanism between said device and said receiver for moving said device into the path of the traveling carrier to retain the carrier during the movement of the receiver to discharge another carrier and adapted upon the movement of the receiver to its normal position to move said device out of the path of the traveling carrier and allow the same to enter the receiver.

2. A distributor for cash or parcel carriers comprising a receiver pivoted at a point which is above its center of gravity when empty but below it when loaded so as to be
 5 capable of tilting when loaded, two starting devices for the receiver, a releasing and actuating device for each starting device, the said releasing and starting devices being in
 10 the path of the incoming carriers and differently formed to be actuated by correspondingly-formed carriers, a device located adjacent to said receiver and normally out of the
 15 path of the traveling carrier, and connecting mechanism between said device and said receiver for moving said device into the path
 20 of the traveling carrier to retain the carrier during the movement of the receiver to discharge another carrier and adapted upon the movement of the receiver to its normal position to move said device out of the path of the traveling carrier and allow the same to enter the receiver.

3. A distributor for cash or parcel carriers comprising a tilting receiver, spring-held pivoted
 25 latch-plates below the receiver, a trip-rod extended through the bottom of the receiver and engaging with one of the latch-plates, a plate in the receiver below the plane of the top of the trip-rod, a trip-rod extended
 30 from said plate and engaging with the other of said latch-plates, an angle-lever for engaging with one of the latch-plates and actuated by the first-named trip-rod, an angle-lever for engaging with the other latch-plate
 35 and operated by the second-named trip-rod, a guard, a lever for operating said guard, means on the receiver engaging said lever and adapted upon the movement of the receiver to move the guard to retain a carrier
 40 during the discharge of another carrier from the receiver.

4. In a cash or parcel carrier distributor, a receiver, provided with independently-actuating mechanisms, one of said mechanisms
 45 adapted to be actuated by one form of carrier and the other mechanism adapted to be actuated by another form of carrier to move the receiver in different directions, means for holding the receiver normally in position
 50 to receive the carriers, means whereby one

form of carrier will release and move the receiver in one direction to deliver a carrier and another form of carrier will release and move the receiver in another direction to deliver a carrier, a device located adjacent to
 55 said receiver and normally out of the path of the traveling carrier, and connecting mechanism between said device and said receiver for moving said device into the path of the traveling carrier to retain the carrier during
 60 the movement of the receiver to discharge another carrier and adapted upon the movement of the receiver to its normal position to move said device out of the path of the traveling carrier and allow the same to enter the
 65 receiver.

5. In a cash or parcel carrier distributor, a tilting receiver provided with independent actuating mechanisms, one of said mechanisms adapted to be actuated by one form of
 70 carrier and the other mechanism adapted to be actuated by another form of carrier to move the receiver in different directions, means for holding the receiver normally in position to receive the carriers, means where-
 75 by one form of carrier will release and tilt the receiver in one direction to deliver a carrier and another form of carrier will release and tilt the receiver in another direction to deliver a carrier, a device located adjacent
 80 to said receiver and normally out of the path of the traveling carrier, and connecting mechanism between said device and said receiver for moving said device into the path of the traveling carrier to retain the carrier during
 85 the movement of the receiver to discharge another carrier and adapted upon the movement of the receiver to its normal position to move said device out of the path of the traveling carrier and allow the same to enter
 90 the receiver.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 11th day of November, A. D. 1899.

JAMES T. COWLEY.

Witnesses:

A. L. MESSER,
 C. A. STEWART.