

No. 675,593.

Patented June 4, 1901.

W. EVANS.

TILL AND MEANS FOR REGISTERING CASH RECEIPTS.

(Application filed Sept. 16, 1899.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 2.

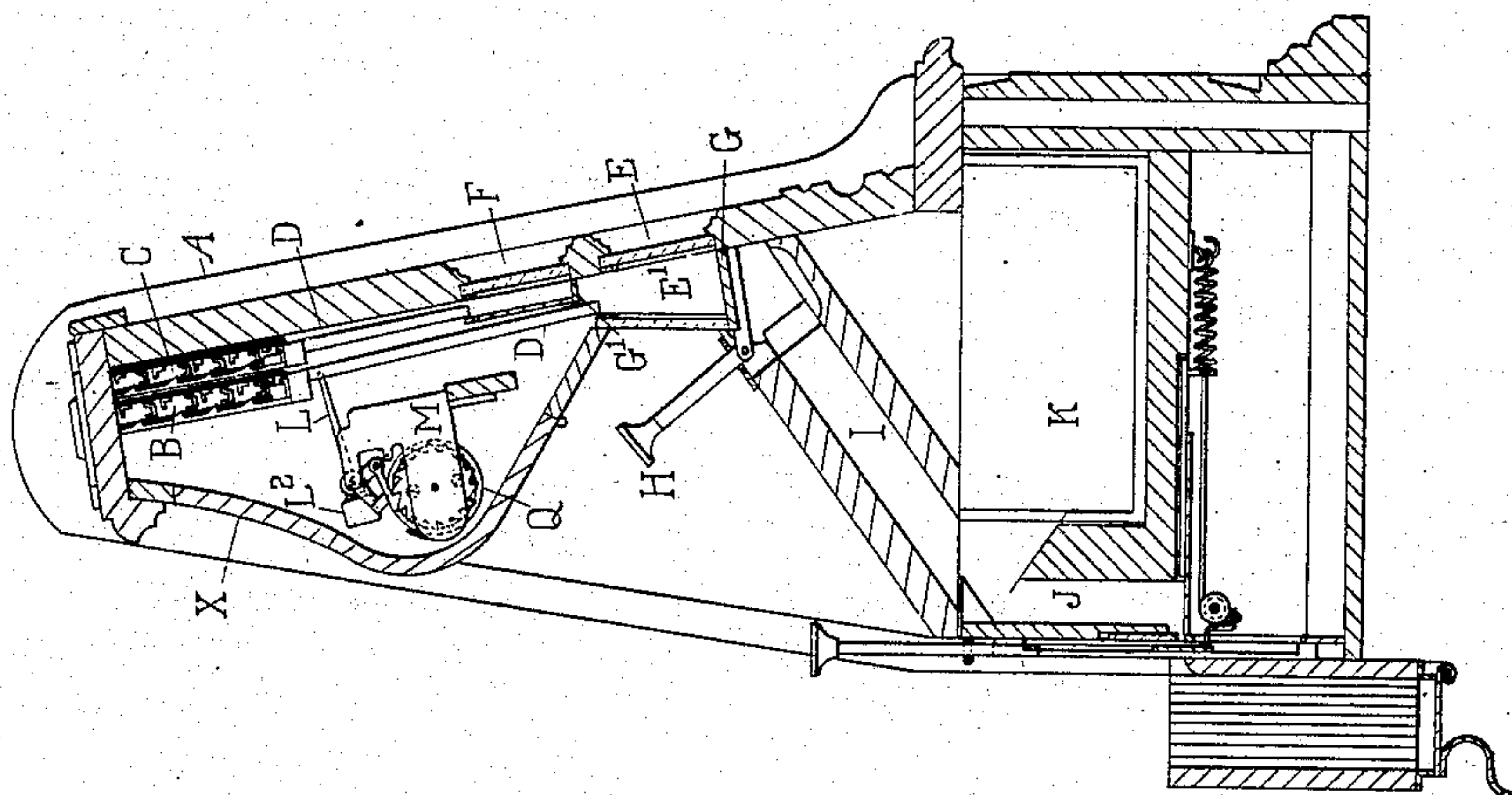
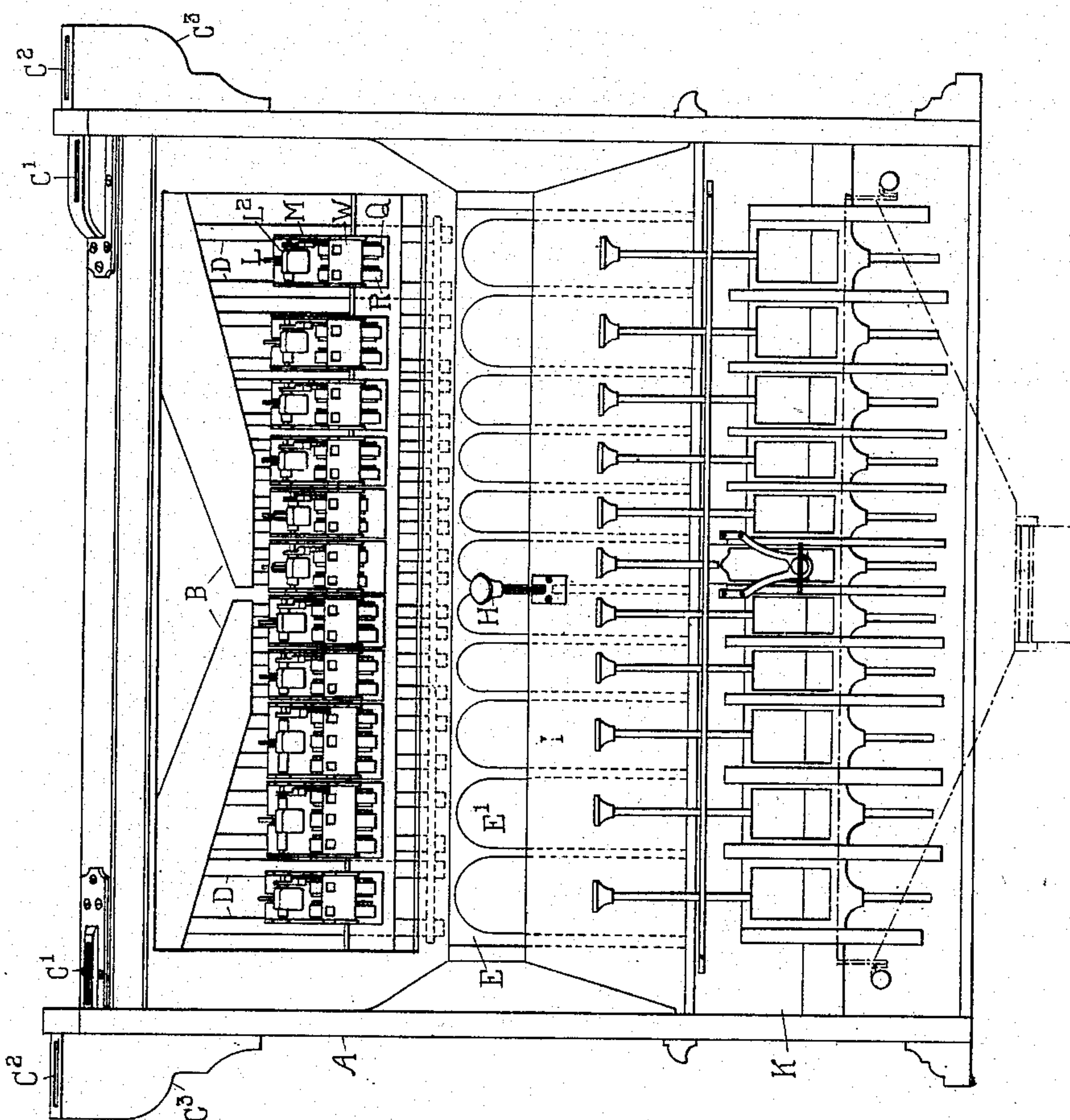


Fig. 1.



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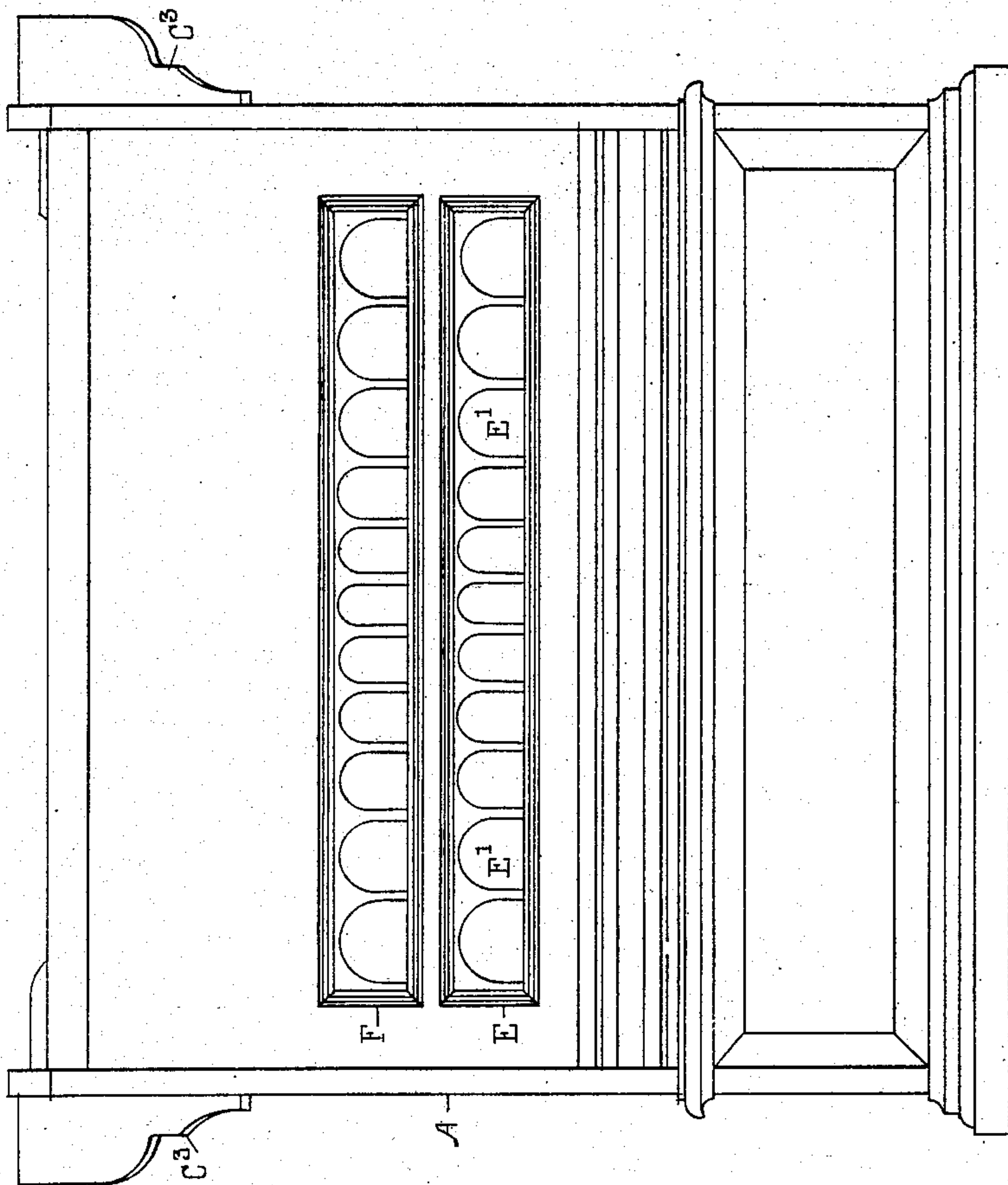
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Fig. 3



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Fig. 4

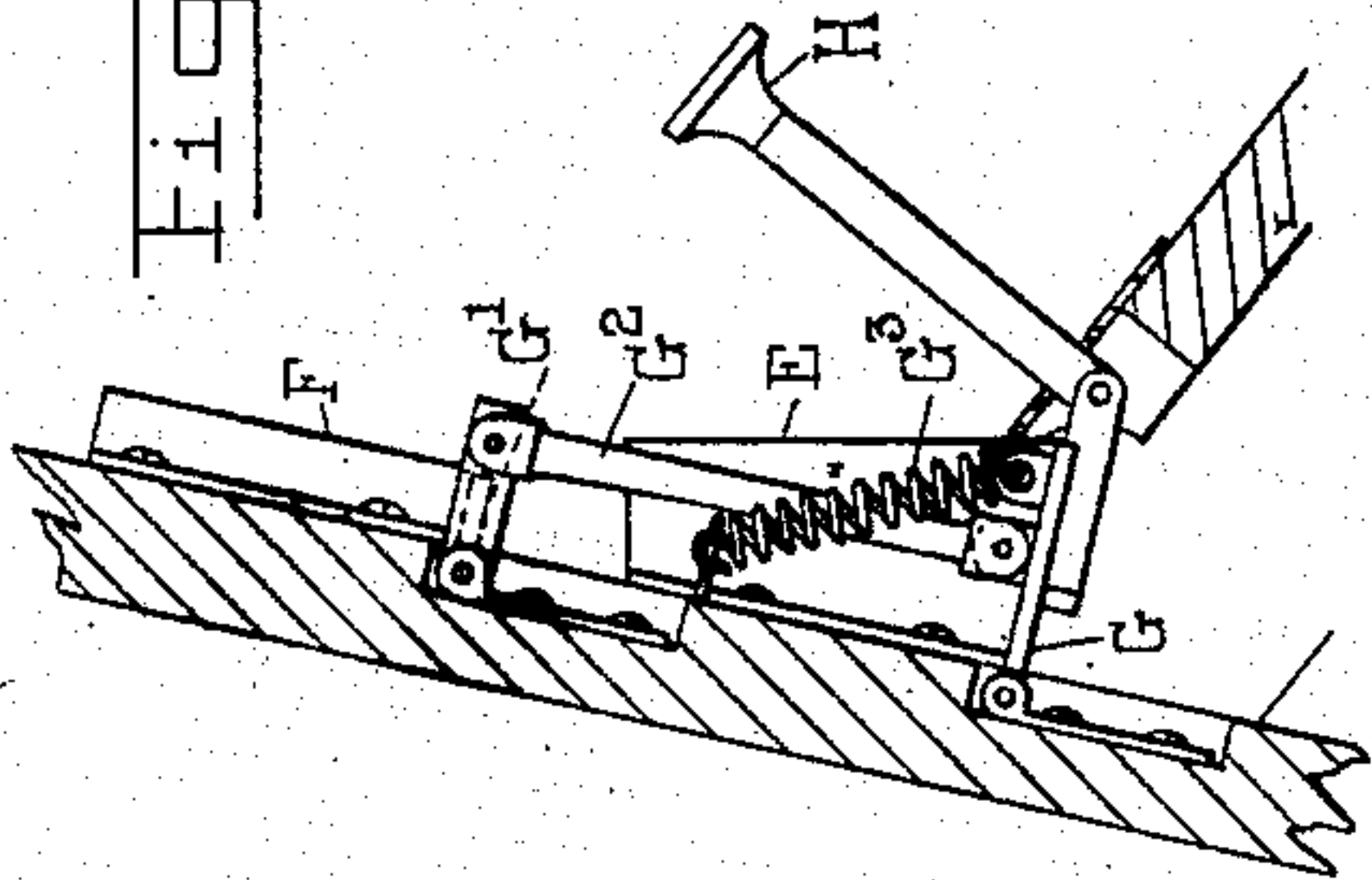
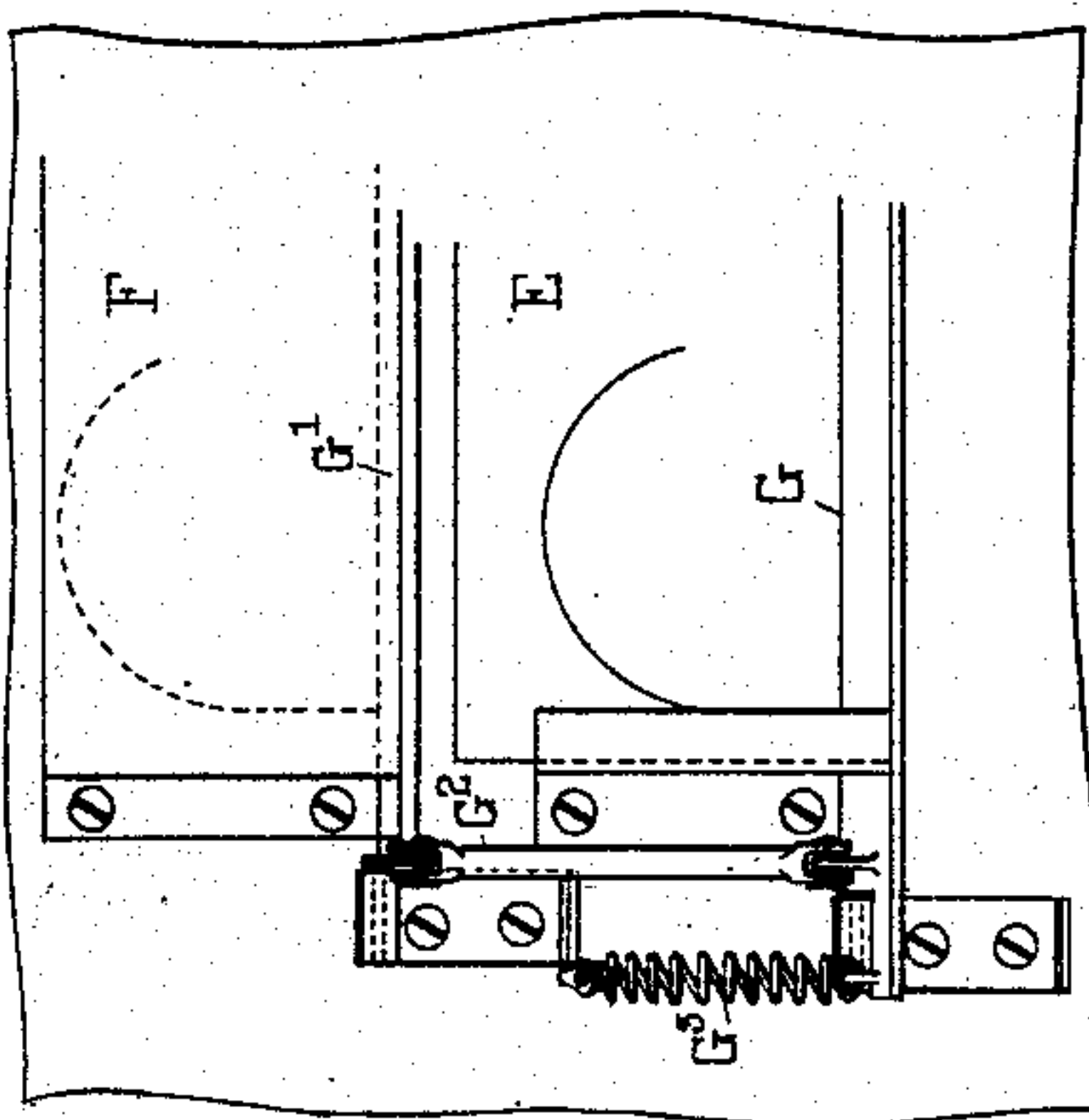


Fig. 5





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FIG. 6.

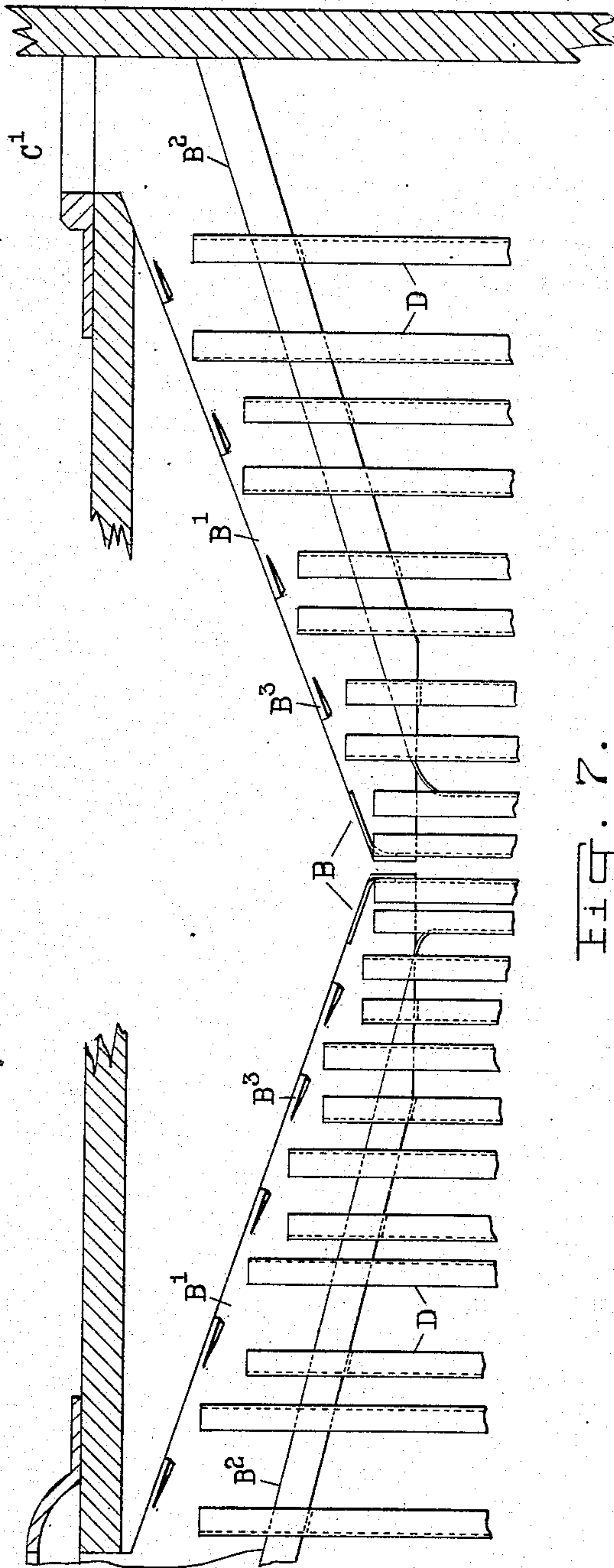
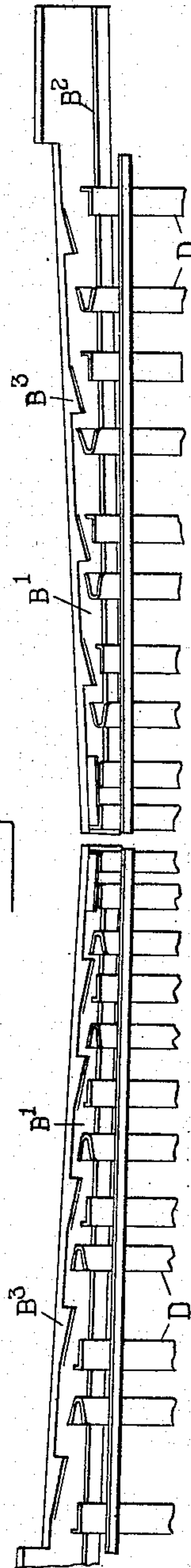


FIG. 7.



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Fig. 8.

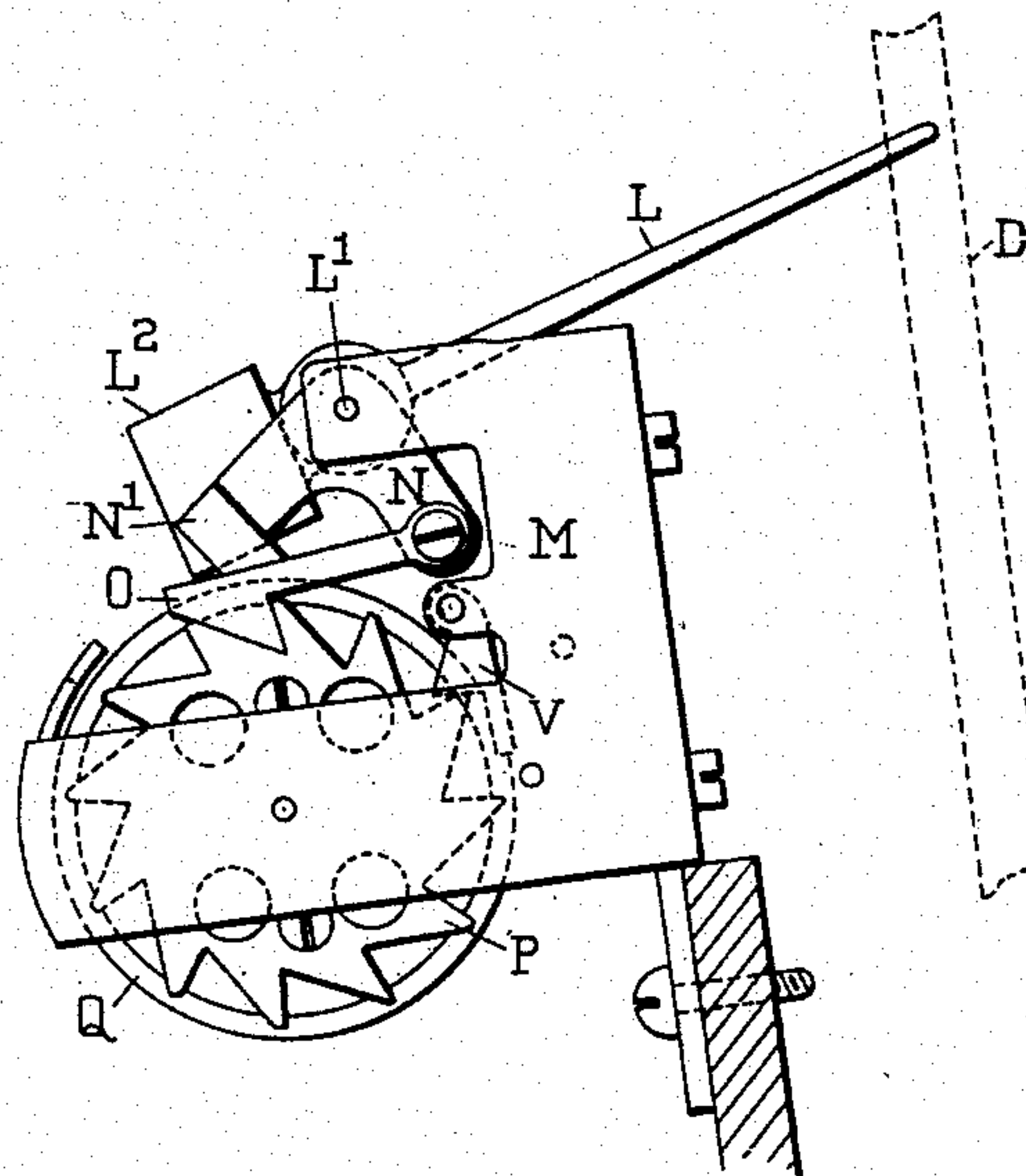


Fig. 9.

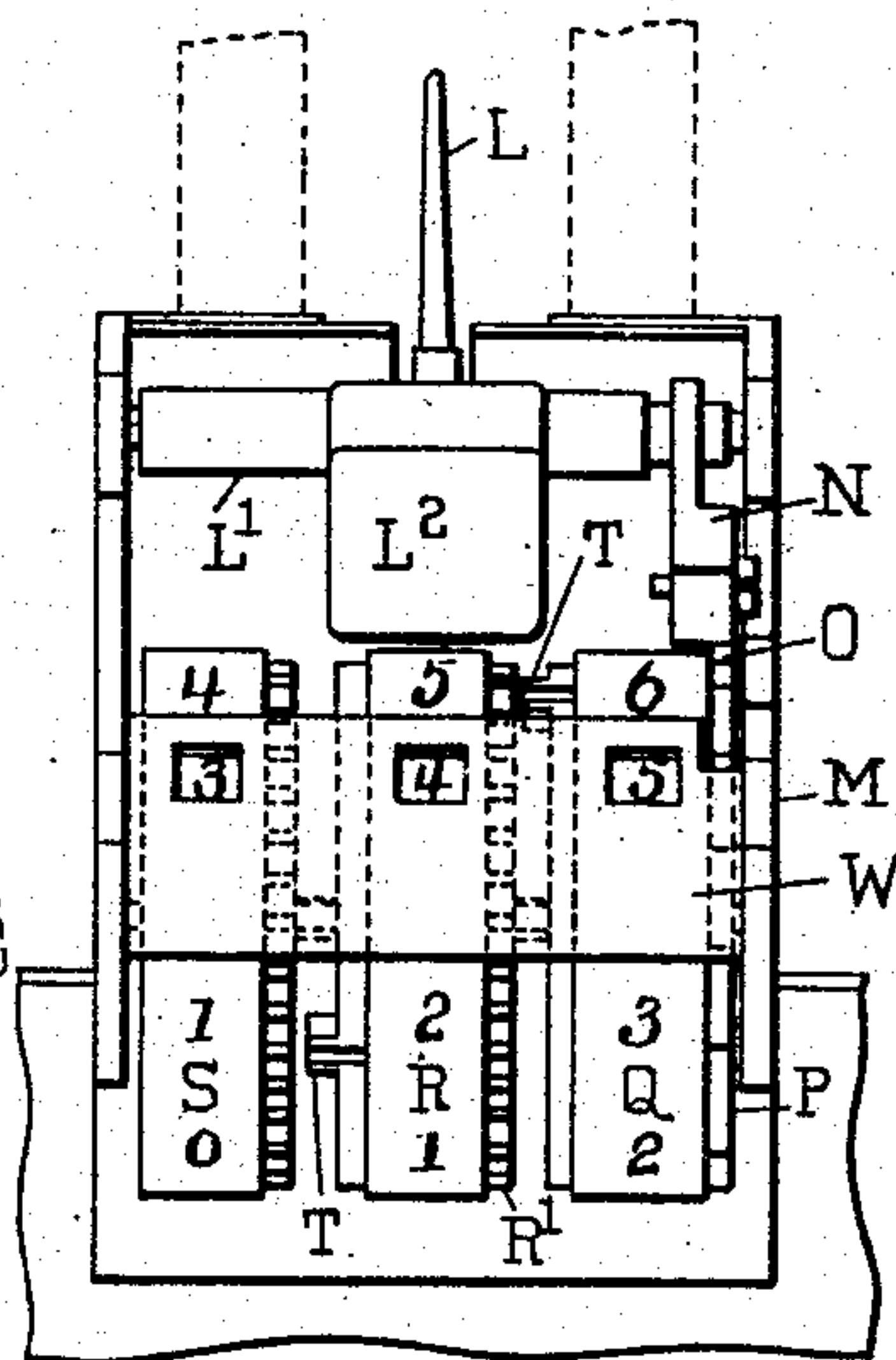


Fig. 10.

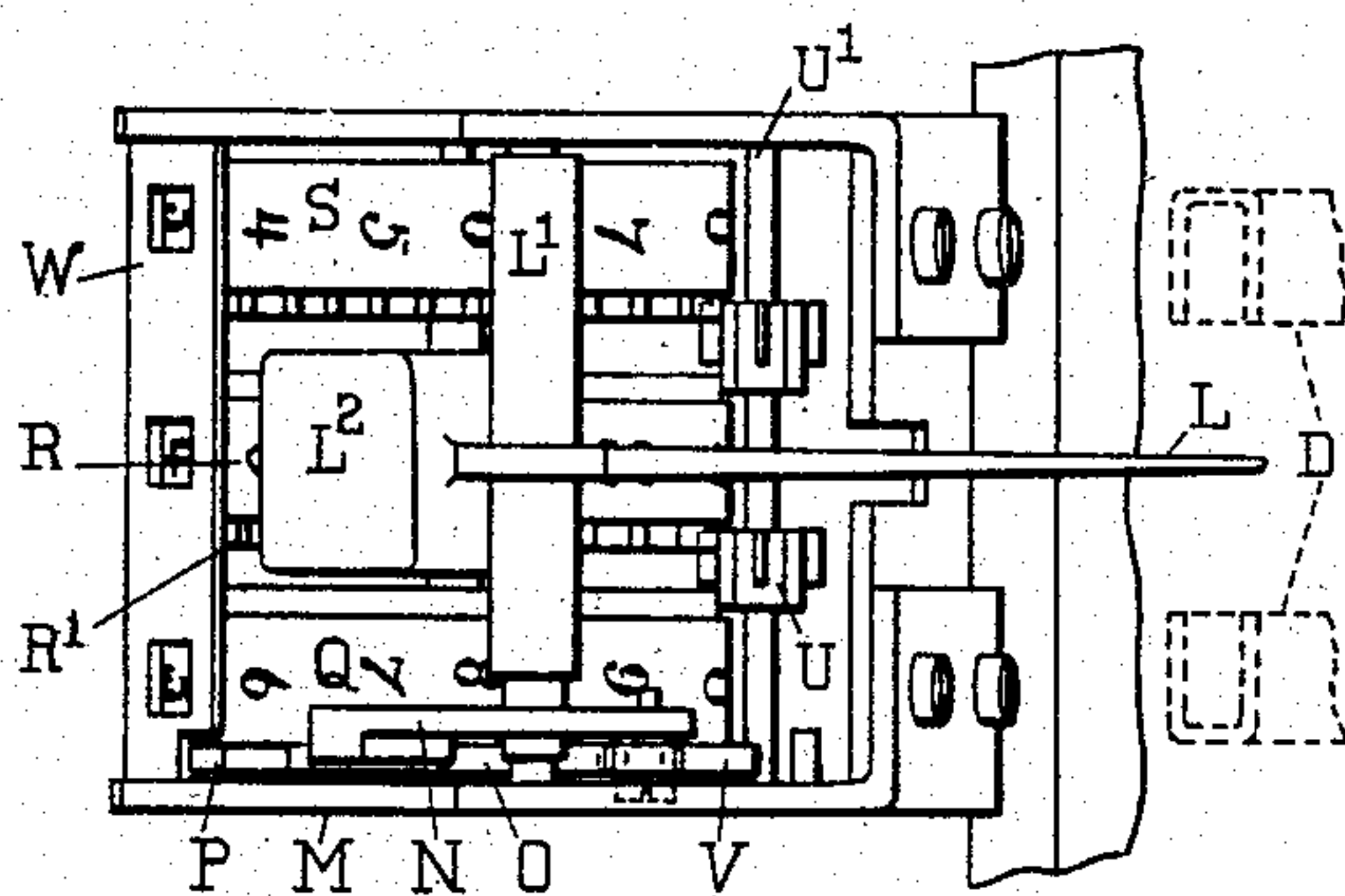


Fig. 12.

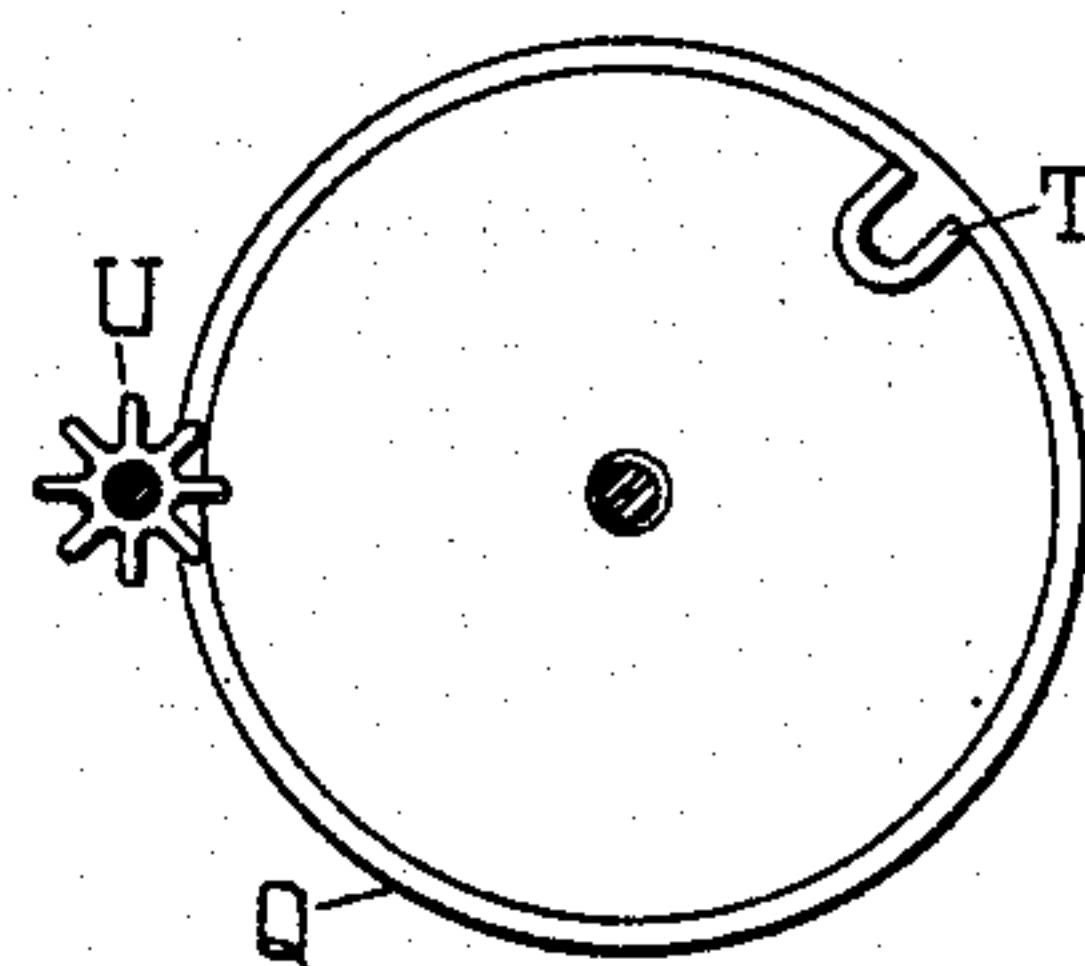


Fig. 11.

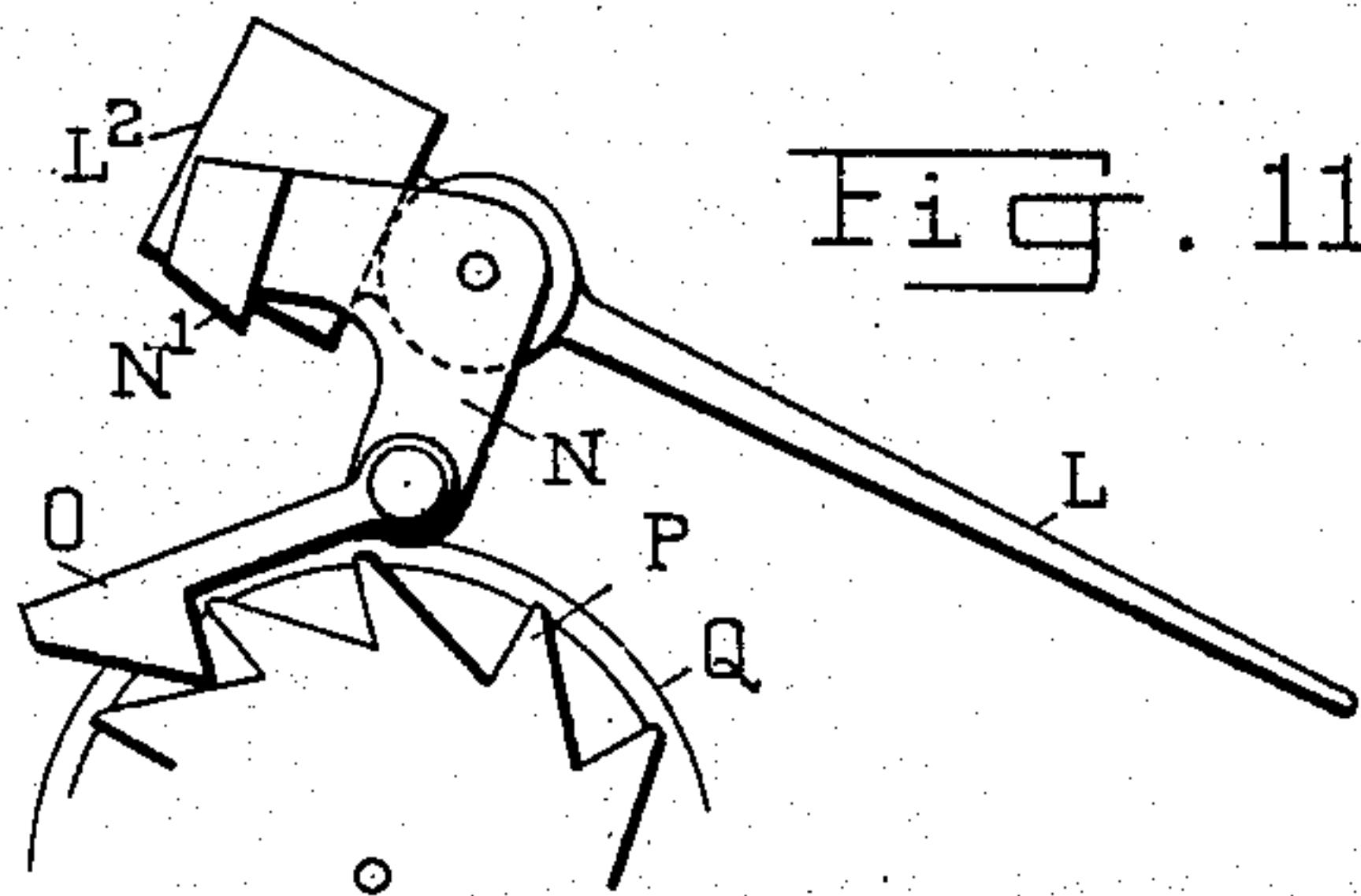
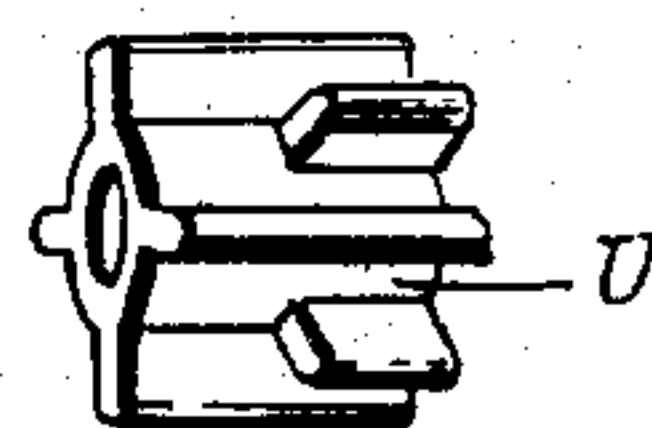


Fig. 13.



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# UNITED STATES PATENT OFFICE.

WALTER EVANS, OF BIRCHFIELD, ENGLAND, ASSIGNOR TO THE GLOBE CASHIER, (BRITISH AND FOREIGN,) LIMITED, OF LONDON, ENGLAND.

## TILL AND MEANS FOR REGISTERING CASH RECEIPTS.

SPECIFICATION forming part of Letters Patent No. 675,593, dated June 4, 1901.

Application filed September 16, 1899. Serial No. 730,767. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER EVANS, a subject of the Queen of Great Britain and Ireland, and a resident of Kingsbury House, Birchfield, in the county of Warwick, England, have invented certain new and useful Improvements in Tills and in Means for Registering Cash Receipts, of which the following is a specification.

10 This invention relates to an improved till in which the coins are assorted according to their respective denominations, the receipts are automatically registered, the coins for the amount of a purchase and the coins tendered when change is required are exhibited to the purchaser, and the said coins when released from the indicators pass into receptacles in the cash-drawer, to which may be fitted suitable change-delivering mechanism.

20 In order that the invention may be clearly understood, reference is made to the accompanying drawings, in which—

Figure 1 is a front elevation of the apparatus with the door over the registering mechanism removed. Fig. 2 is a transverse section of the apparatus. Fig. 3 is a back elevation. Fig. 4 is an end view of the mechanism for releasing the coins from the indicators. Fig. 5 is a front view of part of same. Fig. 6 is an elevation of one of the coin-separators. Fig. 7 is a plan of same. Fig. 8 is a side elevation of the registering mechanism for one denomination of coin. Fig. 9 is a front view, and Fig. 10 a plan. Fig. 11 shows the position of part of the registering mechanism when actuated by a coin. Fig. 12 is a detail, and Fig. 13 is a perspective view, of the pinion-wheel *u*.

40 In carrying out the said invention I arrange within the upper part of a suitably-constructed case A two coin-assorters B and C side by side, B being for the receipts and C for the coins tendered when change is required. Each assorter comprises a rearwardly-slanting back B', a rail or path B<sup>2</sup> for the coins, inclined downward from both ends toward the center, and diverting-stops B<sup>3</sup>, formed on said back. These stops are arranged in descending order from both ends for turning the coins according to size off the said path, the largest coins being first diverted at each end.

The coins are dropped into the "receipts-assorter" B through the slots C' and C' in the top of the case, the slot at one end being for the coins for one part of the assorter and the one at the other end for the coins for the other part. The tendered coins when change is required are put through the slots C<sup>2</sup> and C<sup>2</sup> in the earpieces C<sup>3</sup> and C<sup>3</sup> at the sides of the case and pass to the assorter C. A pair of channel-shaped guides D for each denomination of coins are arranged in connection with each assorter. These guides are secured in position by suitable bars and are placed near the diverting-stops and at the lowest points of the rails B<sup>2</sup>, where the said stops are dispensed with, so that as the coins are turned off or leave the rail they drop into the said guides and pass into exhibitors.

The exhibitor E shows the amount of a purchase. It has compartments E' for each denomination of coins formed between two strips of glass. Into these compartments lead the guides D from the receipts-assorter B. Above this exhibitor is the exhibitor F for exhibiting the coin tendered when change is required. It has compartments similar to those in the receipts-exhibitor, and into these lead the guides from the assorter C for the tendered coins. The bottoms of both exhibitors are in the form of hinged shutters G and G', connected together at their ends by rods, such as G<sup>2</sup>, and retained in the closed position by means of spiral springs, such as G<sup>3</sup>. The lower shutter G is connected with the stem of the press-knob H, which when pressed inward causes both shutters to open and allow the coins in the exhibitors to simultaneously disappear and pass down the chutes I, leading to receptacles J in the cash-drawer K.

Each denomination of coins has its particular receptacle. They may be simple compartments open at the top so that access to the change may be obtained by hand, or they may be formed, as shown in Fig. 2, in the front portion of the drawer K and the coins obtained therefrom by suitable change-delivering mechanism.

For automatically registering the cash receipts or the amount taken in purchases I arrange between each pair of guides D from the receipts-assorter B, so as to be operated



by a coin in its descent, the end portion of the lever-arm L, which is fixed upon an oscillating bar L', supported in a frame M. This lever after being actuated by a coin is returned to its normal position by the weight L<sup>2</sup>, which is secured thereto or connected with the oscillating bar in any suitable manner. To the said oscillating bar L' is firmly secured a bell-crank N, having a pawl O loosely pivoted on one end thereof. Said pawl engages the teeth of the ratchet-wheel P, which is fixed to the side of the registering-wheel Q, mounted upon a spindle carried by the frame M. Around the periphery of the registering-wheel are suitable numerals or figures corresponding in number to the teeth in the ratchet-wheel. A second registering-wheel R, also having suitable numerals or figures thereon and with a toothed wheel R' fixed to the side thereof, is arranged loosely upon the spindle carrying the registering-wheel Q. A third registering-wheel S, of similar construction to the wheel R, is used where a large number of coins in one denomination have to be counted. Of course more registering-wheels could be used if necessary, but three are considered sufficient. The first registering-wheel Q operates the second one either at a complete or part of a revolution, and the second wheel R operates the third wheel where used at every revolution. This is effected by the U-shaped lug T, projected from the side of the wheel Q, engaging a small pinion-wheel U, which is in constant engagement with the toothed wheel R', fixed to the registering-wheel R. This pinion is loose upon the spindle U', supported by the frame M. In order to actuate the second registering-wheel more than once during a revolution of the first registering-wheel, a suitable number of U-shaped lugs are formed upon the wheel Q, so that as soon as the equivalent of a coin of greater value than the coins for which the particular registering device is used is reached one of the said lugs actuates the pinion-wheel U, which then turns the toothed wheel R', and consequently the registering-wheel R, thereby causing the amount to be registered on the second wheel. When the next lug reaches the pinion, the registering-wheel R is again moved, and so on. It will be understood that where the first wheel Q actuates the second wheel once in a revolution only one U-shaped lug is used. The third registering-wheel is actuated by the second one through the medium of a U-shaped tooth, pinion-wheel, and toothed wheel similar to the manner in which the second wheel R is actuated by the first registering-wheel Q.

The numerals or figures on the registering-wheels start after "0" or zero, each figure after the first on each wheel being an addition of the preceding sum and the first figure. The figures on each registering device have reference, of course, to the particular denomination of coins by which it is actuated.

The aforesaid ratchet-wheel P, fixed to the

registering-wheel Q, is prevented from turning farther than the proper distance in one direction by the pressure of the free end N' of the bell-crank N on the pawl O and from turning in the opposite direction by the swinging pawl V, the backward movement of which is limited by a suitable stop.

The pinion-wheel U has every alternate tooth shorter than the others on the side nearest the U-shaped lug. Two of the longer teeth bear upon the periphery of the registering-wheel Q, so that neither the said pinion-wheel nor the toothed wheel R', fixed to the registering-wheel R, can move until the U-shaped lug strikes one of the short teeth of the pinion-wheel, in which case one of the long teeth bearing on the wheel Q is turned into the recess in the U-shaped lug, and thus allows the pinion-wheel to be turned until the said long tooth is again clear of the lug. The above description relating to the second registering-wheel also applies to the third registering-wheel S.

A plate W, having suitable openings therein, is secured to the frame M in front of the registering-wheels, so that through these openings the figures on the said wheels showing the amount registered can be seen.

The registering mechanism can be inspected and the receipts ascertained by opening the door X. This door is fitted with a suitable lock to prevent unauthorized persons tampering with the mechanism.

The operation of the apparatus is as follows: Suppose a coin is tendered in the purchase of an article and change is required. The tendered coin is dropped through one of the slots C<sup>2</sup> and passes through the assorter C down guides D and into the exhibitor F, where it is visible to the purchaser. Its equivalent is then taken from the cash-drawer. The exact amount of the purchase is placed in one of the slots C', and the change handed to the purchaser. The amount of the purchase, after passing through the assorter B, drops into guides D and falls upon the respective levers L of the registering mechanism, depresses same, and consequently operates the registering-wheel Q, and thence passes into the exhibitor E, where it also is visible. By pressing in the knob H the shutters G and G' open and the coins in both indicators simultaneously disappear and pass down chutes I into the cash-drawer.

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

1. In a device of the character described, an assorter for coins tendered, a second assorter for coins of purchase, an independent exhibitor for the coins of each assorter, and means for discharging the coins from the exhibitors simultaneously, substantially as described.

2. In a device of the character described, an assorter for coins tendered, a second assorter for coins of purchase, registering means



operated by the coins of the second assorter, an independent exhibitor for the coins of each assorter, and means for discharging the coins from the exhibitors simultaneously, substantially as described.

3. In a device of the character described, a chute, a lever extending within the chute so as to be actuated by a passing body, means for returning the lever to its normal position, a bell-crank carried by the lever, a pawl pivoted on one arm of the bell-crank and adapted to be engaged by the other arm thereof, a ratchet-wheel engaged by the pawl, a detent for preventing backward turning of the ratchet-wheel, and registering means operated by the ratchet-wheel, substantially as described.

4. In a device of the character described, a frame, a ratchet-wheel journaled therein, a lever pivoted to the frame, a weight carried by the lever, a bell-crank connected with the lever, a pawl pivoted on one arm of the bell-crank and engaging the ratchet-wheel, the other arm of said bell-crank being adapted

to engage the pawl, means for preventing backward turning of the ratchet-wheel, and registering means operated by the ratchet-wheel, substantially as described.

5. In a device of the character described, a frame, a ratchet-wheel journaled therein, an oscillating bar pivoted in the frame, a lever mounted on said bar and carrying a weight on one end, a bell-crank also mounted on the oscillating bar, a pawl pivoted to one arm thereof and engaging the teeth of the ratchet-wheel, the other arm of said bell-crank being adapted to engage the pawl when in its normal position, a swinging pawl pivoted to the frame and also adapted to engage the teeth of the ratchet-wheel, and registering means operated by the ratchet-wheel, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

WALTER EVANS.

Witnesses:

THOS. I. AMOTA,  
C. E. LAYTON.