

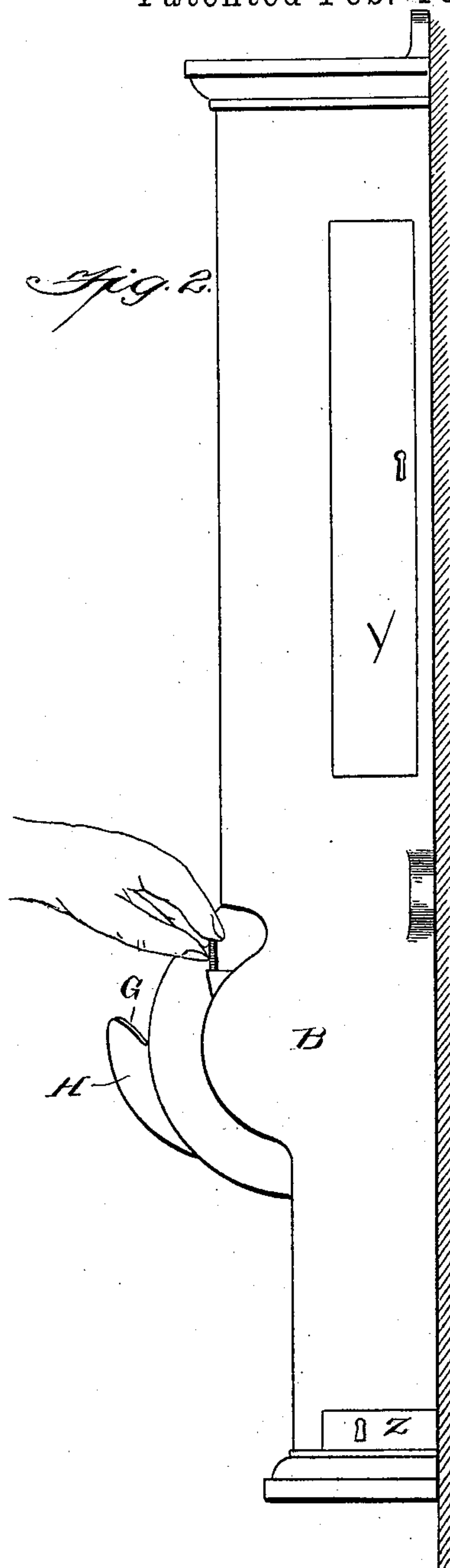
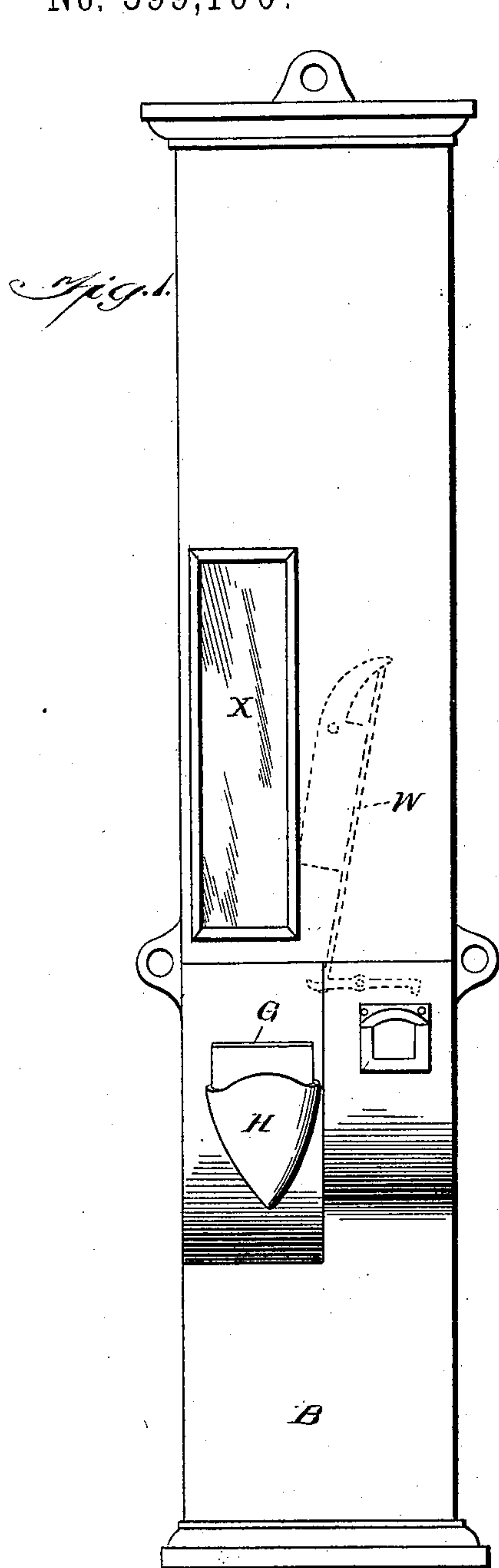
(No Model.)

2 Sheets—Sheet 1.

A. HULME & J. WILLIAMS.  
COIN FREED AUTOMATIC DELIVERY MACHINE.

No. 599,100.

Patented Feb. 15, 1898.



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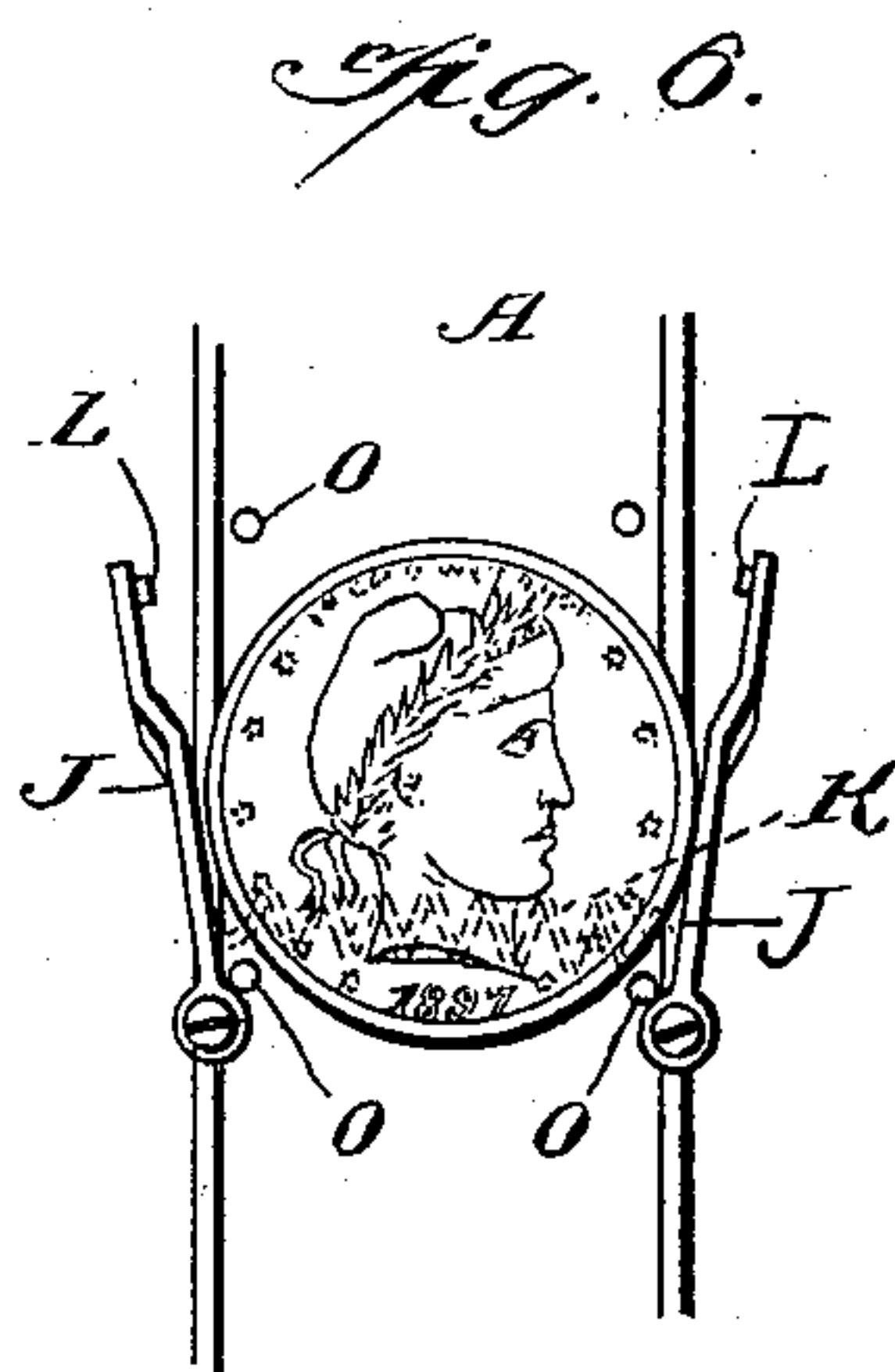
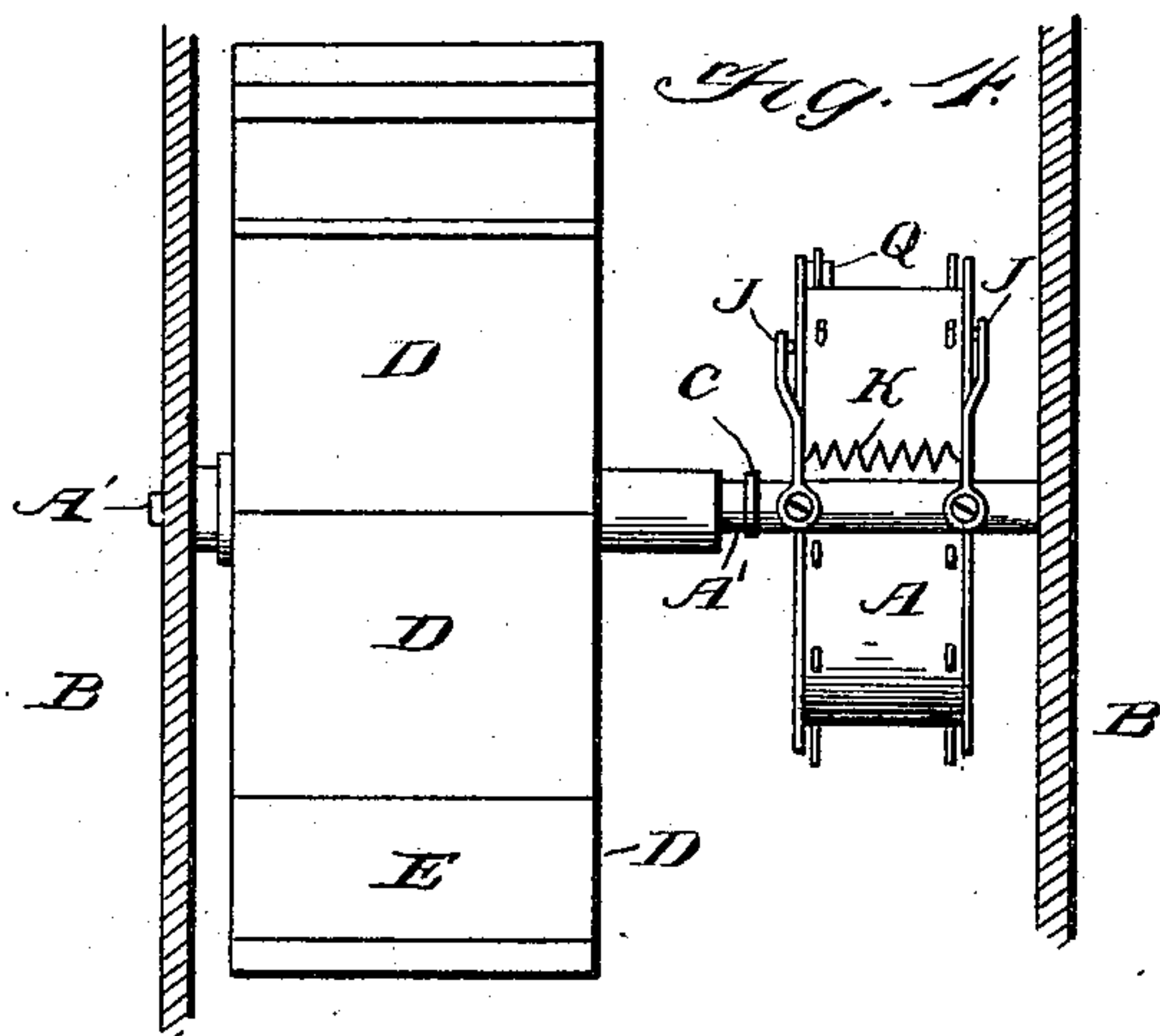
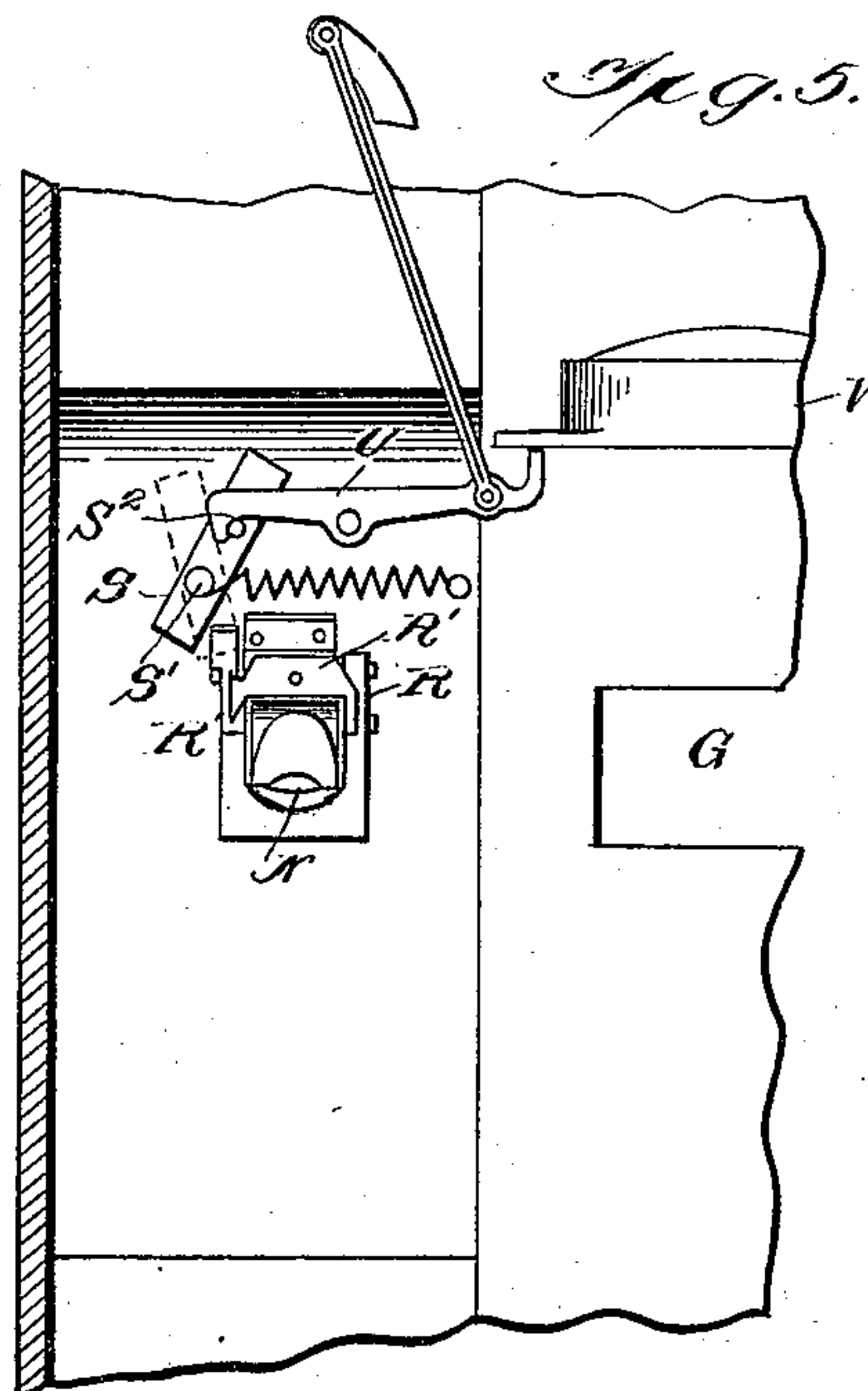
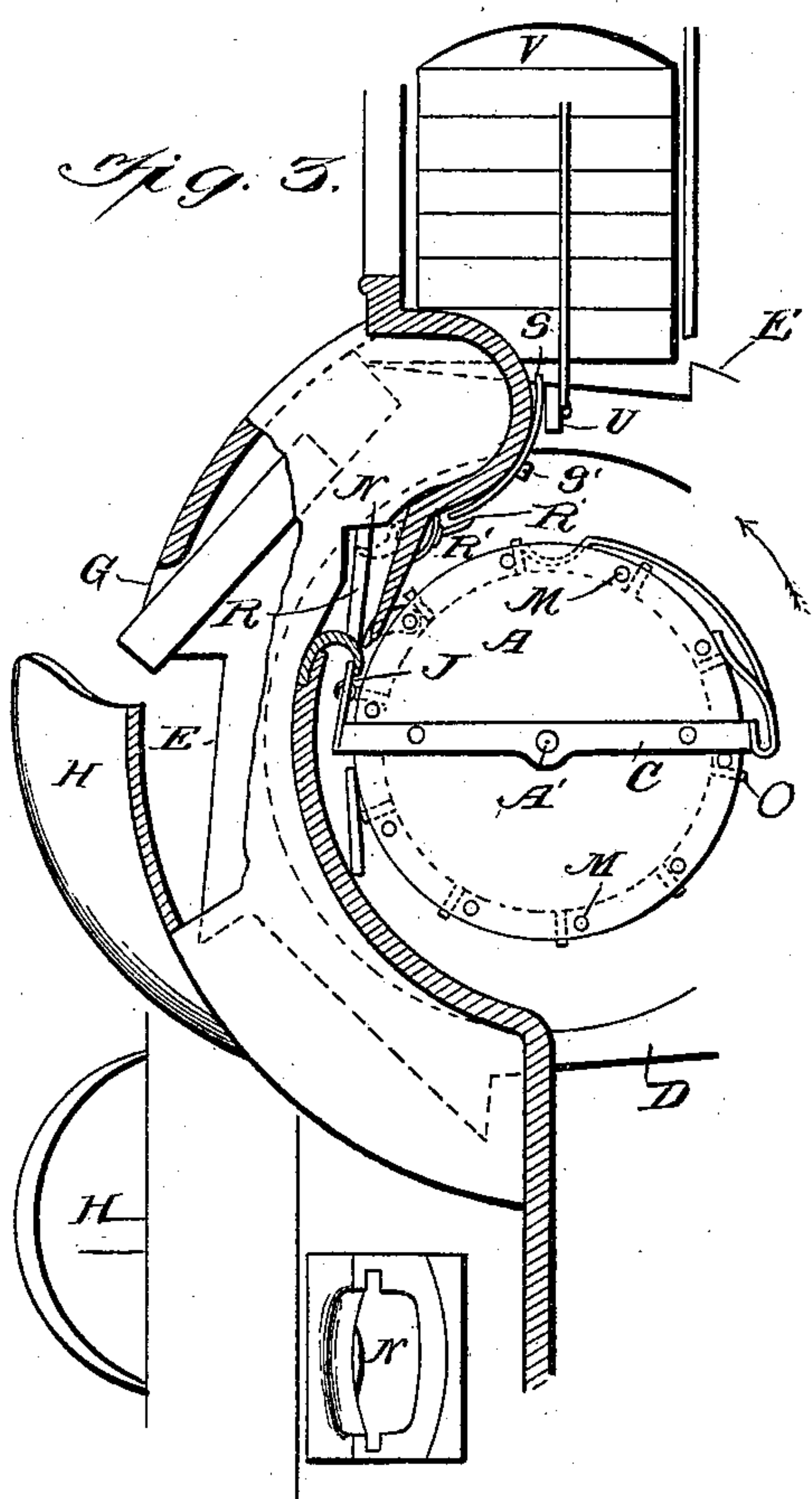
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2 Sheets—Sheet 2.

A. HULME & J. WILLIAMS.  
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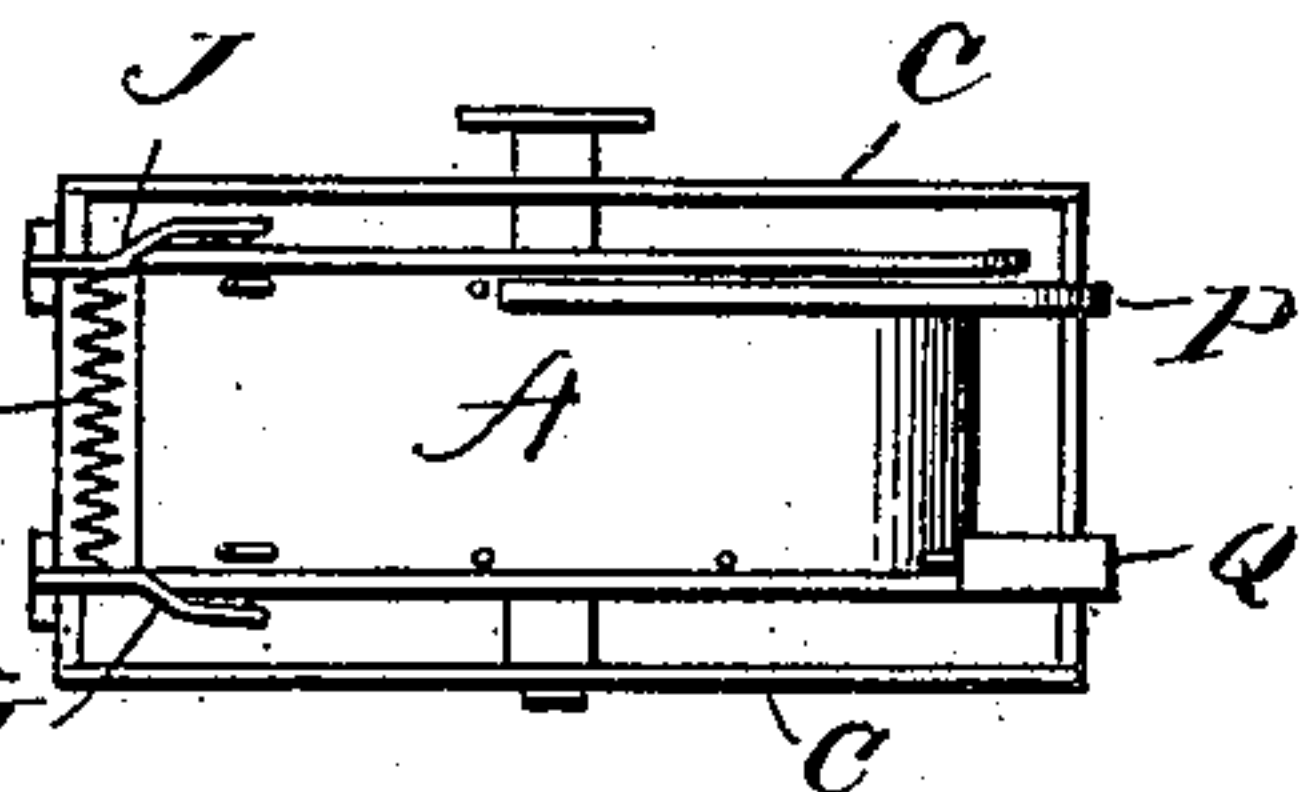
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# UNITED STATES PATENT OFFICE.

ALFRED HULME, OF TIMPERLEY, AND JOHN WILLIAMS, OF PATRICROFT,  
ENGLAND.

## COIN-FREED AUTOMATIC-DELIVERY MACHINE.

SPECIFICATION forming part of Letters Patent No. 599,100, dated February 15, 1898.

Application filed August 24, 1897. Serial No. 649,392. (No model.)

*To all whom it may concern:*

Be it known that we, ALFRED HULME, engineer, of Timperley, and JOHN WILLIAMS, printer, of Patricroft, England, subjects of the Queen of Great Britain and Ireland, have invented Improvements in Coin-Freed Automatic-Delivery Machines, of which the following is a specification.

Our invention relates to machines or contrivances of the coin-freed-delivery type; and it consists, essentially, of a machine, as hereinafter described, in which the insertion of the coin serves for simultaneously delivering the goods without the necessity of manipulating a drawer or push, as in many existing machines.

Figure 1 is a front and Fig. 2 a side exterior view of our automatic coin-freed-delivery machine complete as made for fixing upon a wall or partition. Fig. 3 is a part vertical section, on a larger scale, (about one-half full size,) of the outer casing and exposing an end view of the coin-freed and delivery mechanism. Fig. 4 is a similar section taken at right angles to Fig. 3 and exposing a front view of the coin-freed and delivery mechanism. Fig. 5 is a rear view of the interior of the casing with drums removed. Figs. 6 and 7 show details in elevation and plan, respectively.

In accordance with our invention we employ a drum A, mounted upon a central axis A', supported in bearings in or upon the walls of the iron or other suitable outer casing B or in a suitable frame or bracket C, secured thereto. This axle also carries the delivery-drum D, and the two drums are either keyed to the axle, which is capable of revolving, or the two drums are connected together and revolve upon a fixed axle. The periphery of the delivery-drum D is formed with flats or facets E, corresponding to the size of a packet of sweetmeats or other commodity to be sold or delivered, and the said flats or facets are slightly inclined and produce a ratchet-tooth effect almost equal in depth to one of the packets. Directly above this delivery wheel or drum D is a space for the reception of the column of sweetmeat-packets piled one above another, as shown more clearly in Fig. 3, and resting upon the said drum. By reason of the

peculiar arrangement of facets or flats the said wheel or drum D when it commences to rotate in the direction of the arrow F engages with the lowermost packet of the column of sweetmeats, pushes it forward from beneath the column, and carries it round until it reaches a chute or opening G in the front of the casing, when by reason of gravity the packet slides off the facet of the drum into the pocket H or into any other suitable receptacle placed to receive it. While so delivering one sweetmeat-packet the next succeeding packet of the column simultaneously falls by gravity onto the next succeeding facet of the drum, and as the drum continues to revolve it will be seen that each and every packet in the column will eventually be delivered into the pocket H.

To control the movements of the delivery-drum and to arrange for only one packet of sweetmeats to be delivered for one penny or other coin of fixed size and value, we employ the coin-freed drum A, which, as aforesaid, is coupled up with the delivery-drum D and which under the controlling influence of suitable apparatus only allows the delivery-drum for every penny inserted to rotate a distance equal to one of the facets or flats E. Such controlling apparatus consists of arms or levers J, movable radially on the fixed frame C and so bent and drawn together by a spring K as to embrace the sides of the coin-freed drum, as shown more clearly in Figs. 3 and 6. The extremities of these arms or levers carry pins or studs L, which are designed to take into holes M in the flanges of the drum when such holes come opposite them, and thus lock the drum and prevent its movement. These levers J come directly beneath the chute or slot N, fitted or formed in the front face of the casing and through which the coin is inserted. The distance of such levers and their position in relation to the slot are such that as the coin is dropped into the slot it falls between and comes to rest upon the bent parts of such levers. Upon pushing the coin down it spreads the arms or levers J away from each other, as shown in Fig. 6, and thereby causes them to draw the pins or studs L out of the set of holes M, into which they previously protruded, and thus release the drum. Immediately the studs



L are out of the holes M the edge of the coin strikes or abuts against a set of pins O, and on the further movement of the coin into the machine the drum, by reason of the said abutment, is caused to rotate until such time as the pins O will no longer support the coin, at which instant the greatest width of the coin has completely passed between the arms or levers J and allowed the coin to fall into the machine. At the same time the levers are permitted to approach each other again and cause the studs L to take into the next set of holes M and again lock the drum. In such way the drum is caused to revolve for a certain definite distance, and by connection with the delivery-drum D, as aforesaid, such movement serves to rotate the delivery-drum a sufficient distance to remove the lowermost packet from the column above and deliver it into the pocket H. It will be observed that the packet is not ejected until the coin is out of the reach of the operator, or, in other words, the final movement of the drum D and the last push of the coin are simultaneous. By inserting another coin the levers J will again separate, the coin strike against another set of pins O, the drum A will be rotated to another set of holes M, and another packet will be delivered, and so on continuously for each coin inserted until the supply of sweetmeats is exhausted.

To steady the drum A or to prevent its overrunning, we provide a flat metal spring P, acting on the periphery, and its free end in line with the pins O and coming directly behind one of such pins at each pause of the drum's movement. We also employ a flat spring Q, acting on the flange of the drum.

To prevent the coin being withdrawn by a string or other means, we provide a set of claws R, loosely pivoted on each side of the opening or slot (see Fig. 5) and so balanced or held by spring-plate R' as to lie across the slot, and when a coin is inserted to freely retire; but when an attempt is made to withdraw the coin to nip the coin and prevent extraction. These same claws R we more especially employ for preventing the insertion of a coin when the machine is empty, since by providing a lever S, pivoted at S', and its lower end drawn by a spring T behind the end of one of the claws, the claws cannot retire to make way for an incoming coin, and consequently the insertion of the coin is resisted and prevented.

To hold the lever S from behind the claws when the machine is full or to prevent its locking the machine until the last packet has been delivered, we provide its upper end with a pin S<sup>2</sup>, capable of engaging with the hooked end of lever U, which holds its loose end clear of the claws until such time as it is released. This releasing of the lever S is effected by a block or weight V, placed upon the top of the column of packets at the time of filling the machine, and which block in descending, and in the act of falling onto the drum D after

the last packet has been ejected, strikes the end of lever U and tilting it up causes it to release the lever S, which in turn, under the pull of spring T, moves behind the claws R. In addition to so helping to lock the machine the falling of the weight V also serves to raise a plate or semaphore W (which previously hung down) across the glazed opening X in the front of the machine, and said plate being marked with the word "Empty" the machine is locked and an indication given of the supply of packets being exhausted.

The coins fall into the bottom of the casing or into a special box, and a door or drawer Z is provided for their withdrawal. To charge the machine with sweetmeats, the side of the casing is provided with a door Y.

We would here observe that while we prefer the form of the casing herein described and shown in Figs. 1 and 2, which permits of the "slot" and "delivery" opening being in line or side by side and suited to the position of a person's hands, (right and left, one for inserting the coin and the other for receiving the packet,) and while we prefer to construct the casing to be suitable for hanging on a wall, we may vary the form and mount it on a stand or make it self-supporting, according to the situations in which it is to be fixed, or we may combine it with other machines. We may also duplicate, triplicate, or otherwise multiply the machine—i. e., provide it with two or more delivery openings and slots for different commodities or for containing a larger supply of sweetmeats. While preferring the two drums to be on the same shaft, they may be on different shafts and connected by gearing. Lastly, we would point out that a distinguishing feature of our invention is that the insertion of the coin insures of the direct delivery of a packet and that only one manipulation is necessary in lieu of two or more, as in many existing machines, and therefore without loss of time or annoyance in having first to insert the coin, then move or pull a drawer, and, finally, to pick up the packet.

A further feature of the machine is that any coin of less size than the stipulated one will slip through the machine without delivering the packet and a coin of larger size will not be capable of entering the machine, which features, together with the aforesaid automatic closing of the slot and the indication of the machine being empty, serving to produce a unique machine.

Having thus particularly described the nature of our said invention, we wish it to be understood that we do not confine ourselves to the precise details, relative proportions, and dimensions, or to the exact form, arrangement, or grouping of the parts of the machine, since the same may be modified without departing from our invention, and what we claim is—

1. In combination, the casing, the delivery-drum therein, the coin-chute, the operating mechanism for controlling the delivery-drum controlled by the coin, the yielding claws ar-



5 ranged to normally extend across the coin-chute, means for locking said claws, and means for controlling said lock with the weight in the receptacle adapted to engage said lock-controlling means, substantially as described.

10 2. In combination, the delivery-drum, the coin-chute, the means controlled by the coin for operating the drum, the yielding claws normally extending across the chute, the lock S for engaging the claw, the lever U for hold-

ing the lock inactive, the semaphore connected with the lever and the weight for engaging the lever U, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

ALFRED HULME.

JOHN WILLIAMS.

Witnesses:

WALTER GUNN,

JONATHAN MILNER.