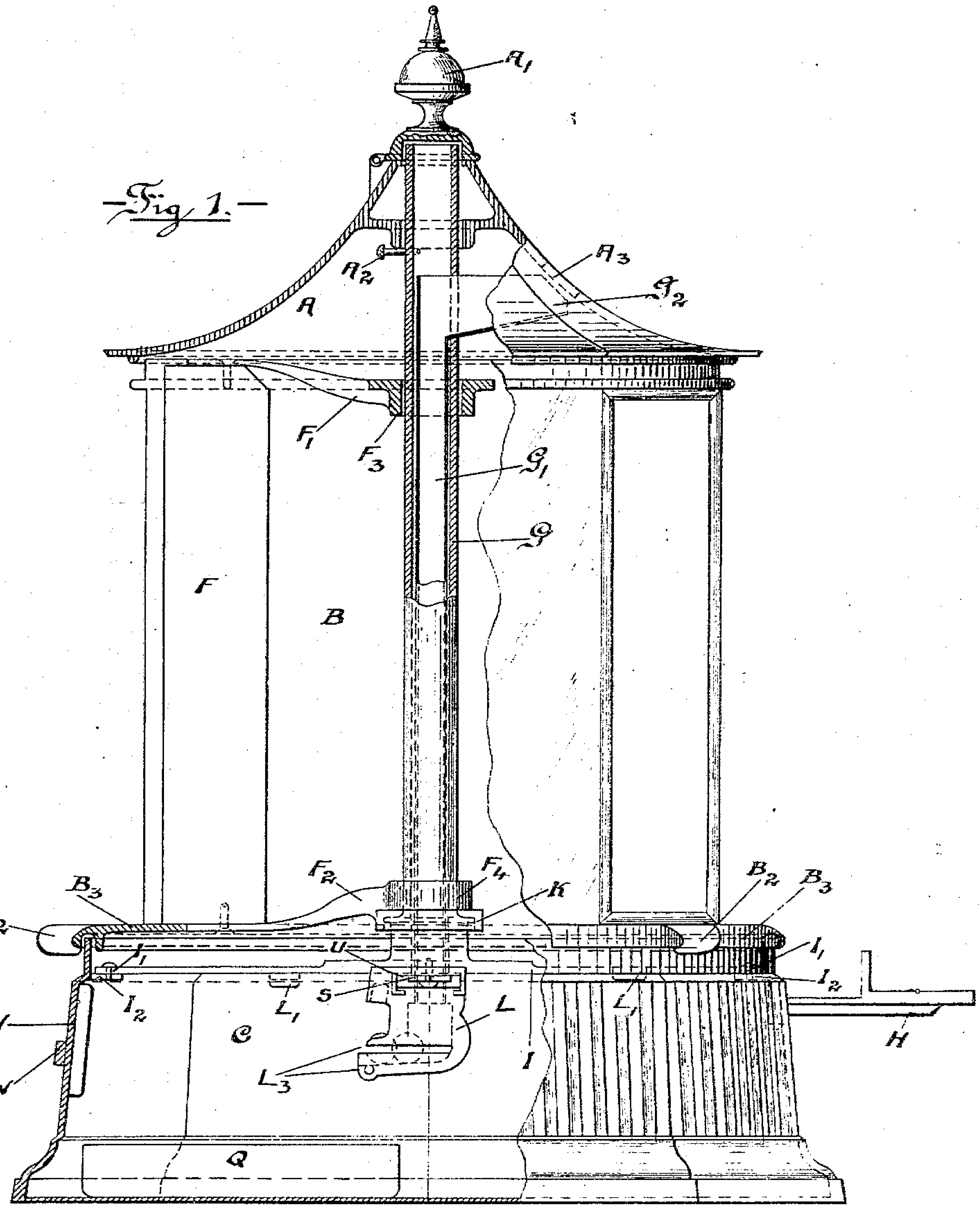
(No Model.) 2 Sheets—Sheet 1.

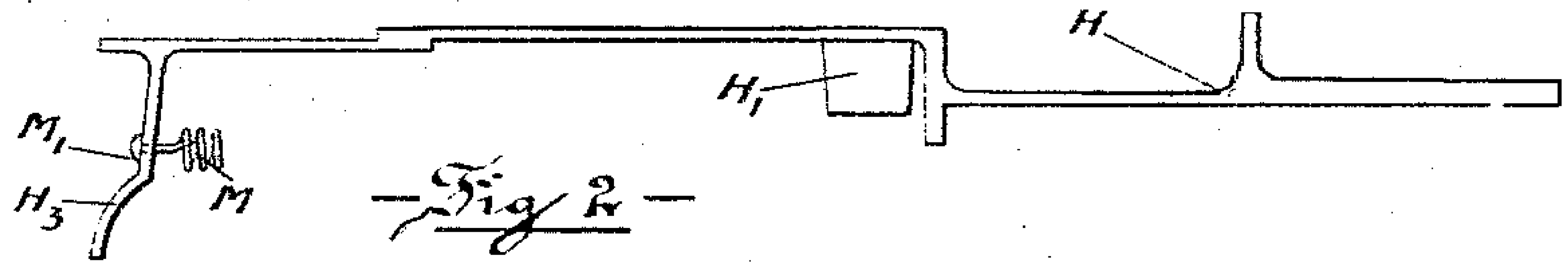
C. E. McDOWELL.

COIN CONTROLLED VENDING MACHINE.

No. 563,789. Patented July 14, 1896.

—Fig. 1.—





—Fig. 2—

—Witnesses—

—Inventor—
Charles E. McDowell
by his Attorney
August M. [illegible]

(No Model.) 2 Sheets—Sheet 2

C. E. McDOWELL.

COIN CONTROLLED VENDING MACHINE.

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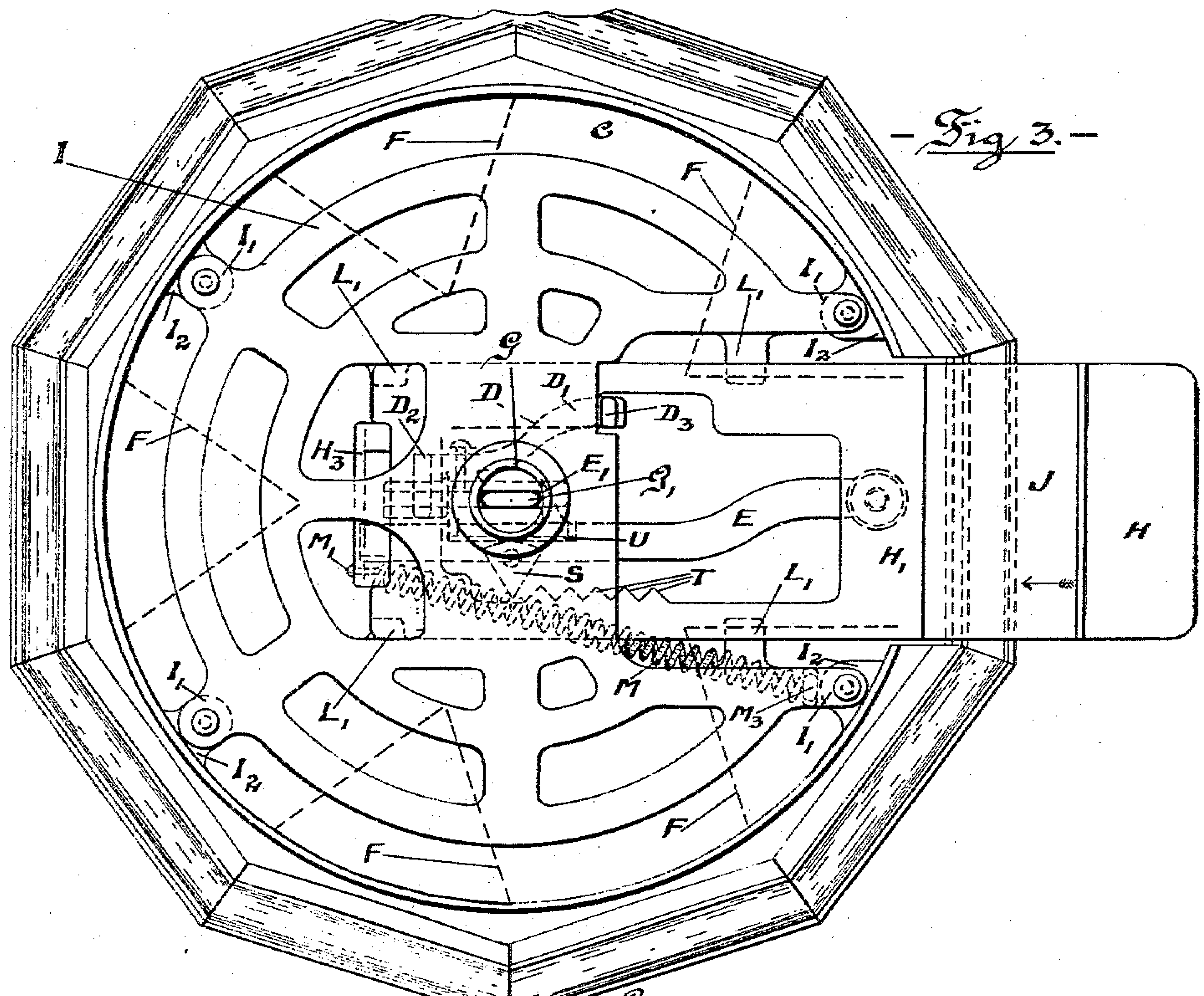
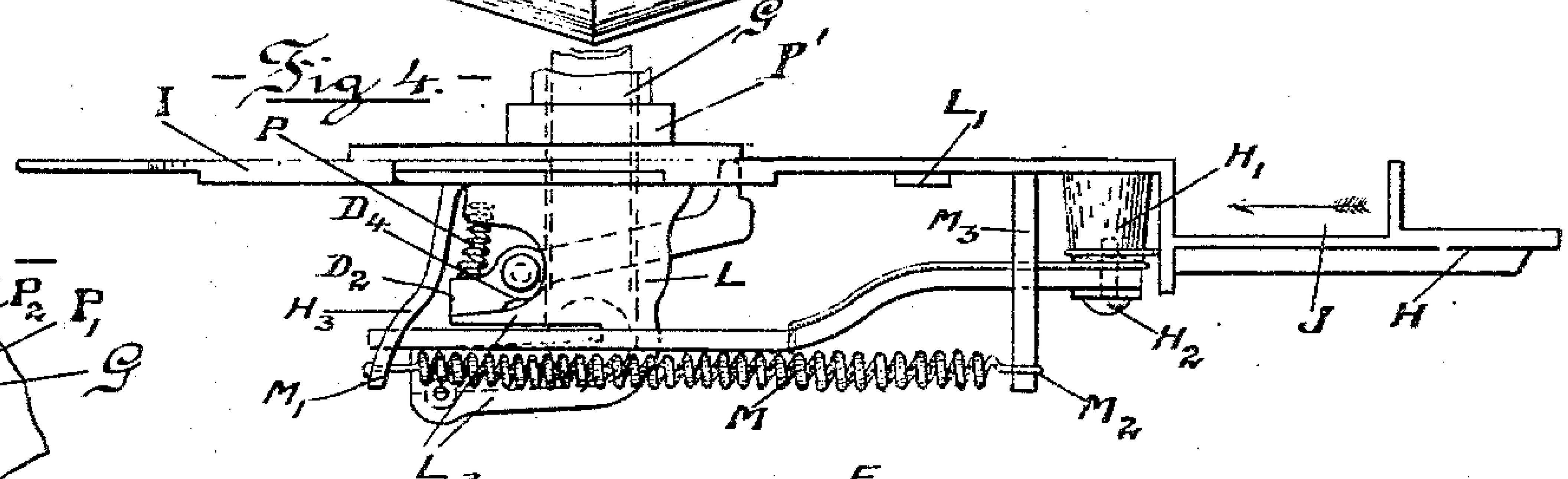
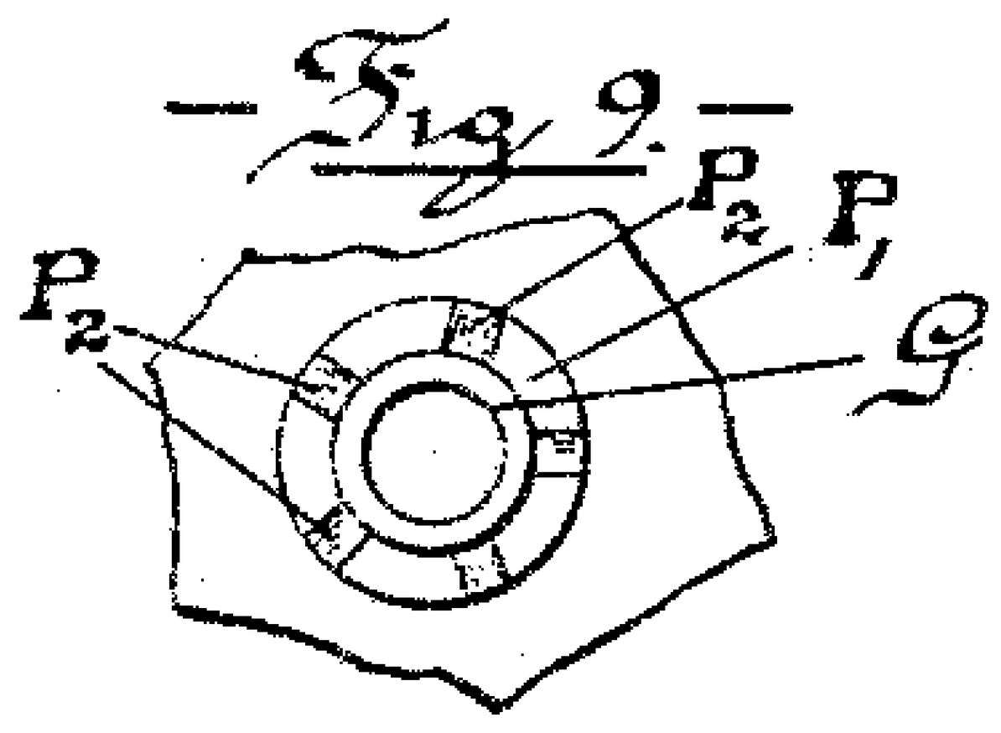
- Fig 3. -

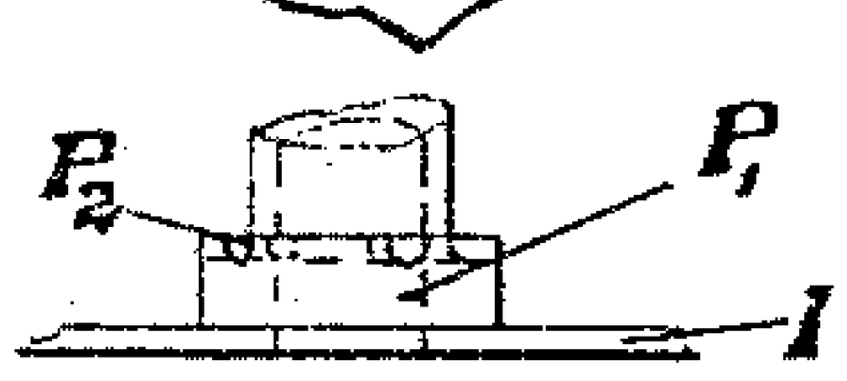


- Fig 4. -



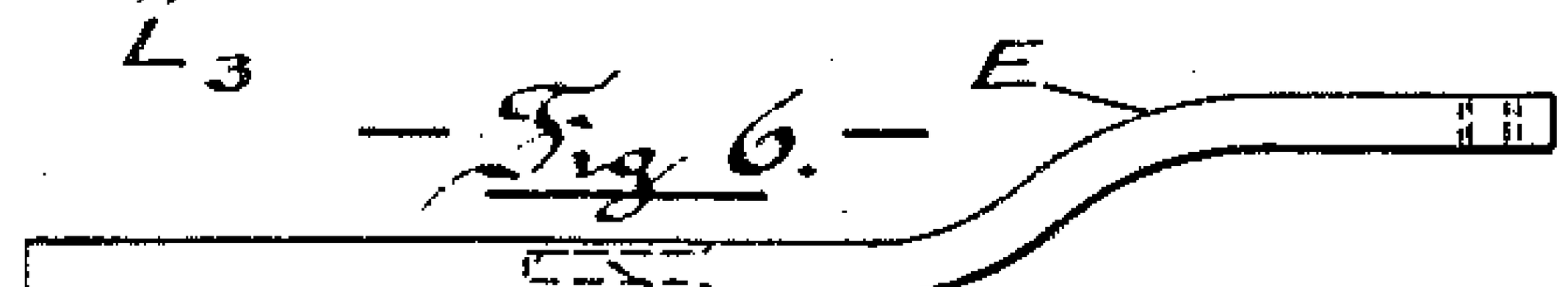
- Fig 9. -

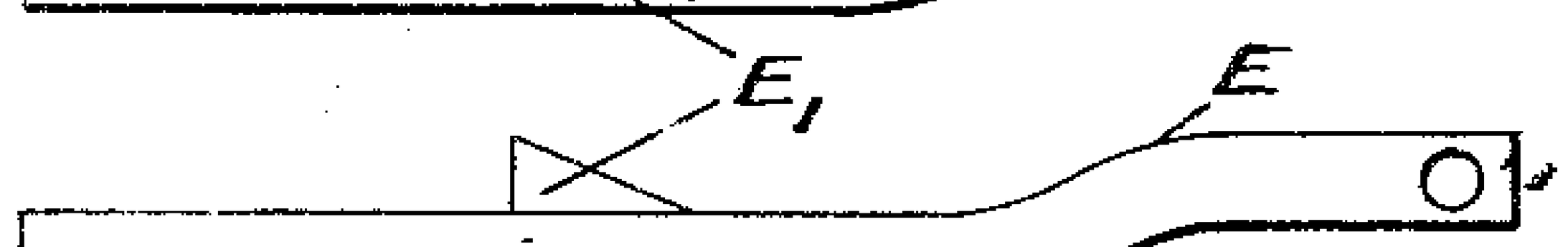




- Fig 10. -

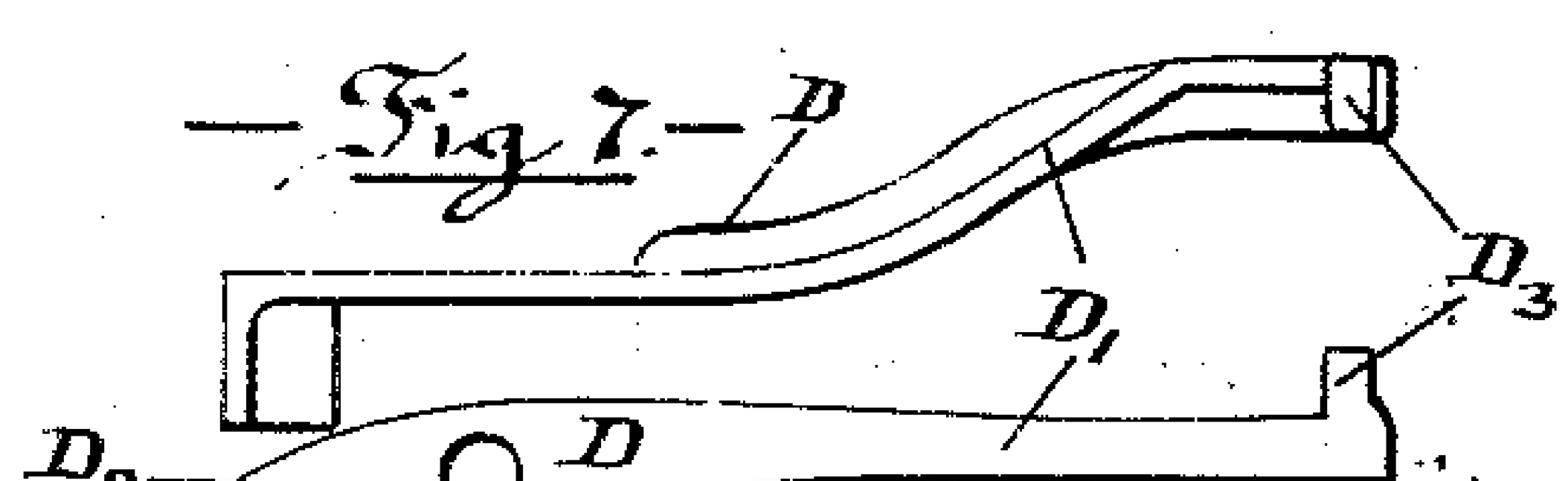
- Fig 6. -





- Fig 5. -

- Fig 7. -



- Fig 8. -

- Witnesses. -

Jno. J. Kunze

J. M. Becker

- Inventor -

Charles E. McDowell

by his Attorney

August M. Tréchow

UNITED STATES PATENT OFFICE.

CHARLES E. McDOWELL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO HENRY W. GENNERICH, OF SAME PLACE.

COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 563,789, dated July 14, 1896.

Application filed February 26, 1896. Serial No. 580,877. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. McDOWELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In describing my invention I call attention to the fact that, classified as it is among the numerous vending apparatus of the last few years, and consequently possessing the attributes of those having a coin passing through a slot and unlocking a delivery-plate presenting some article of merchandise thereon, it possesses novelty in one important respect—viz., in the revolving axial motion of the middle storage part of the apparatus, which naturally results in the unlocking device being constructed and adapted to such revolving motion, making it in the mechanical details different from any other construction known to date, although the principle may be the same as in other unlocking devices of this class.

In connection with this above statement I dare, therefore, safely assume that I present to the public a new vending apparatus embodying a novel construction mechanically simple and, architecturally speaking, attractive to the eye, the description of which I shall now proceed with, and in so doing refer to the accompanying drawings, wherein like letters of reference indicate corresponding parts in the different views.

Figure 1 presents a side view of my revolving vending apparatus, broken through and shown in section to illustrate its axial motion. Fig. 2 is a side view of the delivery-plate. Fig. 3 is a top view of Fig. 1, the top part A and middle revolving part B lifted off, so as to give a clear view of the unlocking device. Fig. 4 is a side view of said unlocking device. Fig. 5 is a top view of Fig. 6. Fig. 6 is a side view of the arm E, which pushes the coin forward. Fig. 7 is a top view of the unlocking-lever D. Fig. 8 is a side view of Fig. 7. Fig. 9 is a top view of the lower seat, on which the middle part rests; and Fig. 10 is a side view of Fig. 9.

The apparatus consists of three main parts, the top A or pyramidal-shaped roof, the middle or storage part B, and the pedestal or bottom part C. The external shape is ten-sided, as seen in Fig. 3, but can of course be constructed with as many sides as will be found convenient; in fact, to suit the number of articles exposed for delivery. In this case there are five spaces partitioned off by the triangular blocks of wood, (indicated by dotted lines marked F in Fig. 3,) each of said blocks being attached to an arm F′ at the top and an arm F^2 at the bottom, these arms cast, respectively, around a ring or bush F^3 at the top and a bush F^4 at the bottom, thus forming the framework of the middle part, and in these spaces the boxes containing the vendible articles are stacked on top of each other, and when the middle part, as will be explained later on, is revolved around the hollow stem G, any desired storage-space will allow the article desired to be extracted by the delivery-plate H, when such space is stopped over the said delivery-plate.

The top part A has a cap A, fitting over the top of the hollow stem G, suitably secured to the said stem and by a padlock fitted in two eyes, one eye on the cap A′ and the other on the top A, so as to lock cap A′, top A, and stem G together. Top A rests on a pin A^2, fitted into stem G, with enough space between A and B to permit B to have free-revolving motion.

The middle part B, as before stated, consists of the five blocks marked F, secured between five arms F′ and F^2, cast on the bushes F^3 and F^4, forming thus a compact body that revolves around the stem G, and having the vendible article inclosed in boxes, stacked in the spaces between the blocks F, said boxes resting on plate I, which, as will be seen in Fig. 3, is ribbed, so as to present as little friction as possible to the boxes, and on a level with this plate I is a delivery-plate H, which, when given the necessary motion, will draw out a box from underneath the pile resting on it

and deliver it to the purchaser or manipulator of said delivery-plate H.

The stem G is hollow and secured to plate I, (see Fig. 4,) and has a bush P′, Fig. 9, where it joins the plate, with five indents or notches P^2, into which notches fit a corresponding number of ribs K, cast on the bush F^4. These ribs and notches being semicircular will regulate the middle part B so as to stop each storage part accurately over the delivery-plate H, when B is turned by aid of any of the five lugs B^2, attached to the lower ring B^3, which forms part of the middle or storage part B.

The pedestal or lower part C is hollow and contains the mechanism which operates so as to unlock the delivery-plate H on the dropping of a coin through the slot A^3 in the top part A, which coin is directed in its course by a flat tube G′, with a mouthpiece G^2 adjacent to the slot A^3, reaching down through the stem G to a receiver L, where the coin is stopped until pushed forward by a lug E′ on the arm E, when it will raise the arm D^2 of the lever D, and in so doing depress the arm D′, having the lug D^3 at the end, thus permitting delivery-plate H to be pushed inward to receive a box.

The whole coin-operating mechanism consists of the following parts: The ribbed plate I is attached to the pedestal C by four lugs I′, resting on four lugs I^2, cast on pedestal C and held down there by screws. Attached to the plate I there are four lugs L′, two on each side of delivery-plate H, on which lugs the plate H slides. Said plate H has furthermore attached to it an arm E, secured by a screw H^2 to a projection H′, cast on plate H, the other end of arm E being supported on a downward-extending rib H^3, forming part of plate H. Said arm E has a lug E′, which passes in through the slots or jaws L^3 of receiver L, so that it can press the coin forward when pushed forward in connection with plate H. Pivoted to receiver L is a lever D, having two arms D′ and D^2, D′ furnished with a projection D^3, extending upward, and in its natural position acting as a stop to plate H. In other words, when the receiver L contains no coin for arm E and lug E′ to push forward, no force acts on lever D and lug D^3 remains stationary, as in the position shown in Fig. 4. If, however, on the other hand, the coin has been inserted and lies in the receiver L, and the plate H is pushed in the direction of arrow, arm E, attached as it is to plate H and following its movements, will, by the aid of lug E′, push the coin forward until it, with its own curved circumference, bears against a round surface D^4 on arm D^2 of lever D, which will raise said arm D^2 and depress the other arm, D′, having D^3 at the end, and as a consequence depress projection D^3 underneath plate H, which will then pass over it and in so doing bring out on its return a box on the part of delivery-plate, (marked J.) In order that the plate H can resume its position, a contraction-spring M is secured to the end of plate H^3 at M′ and to the ribbed plate I at M^2, a downward-projecting piece M^3 being cast in plate I to that end. An expansion-spring P is furthermore located in receiver L, acting with a downward pressure on arm D^2 of lever D, leaving lug D^3 in the elongated notch in the delivery-plate H in engagement with one end of said notch, thus preventing delivery-plate H from being pushed inward and from acting until a coin has passed into receiver L. As it has been necessary to explain the working order of this apparatus in connection with its mechanical elements, only a brief view of its whole *modus operandi* is necessary. Each compartment or space, of which there are five in this instance, but of which no lesser or no greater number will alter the constructional principle in this apparatus, is labeled with the name of some vendible substance, and the purchaser, after having selected his article, revolves, by the aid of one of the lugs B^2, the middle storage part until the compartment containing the article desired by him is opposite to and above the delivery-plate, whereupon he pushes delivery-plate H inward toward the center of the apparatus, and in so doing, by the aid of the before-mentioned elements, depresses the lug D^3 and brings out the bottom box of the stack already resting on plate H, on the space J of said plate. The coin, after having performed its function in raising arm D^2 of lever D, drops into a receptacle Q, Fig. 1, which receptacle can be removed by unlocking a part of the pedestal C, at V, furnished with a lock W to that purpose. There is a checking system arranged in connection with the delivery-plate H, whereby it can be proved that to the exact amount of boxes placed in the apparatus there must correspond exactly the same amount of coins. The component elements of this construction are the following: Pivoted to the upper side of receiver L is a ratchet S, gearing into a row of teeth T. Said ratchet S bears against a spring U, attached to receiver L, thus being the means of preventing, when the coin is once dropped into receiver L, the delivery-plate H from being drawn backward, and will only permit a retrograde movement when the whole row of teeth have passed ratchet S, proving thus that no coin can have been dropped into the apparatus except a box must necessarily be delivered.

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

1. In a coin-controlled vending apparatus of the character set forth, the combination of the pedestal having a centrally-located axial hollow stem, furnished with a coin receiver and controller at its bottom end, and having a guide for the coins lying inside of it, terminating in the receiver and extending upward to the top, adjacent to the coin-slot, a revoluble middle storage part, having any desired number of storage spaces, and furnished at the bottom with a ribbed bush resting on an

extension of the hollow stem, notched for the purposes as set forth, a top supported on a projection extending from the hollow stem, and locked to the said stem by a cap, substantially as illustrated and described, all for the purposes as set forth.

2. In a coin-controlled vending apparatus of the character set forth, consisting of a pedestal having a centrally-located axial hollow stem, a middle storage part secured to and revolving around said hollow stem, and a top covering said middle part and locking the three parts together by a cap attached to the top of the hollow stem, the pedestal having a ribbed plate secured to it, a delivery-plate on a level with said ribbed plate, sliding in guides attached to the plate, a coin-receiver attached to one side of the ribbed plate and a vertical hollow stem to the other, for the purposes as set forth, all substantially as illustrated and described.

3. In a coin-controlled vending apparatus of the character set forth, consisting of a pedestal having a centrally-located axial hollow stem, a middle storage part secured to and revolving around said hollow stem, and a top covering, not touching said middle part and locking the three said parts together by a cap attached to the top of said hollow stem, a ribbed plate attached to the pedestal furnished with a coin receiver and controller, and in juxtaposition to said controller or receiver on its other side, with a vertical hollow stem, said ribbed plate having guides, a delivery-plate moving in said guides and having an arm with a pointed lug attached, moving in the jaws of the coin controller and receiver, and having a contraction-spring attached whose other end is secured to the pedestal, and a lever pivoted to the coin receiver and controller, one arm of which lever is by a spring pressed down over the receiver or controller, the other interposed between the delivery-plate and the ribbed plate until acted upon, substantially as illustrated and described, for the purposes as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of February, 1896.

CHARLES E. McDOWELL.

Witnesses:
AUGUST M. TRESCHOW,
A. V. BEEKEN.