

J. J. WOOD.
COIN OPERATED MECHANISM.
APPLICATION FILED SEPT. 22, 1906.

925,548.

Patented June 22, 1909.

3 SHEETS—SHEET 1.

FIG. 1.

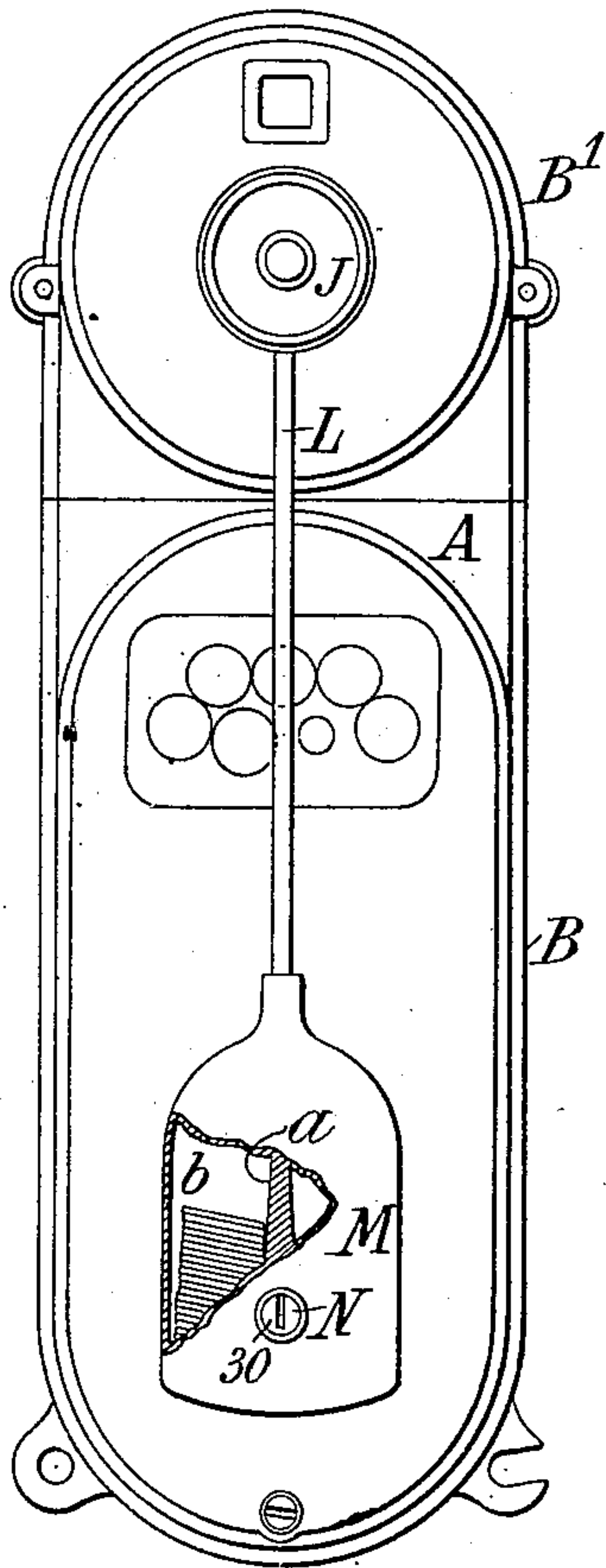
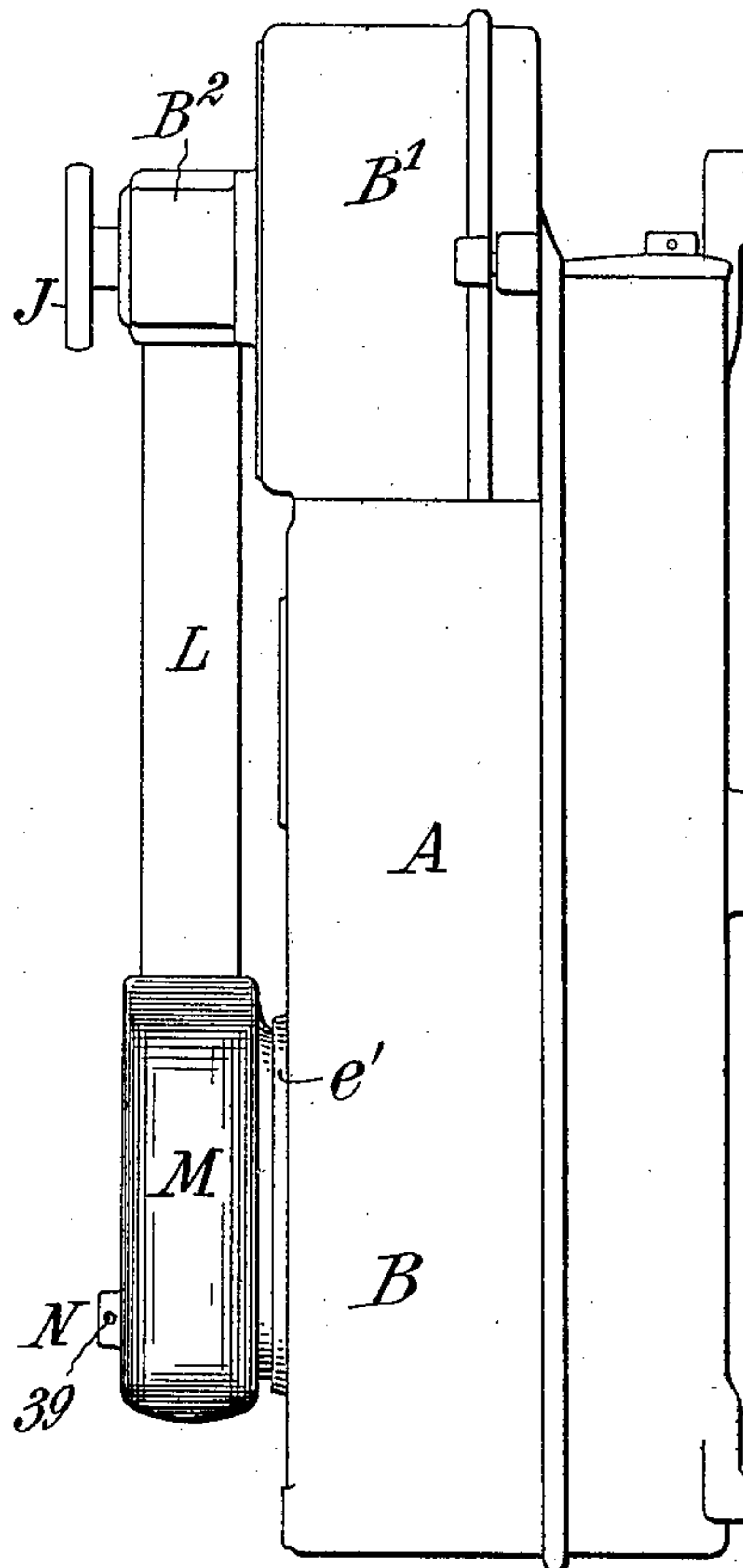


FIG. 2.



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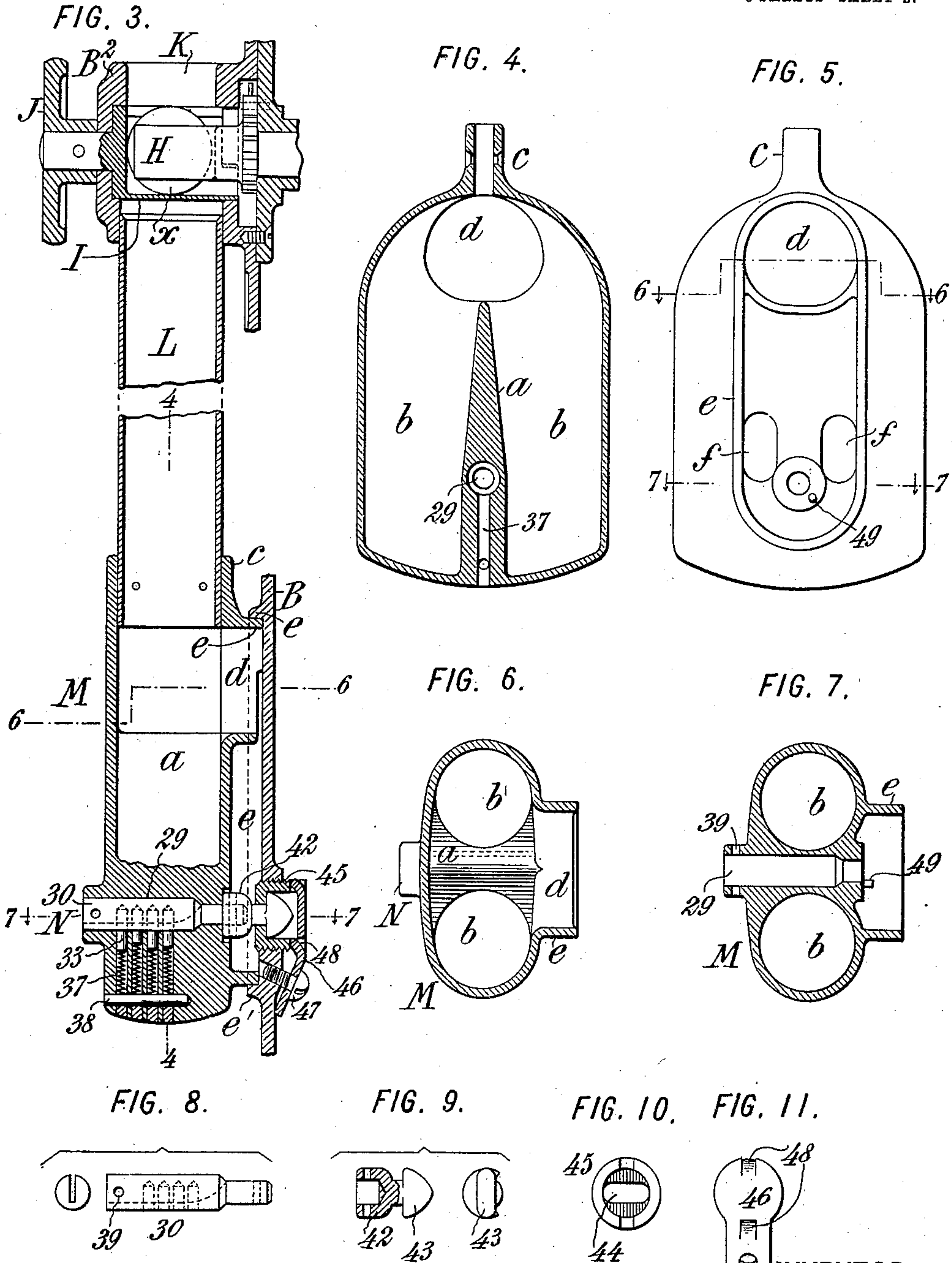
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

FIG. 12.

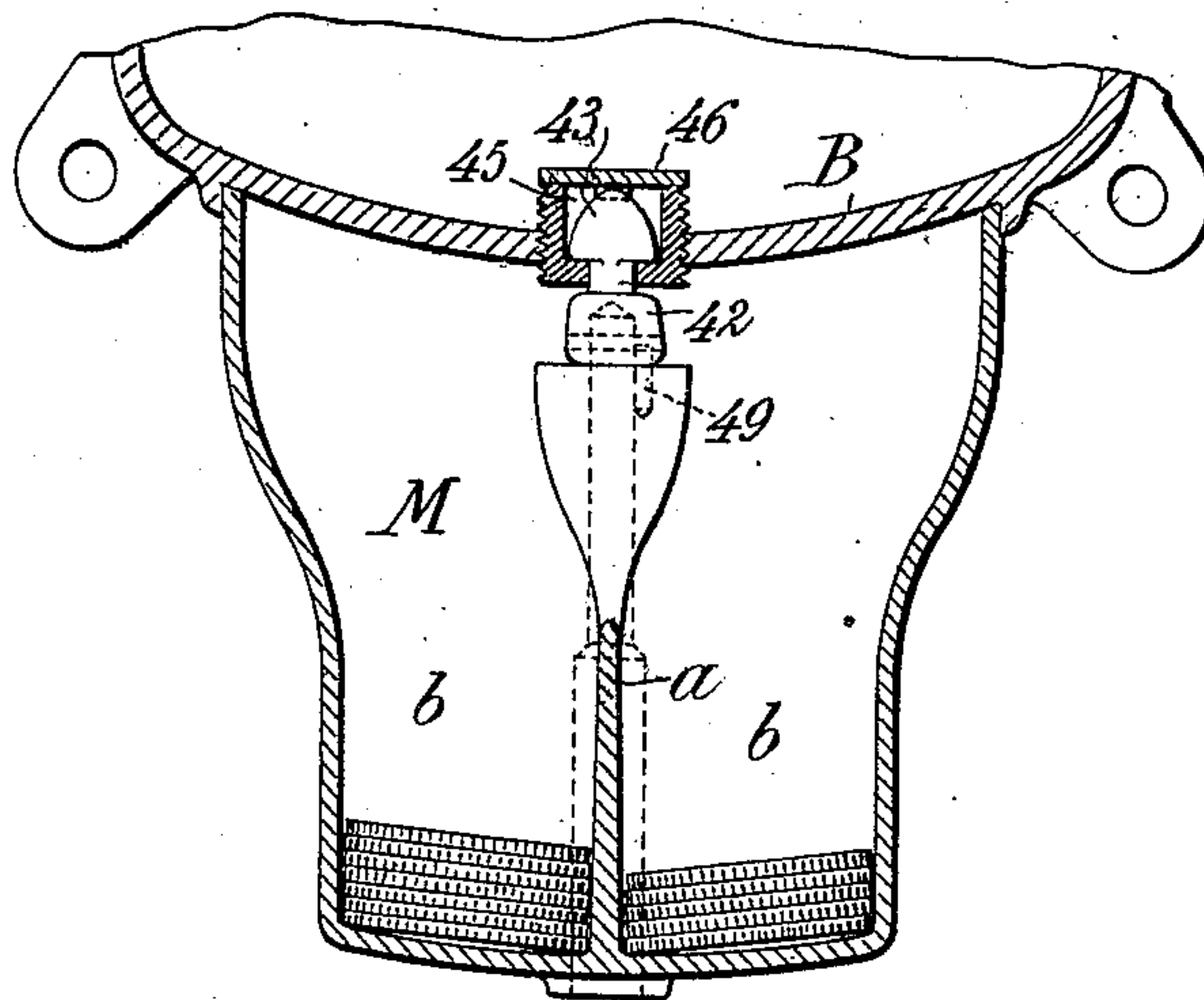
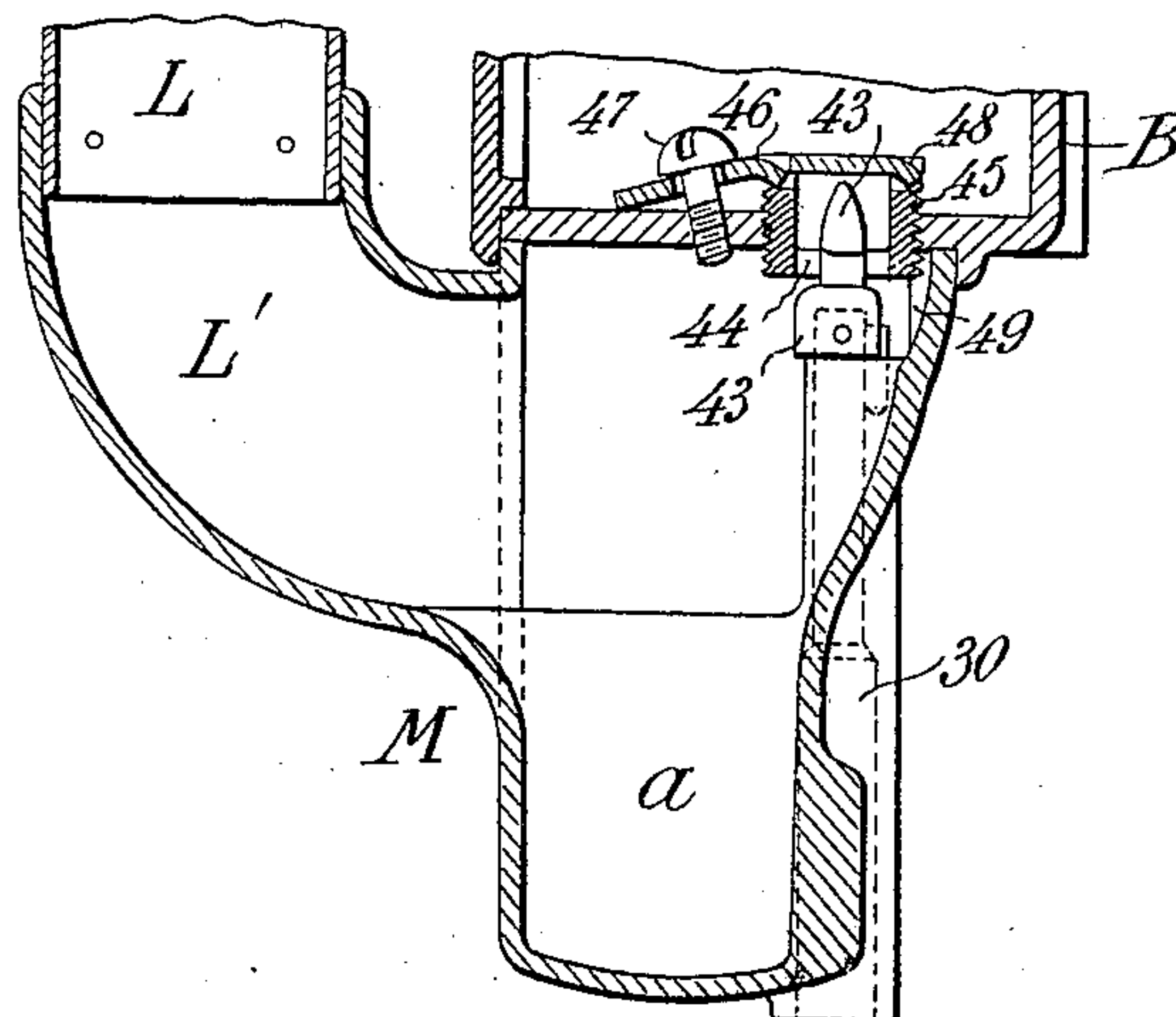


FIG. 13.



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UNITED STATES PATENT OFFICE.

JAMES J. WOOD, OF FORT WAYNE, INDIANA.

COIN-OPERATED MECHANISM.

No. 925,548.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed September 22, 1905. Serial No. 279,579.

To all whom it may concern:

Be it known that I, JAMES J. WOOD, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Coin-Operated Mechanisms, of which the following is a specification.

This invention relates to coin boxes or receptacles for receiving the coins which are discharged after having performed their duty in a coin-operated mechanism.

Although applicable to other kinds of coin-actuated apparatus, the present invention was specially designed for use with prepayment electric meters. For an understanding of the particular coin-actuated mechanism employed in such meters of my invention, reference is made to my application Serial No. 235,412, filed December 3, 1904 (Patented December 5, 1905, No. 806,722.)

Referring to the drawings,—Figure 1 is a front elevation of a prepayment electric meter, showing the coin receptacle of my present invention applied to the front thereof. Fig. 2 is a side elevation of the same. The remaining figures are on a larger scale. Fig. 3 is a vertical mid-section through the coin box, the front of the meter casing, and so much of the coin-actuated mechanism as is necessary to show the path of the coin. Fig. 4 is a vertical transverse section through the coin box or receptacle, in the plane of the line 4—4 in Fig. 3. Fig. 5 is a rear elevation of the coin receptacle removed. Figs. 6 and 7 are transverse sections thereof, in the planes of the like numbered lines in Figs. 3 and 5. The remaining figures show details, Fig. 8 being a front and side view of the lock barrel, Fig. 9 a side and end view of the locking head, Fig. 10 a rear view of the lock socket, and Fig. 11 a face view of the fastening piece for the latter. Fig. 12 is a vertical midsection, viewed from the front, of a modified coin box. Fig. 13 is a vertical midsection thereof viewed from one side.

Referring to the drawings, let A designate as a whole the electric meter or other apparatus to which the coin-actuated mechanism is applied, and let B designate the casing thereof, a fragment of which is shown in section in Fig. 3. The upper portion B¹ of the casing is that part or section thereof which incloses the coin-actuated mechanism. The latter may be of any known or suitable type, so far as concerns the present invention. If

of the kind set forth in my aforesaid application, it includes a coin-admission slot K, a rotatable coin barrel I having an operating knob or wheel J, and a coin-driven part or spindle H. The barrel I turns in a cylindrical portion B² of the casing B¹. When a coin of the prescribed size is introduced, it rests in the position shown by the circle x in Fig. 3, and locks together the barrel I and spindle H, so that upon the turning of the former, the latter is turned, and communicates motion to the inclosed coin-actuated mechanism. Upon completing a half turn the coin is brought into coincidence with the delivery conduit L, and is dropped or discharged thereinto, and falls therethrough into a coin box or receptacle M which is fastened by a lock N to the casing B.

The present invention relates chiefly to the coin box M. It is desirable that the coin box be constructed to contain a given number of coins with the most compact arrangement. To this end, I construct the coin box so that the entering coins will arrange themselves in it in upright stacks of superposed coins lying in nearly horizontal planes. To this end the box is formed with one or more upright chambers slightly larger transversely than the outline of the prescribed coin, and directly beneath the conduit, so that the falling coins drop therefrom into the chambers, and then fall flatwise one on another to form a compact pile or stack. By this means I am able to make a box of a given size hold about twelve times as many coins as it would receive if coins were dropped in indiscriminately, as is the usual practice in devices of this character. The arrangement of the coins in two stacks is preferable, and for this reason the box M is divided by a central coin-diverting member or partition a into two vertical chambers or pockets b b each of which is of such size and shape as to be adapted to receive an upright stack of the prescribed coins. The partition a is arranged vertically in the middle of the box, and in line directly beneath the opening in the contracted neck c which receives the lower end of the conduit, so that the coins falling through the conduit strike the narrow upper edge of the partition and fall therefrom to either side into the respective pockets. The pockets b b are preferably circular or substantially so in cross-section, as shown in Fig. 7. If more coins chance to fall to one side than the other, so that one pocket fills before the other, the remaining coins will

afterward perforce fall into the other pocket, so that when coins to the full capacity of the box have been introduced, both pockets will be filled, and no clogging can occur. If any
 5 coin in falling fails to seat itself properly, the next coin falling upon it will knock it down and cause it to drop flatwise against the coins beneath.

In its preferred construction, shown in
 10 Figs. 1 to 7, the coin box M of my present invention is a vertical receptacle occupying a plane substantially coincident with that of the conduit L, as shown in Fig. 2, widened
 15 enough to provide suitable capacity for holding the desired number of coins, receiving at its narrowed upper end or neck the bottom of the conduit, and fitting flat against the front
 20 face of the casing, and securely fastened thereto by a suitable lock. This construction is especially adapted for those meters
 25 which are of considerable height, so that it would be disadvantageous to apply the coin box beneath the casing according to the arrangement shown in my aforesaid applica-
 30 tion. By reason of the coin box occupying the same vertical plane as the conduit, the coins fall directly downward into the box, instead of being directed backwardly so as to
 35 enter it in a substantially horizontal direction. To empty the box, it is unlocked and removed from the casing, and by inverting it to an oblique position with its rear side down-
 40 ward, the coins will fall out through a discharging hole *d* provided in the rear of the box, and preferably above the upper edge of
 45 the partition *a*, this hole being enough larger than the prescribed coins to freely discharge them. When the box is in place, this hole is closed by contact with the front of the casing
 50 (Fig. 3). To form a firm seat for the coin box against the casing, the box has a rearward flange *e*, which extends back to and
 55 seats against the casing, the latter being formed with a rib *e'* (Fig. 3) to embrace this flange and prevent the insertion of any tool
 60 between by which to pry off the coin box.

The lock N is, as in my former construction, a barrel-lock of the pin-tumbler type. Its barrel 30, which is slotted in the usual
 50 manner to receive the key, turns in a socket 29 in the coin box, being arranged horizontally from front to rear, its front being exposed to receive the key, while its rear end
 55 projects beyond the rear face of the coin box and has fastened on it a locking head 42, which engages a socket 45 fastened to the casing B (see Fig. 3). The locking head 42 has
 60 an elliptical projection 43 which enters through an elliptical hole 44 (compare Figs. 9 and 10) in the socket 45, so that by giving the barrel a quarter turn from its unlocked
 65 to its locked position the projection stands across the hole and locks the parts together, as shown in Fig. 3. The head 42 may be fastened on the spindle 30 by driving a pin

transversely through coinciding holes. To compensate for variations in the castings, it is important that the socket 45 be adjustable in the casing B, and to this end it is externally threaded, and screws into a threaded hole
 70 in the casing. To lock it in any position to which it is adjusted, it is engaged by a locking piece 46, Fig. 11, fastened by a screw 47 and having ears 48 turned down from it and
 75 engaging screw-driver notches formed in the socket 45. To limit the turning movements of the barrel 30, the head 42 is partly cut away on one side (Fig. 9) to form shoulders
 80 engaging a stop pin 49 driven into the coin box (Fig. 5). The lock N thus described, or any equivalent locking means, is applied in any convenient location with respect to the coin box. It is preferable, however, to locate it in a widened portion of the partition *a*,
 85 as shown in Figs. 3 and 4. The partition is narrow at its upper edge, and widens gradually downward until it is of sufficient width to provide material for forming the socket
 90 29. This socket is located high enough to afford room beneath it in the partition for drilling vertically the chambers 37 for the pin tumblers 33 with their springs. These
 95 are drilled upwardly from beneath, and are closed by driving a pin 38 through a horizontal hole intersecting them. This arrangement brings the lock into the middle of the
 100 box, and high enough to make it suitably symmetrical.

The holes *ff* are not essential, being formed by the supports for the core used in casting. They are too small to permit a coin to enter
 105 them. The coin box is preferably attached at its neck *c* to the lower end of the tube forming the conduit L, so that, when the box is unlocked and removed, the conduit comes
 110 with it. This, however, is not a necessary feature of construction.

The principal features of my invention are applicable to a coin box which is arranged beneath the casing, and in which the coins
 115 are built up in stacks. Such a construction is shown in Figs. 12 and 13. In these figures the coin box is shown as arranged in the same position as in my aforesaid application, the coin-discharge conduit L, which is arranged
 120 in front of the casing, entering a curved elbow L' formed integrally with the coin box, and which throws the coin rearwardly into the coin box. The latter is divided, as in the construction already described, by a middle
 125 partition *a* into two compartments or pockets *b b* in which the coins are stacked. The partition *a* is arranged in the path of the coin, being in the same plane as the branch or elbow L', so that the coins thrown back by this
 130 elbow roll along the top edge of the partition and fall therefrom into one or another of the pockets. In this construction the lock has its barrel arranged vertically, its socket being formed in the rear wall of the box. The

socket 45 screws into the bottom of the casing B. The only change in the lock is in the arrangement and proportions, its essential construction and its operation being un-
 5 altered. The lock is no longer housed in the partition, but in the rear wall of the box, the key being inserted upwardly from beneath. It is preferable to drill a hole 39 through the lock socket and barrel, through which hole
 10 may be inserted the wire of a seal to prevent tampering with the lock.

It is to be understood that my invention is capable of considerable modification without departing from its essential features. Where
 15 I have referred to the portion of the casing B to which the coin box is applied as the "front", it will be understood that this term does not exclude such rearrangement as would apply the box to any of the vertical
 20 sides of the casing, any such other side being in such case to be understood as the front, within the meaning of my present specification.

I do not herein claim those features of the
 25 coin box, conduit, and lock, which are claimed in my application Serial No. 279,466, filed September 21, 1905 (Patent No. 849,447, dated April 9, 1907) the same being a division of my aforesaid application 235,412.

30 I claim as my invention:—

1. A box for coins, having a vertical coin-chute through which the coins fall, a coin-diverting member located vertically beneath the chute to be struck by the coins falling
 35 therethrough, whereby to arrest their fall and hold them poised until they tip and again fall to either side thereof, and forming pockets in said box, said pockets shaped as upright chambers conforming approximately
 40 to the shape of the coins and adapted to receive the coins diverted from said member and to dispose them compactly in vertical stacks.

2. A coin-box having a vertical coin-chute

and a central coin-diverting member forming 45 upright pockets in said box, said member located vertically beneath said chute to arrest the coins falling therethrough, and hold them poised until they tip and again fall to either side thereof, and having beveled sides 50 adapted to direct the coins into said pockets, and the pockets adapted to receive the coins and to dispose them in compact stacks.

3. A coin-box and a vertical casing, the coin-box having a coin-chute and a coin-di- 55 verting member and located directly beneath said chute, and a lock for fastening the coin-box against the front of said casing, the box having a coin-discharging opening in its back which is normally closed by said casing. 60

4. A coin-box combined with a casing, and a lock for fastening the box against said casing, comprising an oscillatable barrel turning in the coin-box and a socket entered and engaged by said barrel having a screw engage- 65 ment with said casing, whereby it is adjustable relatively to said barrel, and a holding piece for fastening it after adjustment adapted to prevent its turning.

5. A coin-box combined with a casing, and 70 a lock for fastening the box against said casing, comprising an oscillatable barrel turning in the coin-box and a socket entered and engaged by said barrel having a screw engagement with said casing, whereby it is adjust- 75 able relatively to said barrel, and having notches for turning it, and a holding piece having means for fastening it and having projections entering said notches to prevent the turning of said socket. 80

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES J. WOOD.

Witnesses:

EDWARD A. BARNES,
 A. A. SERVA.