

No. 828,407.

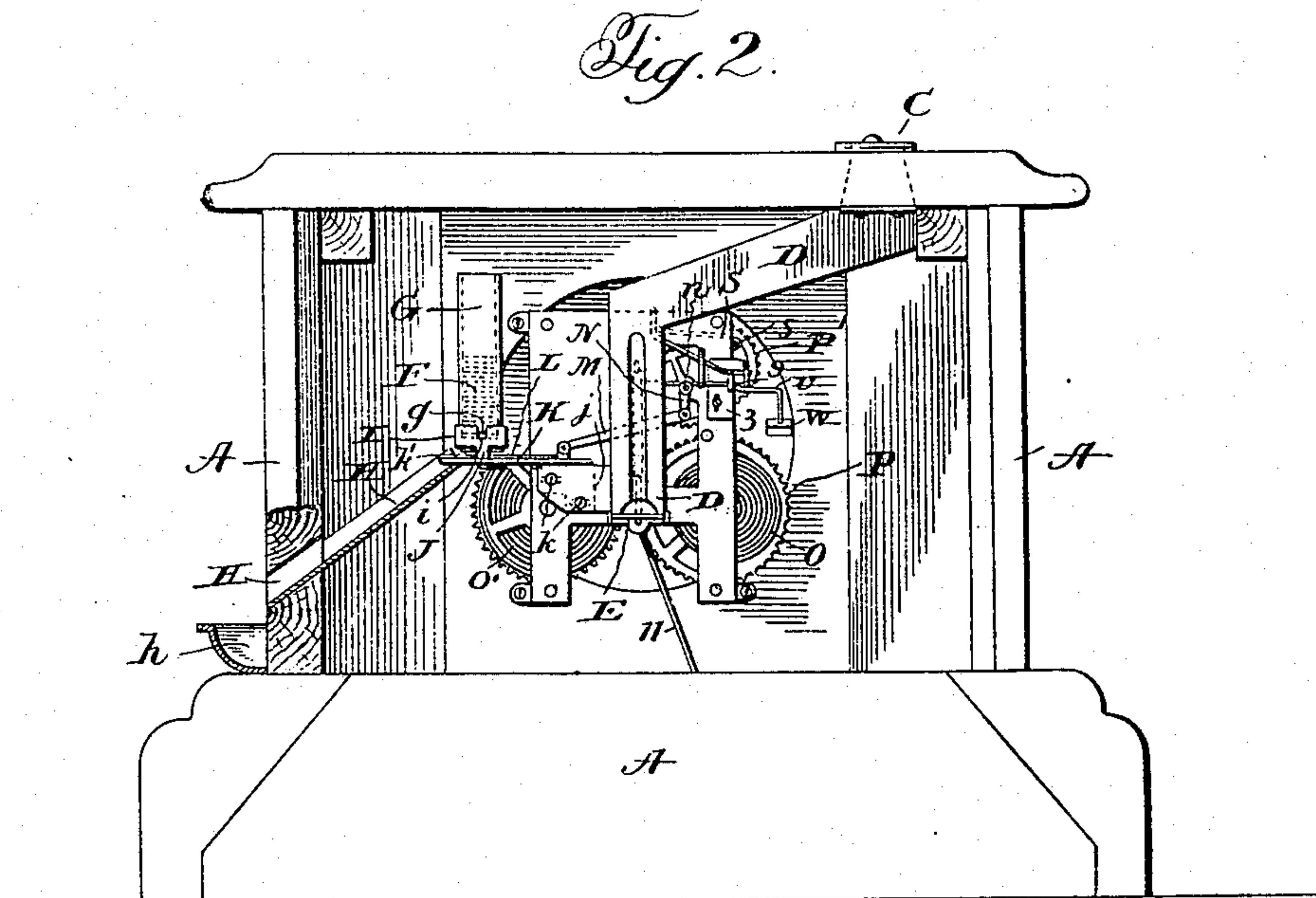
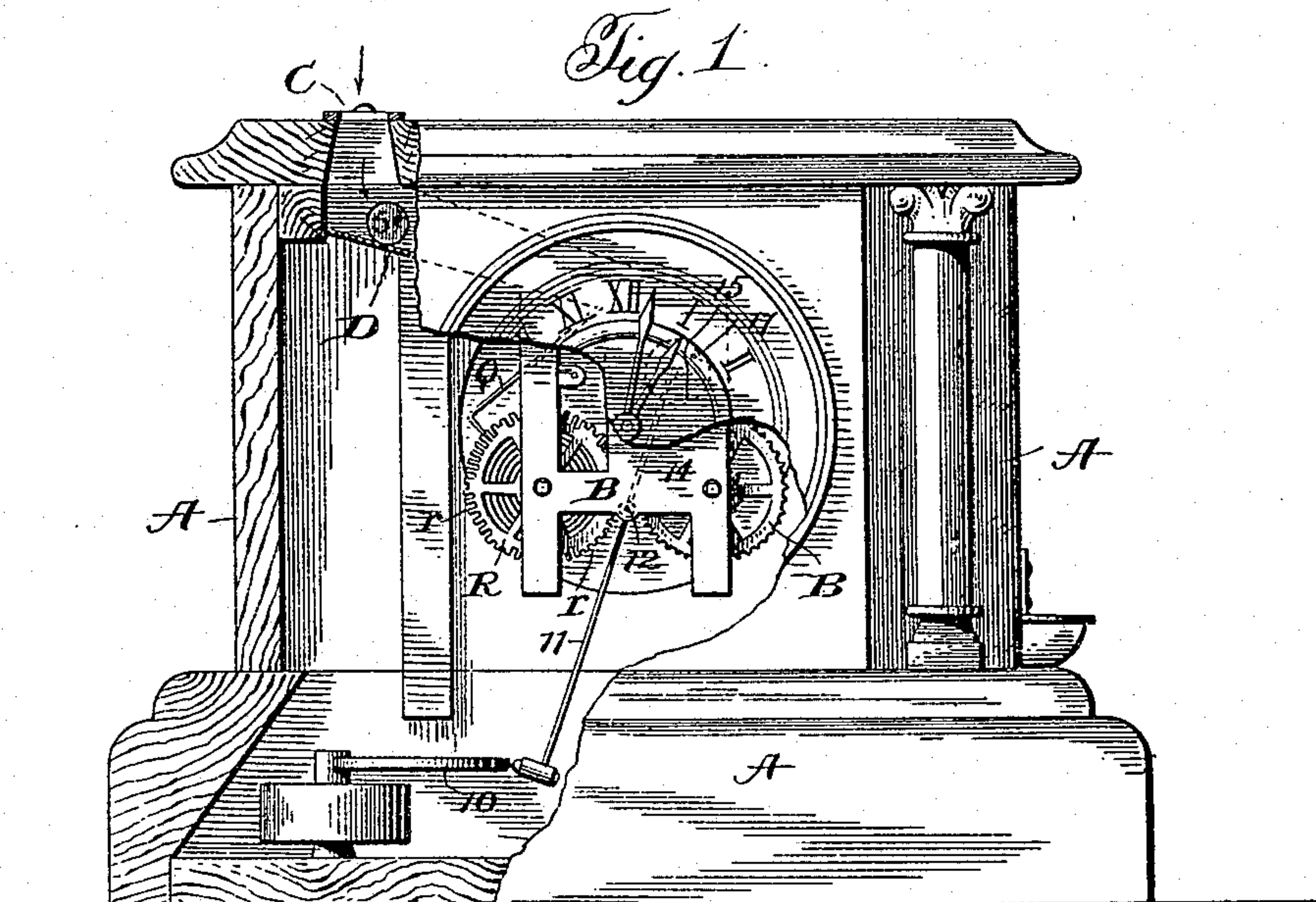
PATENTED AUG. 14, 1906.

W. C. JONES.

DISPENSING DEVICE.

APPLICATION FILED SEPT. 29, 1904.

2 SHEETS—SHEET 1.



Witnesses

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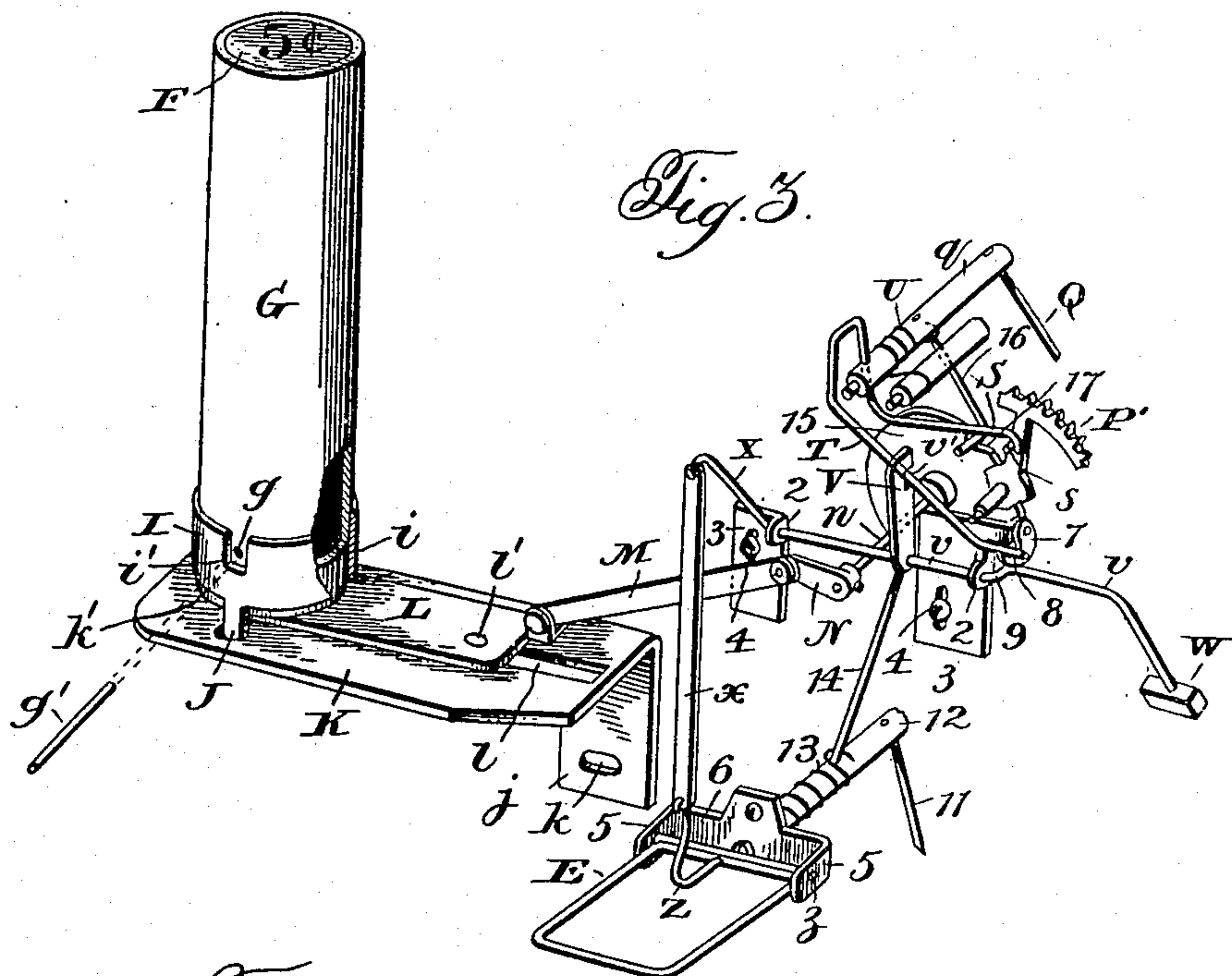
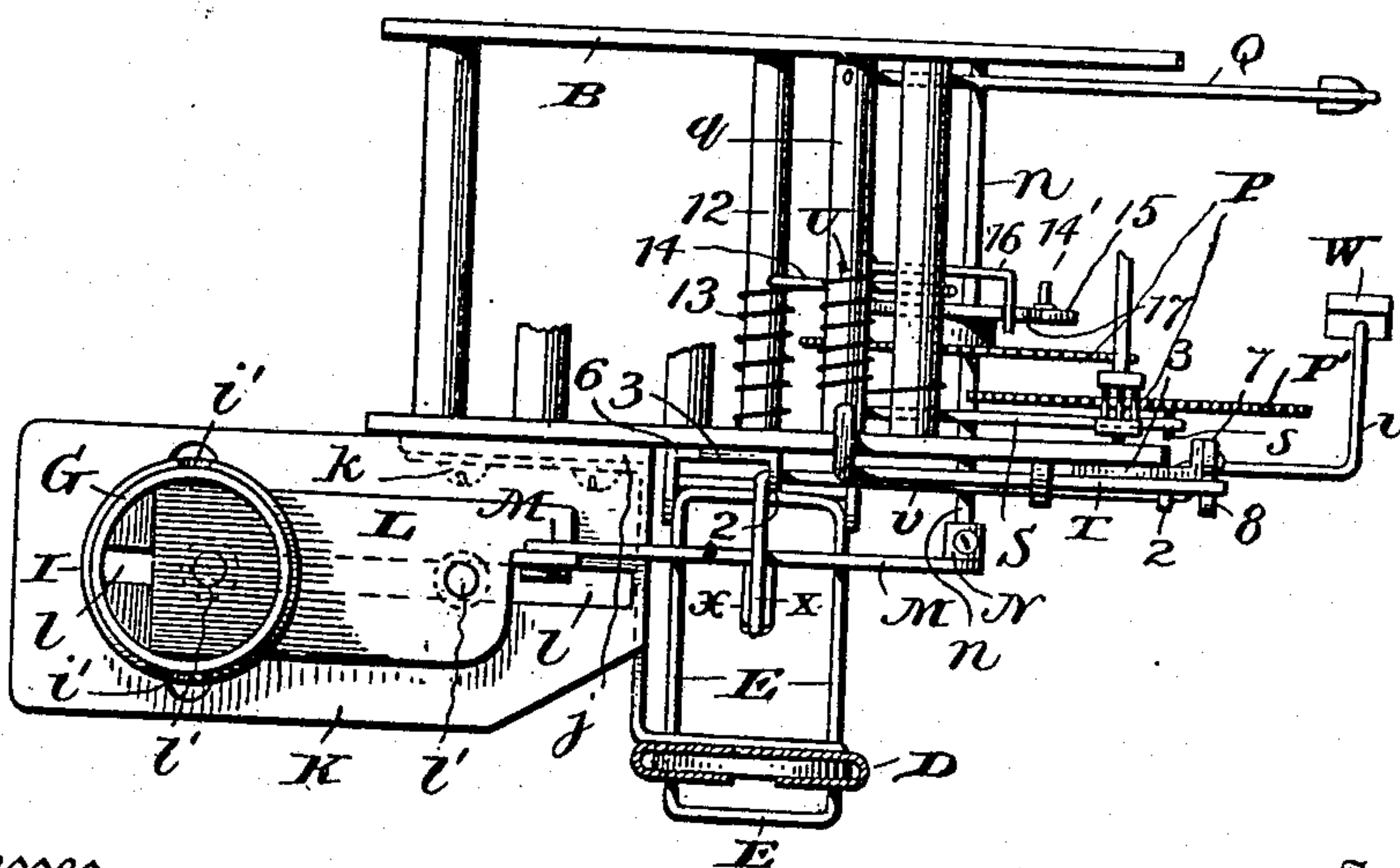


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM C. JONES, OF NIAN TIC, ILLINOIS.

DISPENSING DEVICE.

No. 828,407.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed September 29, 1904. Serial No. 226,586.

To all whom it may concern:

Be it known that I, WILLIAM C. JONES, a citizen of the United States, residing at Niantic, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Dispensing Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in vending-machines, and particularly to that type of machines of this character disclosed in my copending application, Serial No. 141,960, filed February 5, 1903.

An object of the invention is to provide mechanism whereby the machine will be automatic throughout its complete operation, being dependent only upon the deposit of a coin of predetermined denomination rather than upon said coin and the subsequent manipulation of a hand-lever or push-rod, as in my former invention.

A convenient embodiment of the invention is illustrated in the accompanying drawings, forming part hereof, and the novel features thereof will be clearly apparent from the detailed description hereinafter when read in connection with said drawings and the hereto-appended claims.

In the drawings, Figure 1 is a front elevation of the machine, parts being broken away to show the mechanism on the interior of the casing. Fig. 2 is a similar rear elevation. Fig. 3 is a detail perspective view, and Fig. 4 a top plan.

Referring more specifically to the drawings, wherein like reference characters refer to corresponding parts in the several views, A designates the casing of the machine; B, the clockworks mounted therein; C, the slotted mouth of a coin-chute D, extending to the top of the clock-casing and arranged to guide the actuating-coin into a position to operatively engage a trip E, to be hereinafter more fully defined, said trip in turn being designed to release and effect the desired operation of the mechanism to eject an indicator-check or other article F from a tubular holder G, and into the slideway H, opening through the side of the casing and discharging into a tray or receiver h, secured to said side of the casing.

The holder G is conveniently formed of a piece of piping and is open at both ends, whereby the same may be readily filled with the checks to be dispensed, oppositely-dis-

posed apertures g being provided near the lower edge of the holder, whereby a removable pin g' may be inserted to constitute a false bottom during the removal and filling or insertion of the holder into its proper position in the machine. For supporting the holder I provide a cup I, having a ledge i for the bottom edge of the holder and recesses i' through which the false bottom or pin just referred to may be removed. This cup has a pair of supporting-legs J, secured to a base-plate K, projecting forwardly from a flange j, adjustably fastened to the frame of the clock or machine through the medium of screws and slots k. By this arrangement a passage k' is provided longitudinally of the base-plate and between the upper surface thereof and the bottom of the cup for the holder, said space being of sufficient height to permit one of the checks to be ejected therethrough at each actuation of the machine. The base-plate is also slotted longitudinally, as at l, preferably centrally thereof, for the reception of headed guide-pins l', depending from an ejecting slide or plunger L, slidable over the upper face of the base-plate and within the space intermediate the same and the bottom of the holder-supporting cup I.

The operating means for the plunger or slide L may now be described. M is a link, pivoted at one end to the slide or plunger and at its opposite end to a crank N, rigidly secured to the projecting ends of an arbor n, adapted to rotate with the striking-train of the clock mechanism when released and under the influence of the spring O, operatively associated with the striking-train P, as is usual. For the sake of clearness I have omitted from the drawings a number of the gears forming the striking-train, as the particular number of gears and the manner of connecting them form no part of the present invention. The time-train of the clock, which is of the usual construction and which as it forms no part of the present invention I have for the sake of clearness omitted from the drawings, is driven by the spring O', secured to one of the gears thereof. The clockworks are normally held against movement by means of a detent Q, rigid with a rotatable shaft q, and arranged to engage the escapement-wheel R, having the equidistant teeth r, some short and others long, arranged in irregular series, whereby each of the long teeth will stop the mechanism at each cycle of its movement, while the short teeth will

permit successive cycles of movement in response to the deposit of a single coin, effecting the ejecting of a plurality of checks or articles for said coin. Adjacent to the opposite end of the shaft q I provide a hook S , arranged to engage a stop-pin s at the side of one of the gears P' of the striking-train P , and to this shaft is also secured a crank-lever T , projecting downwardly and outwardly to a point beyond the edge of the frame of the machine, as clearly shown in Fig. 2. The lever just referred to is utilized to release the hook S from engagement with the stop-pin s , a spring U normally throwing the said hook into locking engagement.

V is a lock for preventing premature or accidental shifting of the lever T , said lock being in the nature of a finger adapted to swing back and forth with a rock-shaft v and is recessed, as at v' , to embrace the opposite side of the lever T . The rock-shaft just referred to is pivoted in ears 2, projecting from brackets 3, adjustably secured to the framework through the medium of slots and screws 4. The outer end of the rock-shaft is bent rearwardly and weighted, as at W , whereby the lock V engages the lever T , save when the weighted end of the rock-shaft is overcome and said rock-shaft shifted to release the lock V , as hereinafter specified. The opposite or inner end X of the rock-shaft is bent forwardly and is loosely connected with the upper end of a link x , said link being also loosely connected at its lower end with a forwardly-extended arm Z of the trip E , heretofore mentioned. This trip is substantially rectangular in shape and comprises an open frame having stub-pintles 2 at its inner corners, pivotally engaging ears 5 of a bracket 6.

7 is a rocker pivoted to the outermost bracket 3 and arranged transversely of the rock-shaft and the protruding end of the lever T and between the same, so that said end of the lever may rest at all times upon the rounded upper surface 8 of said rocker. The rock-shaft v has an offset portion 9 intermediate its rearwardly-extended end and the nearest pivot-ear of the shaft, whereby said offset portion when the weighted end of the rock-shaft is overcome and the same turned in the proper direction will engage the rocker and elevate the same to raise the free end of the lever.

The operation of the machine as thus far described is as follows: The deposit of a coin of proper denomination into the machine and its discharge from the inner end of the coin-chute upon the free end of the trip E will overcome the resistance offered to the release of the working parts by the weighted end of the rock-shaft v , whereby said end is elevated through the medium of the forwardly-extended portion of said rock-shaft X , the arm Z of the trip and the intermediate

connection-link x . This shifting of the parts insures the forward movement or unlocking of the lock V and the simultaneous elevation of the protruding end of the lever T under the raising action of the rocker 7, which carries the same, the rocker being shifted by the offset portion 9 of the rock-shaft operating therebeneath. The effect of this raising of the free end of the lever or crank T is to thereby rock the rotatable shaft q against the tension of its spring U , thereby elevating the detent Q from engagement with the teeth of the escapement-wheel R and also raising the hook S out of engagement with the stop-pin s . This will permit the parts to operate freely under the influence of the spring O . As soon as the parts are shifted as above pointed out, and the actuating-coin having in the meantime fallen from the trip E , said parts will be restored to their initial or normal position by the weighted end of the rock-shaft and the spring U when the parts arrive at the proper position for stoppage. This stoppage, however, is dependent upon the teeth of the escapement-wheel R , because the spaces between the longer teeth only thereof will permit the rotatable shaft q to move sufficiently to throw the hook S into the path of movement of the stop-pin s . Consequently when the detent Q engages between the shorter teeth the resultant lowering of the hook will be insufficient to prevent rotation of the pin s therebeneath, and a second, third, or even more cycles of movement will result without the deposit of an additional coin.

To indicate to the purchaser the number of actuations of the ejector that matters may be rectified should the supply of checks or articles in the holder G become exhausted, a gong mechanism is provided, the same comprising a spiral wire 10, preferably mounted within the casing A in operative relation to a striker or hammer 11, pivoted upon a shaft 12 and normally held in engagement with the wire by a spring 13. A stem 14, rigid with the shaft and projecting upwardly therefrom into the path of rotary movement of a pin 14', carried by a disk 15, constitutes a medium by which the gong is actuated during each cycle of movement of the machine, it being obvious that the pin on the disk rides upon the end of the stem to rock the shaft and retract the hammer or striker until the pin escapes from the end of said stem, when the spring will throw the striker into engagement with the sounding device, the same being in the present instance a spiral or coiled wire, as stated.

As an additional safeguard to insure perfect working of the machine, I provide instrumentalities for preventing improper engagement of the hook S with the stop-pin s , the same comprising the disk 15, above referred to, the periphery of which engages an

arm 16 on the rotatable shaft *q*, said disk holding said arm elevated, as also the hook on said shaft, until a predetermined point is reached, when said arm is permitted to drop
5 into a notch 17 in said disk. The arm is of course disengaged from the notch by the crank-lever, rocker, rock-shaft, &c., as before defined in the paragraph reciting the operation of the machine.

10 It is to be understood that changes and alterations may be made in the embodiment of the invention disclosed hereby without departing from the spirit of the invention. For instance, while I have herein referred to the means for pivotally supporting the hook or
15 catch *S* as a shaft *q* it is obvious that there are many equivalents for said shaft—as, for instance, a sleeve rotatable upon a fixed shaft, &c.

20 Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a machine of the character described, controlling mechanism including a rotatable
25 member having a stop, a catch cooperating with said stop, and means operable upon the deposit of a coin whereby the catch is thrown into and withdrawn from the path of movement of the stop comprising a rotatable
30 shaft, a crank-lever connected thereto, and means for shifting said lever, shaft and catch.

2. In a machine of the character described, controlling mechanism including a rotatable
35 member having a stop, a catch cooperating with said stop, and means operable upon the deposit of a coin whereby the catch is thrown into and withdrawn from the path of movement of the stop comprising a rotatable
40 shaft therefor, means for rotating the shaft and catch, and means for regulating the extent of movement of the shaft and catch according to the relative positions of the parts whereby the cooperation of the stop and
45 catch is at irregular intervals.

3. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch
50 is thrown into and withdrawn from the path of movement of the stop comprising a rotatable shaft for the catch, means for operating said shaft, and means for preventing cooperation of the catch and stop comprising a
55 rotatable disk notched in its periphery and an arm on the rotatable shaft arranged to ride around the periphery of the disk and drop into the notch to permit the catch to engage the stop.

60 4. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch is thrown into and withdrawn from the path
65 of movement of the stop comprising a rotatable

shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed member at the free end of the lever.

5. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch
70 is thrown into and withdrawn from the path of movement of the stop comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting said lever, shaft and catch in combination with a lock for preventing premature movement of
75 the lever.

6. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch
80 is thrown into and withdrawn from the path of movement of the stop, comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed rocker cooperating with the
85 free end of the lever.

7. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch
90 is thrown into and withdrawn from the path of movement of the stop, comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed member at the free end of the lever, and a rock-shaft having an offset portion cooperating with said member to raise and lower the same.
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8. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch
100 is thrown into and withdrawn from the path of movement of the stop, comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed member at the free end of the lever, and a rock-shaft having an offset portion cooperating with said member to raise and lower the same, in combination with a lock for the crank-lever carried by said rock-shaft and operable thereby.
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9. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch cooperating with said stop, and means whereby the catch
110 is thrown into and withdrawn from the path of movement of the stop comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed member at the free end of the lever,
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120
125
130

and a rock-shaft having an offset portion co-operating with said member to raise and lower the same, in combination with a weighted extension on the rock-shaft.

5 10. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch coöperating with said stop, and means whereby the catch is thrown into and withdrawn from the path
10 of movement of the stop comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed member at the free end of the lever,
15 and a rock-shaft having an offset portion coöperating with said member to raise and lower the same, in combination with a weighted extension thereon, and a trip operatively con-
20 nected with said second extension.

11. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch coöperating with said stop, and means whereby the catch
25 is thrown into and withdrawn from the path of movement of the stop, comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a trans-
30 versely-disposed member at the free end of the lever, and an adjustable rock-shaft having an offset portion coöperating with said member to raise and lower the same.

12. In a machine of the character described,
35 controlling mechanism including a rotatable member having a stop, a catch coöperating with said stop, and means whereby the catch is thrown into and withdrawn from the path of movement of the stop comprising a rotatable
40 shaft for the catch, a crank-lever connected thereto, and means for shifting the lever, shaft and catch including a transversely-disposed member at the free end of the lever, and an adjustable rock-shaft having an offset
45 portion coöperating with said member to raise and lower the same, in combination with a weighted extension on the rock-shaft.

13. In a machine of the character described, controlling mechanism including a rotatable
50 member having a stop, a catch coöperating with said stop, and means whereby the catch is thrown into and withdrawn from the path of movement of the stop, comprising a rotatable shaft for the catch, a crank-lever con-
55 nected thereto, and means for shifting the lever-shaft and catch including a transversely-

disposed member at the free end of the lever, and a rock-shaft having an offset portion co-operating with said member to raise and lower the same, in combination with an extension
60 on said rock-shaft, a trip, and an operative connection between said extension and trip.

14. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch coöperating
65 with said stop, and means whereby the catch is thrown into and withdrawn from the path of movement of the stop, comprising a rotatable shaft for the catch, a crank-lever connected thereto, and means for shifting the le-
70 ver, shaft and catch including a transversely-disposed member at the free end of the lever, and an adjustable rock-shaft having an offset portion coöperating with said member to raise and lower the same, in combination
75 with an extension on said rock-shaft, a trip, and an operative connection between said extension and the trip.

15. In a machine of the character described, controlling mechanism including a rotatable
80 member having a stop, a catch coöperating with said stop, and means whereby the catch is thrown into and withdrawn from the path of movement of the stop comprising a rotatable shaft therefor, means for rotating the
85 shaft and catch, and means for regulating the extent of movement of the shaft and catch according to the relative positions of the parts whereby the coöperation of the stop and catch is at irregular intervals, in combi-
90 nation with instrumentalities operable independently of said last-mentioned regulating means whereby to indicate every cycle of movement of the machine notwithstanding the engagement or disengagement of the
95 catch and stop.

16. In a machine of the character described, controlling mechanism including a rotatable member having a stop, a catch coöperating with said stop, and means for effecting the co-
100 operation of the catch and stop at irregular intervals, in combination with instrumentalities for indicating every cycle of movement of the machine notwithstanding the engagement and disengagement of the catch and
105 stop.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. JONES.

Witnesses:

JOHN H. MCCOY,

GEORGE B. MARSHALL.