

No. 775,671.

PATENTED NOV. 22, 1904.

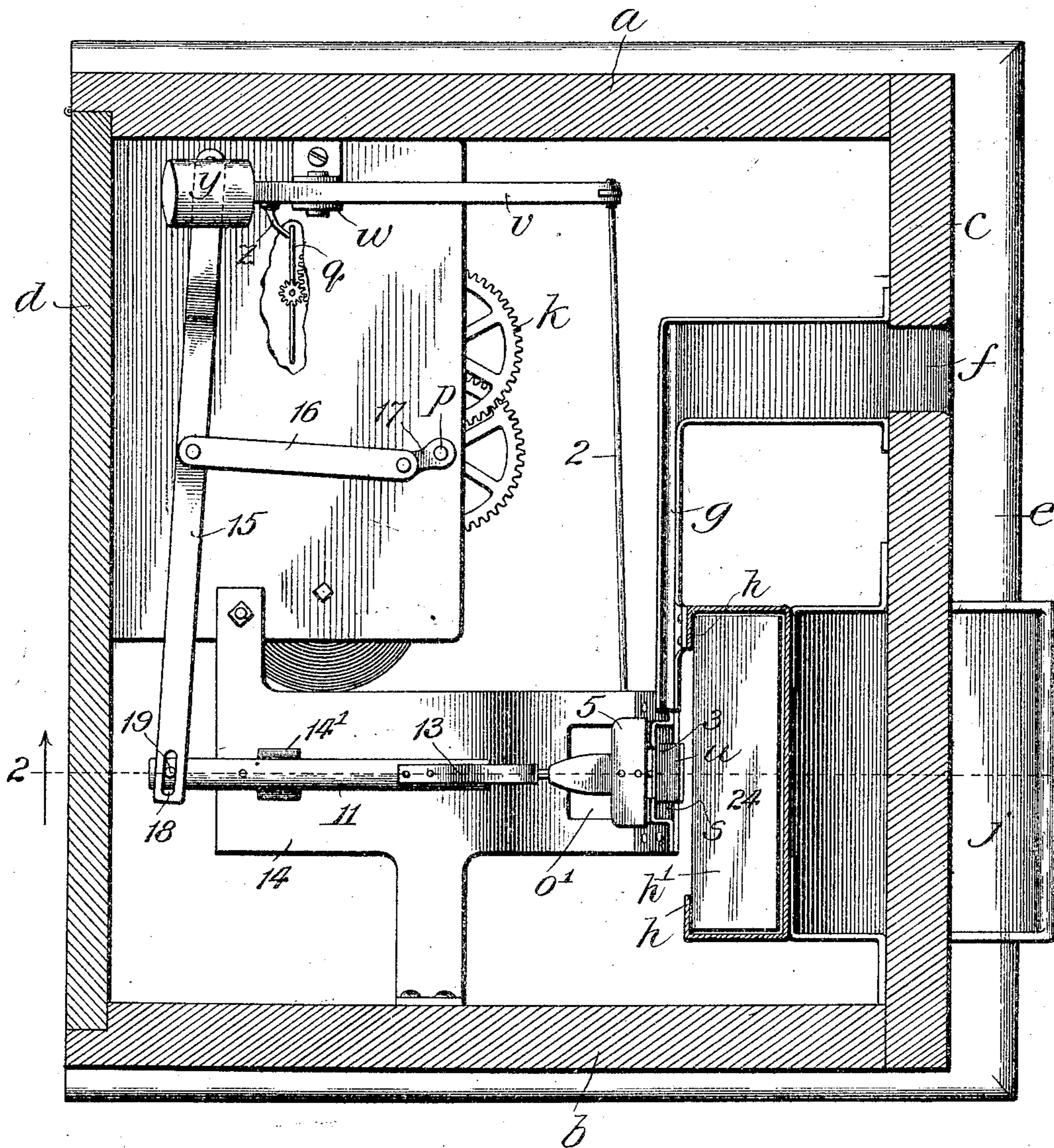
L. J. DISSER.
COIN CONTROLLED SLOT OR VENDING MACHINE AND COIN TESTING
MECHANISM THEREFOR.

APPLICATION FILED MAY 2, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
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John Enders.

Inventor:
Louis J. Dissar,
By Thomas F. Sheridan,
Att'y.

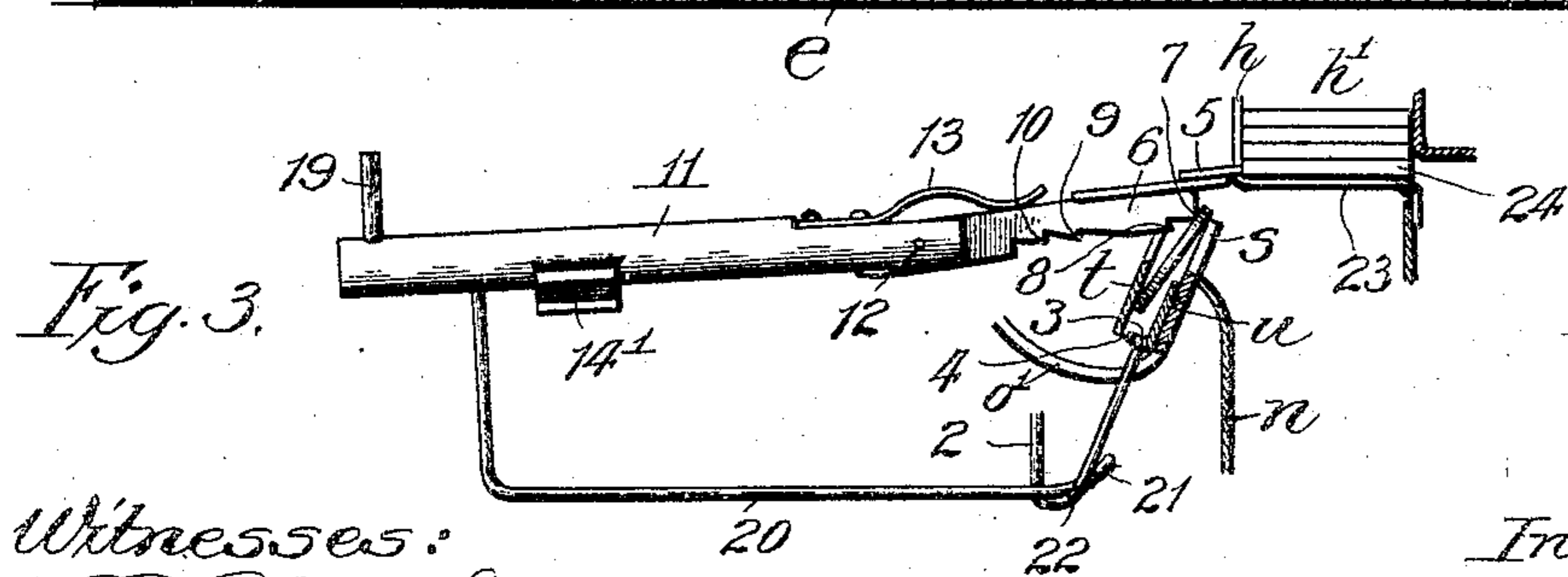
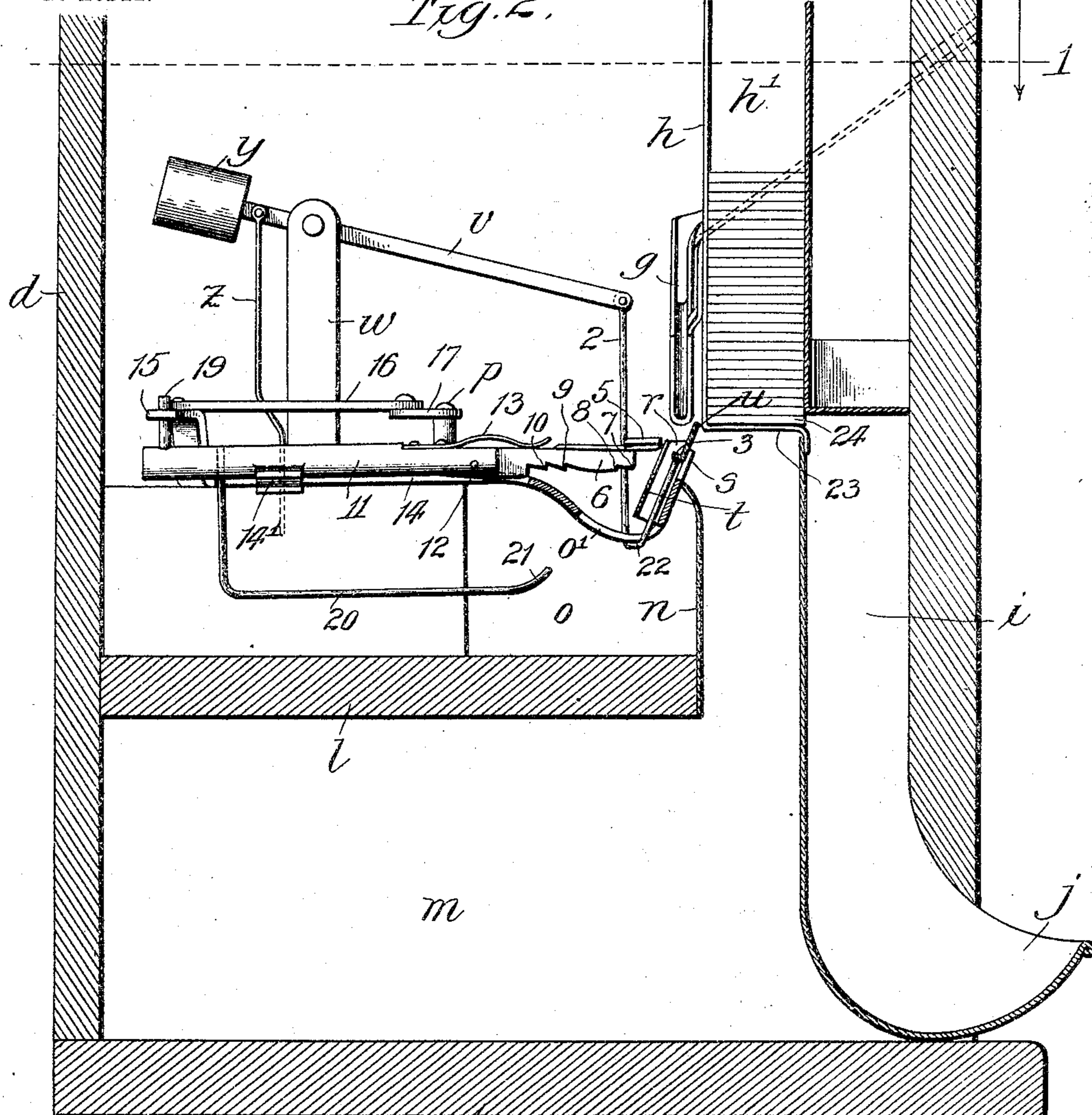
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 MECHANISM THEREFOR.

APPLICATION FILED MAY 2, 1904.

NO MODEL.

Fig. 2.

2 SHEETS-SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

LOUIS J. DISSER, OF CHICAGO, ILLINOIS.

COIN-CONTROLLED SLOT OR VENDING MACHINE AND COIN-TESTING MECHANISM THEREFOR.

SPECIFICATION forming part of Letters Patent No. 775,671, dated November 22, 1904.

Application filed May 2, 1904. Serial No. 205,944. (No model.)

To all whom it may concern:

Be it known that I, LOUIS J. DISSER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, am the inventor of certain new and useful Improvements in Coin-Controlled Slot or Vending Machines and Coin-Testing Mechanisms Therefor, of which the following is a specification.

My invention relates to that class of vending or slot machines for dispensing confections, gum, candy, or other material having discharging mechanism adapted to be set in operation by means of a coin and provided with means for testing the genuineness of the coin.

It relates particularly to the means for detecting the genuineness of the coin and for causing the mechanism to discharge the material vended when the coin is genuine and fail to discharge it when the coin is spurious or damaged.

In the art to which this invention relates it is well known that testing devices have been in use which distinguish genuine and spurious coins by the difference, if any, in their size or weight; but it is very desirable that means be provided whereby spurious coins equal to genuine coins in weight or size or equal thereto in both weight and size can be distinguished from the genuine coins and the discharging mechanism caused to discharge the article vended only in case genuine coins are used. It is also desirable, however, that means be provided whereby genuine coins which have been worn until their value is diminished or destroyed can be detected and distinguished from coins of full value and whereby the machine will be caused to operate and dispense the materials to be vended when a genuine coin of value is used and fail to discharge materials when a coin so worn as to destroy its value is used.

The principal object of the invention is to provide a simple, economical, and efficient coin-controlled vending-machine and coin-testing mechanism.

A further object of the invention is to provide means for detecting the genuineness of the coins placed therein and for discharging

the materials vended when the coins received by the machines are genuine and retaining such materials when the coin is spurious.

Other and further objects of the invention will appear from an examination of the drawings and the following description and claims.

In illustrating and describing my invention I have only shown and described that which is new, taken with only so much that is old as is necessary to enable those skilled in the art to understand and practice the invention.

The invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a sectional plan view of a coin-controlled vending-machine provided with my improvements; Fig. 2, a sectional elevation taken on line 2 of Fig. 1, and Fig. 3 a sectional elevation showing a portion of the coin-detecting and gum-discharging mechanism after the coin has been dropped into the testing device.

In constructing a device in accordance with my improvements and in order to accomplish the foregoing objects I provide a cabinet or casing formed of inclosing side walls *a* and *b*, front wall *c*, and a rear wall *d*, the latter being in the form of or provided with a door, a bottom *e*, and a top. (Not shown.) The front wall preferably is provided with a coin-receiving slot *f*, which communicates with an inside inclined slot portion *g*, which forms a continuation thereof and conducts the coin to the testing mechanism hereinafter described. An inner wall *h*, preferably inside the front wall, forms a chamber *h'* for containing the gum or similar material to be vended, and a discharge-slot *i* communicates with the gum-containing compartment and extends through the front wall, so as to deliver the discharged gum at the opening *j*, where it is accessible to the purchaser.

Clock mechanism *k* is mounted inside the casing or cabinet, preferably upon a subbottom *l*, which forms between the subbottom and main bottom a compartment *m* for receiving the genuine coins and in connection with the inner wall *n* forms above such subbottom a compart-

ment *o* for receiving the spurious, damaged, or valueless coins. A discharge-slot may be provided extending from the spurious-coin chamber or compartment to the outside of the casing, so as to discharge such spurious coins, if desired. The actuating mechanism *k*, commonly designated as "clock" mechanism, comprises a driven shaft *p*, to which the mechanisms for discharging the vended materials and also the coin-testing and coin-controlled mechanism are connected. This actuating mechanism is also provided with an escapement or governor *q*, by means of which it may be stopped or released and permitted to operate, when desired, all of which is old and well known in the art.

In order to provide simple, economical, and efficient mechanism for discharging the materials to be vended when a valid coin is used and for retaining such materials when a spurious or damaged coin is used, I provide a coin-testing pocket *r*, open at top and bottom and formed of an outer ledge or side wall *s* and an inner side wall *t* and having suitable wall portions or guards inclosing the edges of the slot-like space formed between such side walls. This pocket may be termed the "coin-testing" pocket. It is mounted at the inner discharge end of the inclined receiving slot portion *g*, already described. A coin-receiving finger *u* is movably mounted in such testing-pocket and connected to a weighted lever *v*, which is pivotally mounted in a standard *w* and provided at one end with a weight *y*, the weighted end being provided with a tripping-finger *z*, which engages the escapement of the driving mechanism already described. This tripping-finger is movable into engagement with such escapement by means of the weight *y* and out of engagement by means of the weight of the coin. The coin-receiving finger is connected with the light end of the lever *v* by means of a rod 2, so as to permit the coin-receiving finger to move readily in the testing-pocket, and a projecting shoulder 3 upon the coin-receiving finger is provided for holding the coin in place upon the finger in case the coin is genuine until such coin is removed and discharged into the genuine-coin compartment. This shoulder forms a movable bottom for the testing-pocket and is so proportioned with relation to the size of the testing slot or pocket that it leaves an opening 4 between it and the inner wall of the pocket of sufficient dimensions to permit a spurious coin to pass between such shoulder and such inner wall when the finger is lowered, so that the shoulder is at the bottom or outside of the stationary portions or walls of the testing-pocket. It will allow this whether the spurious coin be of excessive thickness or not and will allow an excessively thin coin to pass through the testing slot or pocket into the spurious-coin compartment whether the testing-finger be lowered or not by the weight of such coin.

By this arrangement it will be seen that a coin placed upon the coin-receiving finger, which forms the movable bottom of the testing-pocket, will overcome the weight *y* and raise the escapement-controlling finger *z* out of engagement with the escapement, so that the actuating or clock mechanism will be set in motion, and also that when the coin has been removed from the receiving-finger the weight *y* will return the escapement-controlling finger *z* into the path of the escapement, and thus stop and prevent the operation of the actuating mechanism.

A gum-discharging finger 5 and a coin testing and lifting finger 6, having shoulders 7, 8, 9, and 10 upon its under side, are integral or connected together and flexibly mounted upon a main discharging-rod 11, to the end of which such preferably integral gum and coin discharging fingers are pivotally connected by means of a pivot 12, and a spring 13 is connected to such rod, so as to press the gum-discharging finger and the coin testing and lifting or discharging finger portion yieldingly against the coin when moved forward to the position shown in Fig. 3. This discharging-rod is slidably mounted upon a base 14, which I have here shown in the form of a bracket, having an opening *o'* for permitting spurious and damaged coins to drop from the testing-slot into the spurious-coin compartment. A guide 14' holds the shaft slidably upon the base, and the shaft is operatively connected with the driving-shaft of the actuating clock mechanism by means of levers 15 and 16 and a crank 17, the lever 15 being pivotally mounted at one end and provided at its outer swinging end with an elongated slot 18, in which the pin 19 upon the sliding discharge-rod already described is inserted. A forwardly-projecting guide-rod 20 is mounted upon the sliding discharge-rod 11 and movable therewith, so that its forward upwardly-bent end 21 is free from the curved portion of the coin-receiving finger when the weighted end of the lever *v* is down and the escapement-controlling finger *z* in position to prevent the operation of the clock mechanism. When the coin is dropped upon the coin-receiving finger, however, its weight overcomes the weight *y* and raises the escapement-tripping finger out of engagement with the escapement, so as to permit the operation of the clock mechanism. This moves the sliding discharge-rod 11 and the guard 20 forward, so that the latter extends into the curved portion 22 of the coin-receiving finger, so as to hold it in its lower position, and thereby hold the escapement-controlling finger *z* out of the path of the escapement until the gum-discharging finger and sliding discharge-rod are returned back to initial position by the complete rotation of the crank 16 and consequent movement of the connecting lever-arms.

It is well known that coins such as pen-

nies, nickels, and dimes have a raised or projecting annular flange or rim on each side at their outer periphery which projects above the side surface of the coin and that when this rim has been destroyed by wear or otherwise the coin is either injured or its value entirely destroyed. In operating my improved device, therefore, I take advantage of the roughness and flanges of a valid coin and of the comparative smoothness of the sides of a spurious or damaged coin, so that only the former will permit the discharge of the gum or similar material to be vended. The gum-containing compartment is provided with a bottom portion 23, which has an open slot of sufficient dimensions to receive and permit the free movement of the gum-discharging finger 5. When a coin having a rough edge, or, in other words, a valid coin, is placed on the testing-finger and inside the testing-slot, the shoulder 7 of the testing lug or finger engages the projecting rim of the coin and lifts it slightly, pressing it against the upper edge *s* of such ledge or wall, and the shoulder 7 thus causes the gum-discharging finger 5 to be raised a sufficient distance so that it engages the lowermost package 24 of gum or similar material and when moved forward by the clock mechanism discharges such package of gum into the discharge-chute *z*. During this movement the valid coin is between the ledge or upper edge of the wall *s* and the lower edge of the testing-finger and is being lifted over the wall of the testing-pocket, so as to drop into the valid-coin compartment. The coin thus serves during its passage over the ledge or upper edge of the testing-pocket to hold the gum-discharging finger up until the discharge of such package is complete.

In case the coin is so worn as to not have a sufficiently-projecting rim or rough side to enable the testing-finger to lift or push it over the wall of the testing-pocket the pressure of the spring upon the shouldered finger will fail to raise it into position between the ledge and such finger and, on the contrary, will press it downward, so that it will fall through the testing-slot into the spurious-coin compartment. There being no coin between the ledge or upper edge of the outer wall of the testing-slot and the shoulder portion of the coin-discharging finger, there is nothing to hold the gum-discharging finger up sufficiently to engage the gum, and it therefore passes beneath the gum and fails to discharge the same.

Additional shoulders 8, 9, and 10 are provided on the lower side of the coin testing and discharging lug or finger, so that in case one slips over the edge of a spurious or damaged coin the other will be in position to engage the coin and press it down through the testing-slot into the spurious-coin compartment. By this arrangement it will be readily seen that placing either a spurious or genuine coin upon the coin-receiving finger will cause

the actuating clock mechanism to operate and move the gum-discharging finger forward and backward, but that gum will only be discharged when the coin is genuine or sufficiently rough or flanged so that the coin will be held or passed between the ledge of the testing-pocket and the coin lifting and testing finger or lug. It will also be noted that the same movement passes the valid coin into its proper compartment and applies a test to determine its validity.

I prefer to make the testing-pocket inclosed on all sides, so that side guards movable with the coin-receiving finger may be dispensed with, the walls of the pocket in my device serving to prevent the coin from escaping from the finger except as intended.

I claim—

1. In a machine of the class described, the combination of a pocket for receiving a coin, and a coin-discharging member movable into engagement with the flanged portion of such coin for lifting it out of such pocket, substantially as described.

2. In a machine of the class described, the combination of a pocket for receiving a coin, a coin-discharging member movable into engagement with the flanged portion of such coin for lifting it out of such pocket, and means for operating such coin-discharging member, substantially as described.

3. In a machine of the class described, the combination of inclosing walls provided with a compartment for containing material to be vended, a coin-receiving pocket provided with side walls, mechanism for discharging the material to be vended from the compartment in which it is contained, and a coin-discharging finger connected with such material-discharging mechanism and movable into engagement with the surface of the coin for discharging such coin, substantially as described.

4. In a machine of the class described, the combination of inclosing walls provided with a compartment for containing material to be vended, a coin-receiving pocket provided with side walls, mechanism for discharging the material to be vended from the compartment in which it is contained, and a coin-discharging finger connected with such material-discharging mechanism movable into engagement with the coin and adapted to be raised thereby to guide the material-discharging member into engagement with the material to be vended, substantially as described.

5. In a machine of the class described, the combination of inclosing walls provided with a compartment for containing material to be vended, a coin-receiving pocket having side walls, mechanism comprising a discharging member movable into engagement with the material to be vended for discharging it from the compartment in which it is contained, and a coin-discharging member movable into engagement with the coin for moving such coin

over the side wall of the pocket between such member and side wall and thereby guiding the material-discharging member into engagement with the material to be discharged, substantially as described.

6. In a machine of the class described, the combination of inclosing walls provided with a compartment for containing material to be vended, a coin-receiving pocket, a main discharge-rod, actuating mechanism connected with such main discharge-rod, means for releasing and stopping such actuating mechanism, a material-discharging member flexibly connected with such main discharge-rod movable thereby, and a coin-engaging member movable into engagement with the coin for discharging such coin from the pocket and guiding the material-discharging member into engagement with the material to be discharged, substantially as described.

7. In a machine of the class described, the combination of a pocket having receiving and outlet openings for receiving the coin, a finger mounted adjacent to such pocket movable into engagement with the flanged portion of a coin for lifting it out of such pocket in one direction and adapted to move a relatively smooth coin or piece of metal in a different direction, substantially as described.

8. In a machine of the class described, the combination of a pocket for receiving coin provided with a ledge on one side thereof, a finger mounted adjacent to such pocket and movable transversely thereof over such ledge for engaging the flanged portion of the coin contained in such pocket to raise it over the ledge and adapted to press a relatively smooth coin or piece of metal out of the pocket in a different direction, substantially as described.

9. In a machine of the class described, the combination of a pocket having side walls and receiving and discharge openings, a coin-receiving finger movably mounted in such pocket and forming a movable bottom therefor, and mechanism movable into engagement with the flanged portion of a flanged coin to move it over the edge of one of such side walls, substantially as described.

10. In a machine of the class described, the combination of a pocket provided with a ledge at one side thereof and having receiving and discharge openings, a coin-discharging finger mounted adjacent to such pocket and movable into engagement with the flanged portion of a coin for passing such coin over the ledge between such ledge and coin-discharging finger, and a gum-discharging finger connected with such coin-discharging finger, substantially as described.

11. In a machine of the class described, the combination of a pocket provided with a ledge at one side thereof and having receiving and discharge openings, a coin-discharging finger mounted adjacent to such pocket and movable into engagement with the flanged portion of a

coin for passing such coin over the ledge between such ledge and coin-discharging finger, a gum-discharging finger connected with such coin-discharging finger, and means for operating such coin and gum discharging fingers, substantially as described.

12. In a machine of the class described, the combination of a pocket having inclosing walls and a receiving and discharge opening, a coin-receiving finger movably mounted in such pocket, a coin-discharging finger movably mounted adjacent to such pocket and provided with a shoulder portion for engaging the flanged portion of a coin for moving such coin by means of its flange portion into position between one of the side walls and such coin-discharging finger to raise the finger and discharge the coin, and a gum-discharging finger connected to such coin-discharging finger and movable therewith into engagement with the gum to be discharged, substantially as described.

13. In a machine of the class described, the combination of a pocket having inclosing walls and a receiving and discharge opening, a coin-receiving finger movably mounted in such pocket, a coin-discharging finger movably mounted adjacent to such pocket and provided with a shoulder portion for engaging the flanged portion of a coin and moving such coin into position between one of the side walls of the pocket and such testing-finger to raise the finger and discharge the coin, a gum-discharging finger connected to such coin-testing finger and movable therewith, actuating mechanism connected with such coin-testing and gum-discharging fingers and provided with an escapement, and escapement-controlling mechanism connected with such coin-receiving finger and movable thereby to release such actuating mechanism, substantially as described.

14. In a machine of the class described, the combination of a pocket for receiving the coin, a ledge forming one of the side walls of such pocket, a main discharge-rod, a coin-discharging finger flexibly connected with such main discharge-rod and movable into engagement with the flanged portion of a coin for moving such coin into position between the ledge and coin-discharging finger, and a gum-discharging finger portion connected with such testing-finger and movable therewith into engagement with the material to be discharged, substantially as described.

15. In a machine of the class described, the combination of a pocket for receiving coin, a ledge forming one of the side walls of such pocket, a main discharge-rod, a coin-discharging finger flexibly connected with such main discharge-rod and movable into engagement with the flanged portion of a coin for moving such coin into position between the ledge and testing-finger, a gum-discharging finger portion connected with such coin-discharging fin-

ger and movable therewith into engagement with the material to be discharged, actuating mechanism for moving such main discharge-rod and thereby the gum and coin discharging fingers, and means for releasing and stopping such actuating mechanism, substantially as described.

16. In a machine of the class described, the combination of a pocket for receiving the coin, a ledge forming one of the side walls of such pocket, a main discharge-rod, a coin-discharging finger flexibly connected with such main discharge-rod and movable into engagement with the flanged portion of a coin for moving such coin into position between the ledge and coin-discharging finger, a gum-discharging finger portion connected with such coin-discharging finger and movable therewith into engagement with the material to be discharged, actuating mechanism for moving such main discharge-rod and thereby the gum and coin discharging fingers, and means for automatically releasing such actuating mechanism, substantially as described.

17. In a machine of the class described, the combination of a pocket for receiving the coin, a ledge forming one of the side walls of such pocket, a main discharge-rod, a coin-discharging finger flexibly connected with such main discharge-rod and movable into engagement with the flanged portion of a coin for moving such coin into position between the ledge and coin-discharging finger, a gum-discharging finger portion connected with such coin-discharging finger and movable therewith into engagement with the material to be discharged, actuating mechanism for moving such main discharge-rod and thereby the gum and coin discharging fingers, a coin-receiving finger movably mounted in such pocket, and mechanism connected with such coin-receiving finger and operated thereby for releasing and stopping the actuating mechanism, substantially as described.

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