No. 778,480. PATENTED DEC. 27, 1904.

G. C. ELLIOTT.

VENDING APPARATUS.

APPLICATION FILED JULY 23, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

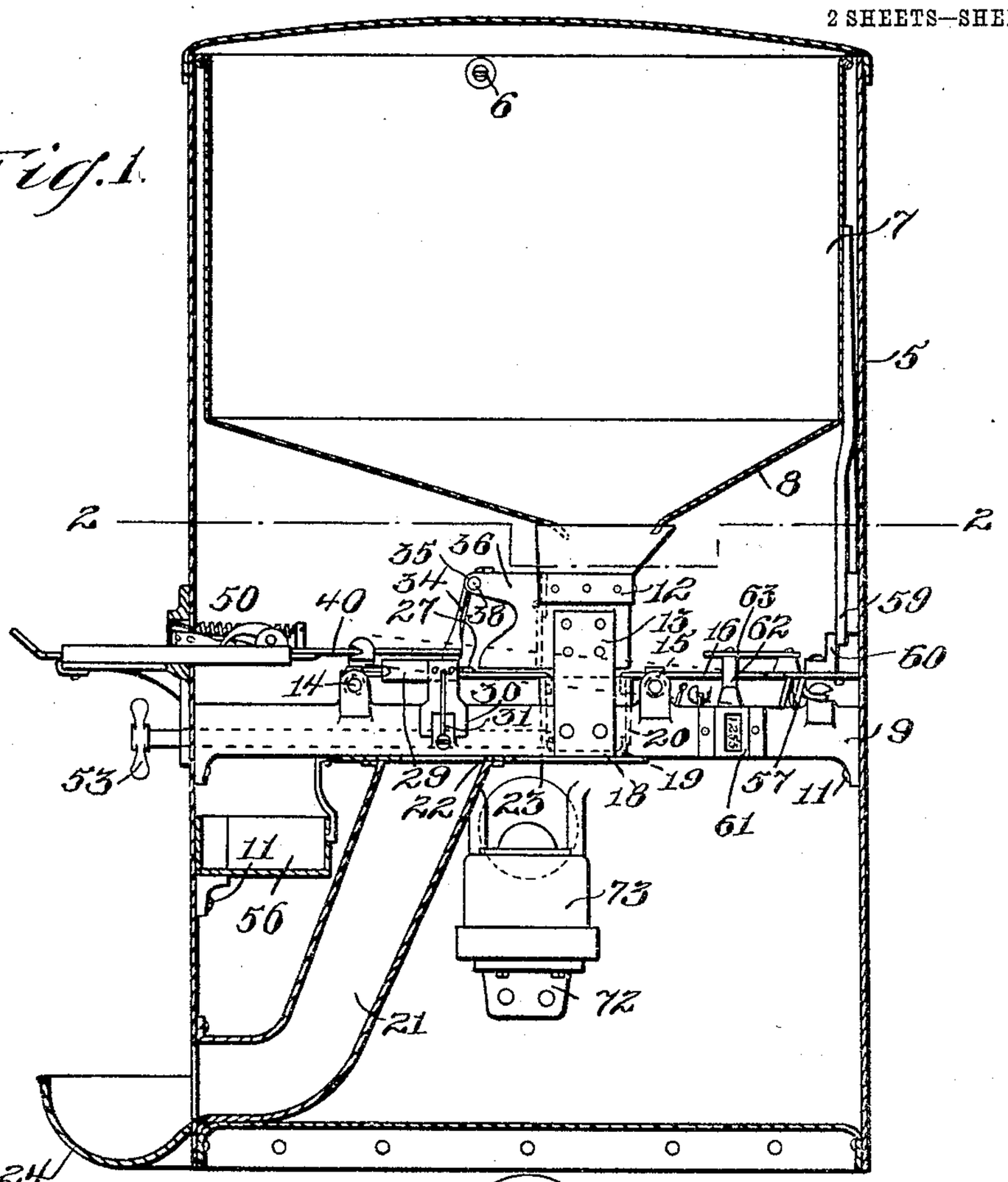
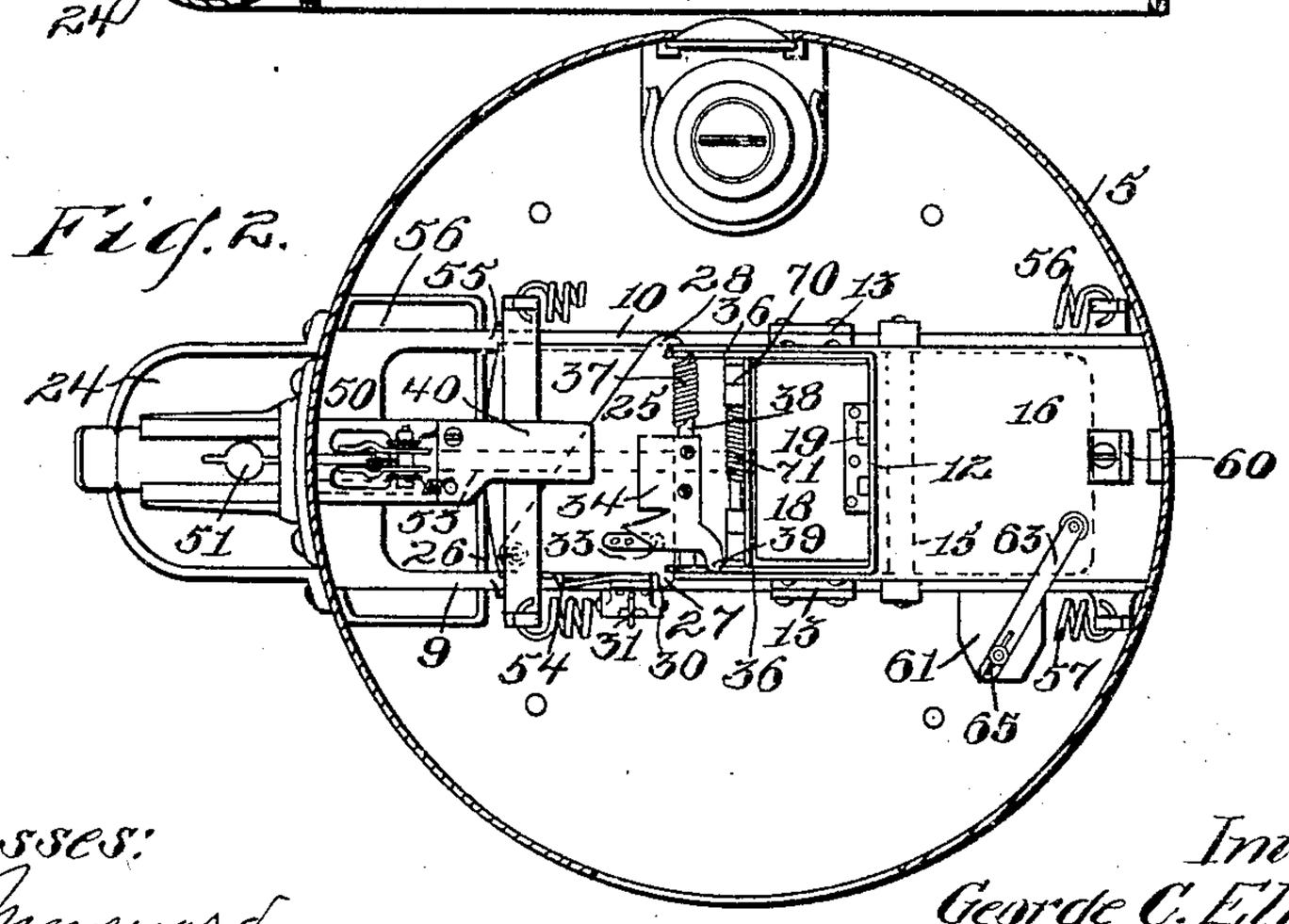


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

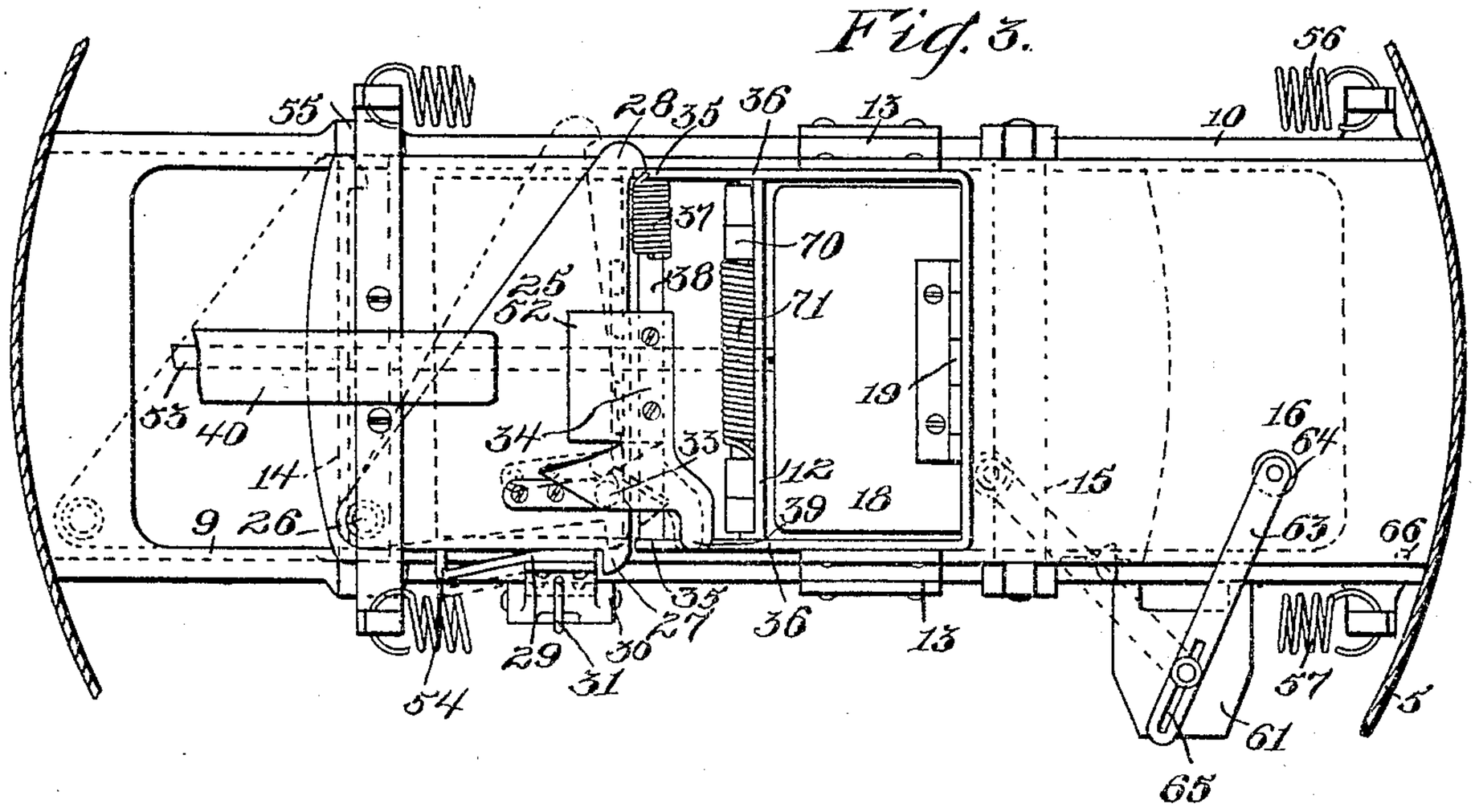


Fig. 4.

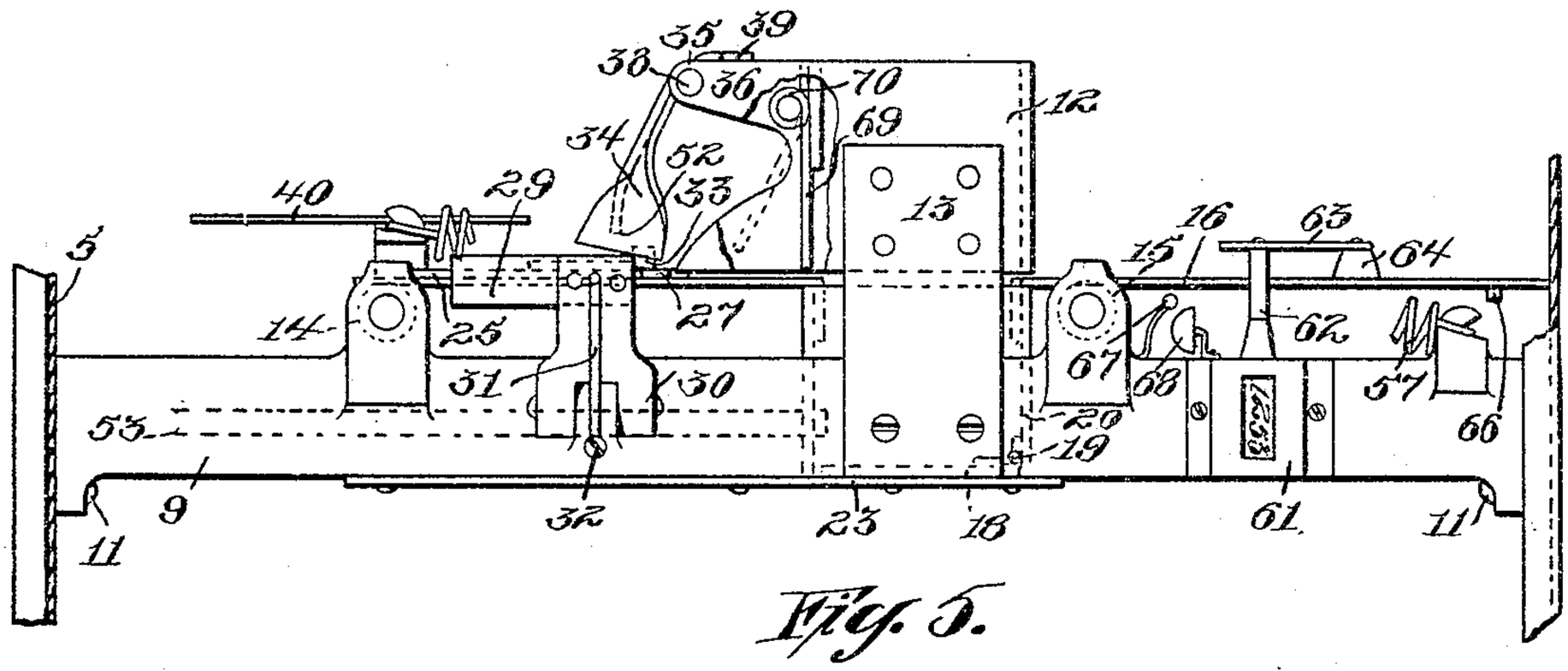
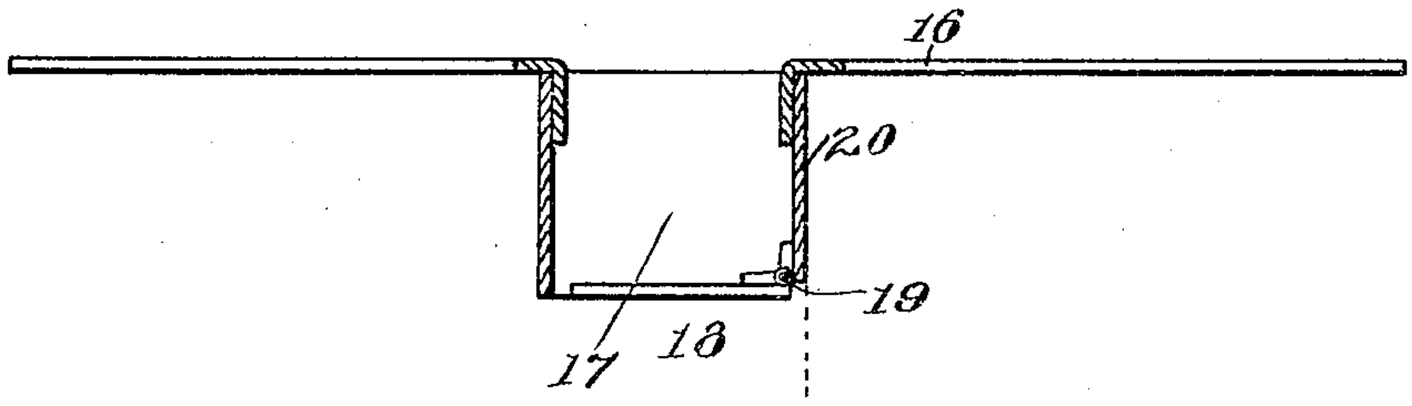


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE CRAWFORD ELLIOTT, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO LOUIS O. TAFEL, OF BROOKLYN, NEW YORK.

VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 778,480, dated December 27, 1904.

Application filed July 23, 1904. Serial No. 217,777.

To all whom it may concern:

Be it known that I, GEORGE CRAWFORD ELLIOTT, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Vending Apparatus, of which the following is a specification.

This invention has reference generally to that class of apparatus by which certain commodities are automatically released and delivered when portions of the mechanism are permitted to operate through a release effected by the introduction of a proper coin.

Generally speaking, therefore, the invention contemplates the embodiment of a receptacle adapted to contain the commodities to be vended, a mechanism for automatically dispensing such commodities, coin-controlled mechanism adapted to coöperate with the dispensing mechanism when the former is released for action by the introduction thereinto of a proper coin, and a receptacle for the reception of the coin after it has effected the release of said mechanism.

This invention further comprehends in the present instance the recording of the number of operations which take place after the introduction of the coin or the number of coins introduced, and, further, the movement of the commodity receptacle or hopper in connection with the movement of the dispensing apparatus, whereby it will not be competent for the commodities to choke or become keyed together within the receptacle in such a manner as to prevent their delivery.

While comprehending the adaptation of this invention to the dispensation of various commodities and for which purposes the invention may be embodied in various constructions so long as the principle hereof explained is adhered to, I have for convenience of illustration and explanation shown an embodiment hereof in an apparatus adapted more particularly for vending peanuts or similar articles whose configuration is rather uneven and whose sizes vary. Such embodiment of this invention is illustrated on the accompanying sheets of drawings, whereon—

Figure 1 illustrates an elevational view of the entire apparatus. Fig. 2 illustrates a transverse section on line 2 2, Fig. 1. Fig. 3 illustrates an enlarged top plan view of the dispensing mechanism. Fig. 4 illustrates an elevational view thereof; and Fig. 5 illustrates a detail of the vending-draw, partly in section.

In the various figures similar characters of reference indicate corresponding parts.

Within the cabinet 5 may be pivoted—for instance, at 6—a hopper 7, the pivoting of the hopper being preferably such that said hopper will normally lean toward what might be here termed the "front" of the cabinet. Located beneath the hopper 7, which in the present instance may be provided with an inclined bottom 8, is a hopper 12, mounted on beams 9 and 10, respectively, which are secured to the casing by bolts 11, and this hopper may be supported by standards 13. Movably mounted on said beams 9 and 10, respectively, and preferably upon rollers 14 and 15, suitably supported thereby, is a longitudinally-reciprocating plate 16, which in the present instance is provided with a pocket 17, adapted when the plate 16 is in normal position to register with the mouth of the hopper 12, and this pocket 17 may be provided with a drop-bottom 18, suitably hinged, as at 19, to the wall 20 of such pocket, and this bottom is permitted to drop into a chute 21 when it passes beyond an edge 22 of an opening in a plate 23, mounted on the under side of said beams, whereby the contents of such pocket will be delivered through the chute 21 into a receptacle 24, which in the present instance is attached to the outside of the casing 5. This longitudinal member 16 in the present instance has movably mounted thereupon a locking device, which in its present construction is in the form of a plate 25, suitably pivoted at 26 to the plate 16 and which in the present instance may be provided with a laterally-extended tooth 27 on one side and a laterally-extended head 28 on an opposite side. The inner portion of said head will, as it is obvious, serve to limit the movement of said plate. This plate 25, which oscillates upon the plate 16, prevents the latter plate from moving longitudinally by reason of the

tooth 27 contacting against a locking-piece 29, which is suitably hinged, as at 30, to one of the beams—for instance, as 9—and which normally bears in a direction toward the plates 16 and 25, respectively, by being urged in that direction by a spring 31, suitably secured at 32 either to the beam or the hinged plate of the member 30. This oscillating plate 25 in the present instance may be provided with an upwardly-extending lug 33, with which contacts a spring-actuated movable member 34, mounted in suitable bearings 35 of an extension 36, carried by the main body portion of the hopper 12, and which member 34 in the present instance may be held in normal position by a spring 37, preferably convoluted upon a shaft 38, mounted in said bearings 35, and the movement of this member 34 should be limited by a stop 39, which may bear against the extension 36, as seen, for instance, in Fig. 4. This member 34 is adapted to be actuated by a rod 40, suitably connected with a coin-controlled mechanism, (indicated in a general way by 50,) which may be of any suitable construction and which is mounted in the framework of the cabinet 5. By a rearward action of the rod 40, which is made possible by depositing a coin in a coin-receptacle 51, which releases the coin-controlled mechanism 50, the said member 34, which is suitably shaped to form a cam 52, is forced against the lug 33, whereby the member 34 and the plate 25 are subjected to a lateral shift, carrying the tooth 27 out of the path of the locking member 29, when a pull on the handle 53, extending outside of the casing 5, will draw the plate 16 forward until the drop-bottom 18 of the pocket 17 falls into the mouth of the chute 21. It may be remarked that during such movement, just explained, the head 28 of the plate 25 will, as seen in dotted lines of Fig. 3, take against a part 55, suitably disposed, whereby such plate will be automatically shifted to its initial position, as shown in full lines of said figure, when the tooth 27 will again be extended into the path of the locking member 29. This locking member 29 is provided with a detent 54 on the end opposite to that where the tooth 27 normally bears against, and, upon the automatic retraction of the plate 16 through the instrumentality of the springs 56 and 57 the tooth 27 will coöperate with such detent 54, and thus prevent the plate 16 from again being drawn forward before the handle has been allowed to fully return and another coin introduced into the coin-controlled apparatus. In other words, it is possible to permit the plate 16 to recede almost to a full locked position, as shown in Fig. 3, whereby the pocket may be again filled with the commodity coming from the hopper 12, but this fraud-preventing detent will not permit the plate 16 to be drawn forward to such an extent as to allow the bottom 18 of the pocket 17 to fall into the chute 21. It will be here understood that upon the complete retraction of the plate 16, the plate 25 having assumed its normal position upon the full out-pulling stroke, the locking member 29 will be temporarily forced outward by the tooth 27 and as soon as such tooth passes beyond the locking member the spring 31 will force the latter to its normal position, when, as seen in Fig. 3, the parts will be normally locked. It will be understood that the spring 31 is of sufficient strength to only support the member 29 in an upright position normally and does not in any way serve to exert any force on the locking-plate.

In order to prevent the "arching" or packing of the commodities in the hopper 7, there is provided a leg 59, secured to said hopper and which communicates with an edge 60 of the plate 16, so that when the said plate 16 is drawn forward to a full open position and then normally released the plate 16 will strike against said leg 59, when the hopper 7 will receive a shock which will loosen any packing, choking, or arching that may have taken place in the hopper.

In order to ascertain the number of the reciprocations the plate 16 has made or the amount of money that has been deposited in the device, I provide a register 61, suitably mounted for examination, to the spindle 62 of which is attached an arm 63, connected to the plate 16, for instance, as being mounted on a bearing 64, as seen in Fig. 4, and which arm 63 is slotted, as at 65, so that it may be properly adjusted at will, it being understood, of course, that upon each reciprocation of the plate 16 such register will indicate the same. In order to indicate when the plate 16 or the handle 53 has been fully drawn out, I provide a lug 66, suitably carried on the plate 16, and which at a proper moment contacts with a spring-hammer 67 which when released by said lug 66 strikes against a bell 68, suitably mounted on one of the beams, as 9. Any suitable signaling device, however, as well as any suitable registering or indicating device may be employed without departing from the spirit of this invention.

Inasmuch as the hopper 12 is constantly filled, and that immediately after the initial movement of the plate 16 the bottom of such hopper 12 is being closed by such plate 16 in order to avoid the crushing or squeezing of the commodity, one wall, as 69, of said hopper 12 is mounted for movement in bearings 70 and is held in normal position by a spring 71. The coins delivered from the coin apparatus may be received into the receptacle 56, suitably bracketed, as at 57 and 58, to the cabinet 5 and beams 9 and 10, respectively, as shown in Fig. 1. Thus, as will be seen, if the commodity within the hopper 12 moves along with the plate 16 the wall 69 will so give, as shown in dotted lines of Fig. 4, as to prevent the crushing of such commodity.

Inasmuch as I have embodied the invention in a construction adapted, preferably, to vend peanuts and, as is well known, peanuts are preferred in a heated state I provide suitable means for heating the same, which means in the present instance constitute a lamp 73, mounted on a bracket 72, secured to the casing 5, and which lamp is so located that its heat will be directed against the bottom 18 of the pocket 17, so that the peanuts ready for delivery will be thus properly heated before delivery.

As having before pointed out, the particular application of the invention herein shown constitutes only an embodiment of such invention and is in no wise to be construed as limiting this invention to the precise construction shown, and even in the embodiment set forth herein the precise construction and arrangement of parts need not be strictly adhered to, but may be modified or rearranged according to the best mechanical skill and judgment without departing from the spirit of the invention.

Having thus described my invention, I claim—

1. In a vending apparatus, the combination with a reciprocating delivery device, of a locking member pivoted thereto, an oscillating cam suitably mounted, and adapted to shift said locking member out of locking position, and means operating to shift said locking device into a locking position during the travel of the delivery device, and a movable lug for said locking device carried by the casing.

2. In a vending apparatus, the combination with a reciprocating delivery device, of a locking member pivoted thereto, an oscillating cam suitably mounted and adapted to shift said locking member out of locking position, and means operating to shift said locking device into a locking position during the travel of the delivery device, and a spring-actuated lug for said locking device carried by the casing.

3. In a vending apparatus, the combination with a spring-actuated longitudinally-movable delivery device, of a locking device carried thereby, manually-operated cam for shifting said locking device out of operative position, a stationary lug for shifting said locking device into operative position during the movement of the delivery device, a spring-actuated lug carried by the casing and provided with two points of contact against which said locking device may operate whereby to lock said device in two different relative positions.

4. In a vending apparatus, the combination with a longitudinally-reciprocating delivery device, of an oscillating plate pivoted thereto, a tooth carried by said plate, a stop carried by said plate for limiting the movement of the latter in one direction, a lug carried by said plate, an oscillating spring-actuated cam adapted to contact with said lug and shift said plate out of operative position, means for operating the cam, a lug to shift said plate into operative position during the movement of the delivery device, and a stop for limiting the movement of the cam.

5. In a vending apparatus, the combination with a longitudinally-reciprocating delivery device, of a plate pivoted thereto and adapted to move in a plane transverse to the plane of movement of said delivery device, a tooth carried by said plate, a stop carried by said plate to limit the movement thereof, means to engage said plate and shift the tooth out of locking position, a spring-actuated lug adapted to engage said tooth, and means to shift said tooth into locking position during the movement of the delivery device.

Signed at Nos. 9 to 15 Murray street, New York city, New York, this 19th day of July, 1904.

GEORGE CRAWFORD ELLIOTT.

Witnesses:
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FRED. J. DOLE.