

J. VONS.
VENDING MACHINE.
APPLICATION FILED JULY 2, 1917.

1,351,589.

Patented Aug. 31, 1920.
2 SHEETS—SHEET 1.

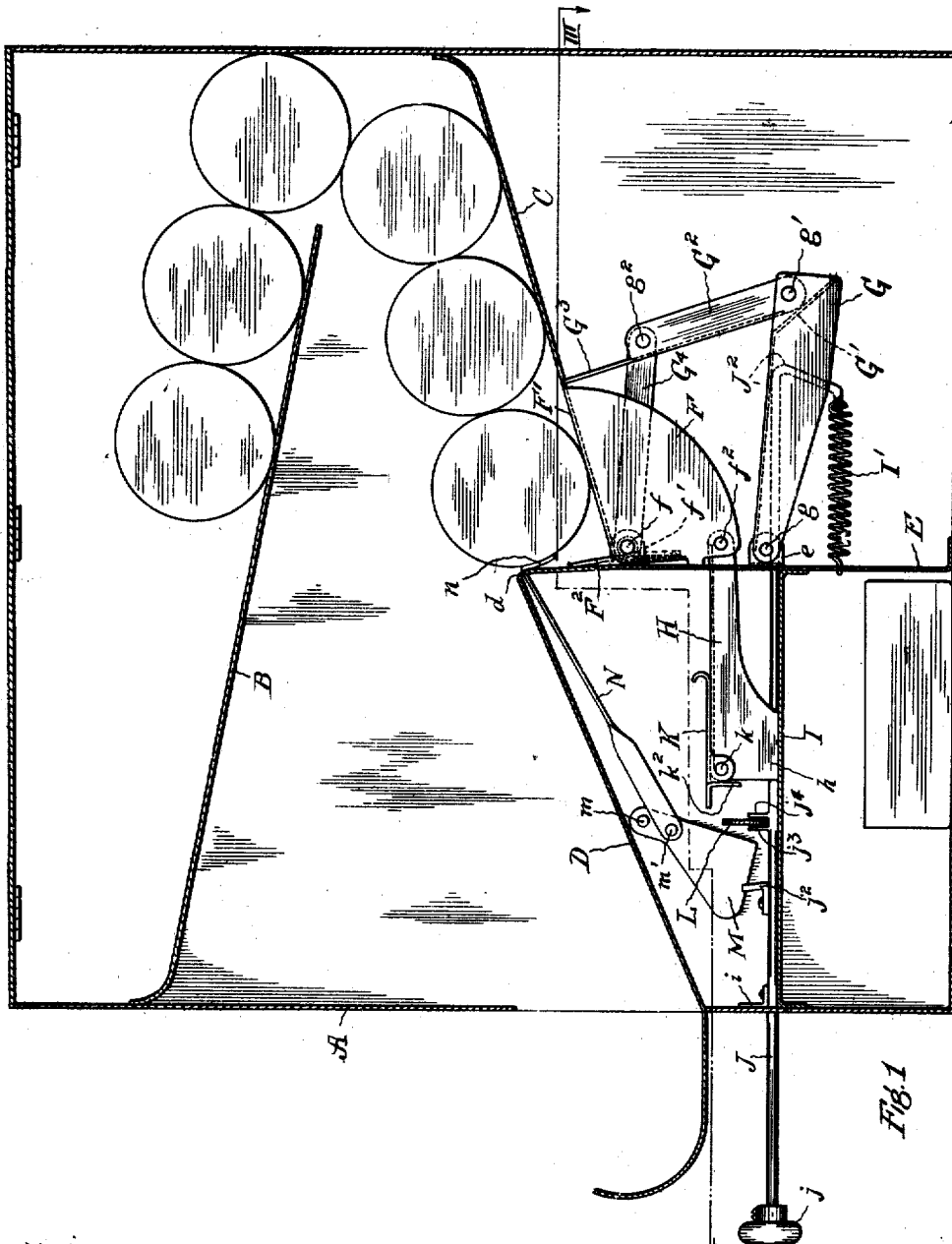


Fig. 1

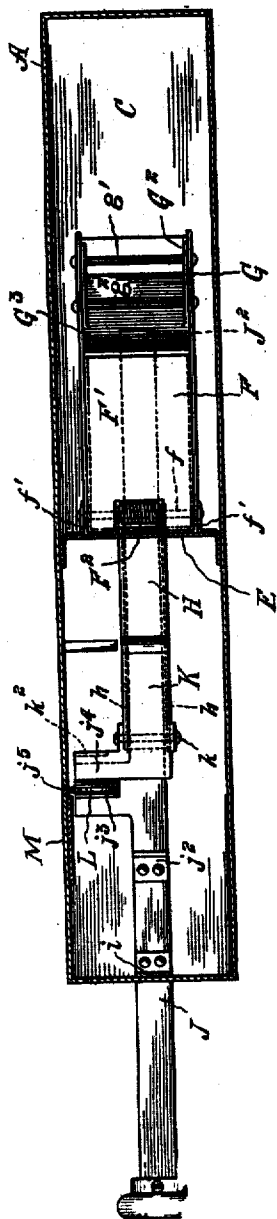
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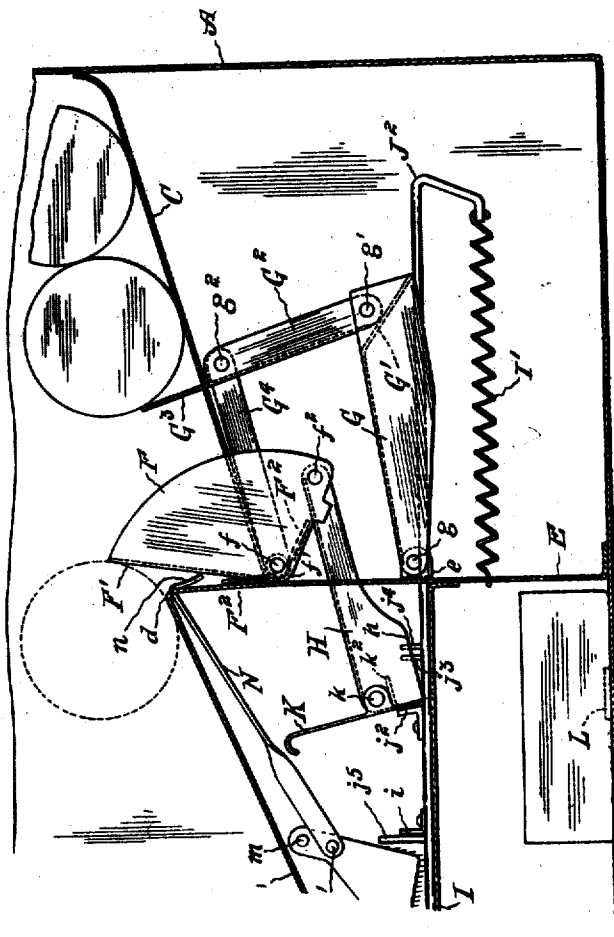
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L. E. Jones



UNITED STATES PATENT OFFICE.

JOHN VONS, OF CLEVELAND, OHIO.

VENDING-MACHINE.

1,351,589

Specification of Letters Patent. Patented Aug. 31, 1920.

Application filed July 2, 1917. Serial No. 178,238.

To all whom it may concern:

Know all men by these presents that I, JOHN VONS, a citizen of the United States, residing in Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Vending-Machines; and I hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to vending machines, and more particularly to a machine for vending articles contained in circular cans or similar containers consisting essentially of a casing containing inclined planes on which the cans are placed and down which they are adapted to roll, and means whereby, upon the insertion of a coin, the lowest of the series of cans is delivered to the purchaser, said means consisting of the parts and devices hereinafter more fully set forth.

In the accompanying drawings Figure 1 is a sectional side elevation of a machine embodying my invention. Fig. 2 is a similar view, except that the position of the parts have been changed in such manner as to place one of the containers on the inclined plane which carries it to the point of delivery. Fig. 3 is a sectional plan view at line "III—III," Fig. 1. Fig. 4 is detailed view of one of the parts in perspective.

"A" is the frame of the device, and incloses the working parts and the articles to be sold. "B" is an inclined plane or runway, mounted in the frame "A" at such incline as will cause the circular containers to roll down the incline. "C" is a similar inclined support, leading to the operative mechanism, while a third incline, "D," leads from the operative mechanism to the point of delivery. "E" is a brace, or support extending from the bottom of the frame upward within the center thereof and is adapted to support the inner end of the incline "D" and to also support the operative mechanism hereinafter more fully described. Mounted between the support "E" and the inner end of the incline or track "C" is a section of track "F," the upper surface "F¹" of which, when in its normal position, forms a continuation of the incline "C." The section "F" is mounted on a pin "f" which is in turn supported by the brackets "f¹" "f²" attached to the support "E." The outer or right hand end of the section of track "F"

is adapted to be swung upward and force the lowermost container over the point "d" and down the incline "D." "F²" is a coil spring mounted on the pin "f" and adapted to hold "F" down in its normal position. Attached to the support "E" and the wall of the frame "A" is a metal support "I" adapted to support the push rod "J" and the cross head "H." The lower points "h" "h'" of the cross head rests on the upper surface of the support "I" on each side of the push bar. The inner or right hand end of the cross head "H" is pivotally connected to the lower left hand corner of "F" by a pin "f³." On the upper left hand corner of the cross head "H" is mounted a pawl "K." The pin "h'" serves to attach the pawl to the cross head and acts as a pivot upon which the pawl is swung. The pawl "K" is provided with a projection "k²" shown in all the figures, but in dotted lines in Fig. 3. This projection is adapted to come in contact with the coin inserted between the brackets "j³" and "j⁴" when the push rod is pushed inward as hereinafter set forth. The push rod "J" has a knob "j" on its outer end. The push rod "J" normally projects from the side of the frame "A" as shown in Fig. 1 and is held in this position by the coil spring "I¹" attached to its inner end, and to the support "E." The bracket "j" attached to the push rod "J" limits the outward motion of the push rod. Another bracket "j²" is mounted on the push rod "J" for the purpose hereinafter indicated. Attached to and mounted to one side of the push rod "J" are the vertical jaws "j³" and "j⁴" adapted to hold the coin "L." The space between these jaws is normally opposite the opening "j⁵" (Fig. 3) in the side of the frame.

The arm "G" is mounted at its inner end on a pin supported by the brackets "e" on the support "E." The outer end of the arm "G" is pivotally connected through pin "g¹" to a metallic spacer "G²," the upper end of which, "G³" is adapted to project between the container being withdrawn and the container next above it on the incline "C," as shown in Fig. 2, in such manner as to cause the retainers, except the one being withdrawn, to remain in their former positions. The space "G²" is also pivotally connected through the connecting rod "G⁴" and the pin "g²" to the pin "f." At the right hand end of the arm "G," the

upper part of the metal, between the sides thereof is turned down to form an inclined plane or cam surface "G¹." The inner end "J²" of the push rod "J" is adapted to

5 come in contact with the cam surface "G¹" and force the outer end of the arm "G" upward as hereinafter more fully explained.

To prevent an insertion of a coin when there are no containers in the machine I provide a latch "M" pivoted at "m" and lying close against the side of the machine. This latch is so formed and hung that it normally closes the opening "j¹." Attached to the latch at "m" is a rod "N" passing through the support "E" at its upper end and being turned downward at "n." The end "n" is adapted to come in contact with the containers as shown in Fig. 1, the weight of the container forcing the latch "M" away from the coin opening. When there are no containers in the machine the latch "M" by force of gravity closes the coin opening and prevents the insertion of a coin.

In the manufacture of the device it is desirable that the inclines "B" and "C" be made in two parts, one attached to each side of the frame of the machine. This, however, is merely for convenience and is no part of the invention and is not shown in the drawing.

The frame of the machine may be as large as desired, the number of incline planes or tracks being increased in proportion to the number of containers to be placed in the frame. The commercial use of the machine requires that suitable magnets be provided to prevent the use of iron or steel slugs in the place of coins, but these devices are well known and form no part of my invention.

40 The operation of the device is as follows: The desired number of containers are placed on the inclines within the frame. The push rod is forced outward by the spring "I" and the section of track "F" is held down by the spring "F²," all in the position shown in Fig. 1. The operator then inserts a coin through the slot "j⁵" within the jaws "j³" and "j⁴." The push rod "J" is then forced inward against the resistance of the spring "I" and the coin comes in contact with the projection "k²" of the pawl "K," swinging the latter on its pivot "k," and causing the lower end thereof to come in contact with the bracket "j²," as the latter moves inward.

The further inward motion of the push rod "J" forces the cross head "H" inward and through its pivotal connection at "f²," causes the section of track "F" to swing upward and force the lowermost container over the point "d" and down the incline "D." At the same time the inward motion of the push rod "J" causes its right hand end "J²" to come in contact with the cam surface "G¹" of the arm "G," forcing the plate "G³" upward, thereby holding the containers, except the one being delivered, in their former positions. When the lowermost container has thus been delivered, the springs "I" and "F²" bring the parts back in their former positions where they remain until the process is repeated.

Having described my invention I claim—

1. In a vending machine for vending articles in circular containers, the combination with the casing, of an inclined plane adapted to support said containers, a movable member forming a continuation of said inclined plane, a swinging latch pivoted to the casing above the coin slot and having a rod extending to the lower end of the inclined plane and adapted to come in contact with the lowermost container, whereby the weight of the container forces the swinging latch clear of the slot, and the weight of the latch causes it to close the coin slot when the casing is empty, substantially as and for the purpose specified.

2. In a machine for vending circular cans comprising a frame, a movable member adapted to support a container, a latch pivotally secured to the inner face of the frame above the coin slot, a rod secured to said latch extending to the lower end of the movable member and adapted to contact with the lowermost can carried by said movable member, whereby the weight of the can forces the latch clear of the coin slot, and the weight of the latch causes it to entirely close the coin slot when the machine is empty.

In testimony whereof I have hereunto set my hand at Cleveland, Ohio, this 20th day of June, 1917.

JOHN VONS.

In the presence of:—
L. E. JONES,
ALFRED ELUM.