No. 734,647. PATENTED JULY 28, 1903.

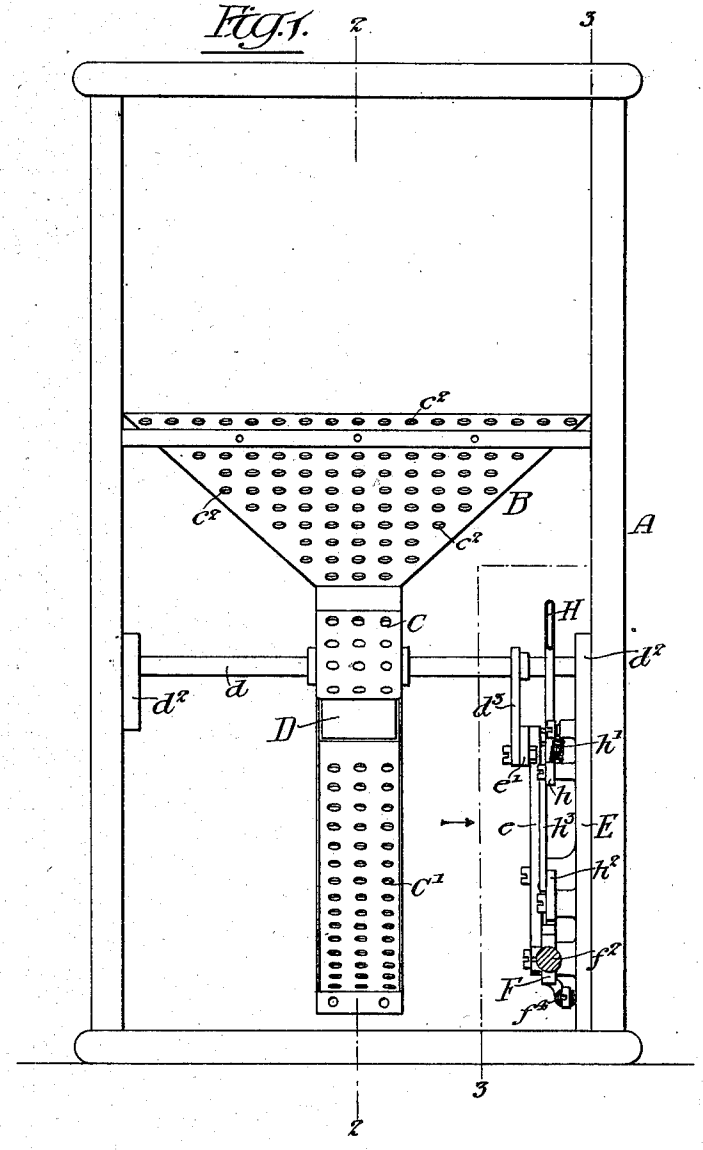
E. WÜSTNER.

VENDING MACHINE.

APPLICATION FILED JULY 24, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:-
Herman C. Metcies.
William E. Bradley

Inventor:-
Ernest Wüstner,
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Howson & Howson

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 1.

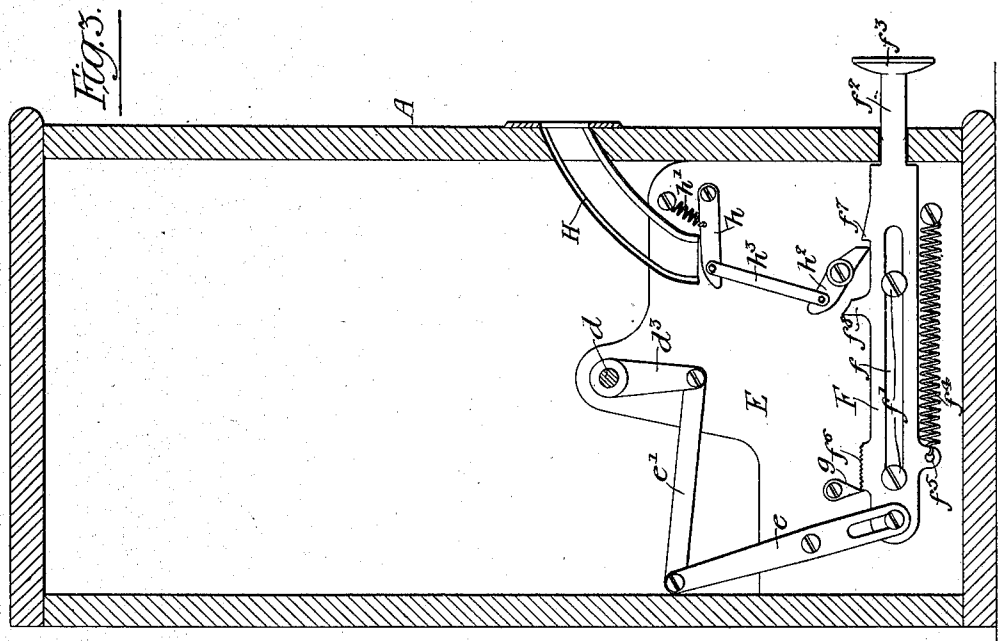
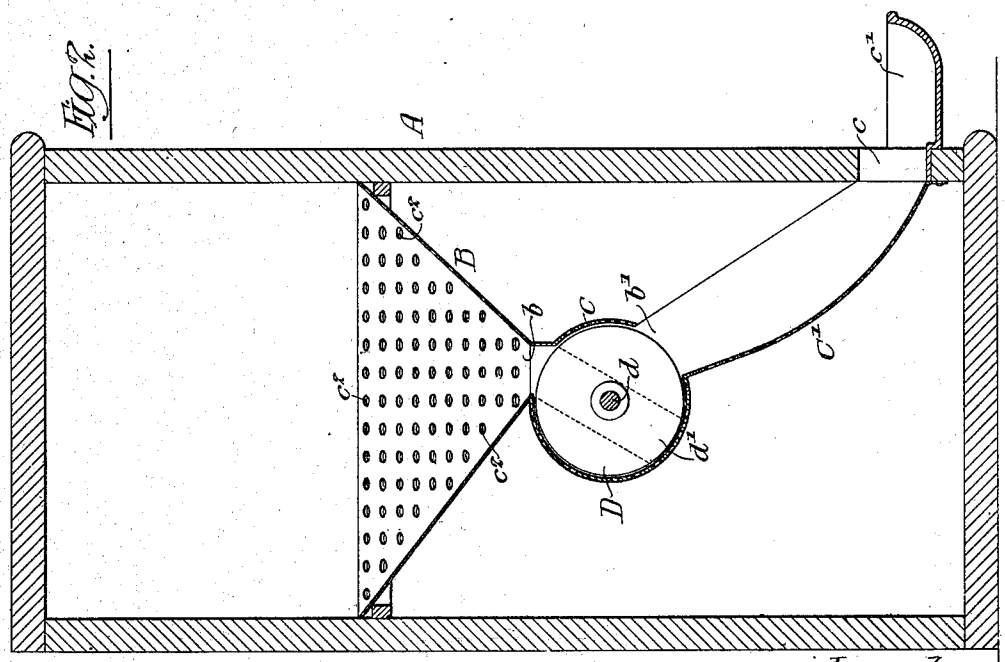


Fig. 2.



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UNITED STATES PATENT OFFICE.

ERNEST WÜSTNER, OF PHILADELPHIA, PENNSYLVANIA.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 734,647, dated July 28, 1903.

Application filed July 24, 1901. Serial No. 69,533. (No model.)

To all whom it may concern:

Be it known that I, ERNEST WÜSTNER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Vending-Machines, of which the following is a specification.

My invention relates to certain improvements in vending-machines, and more particularly to an improved form of machine for delivering a fixed quantity of any desired merchandise when a coin of a certain denomination has been placed in an appropriate slot and the necessary machine operated.

The object of my invention is to provide a device of the character described which shall be simple in construction and reliable in action. This object I attain as hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of my machine, the front of the casing being removed; and Figs. 2 and 3 are vertical sectional views on the lines 2 2 and 3 3, respectively, Fig. 1.

In the drawings, A is a box or casing of any desired construction, within the upper part of which is suitably supported a hopper B. The bottom of this hopper slopes downwardly from its edges toward an opening b in communication with the interior of a cylindrical casing C, there being an outlet b' in the lower part of the said casing leading into a discharge chute or passage C'. The sides of the sloping bottom of the hopper are perforated with a number of holes c^2 c^2, these being provided for the purpose of allowing dust and small particles of salt, sugar, &c., to be separated from the main supply of candy, peanuts, &c., in the hopper. If desired, the casing C as well as the discharge-chute may also be perforated, thus preventing any possibility of an excessive accumulation of the objectionable substances mentioned above. The chute terminates near the bottom of the main casing A, there being an opening c through the front thereof and a discharge cup or holder c'.

Within the cylinder-casing C is a wheel D, revolubly supported on a shaft d and having through it a passage or pocket d', (clearly shown in dotted lines in Fig. 2,) the same being preferably of a rectangular section. This passage is placed eccentrically within the wheel D, this latter being so designed that the said passage can at no time be simultaneously in communication with the hopper and the discharge-chute C'.

Bearings d^2, fixed to the side of the containing-box A, are provided for the shaft d, which has a lever-arm d^3 fixed to it near one end, one of said bearings being preferably formed in a metallic plate E, suitably fastened to the side of the box A. On this plate is pivoted a lever e, there being a link e' connecting one end of said lever to the arm d^3, while a slotted bar F is loosely connected to the other end. The bar F has in it a longitudinal slot f, through which project two headed pins or screws f', these being fixed to the plate E and serving as guides to the said bar. A portion f^2 of the bar, of diminished section, projects through the side of the casing A, being provided with a head f^3. A spring f^4 is attached at one end to the plate E, its other end engaging a lug f^5 on the bar F and normally keeping said bar in a forward position. There is also a series of teeth f^6, preferably formed to project above the upper edge of the bar F, and a pawl g, pivoted to the plate E, is placed so as to engage with the teeth, as hereinafter set forth.

H is a tube or chute of suitable dimensions to receive a coin of predetermined value, it being held in position by and opening through the front of the box or container A. The said chute terminates some distance above the bottom of the box A, and its lower end is normally closed by a pivoted piece h, held in place by a spring h'. This end-closing piece h is pivoted to the plate E, as is also a lever h^2, this latter being operatively connected to the piece h by a link h^3. A single tooth f^7 on the bar F is placed as shown to prevent inward motion of said bar, except when a coin has been placed in the chute H, and a second projection f^8 is also provided on the bar to restrict the movement of the pieces h' and h^2 when the bar F is in its normal position.

In operation the reservoir formed by the upper part of the casing A and the hopper is filled with salted peanuts, small candies, or similar merchandise in small pieces, the same flowing through the opening in the bottom of the hopper and filling the pocket or passage in the wheel D. If now a coin of proper de-

nomination be placed in the slot of the chute or tube H, it passes downwardly through the same and finally rests upon the piece h. The spring h' is made of such a strength as will allow the coin, if of the proper weight, to depress said piece and with it the link h^3. The downward motion of the link causes the piece h^2 to turn on its pivot until it is stopped by contact with the projection f^8 on the bar F. As will be seen by reference to Fig. 3, this motion of the piece h has not been sufficient to allow the coin to escape from the end of the chute H, although it has been enough to raise the ratchet end of the piece h^2 higher than the tooth f^7 of the bar F. The said bar may now be pushed inwardly, thereby turning the lever e and through the link e' and the arm d^3 partially revolving the shaft d in its bearings. This causes the wheel D to turn in its casing, the pocket therein being cut off first from communication with the hopper, after which it is placed in connection with the discharge-chute C'. The merchandise then passes by gravity out of the pocket in the wheel D and is delivered into the cup c', from which it is removed. Upon the pressure on the head of the bar F being removed the spring f^4 immediately restores it, with the wheel D, to its original position. Before this action has taken place, however, the operation of the coin-controlled mechanism is to be noted. As the bar F is pushed inwardly to operate the wheel D the projection f^8 passes from under the end of the pivoted arm h^2, thereby allowing the weight of the coin in the chute H to further revolve the lever h and until the end of said chute is opened widely enough to permit the coin to pass out into the bottom of the box or container A, after which the spring h' returns the levers h and h^2 to their normal positions.

The necessity for the stop f^8 will be understood when it is noted that unless prevented the lever h would permit a coin to be discharged from the chute H immediately upon its entrance into the same, thus making it impossible to push inwardly the rod F unless the pressure thereupon was made at the precise instant at which the lever h^2 was in its turned position.

In order to prevent the bar or rod F from being caused to make a number of partial strokes, and thereby securing a number of discharges of merchandise with but one coin, I provide the form of pawl and ratchet shown at f^6 and g. It will be seen that as the said bar is pushed inwardly the pawl g is inclined from the perpendicular and allows the teeth f^6 to pass under it. Should the bar F be stopped and the endeavor made to draw it out, the pawl would immediately engage the teeth, thereby preventing such motion. It is therefore necessary to push the bar in to the full limit of its stroke, and when this point is reached the pawl g drops off the raised portion, carrying the teeth f^6, and inclines in a direction opposite to that previously assumed as the bar is forced out by the spring f^4. Similarly the bar F may not again be moved inwardly until it has reached the outward limit of its stroke, when the pawl again drops off of the teeth f^6 and takes its perpendicular position.

I preferably perforate the bottom of the hopper B and the sides of the wheel-casing C, as shown, with a number of holes, such construction allowing dirt, sugar, salt, or other small particles of material from accumulating in the lower part of the reservoir, and thereby preventing clogging of the mechanism.

I claim as my invention—

1. In a machine of the character described, the combination of a containing-casing having in it a hopper, a cylindrical vessel having its axis horizontal and below said hopper, and having an opening into the bottom of the same, said vessel also having a discharge-opening, a revoluble shaft passing axially through the cylindrical vessel, a second vessel open at its ends and fixed to said shaft and revolubly supported thereby within the cylindrical vessel, said second vessel being placed on said shaft so that but one opening can communicate at a time with the openings of the cylindrical casing, substantially as specified.

2. In a device of the character described, the combination of a containing-casing, a hopper within the same, a horizontally-supported cylindrical casing supported beneath the hopper and having in its side an opening communicating with the same, a second opening in said cylindrical casing on the same side of a plane passing through its axis as is said first opening, a shaft passing axially through the cylindrical casing, a cylindrical vessel within the casing and fixed to said shaft with an inclosed passage through the said vessel, said passage being formed so that but one of its openings can be in communication with the openings into the cylindrical casing at any one time, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNEST WÜSTNER.

Witnesses:
MURRAY C. BOYER,
JOS. H. KLEIN.