

No. 678,033.

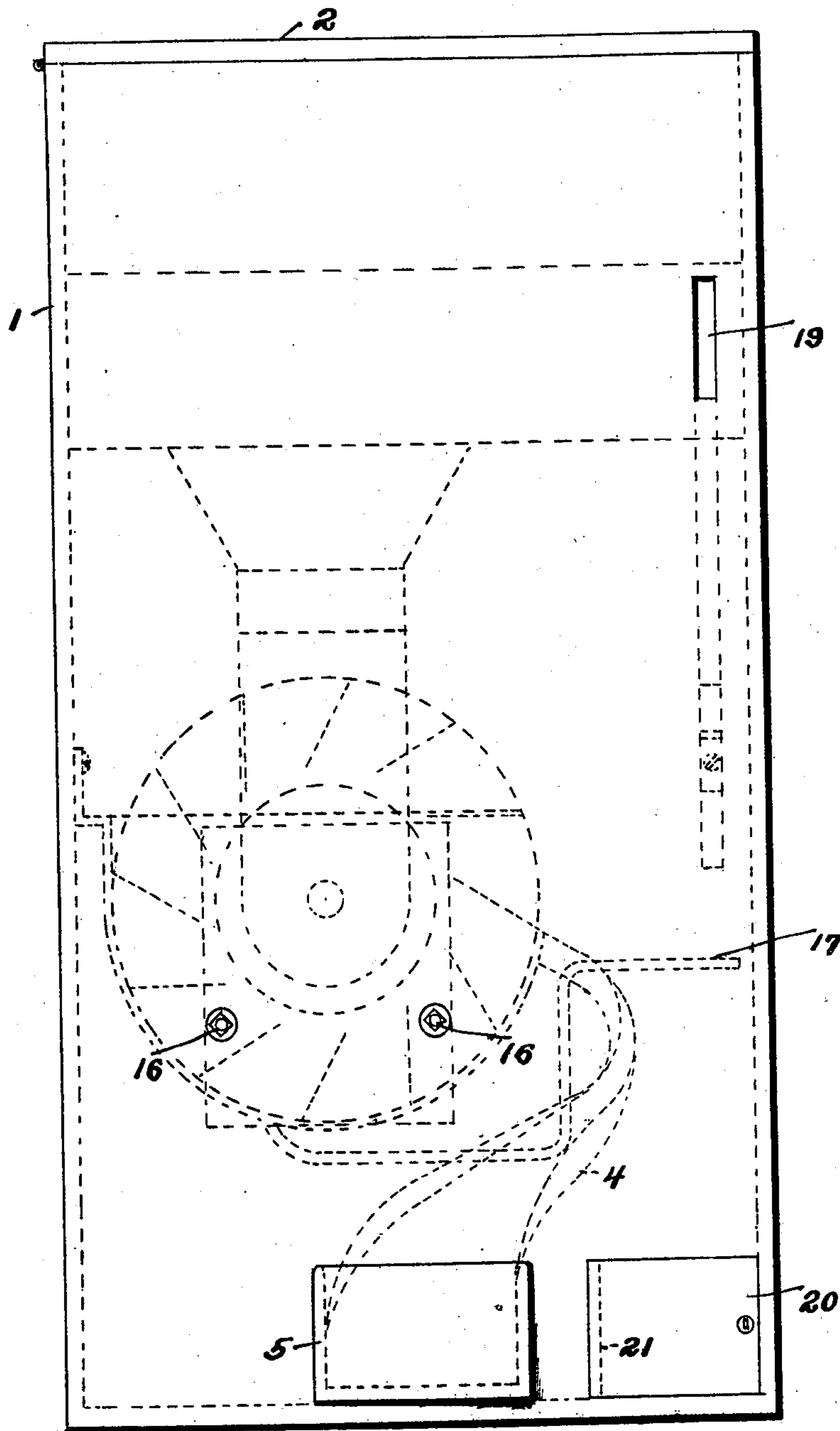
Patented July 9, 1901.

E. A. REEVES.
AUTOMATIC VENDING MACHINE.

(Application filed Feb. 12, 1901.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses.

J. O. Sejon
Frederic H. Montz



Inventor.

Edwin A. Reeves
by George H. H. H.
Attorney.

No. 678,033.

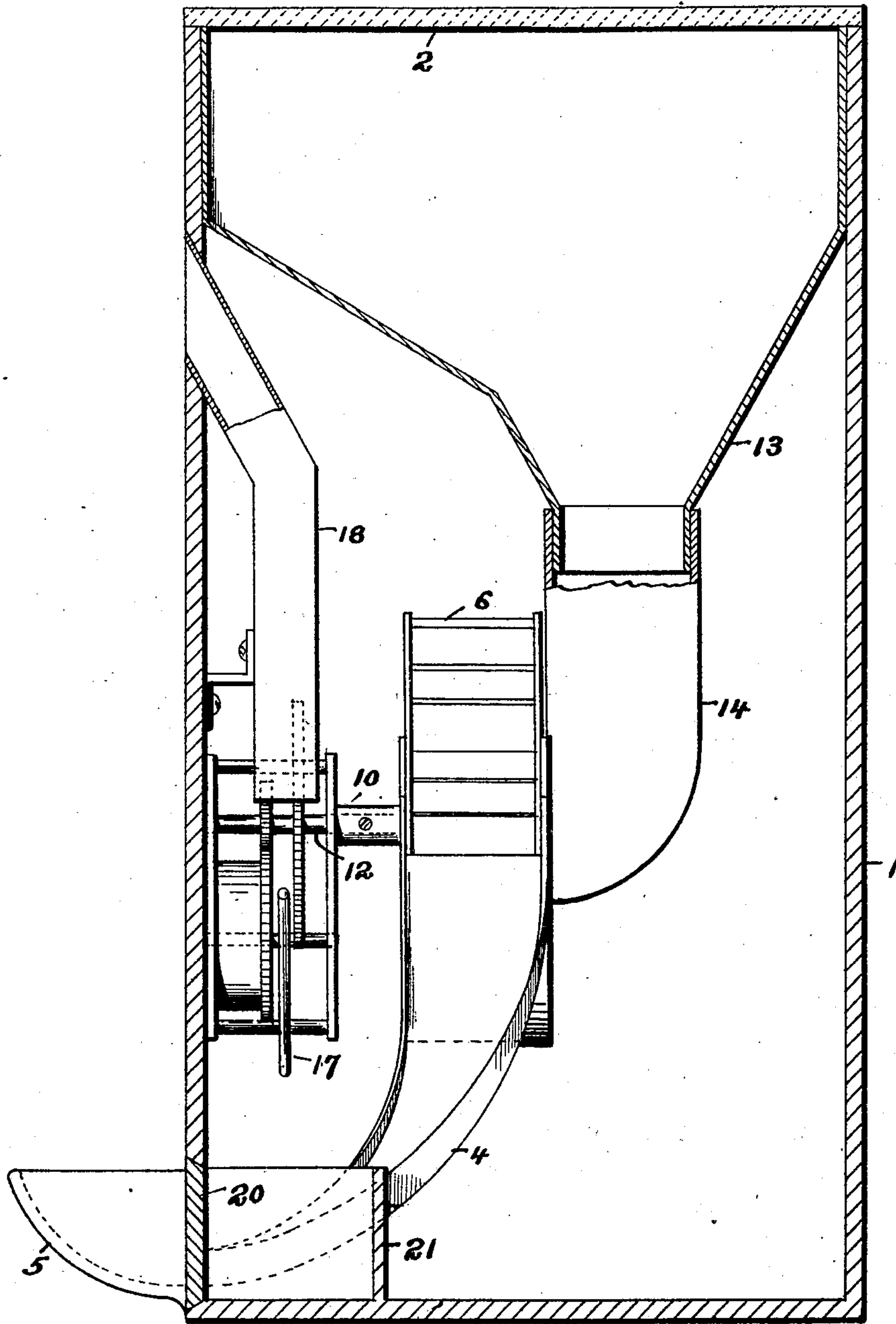
Patented July 9, 1901.

E. A. REEVES.
AUTOMATIC VENDING MACHINE.

(Application filed Feb. 12, 1901.)

(No Model.)

4 Sheets—Sheet 2.



Witnesses.

J. P. Sejon

Frederic H. Mank

Fig. 2

Inventor.

Edwin A. Reeves

by George E. Hall

Attorney.

No. 678,033.

Patented July 9, 1901.

E. A. REEVES.
AUTOMATIC VENDING MACHINE.

(Application filed Feb. 12, 1901.)

(No Model.)

4 Sheets—Sheet 3.

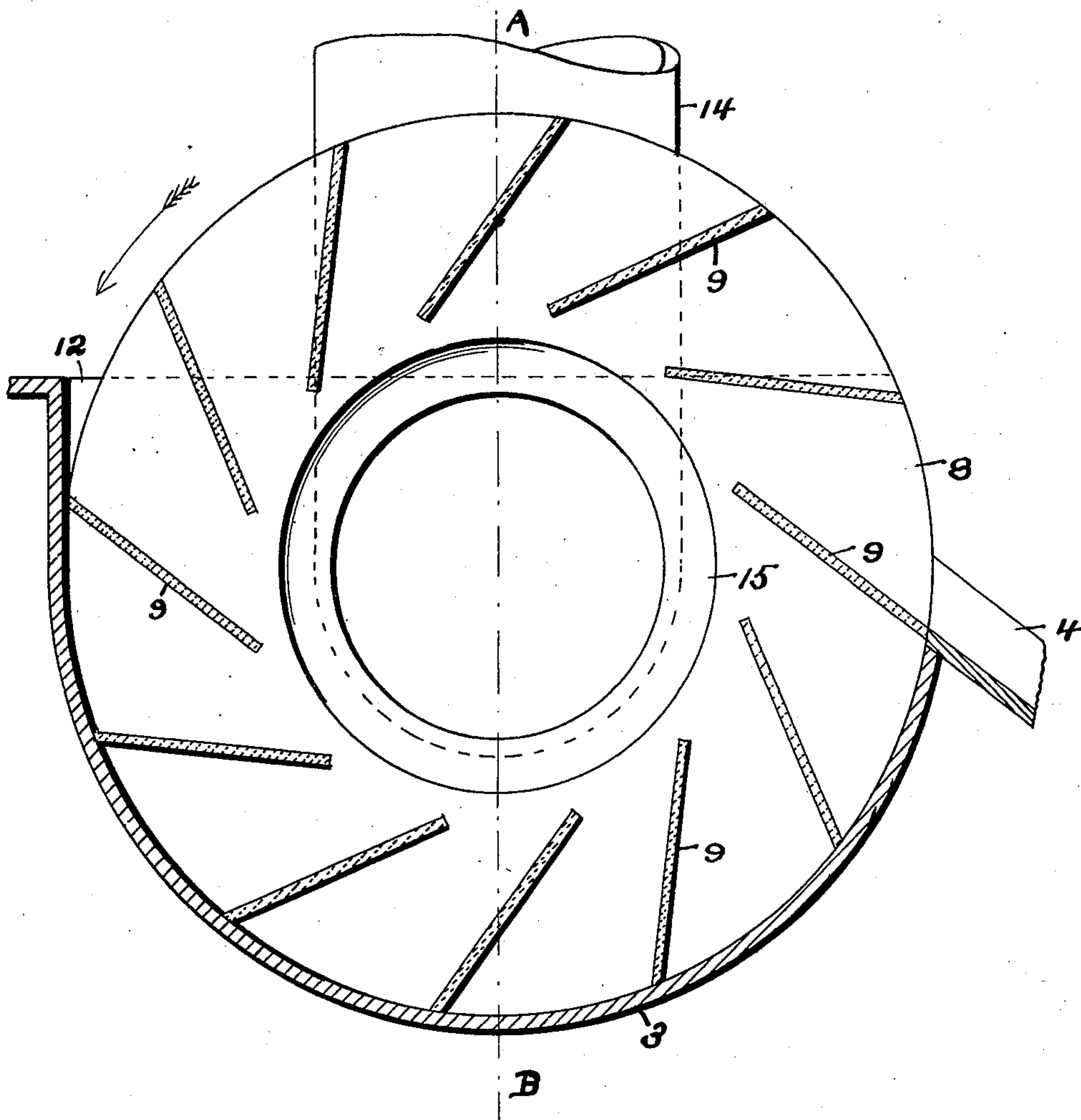


Fig. 3.

Witnesses.

J. P. Dejon
Florence H. Monk

Inventor.

Edwin A. Reeves
by George E. Hall
Attorney.

No. 678,033.

Patented July 9, 1901.

E. A. REEVES.
AUTOMATIC VENDING MACHINE.

(Application filed Feb. 12, 1901.)

(No Model.)

4 Sheets—Sheet 4.

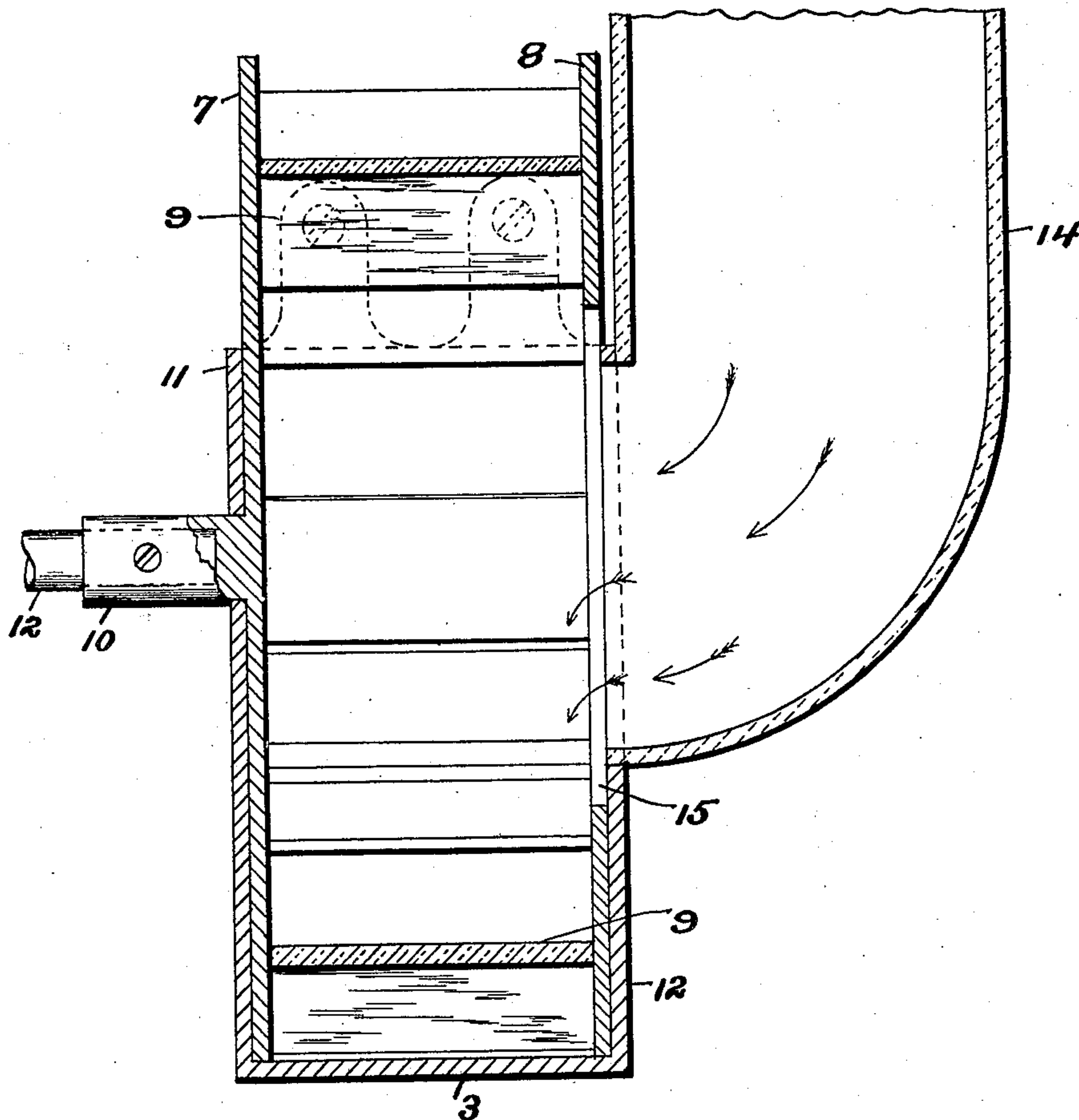


Fig. 4.

Witnesses.

J. P. Dejon

Frederic H. Monk

Inventor.

Edwin A. Reeves

by George E. Hall

Attorney.

UNITED STATES PATENT OFFICE.

EDWIN A. REEVES, OF NEW HAVEN, CONNECTICUT.

AUTOMATIC VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 678,033, dated July 9, 1901.

Application filed February 12, 1901. Serial No. 47,064. (No model.)

To all whom it may concern:

Be it known that I, EDWIN A. REEVES, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Automatic Vending-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in automatic vending-machines in which a predetermined quantity of merchandise is automatically delivered by a coin-actuated mechanism.

It is the object of my invention, among other things, to construct a machine of this character which will vend crushable merchandise without damage or breakage, to provide a positively-actuated machine which will successively deliver equal quantities of merchandise, to so design the operative mechanism that it will be impossible for the merchandise to clog or impair its operation, and, further, to perform these several functions with mechanism that can be economically constructed and readily assembled.

To these and other ends my invention consists in the automatic vending-machine having certain details of construction and combination of parts, as will be hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, in which like numerals designate like parts in the several views, Figure 1 is a front elevation of my improved machine. Fig. 2 is a side elevation thereof with the case, hopper, and coin-chute partly in section. Fig. 3 is a sectional elevation of the drum and its adjacent parts, and Fig. 4 is a transverse sectional elevation thereof upon line A B of Fig. 3.

The automatic vending-machines now made for vending crushable merchandise are defective in that the parts crush and bruise the merchandise, so that when delivered the goods are damaged. The several parts also are so constructed and operate in relation to each other that the merchandise is frequently jammed in between them, which either stops

the machine or a smaller quantity of merchandise is delivered than is designed. In my invention these and many other disadvantages in the present machines are overcome by having an intermittently-rotary drum provided with a plurality of paddle-arms, forming compartments therebetween of uniform size, rotatable in a trough filled with merchandise, and mechanism actuated by a coin to revolve this drum a predetermined portion of its revolution and bring successively one of the said compartments and paddle-arms in line with a trough or delivery-chute upon which the merchandise is delivered.

Referring to the drawings, the numeral 1 designates the case, which can be of any preferred form or material, and 2 the cover, which is hinged thereto and provided with any suitable locking device (not shown) for securing the same. To the interior of the case is attached a semicircular trough having side plates 11 and 12 and a bottom plate 3, and connected with and leading from said trough is a delivery-chute 4, which terminates at the bottom of the case opposite the receiver 5. Revolvable within this trough is a drum 6, which is constructed with a side plate 7, having a hub 10 thereon, which is rotatable within the trough-plate 11 and secured to the arbor 22 of the operating mechanism, a side plate 8 having an opening 15 there-through, and a plurality of paddles 9, fixed to and connecting said side plates and forming a plurality of compartments therebetween, with the outer ends thereof flush with the periphery of said plates. The paddles 9 are arranged at a sufficient angle to the diameter of the drum to form an inclined plane for the merchandise to roll down onto the delivery-chute when the paddles are brought into register therewith. (See Fig. 3.) Within the upper portion of the case is secured a hopper 13, having a tapering bottom, which is connected with a feed-chute 14, fastened to the trough-plate 12, with the opening in the bottom thereof opposite the opening 15 in the drum-plate 8. The detailed construction of the hopper and feed-chute is immaterial to

my invention, as any form of mechanism for a merchandise-supply to the trough will operate equally as well as the one herein shown.

Any preferred style of mechanism—such as 5 clock mechanism, electrical devices, or numerous other mechanical means—can be used to intermittently rotate the drum 6, and I do not desire, therefore, to be limited to any special form thereof; but the mechanism herein 10 shown (not in detail) is clock mechanism actuated by springs, which are wound in the usual manner by keys which engage the spindles 16, projecting through the front of the case. This mechanism is provided with the 15 usual gears and pinions, which actuate the arbor 22, to which the drum is connected. Intermittent rotary clock mechanism is old and is invariably actuated by a trip-lever, which in the drawings is designated 17. By 20 depressing the trip-lever 17, Fig. 1, the mechanism is actuated and the spindle 12 is revolved a portion of a revolution corresponding to the number of paddles in the drum. I have not shown the details of this clock mechanism, as its construction is old in the art, 25 and the particular mechanism for actuating the drum I do not claim as being a part of my invention.

The trip-lever 17 is bent so as to be directly under the coin-chute 18, which opens 30 through the slot 19 in the front of the case, and beneath said chute and lever is a coin-receiver formed by the walls 19 and into which the coins drop.

The operation of my device is as follows: 35 The cover 2 is raised, exposing the hopper, which is filled with merchandise that falls by gravity through the bottom thereof into the feed-chute 14 and thence through the 40 opening 15 in the side plate 8 and is deposited in the trough 3, filling the trough and all the compartments between the several paddles which are beneath the feed-chute. A coin now placed in the coin-chute 18 through the 45 slot 19 drops upon the end of the trip-lever 17, depressing the same a sufficient distance to actuate the clock mechanism and impart a partial rotation to the spindle 12 and through it to the drum 6. The coins after tripping 50 the lever 17 drop into the coin-receiver and are removed therefrom through the door 20 in the front of the case. The rotation of the drum 6 within the trough 3 moves the paddles in a rotary path and the merchandise 55 in front thereof is elevated thereon and falls upon the delivery-chute 4 during its rotation until the paddle is in a direct line with the bottom of said chute, as shown in Fig. 3, when the mechanism automatically stops 60 itself and the merchandise remaining upon the paddle rolls onto said chute and is delivered into the receiver 5, where it can be removed by the operator.

From this description it is apparent that 65 my machine is operated by simply inserting a

coin in the coin-chute, and the mechanism and the drum are automatically actuated thereby, and the partial rotation of the drum scoops out a predetermined quantity of merchandise from the trough, which is delivered to 70 the operator.

This machine is especially adapted for merchandise such as nuts, candies, &c., as no merchandise can work into the moving parts and be crushed or damaged, the paddles simply pushing the merchandise along the bottom 75 of the trough 3, and if its contour is round it will roll readily in front of the paddles and be delivered without damage. The arrangement of the hopper and feed-trough 80 is such that the trough is always filled with merchandise and the paddles will each time deliver the same quantity.

There are minor changes and alterations that can be made within my invention, and 85 I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but claim all that falls fairly within the spirit and scope 90 of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a merchandise-vending machine, the combination with a vertical receiving-trough; 95 of a drum having pockets open at their inner and outer ends, operative within said trough; a feed-chute terminating opposite an opening in said drum between the inner ends of said pockets; a delivery-chute leading from said 100 trough to the exterior of the case; and means for intermittently rotating said drum so as to bring the said pockets successively in line with the said delivery-chute.

2. In a merchandise-vending machine, the 105 combination with a vertical receiving-trough; of a drum having pockets open at their inner and outer ends, operative within said trough; a hopper adapted to receive a supply of merchandise; a feed-chute leading from said 110 hopper and terminating opposite an opening in the side of said drum between the inner ends of said pockets; a delivery-chute leading from the said trough to the exterior of the case; and means for intermittently rotating 115 said drum so as to bring the said pockets successively in line with the said delivery-chute.

3. In a merchandise-vending machine, the combination with a vertical receiving-trough; 120 of a drum operative therein and having a plurality of paddles between the sides thereof forming compartments therebetween, which compartments are open at both ends, one of the sides of said drum having an opening therethrough between the inner ends of said 125 paddles; a feed-chute terminating opposite the said opening, whereby merchandise is conveyed into said trough and fills the lower compartments of said drum; a delivery-chute leading from said trough; and means for in- 130

termittently rotating said drum, whereby the paddles are successively brought into line with said delivery-chute, and forming an extension thereof.

- 5 4. In a merchandise-vending machine, the combination with the case 1; of a receiving-trough; a drum 6 operative therein; mechanism for intermittently rotating said drum; a hopper 13 within said case; a feed-chute
10 14 leading from said hopper to said trough;

and a delivery-chute 4 leading from the said trough to the said case, all constructed and operating substantially as described.

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

EDWIN A. REEVES.

Witnesses:

GEORGE E. HALL,
WALLACE S. MOYLE.