

Dec. 22, 1931.

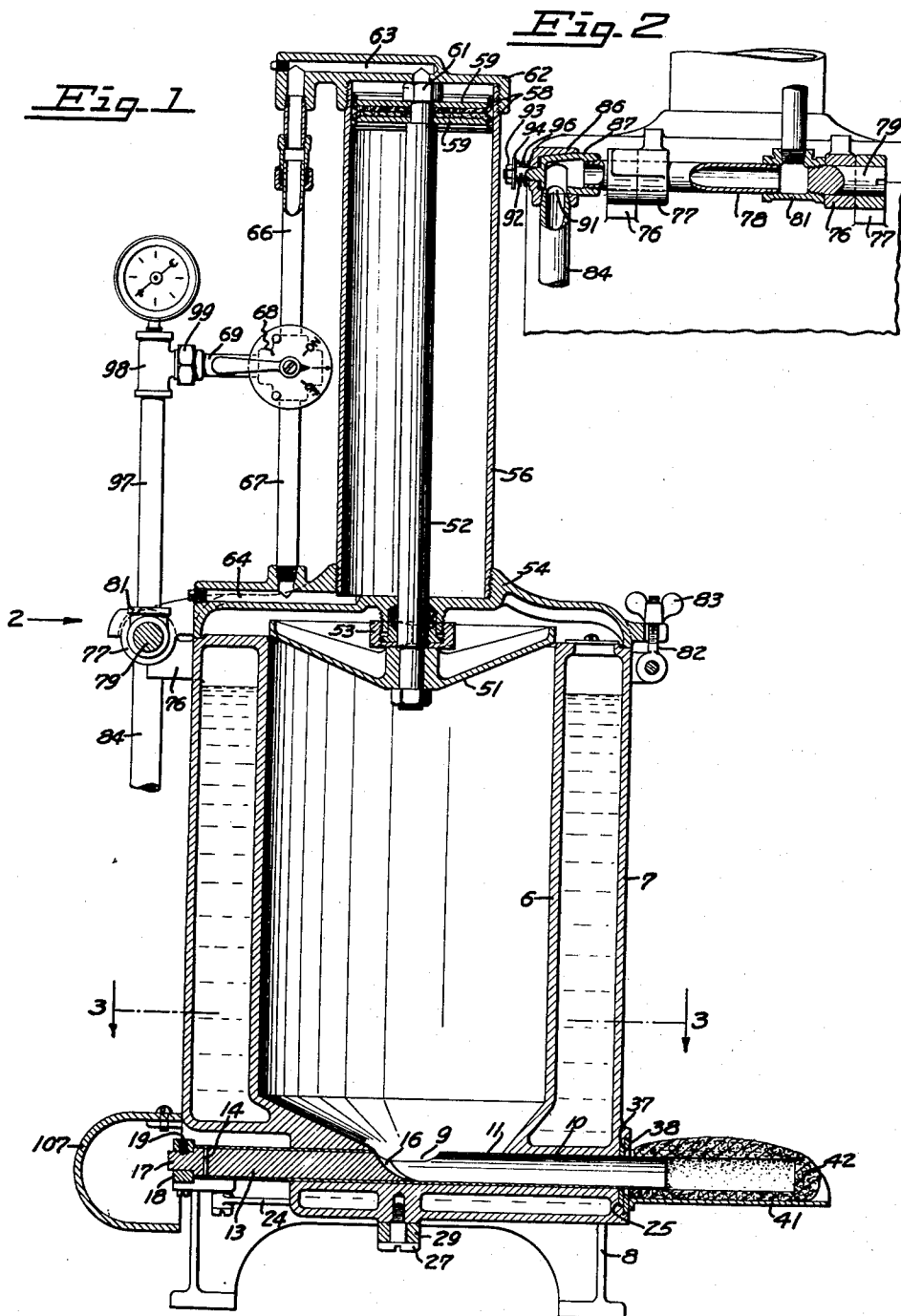
J. R. SKOVERSKI

1,837,592

DISPENSING MACHINE

Filed May 9, 1928

2 Sheets-Sheet 1



INVENTOR
JOHN R. SKOVERSKI
Charles S. Evans
BY HIS ATTORNEY.

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2 Sheets-Sheet 2

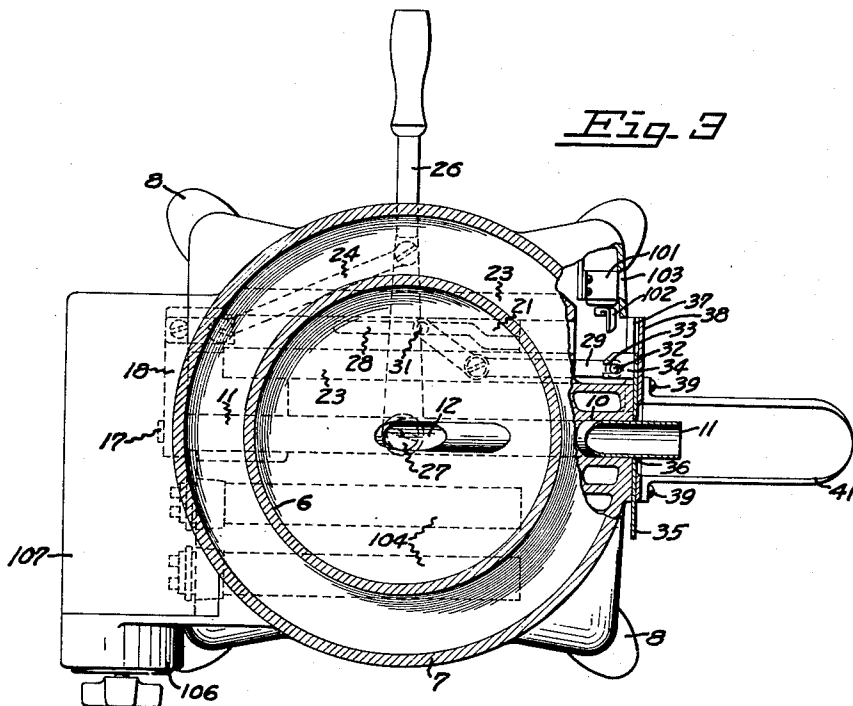


Fig. 3

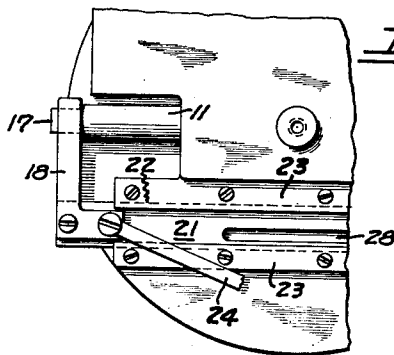


Fig. 4

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UNITED STATES PATENT OFFICE

JOHN R. SKOVERSKI, OF BERKELEY, CALIFORNIA, ASSIGNOR OF ONE-HALF TO GEORGE H. ROBERTS AND ONE-HALF TO JOSEPH SCHOR, BOTH OF SAN FRANCISCO, CALIFORNIA

DISPENSING MACHINE

Application filed May 9, 1928. Serial No. 276,332.

My invention relates to dispensing machines, and particularly to machines for dispensing individual portions of food products in sandwich rolls.

5 An object of my invention is to provide a device for filling rolls with minced or semi-fluid food products in a convenient and appetizing manner.

Another object of my invention is to provide a dispensing machine which will minimize wastage of the product dispensed.

Still another object of my invention is to provide a machine which is easily kept clean and sanitary and which protects the contained food product from contamination.

My invention possesses other objects and valuable features, some of which will be set forth in the following description of my invention which is illustrated in the drawings forming part of the specification. It is to be understood that I do not limit myself to the showing made by the said description and drawings, as I may adopt varying forms of my invention within the scope of the claims.

Referring to the drawings:

Figure 1 is a vertical axial sectional view of the machine of my invention.

Figure 2 is a view, partly in section, of the hinge joint of the cover of the same, the direction of the view being shown by the arrow 2 of Figure 1.

Figure 3 is a transverse sectional view, of the machine, the plane of section being indicated by the line 3—3 of Figure 1.

Figure 4 is a fragmentary view of the bottom of the machine, showing the arrangement of the slide and nozzle operating mechanism.

Considered broadly, my invention comprises a container for the material to be dispensed, which is provided with an axially movable discharge nozzle. Means are provided for extending and retracting this nozzle, and the parts are so arranged that communication between the container and nozzle is opened in time with its extension. Means may be provided for exerting pressure upon the material to force it more rapidly thru the nozzle, and there is also preferably provided means for preventing the emptying of mate-

rial retained in the nozzle when it is in the retracted position.

In its preferred form the machine is used for dispensing such foods as chile-con-carne, hash, minced beef or other products of similar consistency. A roll, previously hollowed out, is placed in front of the nozzle. The nozzle is then extended, entering the roll and injecting a portion of the food product therein, cleanly and without waste. When the nozzle is retracted the operation is complete; the further ejection of material from the hopper is stopped and the discharge orifice is closed, preventing both wastage of the material and its contamination by dust or insects. The entire operation requires but a few seconds, and many people or few may be served with equal economy of time and material.

In detail, a preferred form of my invention comprises a container 6 of hopper-like form, conveniently a casting integral with a water-jacket 7 and mounted on legs 8. In the bottom of the casting and communicating with the interior of the container thru the port 9 is a passage 10 in which the tube 11 is slidably mounted to form the nozzle of the machine. A port 12 in the tube 11 registers with the port 8 when the tube is slid forward or extended, thereby opening a communication between the container and the nozzle which is closed by the non-registry of the ports when the tube is retracted.

A plug 13 closes the posterior end of the tube and is secured by the pin 14, the inner end 16 of the plug being shaped to form a smoothly curved passageway from the port 12 into the nozzle. A tang 17 is formed on the outer end of the plug, and a yoke 18 is secured to the tang as by the set screw 19.

The yoke is bolted to a slide 21 working in a groove 22 in the base of the container and secured therein by the gibbs 23. A link 24 connects the yoke to a hand-lever 26 which is pivotally fastened beneath the center of the container 6 by the screw 27.

A camway 28 is formed in the bottom of the slide. The camway is in the form of a groove having two straight portions running longitudinally of the slide and connected by a short diagonal portion.

A bent lever 29 is pivotally mounted to the base of the container adjacent the slide and a pin 31 in the end of the lever works in the camway. A pin 32 in the other end of the lever is engaged by a slot 33 in a block 34 secured to the slide 35, which has in it a hole 36 of a size adapted easily to pass the nozzle 11.

The slide 35 works in a slideway 37 formed in the lower part of the face of the container and over the orifice of the passage 10. It is held in place by a cover-plate 38, the screws 39 with which it is screwed also serving to hold a trough or guide 41 for receiving the roll 42 which the machine is designed to fill.

It will thus be seen that movement of the hand-lever 26 imparts a rectilinear motion to the nozzle 11 and the slide 21. The disposition of the parts is such that as the nozzle is brought forward the pin 31 engages the diagonal portion of the camway just before the end of the nozzle reaches the slide 36. Thru the action of the lever 29 this causes the slide to move to bring the hole 36 into position in line with the end of the nozzle. At the same time the ports 8 and 11 are brought into register so that the material within the hopper can pass into the rolls. When this operation is complete reverse motion of the hand-lever retracts the nozzle, and the pin and camway cooperate to close the slide immediately the end of the nozzle has receded within the passage 10, thus preventing leakage or contamination of the material within the nozzle.

The materials which it is desired to dispense may be so viscous as not to flow readily thru the nozzle, and means are, therefore, provided to apply pressure within the container to eject them.

A plunger 51 fits slidably within the container, and is mounted on the end of a piston rod 52 which passes thru a gland 53 in a closure 54 which covers the container. On this closure, concentric with the piston rod, is mounted a cylinder 56 within which the piston attached to the rod 52 is fitted. The piston conveniently comprises a pair of cup-leathers 58 clamped between the washers 59 by the nut 61.

The cylinder is closed by a cylinder head 62, formed with a duct 63 therein ported into the upper end of the cylinder. A similar duct 64 is formed in the closure 54 and is ported into the lower end of the cylinder. These ducts are connected by the pipes 66 and 67 with the three-way cock 68; and the cock is arranged so that a pressure fluid, conducted thereto thru a pipe 69, may be directed into either end of the cylinder at will, the duct at the other end of the cylinder being opened at the same time for exhaust. This is a well known arrangement and the cock will, therefore, not be described in detail. The pressure fluid may be either water, air, carbon dioxide or other fluid as conven-

ience may dictate. When the machine is in operation the valve 68 is left in position to direct the pressure continuously into the top of the cylinder, so as to force the material from the cylinder by operation of the hand-lever alone. When the container becomes empty, the reversal of the cock quickly raises the plunger, so that the closure may be demounted.

To facilitate the latter operation the container and closure are provided with lugs 76 and 77 respectively, the lugs cooperating to form a hinge. As a pin for this hinge the pipe 78 is used, together with the plug 79 which is screwed into one arm of a T 81. These parts are fixed in the brackets 77 to rotate with the closure. The closure is held shut by the shackle-bolt 82 and wing-nut 83.

The pressure fluid is led to the cylinder thru the hinge. The service pipe 84 is screwed to one arm of an L fitting 86 whose other arm has a smooth tapered bore. Within this bore is fitted a hollow tapered plug 87, screwed to the end of the pipe 78 and provided with a port 91 which registers with the inlet opening of the L. A stud 92 on the taper plug carries a nut 93 and washer 94 to compress the spring 96 for holding the taper-joint tight, as is customary in cocks and similar devices. The pressure fluid passes from the service pipe, thru the movable joint thus formed, the pipe 78, and the T 81, to a pipe 97 connecting from the stem of the T to a second T 98 which connects to the union 99 on the end of the pipe 69, and thence to the cock 68 and the cylinder.

A counting mechanism 101 may be mounted where its trip 102 is engaged by the slide 21, and its dial observed thru the aperture 103. As each reciprocation of the slide represents a portion served this gives a valuable check on the use of the machine. The rolls used may be of the ordinary kind, hollowed out by means of an auger, or may be specially formed for the purpose.

In order that the food may be served in a palatably heated condition, electric heating elements 104 of the bayonet immersion type are inserted in the lower portion of the water-jacket. These are controlled by a snap-switch 106, mounted on the end of a shield 107 which is arranged to cover the electrical wiring of the device and the projecting parts of the nozzle reciprocating mechanism.

I claim:

1. A dispensing machine comprising a container having a wall enclosing a passage ported into the container, a tube slidably arranged in said passage and having a port adapted to cooperate with the container port, means for reciprocating said tube from a position within the passage to a position extending therefrom, and means for closing the outer

end of the passage when the tube is there-within.

2. A dispensing machine comprising a container having a wall enclosing a passage port-
5 ed into the container, a tube slidably ar-
ranged in said passage and having a port
adapted to cooperate with the container port,
means for reciprocating said tube from a po-
10 sition within the passage to a position extend-
ing therefrom, and a slide connected for
movement in time with said tube for closing
the outer end of the passage when the tube
is therewithin.

3. A dispensing machine comprising a con-
15 tainer, a discharge nozzle for said container,
valve mechanism cooperating with said dis-
charge nozzle, a demountable closure for the
container, a pressure cylinder arranged on the
closure, a piston in said cylinder, a plunger
20 slidable within the container and arranged
for movement with said piston, and means
for admitting pressure fluid into either end
of said cylinder.

4. A dispensing machine comprising a con-
25 tainer, an axially movable discharge nozzle
for said container, a lever for extending and
retracting said nozzle, a slide movable to cov-
er the end of said nozzle when in the retracted
position, and means actuated by said lever
30 for moving said slide in time with the move-
ment of the nozzle.

5. A dispensing machine comprising a con-
tainer, an axially movable discharge nozzle
for said container, a lever for extending and
35 retracting said nozzle, a slide movable to
cover the end of said nozzle when in the re-
tracted position, a cam movable with said
lever, and a follower engaging said cam for
moving the slide.

40 6. A dispensing machine comprising a con-
tainer, an axially movable discharge nozzle
for said container, a lever for extending and
retracting said nozzle, a slide movable to cov-
er the end of said nozzle when in the retract-
45 ed position, a cam movable with said lever,
a second lever connected with the slide, and
a cam follower fixed to said second lever for
moving said slide in time with the movement
of the nozzle.

50 In testimony whereof, I have hereunto set
my hand.

JOHN R. SKOVERSKI.