C. W. BUNDE.

CANDY MOLDING MACHINE.

APPLICATION FILED MAR. 18, 1918.

1,331,693.

Patented Feb. 24, 1920.

2 SHEETS—SHEET 1.

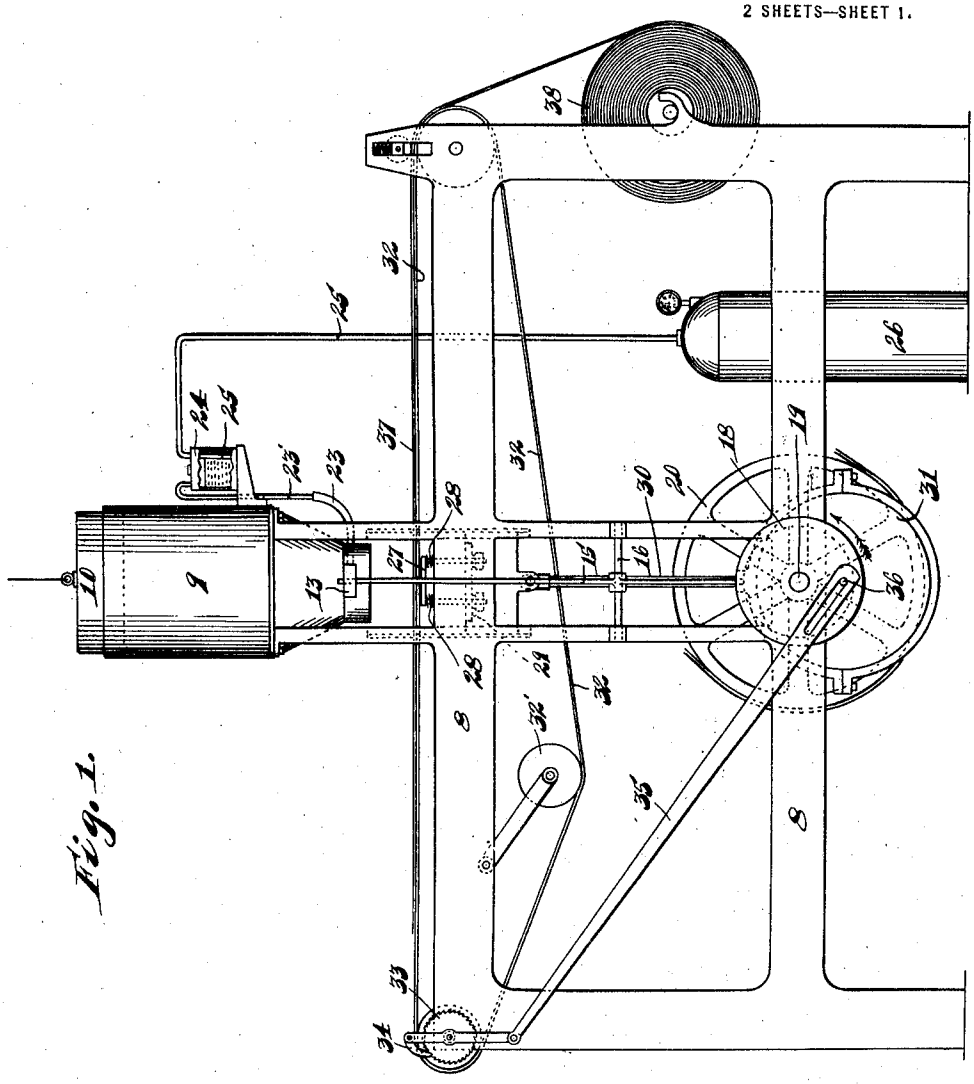


Fig. 1.

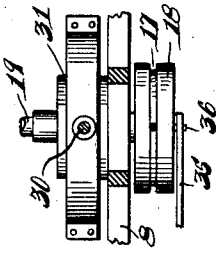


Fig. 2.

Witnesses:
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B. G. Richards

Inventor:
Claude W. Bunde,
By Joshua R. H. Potts
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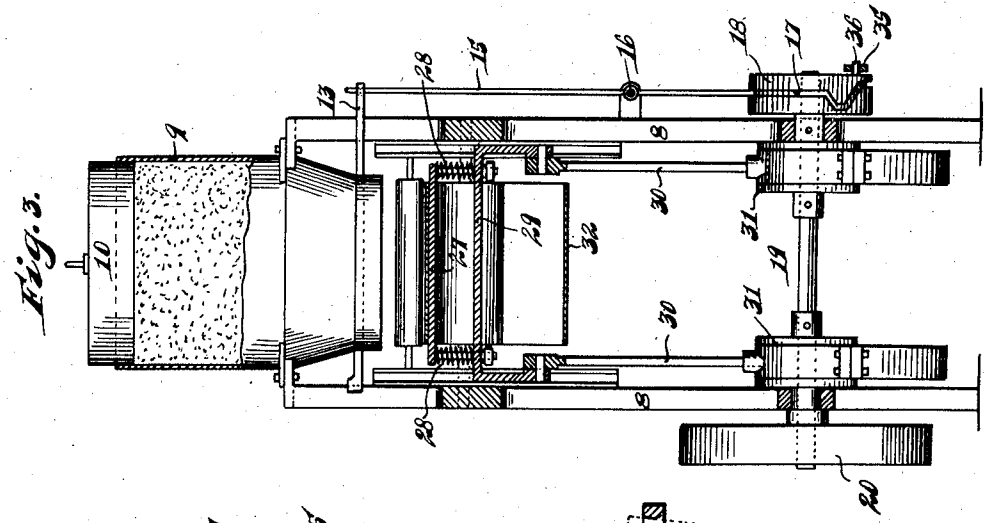


Fig. 3.

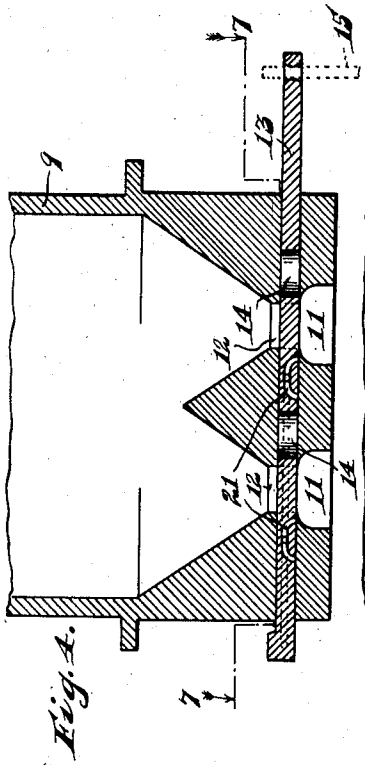


Fig. 4.

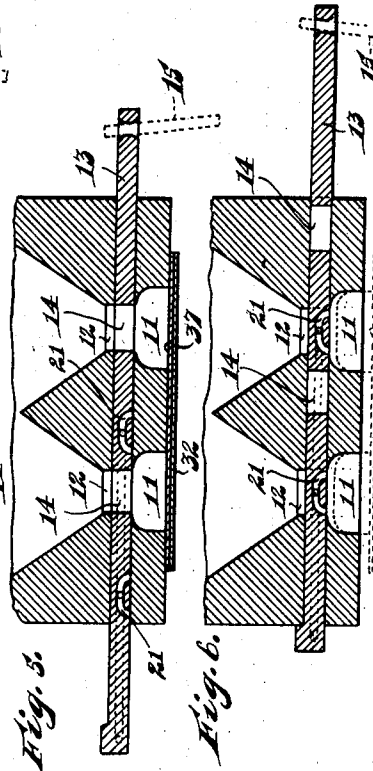


Fig. 5.

Fig. 6.

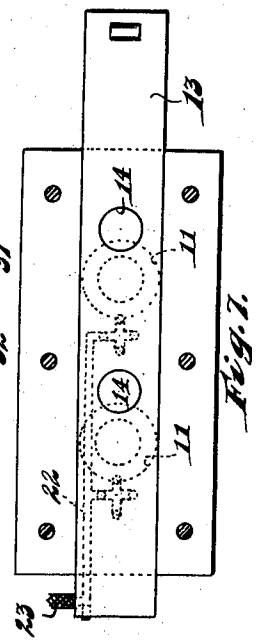


Fig. 7.

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UNITED STATES PATENT OFFICE.

CLAUDE W. BUNDE, OF CHICAGO, ILLINOIS.

CANDY-MOLDING MACHINE.

1,331,693. Specification of Letters Patent. Patented Feb. 24, 1920.

Application filed March 18, 1918. Serial No. 223,215.

To all whom it may concern:

Be it known that I, CLAUDE W. BUNDE, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Candy-Molding Machines, of which the following is a specification.

My invention relates to improvements in candy molding machines and has for its object the provision of an improved construction of this character which is of simple construction and highly efficient in operation.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side view of a molding machine embodying the invention,

Fig. 2, a detail view showing an eccentric and cam employed in the construction,

Fig. 3, a transverse section of the machine,

Figs. 4, 5 and 6, detail sections illustrating different positions of a slide valve employed in the machine, and

Fig. 7, a section taken on line 7—7 of Fig. 4.

The preferred form of construction as illustrated in the drawings comprises a suitable frame or standard 8 having a feed hopper or receptacle 9, arranged centrally over the top thereof, said hopper being equipped with a weighted piston 10 adapted to exert pressure on material in said hopper. Two molding chambers 11 are formed at the bottom of hopper 9 in open communication therewith through passages 12, and a slide valve 13 is provided for controlling said passages. The valve 13 is provided with two ports 14 arranged to be thrown into and out of registration with passages 12, and said valve is operated by means of a lever 15 pivoted at 16 to the frame of the machine and having its lower end running in a cam groove 17 in the periphery of a cam disk 18, as shown, the arrangement being such as to cause reciprocation of the slide valve 13 upon revolution of the cam 18. Cam 18 is mounted on the master shaft 19 of the machine, said master shaft being driven by means of a belt operated on a pulley 20.

The valve 13 is provided with two sets of air ports 21 in communication with a passage 22 supplied with air under pressure through a flexible hose or tube 23. Tube 23 connects with a pipe 23′ leading into the upper portion of an oil chamber 24, which is closed at the top, and another pipe 25 leads from the lower portion of the oil chamber 24 to a compressed air supply tank 26, the arrangement being such that when slide valve 13 moves into the position indicated in Fig. 5, the mold chambers 11 will be filled with the candy material, which is placed in hopper 9 in a plastic state. Then the supply of candy is cut off by the movement of valve 13, and ports 21 brought into the position indicated in Fig. 6, to force the molded candy downwardly from the mold chambers 11, as indicated in Fig. 6, the oil carried away by the air passing through oil chamber 24 serving to lubricate the walls of the mold chambers, to prevent sticking of the candy.

A combined closure and supporting plate 27 is arranged under the mold chambers 11 and yieldingly supported by means of springs 28 on a vertically reciprocating table 29, connected by links 30 with eccentrics 31 on shaft 19, the arrangement being such that when the mold chambers 11 are being filled with material, the closure and support 27 is yieldingly held against the underside of hopper 9 to form a closure for the open lower ends of mold chambers 11. When valve 13 shifts to admit the air into the mold chambers, the support 27 is withdrawn to permit of the discharge of the molded candy from said mold chambers. An endless belt conveyer 32 is arranged to travel across the frame 8 of the machine over the closure and support 27, and is equipped with a weighted tension roller 32′ which maintains the tension in said conveyer, which permits of the movements of plate 27. The conveyer 32 operates over suitable rollers as indicated, and is intermittently driven by means of a ratchet 33 and pawl arm 34 oscillated by a link 35 having a slot and pin connection 36 with the face of the cam member 18, as will be readily understood, to produce an intermittent feed of the belt conveyer 32. A strip of paraffined paper 37 is arranged to travel

across the top of plate 27 being withdrawn from a roll 38 by the action of said conveyer. The strip 37 is thus arranged to receive the molded portions of candy discharged from the molding chambers 11 at each operation, and serves as a means for ready removal of said candy and disposition of the same.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A molding machine comprising a molding chamber open at the bottom; means at the top of said chamber for filling the same with material to be molded; a combined closure and support arranged under said chamber and mounted to be reciprocated vertically to serve as a closure for said chamber, and as a support for the molded material upon discharge thereof; and a belt conveyer traveling over said closure, substantially as described.

2. A molding machine comprising a molding chamber; means for filling said chamber with material to be molded; means for discharging the molded material from said chamber; a combined closure and support arranged to be reciprocated toward and away from said chamber, and adapted to serve as a closure for the discharge side thereof during filling of said chamber, and as a support for the molded material upon discharge thereof; and a belt conveyer traveling over said closure, substantially as described.

3. A molding machine comprising a molding chamber; means for filling said chamber with material to be molded; means for introducing gas under pressure to discharge the molded material from said chamber; and means for introducing lubricating material into said gas, substantially as described.

4. A molding machine comprising a molding chamber; means for filling said chamber with material to be molded; means for introducing air under pressure to discharge the molded material from said chamber; and means for introducing lubricating material into said air, substantially as described.

5. A molding machine comprising a feed hopper; a molding chamber in communication with said feed hopper; a valve controlling said communication; means for exerting pressure on material in said hopper; means for introducing gas under pressure to discharge the molded material from said chamber; and means for introducing lubricating material into said gas, substantially as described.

6. A molding machine comprising a feed hopper; a molding chamber under pressure and in communication with said feed hopper, said chamber being open at the bottom; a slide valve controlling said communication; a vertically reciprocating combined closure and support under said chamber; a belt conveyer traveling over said closure; and means controlled by said valve for admitting air under pressure to said chamber to discharge the molded material therefrom, substantially as described.

7. A molding machine comprising a feed hopper; a molding chamber under pressure and in communication with said feed hopper, said chamber being open at the bottom; a slide valve controlling said communication; a vertically reciprocating combined closure and support under said chamber; a belt conveyer traveling over said closure; means controlled by said valve for admitting air under pressure to said chamber to discharge the molded material therefrom; and means for supplying oil to said air, substantially as described.

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

CLAUDE W. BUNDE.

Witnesses:
HELEN F. LILLIS,
B. G. RICHARDS.