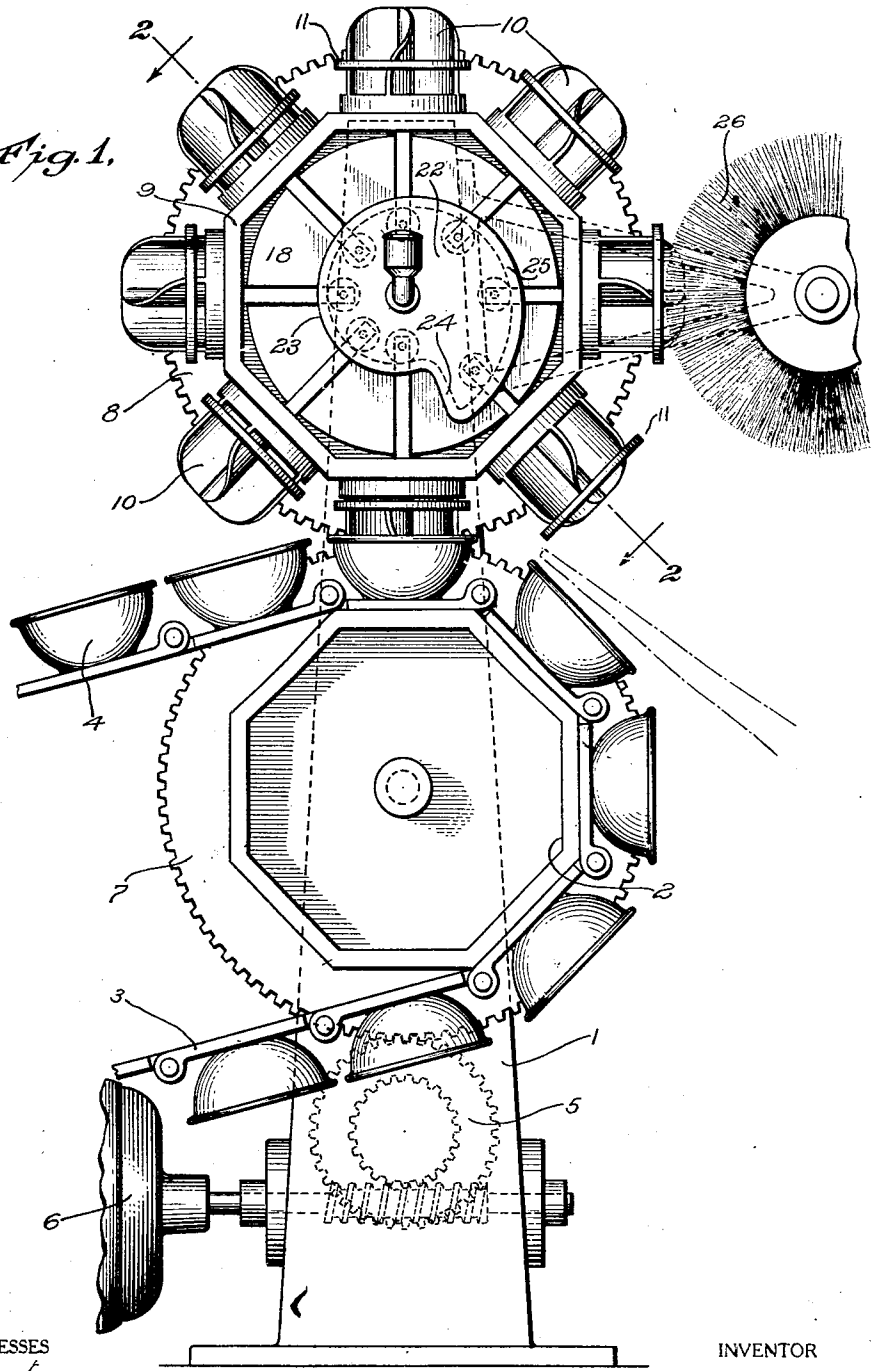
April 9, 1929. C. GOTTFRIED 1,708,758

THROW-OFF DEVICE FOR VIENNA ROLL FORMING MACHINES

Filed Oct. 25, 1926 2 Sheets-Sheet 1

Fig. 1.



WITNESSES

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Fig. 2.

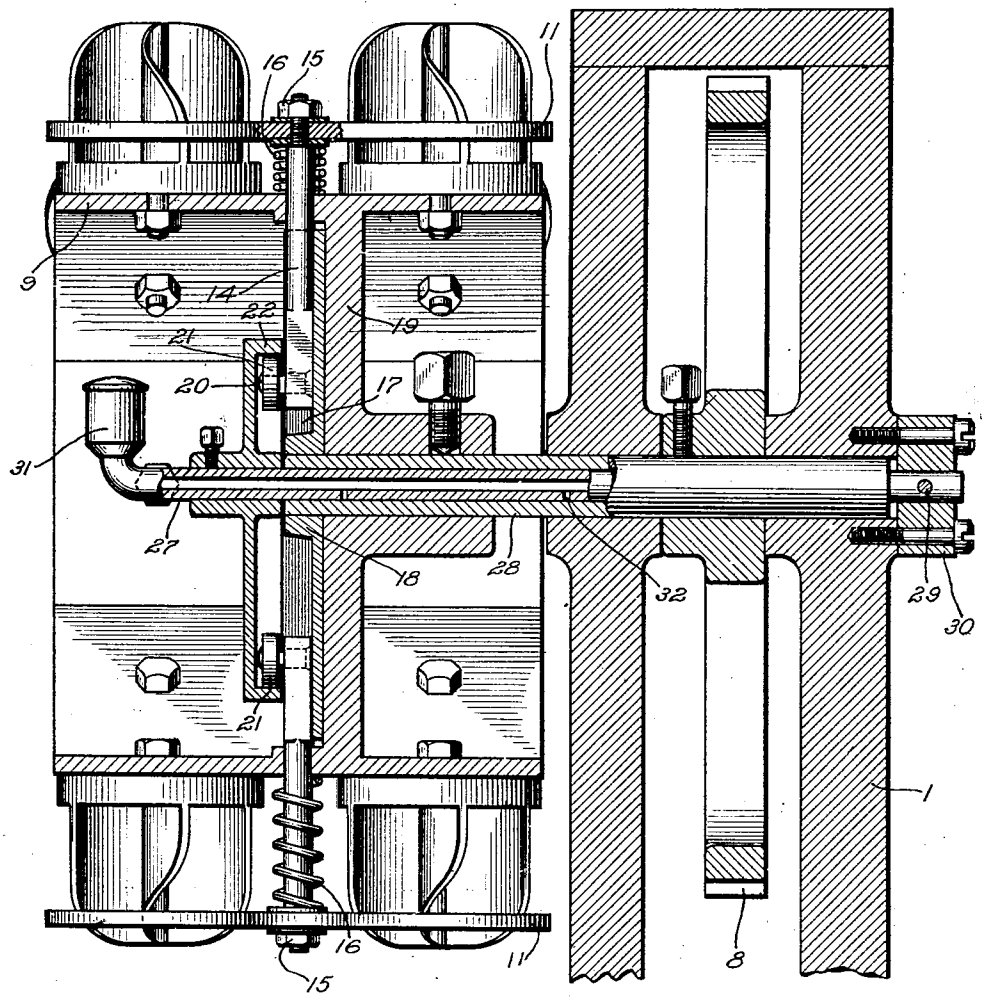
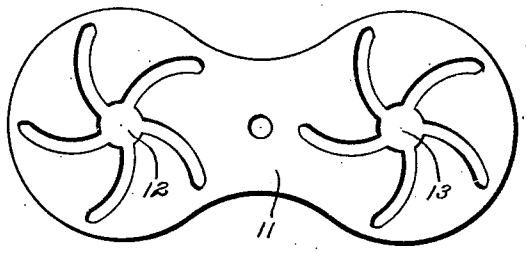


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES GOTTFRIED, OF NEW YORK, N. Y.

THROW-OFF DEVICE FOR VIENNA-ROLL-FORMING MACHINES.

Application filed October 25, 1926. Serial No. 144,032.

This invention relates to machines for forming Vienna rolls and particularly to an improved construction in machines of this type wherein the rolls are ejected immediately after being formed, the object being to present a structure which will automatically form the rolls and eject the same at a given point.

Another object of the invention is to provide in a Vienna roll forming machine, a series of ejecting rings associated with the forming dies and so actuated that they will force the rolls from the dies at a given point.

An additional object is to provide an improved structure over my co-pending application, Serial No. 76,047, now Patent No. 1,625,649.

In the accompanying drawings—

Figure 1 is an elevation of the principal part of a roll forming machine, the same being shown with an embodiment of the invention applied thereto.

Figure 2 is a sectional view through Figure 1, approximately on line 2—2, the same being on an enlarged scale.

Figure 3 is a plan view of one of the ejecting plates or rings.

Referring to the accompanying drawings by numerals, 1 indicates a standard and 2 a pulley adapted to carry the belt 3 which carries the roll supporting cups 4. The pulley 2 is rotated through the action of a train of gears 5 actuated by a suitable source of power, as for instance, an electric motor 6. The train of gears 5 operate the large gear 7 which is connected with pulley 2 whereby said pulley is actuated. The large gear 7 meshes with a second large gear 8, which second gear is of the same diameter as gear 7 and, consequently, moves the pulley structure 9 at the same speed as pulley 2. The parts just described are similar to certain parts in my patent No. 1,625,649 and, therefore, will not be further described. It will also be understood that a second pulley similar to pulley 2 is provided to assist in supporting belt 3, the same being fully disclosed in my patent heretofore mentioned.

In the present application, the invention resides in the association of parts and the particular construction involving means for forcing from the various dies 10 the rolls after they have been acted upon by the dies. It is to be noted that at some desired point, batches of dough are placed in the cups 4 and as they are moved to a point above the pulley 2, one of the dies 10 enters the cup and cuts or presses the dough into the desired shape. Usually this operation causes the dough to adhere to the die and, consequently, the same must be removed by the hand or some mechanism must be provided in order that the machine may work continually. In the accompanying drawings, ejecting means have been provided for ejecting or throwing off the rolls from the dies 10. This mechanism includes a throw-off plate 11 shown in detail in Figure 3. From Figure 2 it will be noted that the cups 4 are arranged in pairs and dies 10 are also arranged in pairs so that the plate 11 is provided with a pair of openings, namely, openings 12 and 13. These openings are of the proper shape to fit the various blades of the dies 10 whereby the plate 11 may be moved radially back and forth. It is, of course, evident that one row of cups 4 could be used or even more than two rows and the device would operate equally well. A reciprocating rod 14 is secured to the plate 11 by a suitable nut 15 and adjacent the point where the plate 11 is secured to rod 14 is arranged a spring 16 surrounding rod 14 and acting on the pulley 9 and on the plate 11 to tend to normally move the plate 11 outwardly. The rod 14 reciprocates in a suitable groove 17 in a plate 18 secured in any desired manner to the central web 19 of pulley 8. Near the inner end of rod 14 a stub shaft 20 is connected with the rod and on this stub shaft is mounted a wheel 21 which engages the inner face of the cam 22 whereby as the pulley 9 and associated parts rotate the rod 14 will be pulled inwardly at a given point and then forced outwardly by spring 16. It will be understood that the description of one rod 14 and associated parts will apply equally to all of these rods as there is provided a rod 14 for each pair of dies 10 and they all co-act with the same cam 22. It will be noted that cam 22 is formed with an arc-shaped section 23 which is provided with a sudden rise 24 and then a gradual lowering portion 25. When the various wheels 21 are operating on the arc-shaped portion 23, the various plates 11 are held in their innermost position but as soon as any particular wheel 11 reaches the rise 24, the spring 16 associated with that particular plate 11 will quickly force the plate 11 and associated parts to an outer position and thereby quickly throw off the roll which has been carried by that particular die 10. If desired, after the roll has been thrown off, butter or other oleaginous

material may be applied to the outer end of the die in any suitable manner, as for instance, by a brush 26.

From Figure 2 it will be noted that the cam 22 is rigidly secured to the hollow shaft 27 and said hollow shaft extends entirely through the tube 28 carrying pulley 9 and is secured by a pin 29 to the plate 30 which is bolted to one of the standards 1. An oil cup 31 is carried by the hollow shaft 27 and oil from this cup is adapted to pass through suitable apertures 32 so as to lubricate the hollow shaft 27.

What I claim is:

In a Vienna roll forming machine provided with a series of dies adapted to make an imprint on a roll while in the form of dough, said dies being arranged in two parallel circular rows with the dies of each row opposite each other so as to present pairs of dies operating simultaneously, a throw-off structure for each of said pairs of dies, said throw-off structure including a plate for each pair of dies, each plate being formed with two openings through which the respective dies extend, a rod rigidly secured to each plate at the center thereof, and means for causing the actuation of said rods immediately after the dies have performed their function for moving said plates to a throw-off position.

CHARLES GOTTFRIED.