

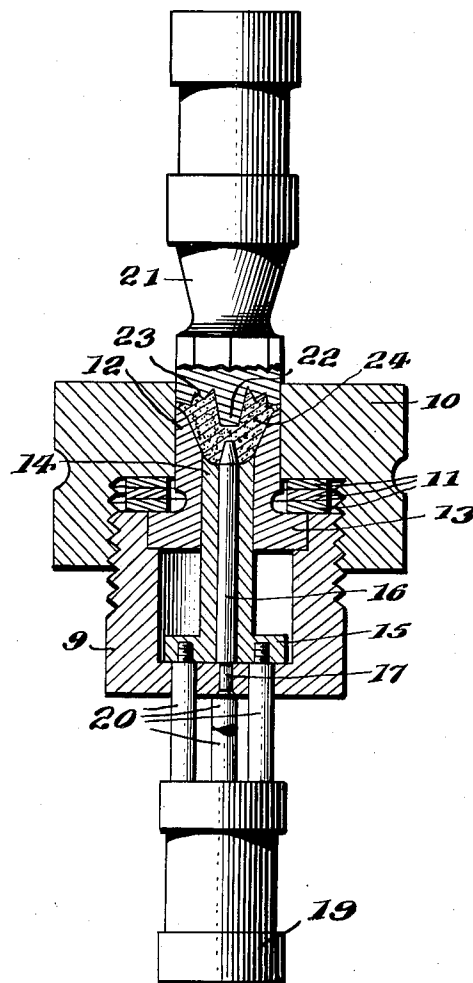
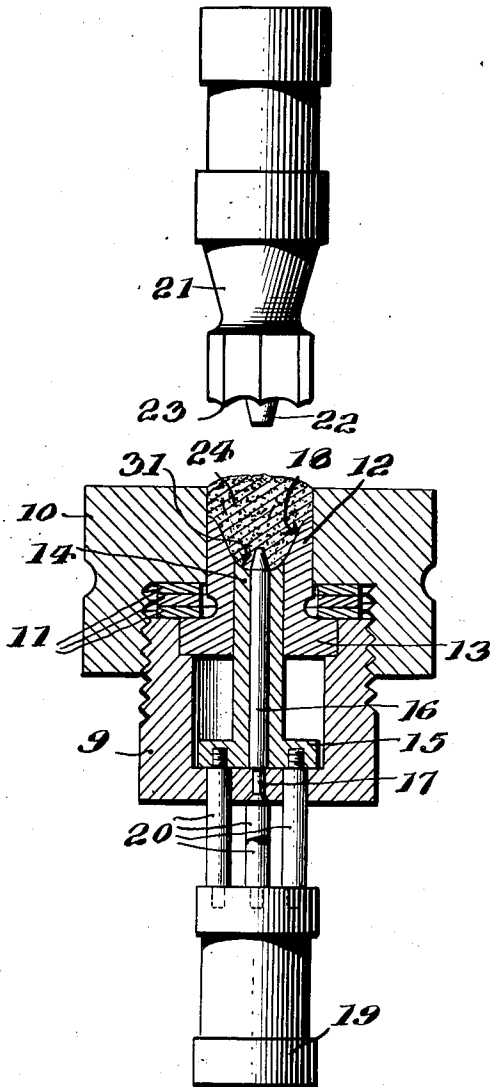
P. E. SCHRELL

ORNAMENTAL CANDLE HOLDER MANUFACTURE

Filed June 1, 1931

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Fig. 2.



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Fig. 3.

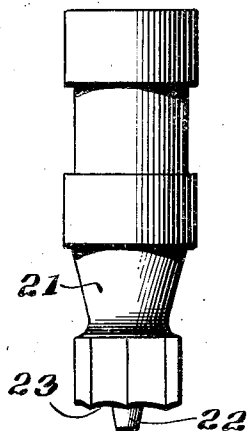


Fig. 4.

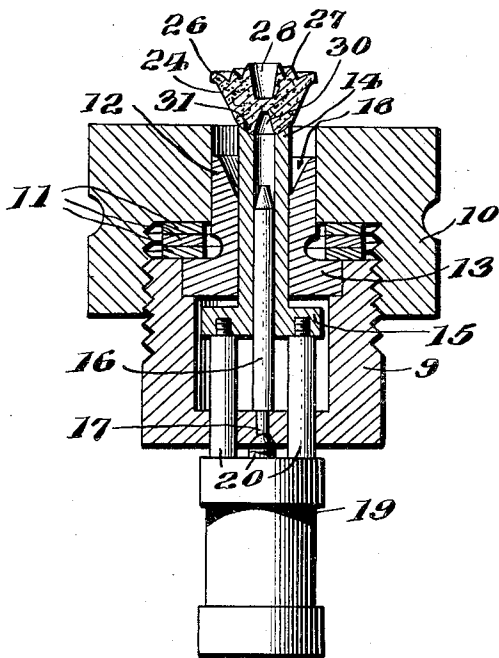
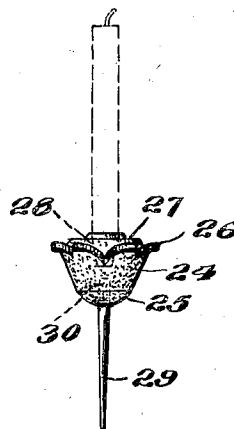
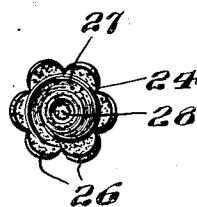


Fig. 5.



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ORNAMENTAL CANDLE HOLDER
MANUFACTURE

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Application June 1, 1931, Serial No. 541,388

4 Claims. (Cl. 18—16)

My invention relates to the construction and method of manufacture of what are sometimes called birthday cake candle holders. In the past it has been customary to manufacture such holders out of plastic composition or icing which is squirted on to a rotating wire form or socket member. This wire form provides a recess or socket for the candle and the stem of the form furnishes means for supporting the holder in a cake. As the icing is moist it is necessary to stack the holders when they are completed and allow them to dry for many hours before it is possible to pack them. While it is possible to make very attractive holders in this way, a considerable amount of skill is required on the part of the operators and the product is not uniform. It is also practically impossible to mark these holders with the name or trademark of the manufacturer.

I have accordingly endeavored to provide a construction which can be made in automatic machines in a uniform manner and at low cost. The present construction is the result of long years of experience in the manufacture of ornamental candle holders and represents the extreme simplification of design and details of manufacture.

According to my invention the holder consists of an integral body portion made out of a suitable composition such as powdered sugar and glycerine compressed into the desired shape and having an ornamental top with a central candle holding recess and tapered sides and a convex bottom with a central recess, in which is cemented or glued a wooden stem. The body is formed in suitable dies and automatically ejected in its finished state, the stem being inserted in a separate operation.

Fig. 1 is a vertical sectional view of a set of dies for forming the body of the holder according to my invention, the parts being shown in the position they would occupy at the beginning of one cycle of operation, namely, with the die filled with the loose material of which the body of the holder is to be made.

Fig. 2 is a similar sectional view showing the parts in the position which they occupy at the end of the forming stroke.

Fig. 3 is a similar view showing the punch retracted and the finished body in position to be knocked out or ejected.

Fig. 4 is a side view of a finished holder embodying my invention with a candle shown dotted in position.

Fig. 5 is a plan view of a candle holder embodying one design of my invention.

In the form shown the die holder consists of a cup-like base member 9 and an annular top or cover 10 adapted to be screwed on to the base. A number of washers 11 may be interposed to regulate the height of the cover or top member.

Inside of the holder is mounted a die member 12 having a flange 13 supported in the cup member 9. A plunger 14 is mounted in the cup member 9 and extends upwardly through the die member 12. In the position shown in Fig. 1 the base 15 of the plunger rests in the bottom of the cup member 9. A central pin 16 is secured at 17 in the bottom of the cup member and extends upwardly through the plunger 14 with its tip extending into the recess 18 formed by the concave upper end of the plunger 14, the conical interior wall in the upper end of the die 12 and the cylindrical wall within the upper edge of the top member 10.

The member 19 is vertically movable in the machine in any suitable manner (not shown) and is connected by rods 20 to the base 15 of the plunger 14, the rods being vertically reciprocable through the bottom of the cup member 9 for the purpose which will later appear.

The punch member 21 has a central pin portion 22 preferably somewhat tapered and an ornamented lower face 23. The pin projects below the face 23 so as to act in advance of the final compression.

The body 24 of the candle holder made on these dies has a convex bottom 25, inclined sides, flaring petals 26, an ornamental top 27 and a central candle holding recess 28. The stem 29 is preferably formed of wood sufficiently tapered at its lower end to facilitate its insertion into the top of a cake. The upper end of the stem is glued or otherwise cemented into a recess 30 in the bottom of the body of the holder.

In forming the body the dies start in the position shown in Fig. 1 and the composition to be used is filled into the recess 18 in any suitable manner. The punch member is then brought down to compress the composition into the position shown in Fig. 2 so that the body is molded or formed by a single action of the punch member. The member 19 is then actuated to lift the plunger 14 to the position shown in Fig. 3, thus ejecting the finished body of the candle from the die recess 18 and clearing the upper end of the pin 16 so that the body can be removed by a simple sideways motion of the hand or any suitable mechanism.

By adjusting the top or ring 10 up or down on

the cup or base 9 the size of the cavity 18 can be varied to hold the desired amount of the composition. This is highly desirable as the size of the particles affects the amount of possible compression.

The taper of the pin 22 and the pin 16 may be varied and in fact the drawings show an exaggerated amount.

The lower face 23 is designed to provide corrugations in the upper face of the holder body so as to better retain the candle "drip" and produce a slightly elevated central portion. The punch and die members are designed to form the recesses 28 and 30 before the final compression of the composition so as to avoid excessive stress which might have a tendency to crack the body.

By reason of the shape of the dies and the fact that the material is compacted under great pressure the body does not stick in the dies although it is made of material which would ordinarily be considered as somewhat sticky.

When the finished body has been ejected the plunger 14 is returned to the position shown in Fig. 1 whereupon another charge of the desired composition is fed into the recess 18 and the operation repeated.

As the bodies are complete the instant they are ejected from the dies they may be stored or packed immediately without requiring any loss of time in drying. As they are hard and durable no especial care is required in the handling or packing.

It is possible by this method to mold or form trademarks or other indications of origin in the convex bottom 25 by simply providing a suitable design in the face 31 of the plunger 14 so that the trademark is applied automatically as the pieces are molded.

The stems 29 may be made in any suitable manner and can be stored in a compact form ready for attachment when desired.

The stems may be inserted in the recesses 30 by hand or otherwise if desired and retained securely by means of glue or other cement applied, for instance, to the end of the stem as it is plugged into the recess. By fitting these stems snugly into the recesses the finished holders can be immediately handled without danger of the stems becoming detached. Such wooden stems have a special advantage in that they eliminate the use of metal which may become rusty and corroded and may be a source of injury to the persons handling them.

Production in this manner greatly reduces the cost and time of manufacture. The holders can be made rapidly on automatic machines and immediately packed if desired without the loss of time heretofore required in drying. The holders can be made uniform and of any desired design and are much less fragile and more durable for shipment, handling and use than the holders made by the earlier squirting process. A considerable advantage also exists in the shop where these holders are made in that no addi-

tional space is required for drying. The automatic machines for making such holders take up much less space than the operators required for the usual hand method of production.

The product is also much less affected by changes in temperature and moisture in the air, which changes affect the old method of manufacture and storage.

By reason of the fact that the stems and bodies are made separately it will be obvious that the manufacture of neither part is dependent upon the other. Consequently the bodies can be made at one time and stored by themselves and the stems can be made at any time and stored by themselves, the act of assembling being performed whenever and wherever it happens to be convenient. In fact the two parts of the holder can be made at different places and assembled at any place independently of the place of manufacture of the individual parts.

I claim:

1. Means for forming candle holders comprising a holder formed in two parts, one adjustable with respect to the other and having a central cavity, a die member mounted in said cavity, the upper member of said holder being vertically adjustable, a central recess-forming pin projecting upwardly into said cavity, and a vertically reciprocable punch including a central projecting pin and a surrounding compression face movable into said cavity.

2. The method of forming an ornamental candle holder body out of a mixture of powdered sugar and glycerine which comprises compressing the mixture and simultaneously forming tapered recesses in opposite faces to receive a stem and a candle respectively and forming an outwardly flaring side wall surface around the stem recess and a grooved top surface around the candle recess, releasing the pressure from one recess and the surrounding surface and then releasing the pressure from the opposite recess and finally releasing the remaining surfaces.

3. The method of forming an ornamental candle holder body out of a compressible viscous material which comprises compressing the material while flowing it outwardly and compressing said material a maximum amount above a stem receiving recess.

4. An apparatus for forming an ornamental candle holder by substantial compression of the material thereof comprising a punch member, a die member in which said punch member is adapted to fit, a cup-shaped support for said die member, a central portion of said die member being movable to eject the candle holder after being formed, the movable portion of said die member having a flange portion movable within said cup-shaped support, and means passing through the bottom of said cup-shaped support and secured to the flange portion of said movable part of the die member for actuating the same.

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