June 19, 1928. 1,674,626

E. E. SLICK

ARTICLE OF MANUFACTURE AND METHOD OF MAKING THE SAME

Filed March 2, 1927

Fig. 1.

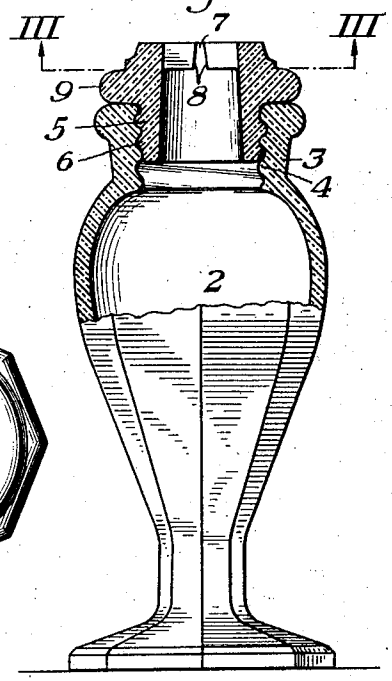


Fig. 2.

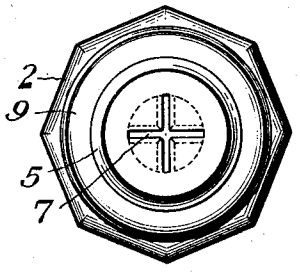


Fig. 3.

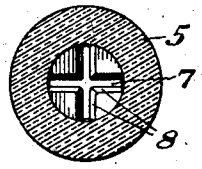


Fig. 4.

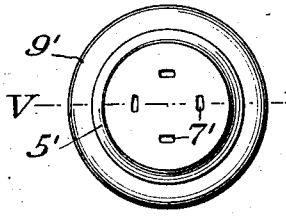


Fig. 5.

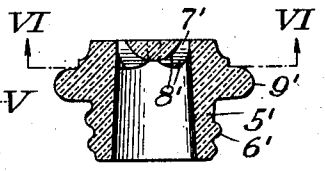


Fig. 6.

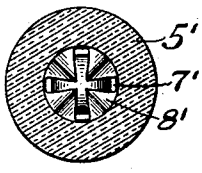


Fig. 7.

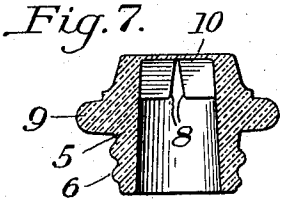
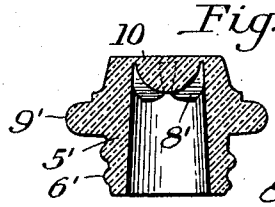


Fig. 8.



INVENTOR
Edwin C. Slick,
by Symes, Fabbri & Parmelee,
his attys.

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UNITED STATES PATENT OFFICE.

EDWIN E. SLICK, OF PITTSBURGH, PENNSYLVANIA.

ARTICLE OF MANUFACTURE AND METHOD OF MAKING THE SAME.

Application filed March 2, 1927. Serial No. 172,172.

The present invention relates broadly to the art of glassware, and more particularly to hollow glass containers, such for example as condiment holders involving improved covers or caps and an improved method of making the same.

It has heretofore been proposed in the art to which this invention relates to construct condiment holders entirely of glass, the caps in such cases usually comprising a body interiorly threaded to fit over the upper end of a receptacle having corresponding threads. It has been found that such caps are so frangible that not infrequently they are broken in attempting to thread the same into position, and that the life of holders constructed in this manner is not only short, but that the danger of broken pieces of glass in the condiment being dispensed constitutes a very decided objection to their use.

In accordance with the present invention, there is provided an improved cap and method of making the same whereby not only is the cap materially strengthened, but it is of such construction that the likelihood of broken pieces or chips of glass finding their way into the contents of the container is minimized.

In the accompanying drawings, there are shown for purposes of illustration only, two different embodiments of the present invention, it being understood that the drawings do not define the limits of my invention as changes in the construction, contour and dimensions may be made without departing either from the spirit of the invention or the scope of my broader claims.

In the drawings:

Figure 1 is a side elevational view partly broken away and partly in section illustrating one form of condiment holder constructed in accordance with the present invention;

Figure 2 is a top plan view of a condiment holder constructed as illustrated in Figure 1;

Figure 3 is a transverse sectional view on the line III—III of Figure 1, looking in the direction of the arrows;

Figure 4 is a top plan view of a slightly modified form of cap;

Figure 5 is a vertical sectional view on the line V—V of Figure 4;

Figure 6 is a transverse sectional view on the line VI—VI of Figure 5, looking in the direction of the arrows;

Figure 7 is a sectional view through a cap similar to that shown in Figure 1, illustrating the same before completion; and

Figure 8 is a view similar to Figure 5, illustrating a cap prior to completion.

The present invention is not limited to use with containers of any particular characteristics, contour or size, and the condiment holder 2 of Figure 1 is included by way of illustration only. This holder preferably comprises a neck 3 having an internal thread 4, pressed therein during the formation of the body.

The cap illustrated in Figure 1 preferably comprises a hollow glass body 5 having a lower threaded portion 6 adapted to be threaded into the threaded portion 4 of the neck 3 of the holder. The upper portion of the cap is formed with a dispensing opening or openings 7, by means of which the contents of the holder may be dispensed as well understood in the art. The dispensing opening of Figures 1, 2 and 3 is illustrated as comprising intersecting slots forming a generally cross shaped opening, the sides 8 of the slots tapering downwardly and outwardly, as clearly illustrated in the drawings.

Intermediate the ends, the cap is provided with a reinforcing body 9 of glass serving to materially strengthen the body and to protect the opposite ends thereof when the cap is removed from the holder. At the same time, it also functions in the capacity of a stop shoulder limiting the insertion of the cap into the holder.

In Figures 4, 5 and 6, there is illustrated a cap of slightly different construction in which parts corresponding to those already described are designated by the same reference characters having a prime affixed thereto. In this embodiment, there are provided individual openings 7′, each of these openings being located at what would be the extremities of the cross of the cap of Figures 1 to 3. The side walls 8′ of these openings are shaped to provide an opening of gradually increasing cross sectional area downwardly in the general manner before described. This tapered side wall construction leading to the dispensing openings has been found to be of particular importance inasmuch as it permits free access of the material within the holder to the openings and serves to guide the same thereto while preventing any adherence of such material. When the holder is returned to its normal

position, therefore, any material adjacent the openings immediately drops downwardly therefrom into the main space within the holder 2.

Figures 7 and 8 illustrate the preferred method of forming the caps heretofore described. As will be apparent to those skilled in the art, the caps are preferably formed by pressing the desired amoung of glass in a suitable mold. It has been found extremely difficult, however, to provide a pressing plunger which will cooperate with successive gathers of glass to directly form dispensing openings having the desired characteristics. Not only would such a plunger have to have a terminal portion of extremely small cross sectional area to satisfactorily form the dispensing openings whereby it would become extremely hot and subject to rapid wear, but with variations in successive gathers, the effect on the plunger would be different. In order to obviate these objectionable features, I preferably form the caps with an excess body of glass 10 on the outer end thereof with the openings in the form of depressions projecting thereinto but not through the same. Thereafter, the caps are subjected to a grinding operation by means of which the surplus glass is removed to an extent desired to give openings of exactly the required dimensions. This permits the area of the openings to be easily varied in accordance with the use to which the caps are to be put and provides at the same time a finished and polished upper surface on the caps preventing the adhering of any foreign substances thereto.

This method of providing an excess body of glass and subsequently removing the same, as for example, by a suitable grinding operation in combination with the tapered side walls leading to the openings, enables caps to be quickly and accurately formed and at the same time permits the operator, by grinding away less of the glass body, to provide smaller openings, or by grinding away more of the glass body to correspondingly increase the size of the openings. This adapts the method to the production of caps of widely differing characteristics and constitutes one of the advantageous features of the present invention.

Other advantages of the invention arise from the provision of a cap having a threaded portion at one end and a dispensing opening at the other end with a reinforcing body of glass intermediate the same.

Still other advantages of the invention arise from the provision of a cap having dispensing openings with tapered walls leading thereto, the taper of the walls being such as to provide passages of gradually increasing cross sectional area effective for guiding material to the openings, while preventing adherence of such material thereto.

I claim:

1. In the method of making caps for containers, the steps comprising shaping a body of glass to provide an end portion having a depression interiorly thereof communicating with a hollow body, and thereafter removing a portion of said glass to intersect said depression and form a dispensing opening.

2. In the method of forming glass caps for dispensing purposes, the steps comprising shaping a body of glass to form a hollow body portion with a closure for one end and a depression in said closure communicating with the hollow body and having at least one tapered side wall, and thereafter grinding said glass body to intersect said depression and form a dispensing opening.

3. In the method of forming glass caps for dispensing purposes, the steps comprising shaping a body of glass to form a hollow body portion with a closure for one end and a depression in said closure communicating with said hollow body and having tapered side walls, and thereafter removing a portion of said body to intersect said depression and form a dispensing opening.

4. In the method of forming glass caps for dispensing purposes, the steps comprising shaping a body of glass to form a hollow body portion with a closure for one end and a depression in said closure communicating with said hollow body and having tapered side walls, thereafter removing a portion of said body to intersect said depression and form a dispensing opening, and determining the size of said dispensing opening by the amount of body removed.

In testimony whereof I have hereunto set my hand.

EDWIN E. SLICK.