Feb. 23, 1932. C. BARBIERI 1,846,670

METHOD OF SECURING CAPS IN CUPS WITH ROLLED EDGES

Filed Sept. 21, 1928

Fig. 2

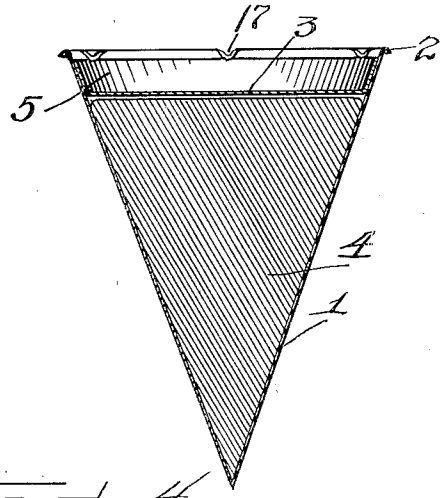


Fig. 1

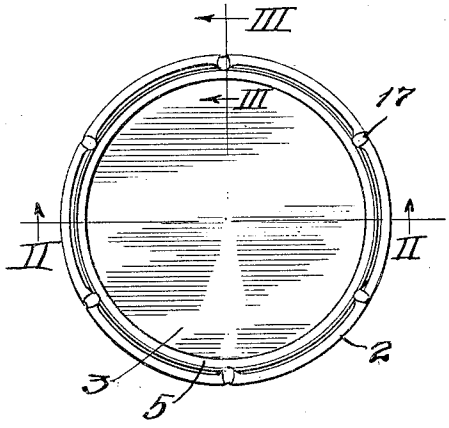


Fig. 4

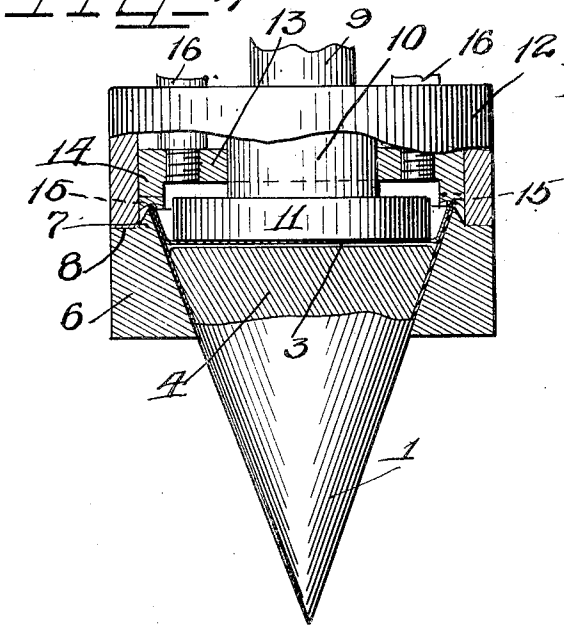
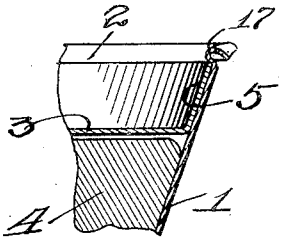


Fig. 3



Inventor

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by Charles O. Hill Attys.

Patented Feb. 23, 1932 1,846,670

UNITED STATES PATENT OFFICE

CESARE BARBIERI, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO VORTEX CUP COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

METHOD OF SECURING CAPS IN CUPS WITH ROLLED EDGES

Application filed September 21, 1926. Serial No. 307,399.

In paper drinking cups and the like which are constructed with straight drinking edges, it has been the practice to insert flanged paper caps within the cups to protect the contents thereof and then deflect a margin of the cup inwardly and downwardly over the flange of the cap to lock the cap in position. While this method is applicable for paper cups with straight edges it is not adaptable, however, for use in connection with paper cups having outwardly deflected or rolled edges at the open end of the cup for the reason that if the curved or rolled edge were deflected inwardly and downwardly over the margin of the cap the curved edge would be completely ruined and could not afterward be adaptable to provide a rounded drinking edge for the cup.

To overcome the above mentioned difficulties in the capping of paper containers or the like having rolled edges, this invention has been conceived with the idea of providing an improved method whereby the curved or rolled edges of paper containers may be suitably indented at spaced intervals to project over the edge of a flange of a cap to hold the cap locked in position over the contents of the cup.

It is an object of this invention to provide an improved method whereby containers with rolled edges may be conveniently punched to provide retaining lugs adapted to seat over the flange of a cap to hold the cap locked in position within a container.

It is also an object of this invention to provide a method whereby the rolled rim of a container is adapted to be indented at spaced intervals to provide a plurality of retaining lugs adapted to engage over the flange of a cap for the container to hold the cap locked in position but permitting convenient removal of the cap by a proper deflection of the rolled margin of the cup.

It is an important object of this invention to provide an improved method whereby the rolled drinking rims of paper containers and the like may be simultaneously indented at a plurality of spaced points around the drinking periphery of the cup to provide overhanging projections adapted to engage the rim of a cap to hold said cap seated in a locked position to close the open end of a container.

Other and further important objects of this invention will be apparent from the disclosures in the drawings and specification.

This invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a top plan view of a capped container constructed according to the method embodying the principles of this invention.

Figure 2 is a vertical central section of the closed container taken on line II—II of Figure 1 and illustrating the contents of the container in section.

Figure 3 is an enlarged fragmentary detail section taken on line III—III of Figure 1.

Figure 4 is a fragmentary sectional view of a rolled edge cup seated in a deflecting mechanism whereby the improved method is adapted to be performed.

As shown on the drawings:

The reference numeral 1 indicates a conical paper container or cup, the upper margin or edge of which is deflected or curved to provide a rolled drinking edge for rounded rim 2 permitting a cap 3 to be inserted into the upper open end of the cup above the contents 4 of the cup. The cap 3 is provided with an upwardly directed flange 5 which is inclined to flatly seat against the inner face of the cup 1 above the contents 4.

For the purpose of holding the flanged cap locked in a seated position within the cup, an improved method has been provided whereby the cap may be held in place without destroying the outwardly rolled drinking edge of the cup. The method consists of seating a filled cup 1 in a holder or socket 6 provided with a beveled ring 7 disposed to the inside of a stop shoulder 8. The cup 1 is thus adapted to be seated in the holder 6 with the rolled edge projecting above the beveled ring 7. The cup 1 may be filled with a quantity of ice cream or the like either before or after it is seated in the holder 6 after which a flanged cap 3 is seated therein with the beveled flange 5 thereof flatly contacting

the upper portion of the inner face of the cup. When the cap is properly seated in position the upper edge of the cap flange is disposed flatly below the rolled edge 2 of the cup.

Mounted above the holder 6 and operable by any suitable means is a slidable plunger rod 9 provided with a shank 10 on the lower end of which a cap retaining or plunger head 11 is secured. Engaged over the plunger head 11 is a hood 12, the lower edge of which is adapted to seat against the stop shoulder 8 when the plunger head is in its lowermost position seated against the upper surface of the cap 3 to securely hold the cap in position during a cap rim notching operation whereby the flanged cap is locked within the cup. Slidably mounted within the hood 12 above the plunger head 11 and surrounding the plunger shank 10 is a crimping die plate 13, the rim 14 of which is directed downwardly and is provided with a plurality of equidistantly spaced deflecting teeth 15. In the present instance six teeth 15 are provided on the rim of the crimping die plate 13, but, of course, it will be understood that any other suitable number of teeth desired may be provided on the rim of the crimper die plate. Attached to the crimper die plate 13 are a pair of posts 16 to facilitate operation of the crimper die plate within the hood 12 after the plunger head 11 has been lowered into its lowermost position as illustrated in Figure 4, with a plunger hood seated upon the stop shoulder 8 of the holder 6.

With a filled cup seated in position within the holder 6 and having a flanged cap engaged therein above the contents 4, the plunger head 11 and the hood 12 are first lowered to permit the plunger head 11 to push the cap 3 a predetermined distance into the cup 1. The die plate 13 is now operated by means of the posts 16 to cause the die plate 13 to move downwardly within the hood 12 causing the teeth 15 to engage the rolled edge 2 of the cup at spaced intervals to inwardly deflect portions of the rolled edge to form retaining lugs or teeth 17 which project over the upper edge of the flange 5 of the cap 3 thereby serving to lock the cap in seated position within the cup without mutilating or destroying the rolled edge 2. It will thus be noted that portions of the rim 2 are left between the lugs or teeth 17 sufficient to afford convenient rounded drinking edges for drinking the contents of a cup when a liquid is contained therein and the cap has been removed.

I am aware that numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

1. The method of securing a flanged cap within a container provided with a rolled drinking edge, said method consisting of first inserting a flanged cap in the container above the contents thereof and then indenting the rolled edge of the cup at spaced intervals to afford retaining projections engaging over the flange of the cap to hold the cap locked in position within the container.

2. The method of capping a rolled edged paper container consisting of depositing a cap within the container and then depressing portions of the rolled edge over the cap edge leaving rolled drinking segments between the depressions.

3. The method of securing a cap within a rolled edged paper container, said method consisting of indenting portions of the rolled edge to form retaining projections for engaging over the edge of the cap to hold the cap in place.

4. The method of securing a flanged cap in a container having its rim portion cooperating with the flange of the cap extended beyond said flange which consists in providing the edge of said rim portion with a plurality of indentations extending over the edge of the flange and cooperating with said flange to hold the cap in place in the container.

In testimony whereof I have hereunto subscribed my name.

CESARE BARBIERI.