(No Model.)

E. GALLET.

CAP FOR BOTTLES OR SIMILAR RECEPTACLES.

No. 600,309. Patented Mar. 8, 1898.

FIG. 4.

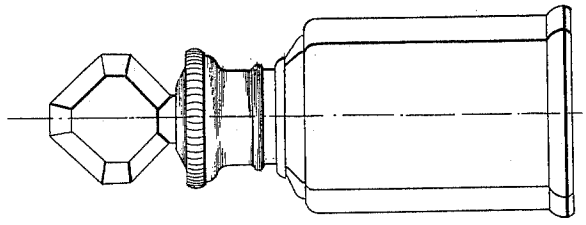


FIG. 3

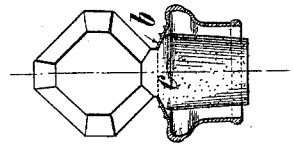


FIG. 1

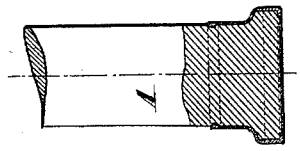
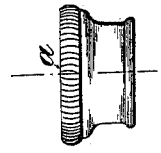


FIG. 2.



WITNESSES:

Geo. H. Jaekel.

M. A. Kuntzel.

INVENTOR:

Edmond Gallet

by Howell & Haegener

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDMOND GALLET, OF PARIS, FRANCE, ASSIGNOR TO LA SOCIÉTÉ ROGER ET GALLET, OF SAME PLACE.

CAP FOR BOTTLES OR SIMILAR RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 600,309, dated March 8, 1898.

Application filed September 30, 1897. Serial No. 653,547. (No model.)

To all whom it may concern:

Be it known that I, EDMOND GALLET, a citizen of the Republic of France, residing at Paris, in said Republic of France, have invented certain new and useful Improvements in or Relating to Caps for Bottles or Similar Receptacles, of which the following is a specification.

This invention has for its object an improved cap or capsule for bottles, flasks, and similar receptacles arranged so that it must necessarily be broken when the bottle is opened, while it may have the appearance of a skin or parchment cap such as is often used for scent and other bottles.

In order to make the invention better understood, the different stages of manufacture of a cap according to the present invention are illustrated by way of example in the accompanying drawings, in which—

Figure 1 is a mandrel on which my improved caps are shaped while they are still in a soft condition. Fig. 2 is a side view of the cap after the same has been shaped on the mandrel. Fig. 3 is a vertical central section showing a cap placed in position on the stopper of a bottle, and Fig. 4 is a side elevation of a bottle with my improved cap applied to the neck and stopper of the same.

Similar letters of reference indicate corresponding parts.

The characteristic feature of the cap according to the present invention consists in the use of a compound having a basis of gelatin preferably rendered opaque by any suitable substance and subjected after having been placed on the bottle to the action of a reagent which hardens it and enables it to resist heat and humidity.

The process may be carried out as follows: First, a paste is prepared containing the following substances: gelatin, glycerin, oxid of zinc, sugar, and water. The proportions may be, for instance, as follows: water, four hundred to seven hundred parts; gelatin, two hundred to four hundred parts; glycerin, thirty to sixty parts; oxid of zinc, one hundred to three hundred parts; sugar, fifty to one hundred parts.

To manufacture the caps, a core or former A, Fig. 1, is used, having the shape of the neck of a bottle, and may be provided with an engraving or ornamentation either to render the appearance of the cap more attractive or to produce a trade or other mark. The core A is dipped into the hot paste, withdrawn, and cooled. The part of the core which has been dipped into the paste thereby becomes covered with a film, which after cooling retains its elasticity. The cap is then removed from the core and may be turned inside out, if necessary, either in removing it from the core or afterward. The cap then has the shape shown in Fig. 2, and the inscription or ornamentation engraved on the cores in intaglio appear on the cap in relief. The top *a* of the cap is then provided with a hole *b*, much smaller than the plug *c* of the ground stopper to be used. The plug can enter the hole *b*, owing to the elasticity of the material of the cap, which immediately afterward contracts again and fits around the reduced upper portion of the stopper, as shown in Fig. 3. When the stopper is thus provided with its cap, it is introduced into the bottle to be stoppered, the lower part of the cap embracing the neck of the bottle, Fig. 4. Then the cap is hardened, so as to enable it to resist the action of heat and humidity. This may be effected by subjecting the cap in place on the bottle to the action of any suitable reagent, formic aldehyde being particularly suitable and giving excellent results. After this operation it is absolutely impossible to withdraw the stopper from the bottle without breaking the cap. In this manner a safety closing device is obtained for bottles and the like.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A safety-cap for bottles, consisting of a hardened film provided with an opening in its upper portion or web, and fitting snugly around the stopper-neck, bottle-mouth and bottle-neck, substantially as set forth.

2. A safety-cap for bottles, consisting of a film composed of a hardened mixture of gelatin, glycerin and a pigment, substantially as set forth.

3. The process for making safety-caps for bottles, which consists first, in preparing an

elastic paste containing gelatin; second, gathering a film of said paste upon a core or former; third, removing it from said former; fourth, making an opening in its web; fifth, applying the film to the stopper and bottle-neck; and lastly, hardening said film or cap while thus applied; substantially as set forth.

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

EDMOND GALLET.

Witnesses:
EDWARD P. MACLEAN,
EDOUARD BARBARY.