April 1, 1924. 1,488,969

G. BABINET

SPRINKLING STOPPER

Filed April 30, 1923

Fig.1.

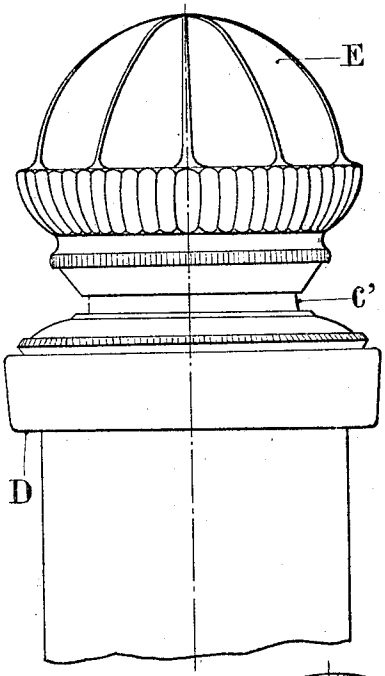


Fig.2.

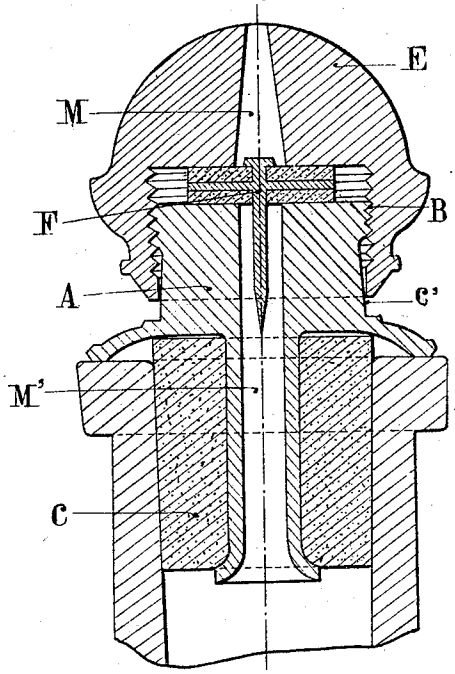


Fig.3.

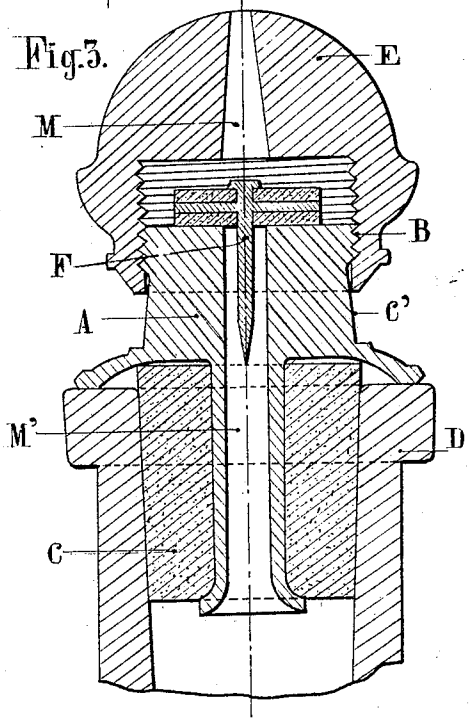


Fig.4.

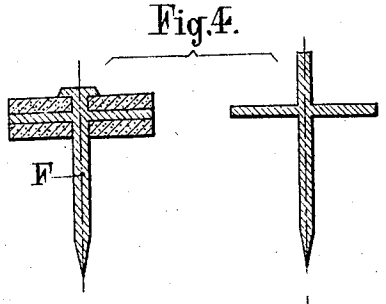
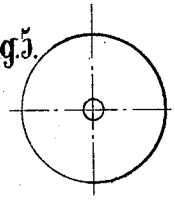


Fig.5.



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UNITED STATES PATENT OFFICE.

GEORGES BABINET, OF PARIS, FRANCE, ASSIGNOR TO SOCIÉTÉ ROGER & GALLET, OF PARIS, FRANCE.

SPRINKLING STOPPER.

Application filed April 30, 1923. Serial No. 635,758.

To all whom it may concern:

Be it known that I, GEORGES BABINET, a citizen of France, residing at Paris, Seine, France, have invented certain new and useful Improvements in Sprinkling Stoppers, of which the following is a specification.

Most of the sprinkling stoppers now on the market have the disadvantage of providing an insufficiently tight joint or closure; in some instances an element of the stopper must be removed to allow the liquid to flow out. This element is frequently very small and in many cases is lost by the user.

The present invention provides a sprinkling stopper whereby the above-mentioned disadvantages are obviated. A constructional example of the improved sprinkling stopper is illustrated in the accompanying drawing, in which—

Figure 1 is an elevation.

Figure 2 is a sectional view showing the stopper in its closed position.

Figure 3 is a similar view, but with the cap member of the stopper set to afford passage to the liquid.

Figures 4 and 5 are detailed views of the valve member.

The sprinkling stopper according to the invention essentially comprises a support or body A, the upper portion B of which is externally screw-threaded. The tabular downward extension or stem of the said body is fitted with the stopper proper C, the purpose of which is to form a closure for the neck D of the bottle. An internally screw-threaded cap E screws on the upper portion of the body A. A valve member F has freedom of movement in the cavity formed by the inner faces of the cap and the upper face of the body A. The valve member may be shaped as in Figures 4 and 5 or it may be spherical in shape and rest on a suitable seat, or it may be given any other desired shape. In Figures 4 and 5, it is shown as comprising upper and lower flat disks of suitable fibrous material arranged at opposite sides of a central metal disk which is formed integral with the metal shank or stem of the valve. The said stem has upper and lower portions which extend through the fibrous disks, and the latter portion projects loosely into the outlet duct M′ and has a relatively small diameter as compared with the diameter of said duct.

The cap E cannot be removed from the body A owing to the latter being formed immediately below the threaded portion B with a smooth cylindrical portion C′, the external diameter of which is less than that of the threads. Moreover the internal diameter of the smooth portion which is also provided on the lower end of the cap directly below the threaded portion thereof is less than that of the threaded portion B of the body, so that the extent to which the cap may be unscrewed is limited. When the said cap is screwed down, the valve member F is pressed between the said cap and the body. The former and the latter have ducts M and M′ respectively, co-axial with the bottle or parallel to the axis thereof. The contents of the bottle are allowed to flow out when the bottle is manipulated in the usual way after unscrewing the cap to an extent sufficient to permit the valve member freedom of movement within the above-mentioned cavity. The cap is screwed home when the stopper is not in use so that the valve member is rendered stationary and closes the ducts. Any liquid left in the cavity cannot flow out when the said valve member is in the position just described. Of course the liquid within the bottle cannot escape beneath the lower face of the valve member.

Having now particularly described and ascertained the nature of my said invention as well as the manner in which the same is to be performed, what I claim as new is:

1. A sprinkling stopper, comprising a support or body having the upper portion of its side wall threaded and also having an integral, depending tubular stem, said body being formed with a vertical discharge duct in register with the bore of the stem, a stopper proper fitted on the stem, a cap having an internal cavity, the upper portion of the side wall of which is threaded for rotatable engagement with the threaded portion of the wall of said body, said cap also having a vertical discharge duct which alines with the first-named duct, and a movable valve disposed in said cavity to control communication between said ducts; the said walls of the body and cavity having smooth portions directly below the respective threaded portions thereof and the diameters of which are less than the diameter of the threaded portion of said body wall, thereby to permit the rotary vertical movement of the cap

on the body within definite limits but preventing its removal from said body; substantially as described.

2. In a sprinkling stopper, the combination of a support or body having an externally threaded upper portion and a depending, integral tubular stem, said body being formed with a vertical discharge duct in register with the bore of the stem; a stopper proper fitted on the stem; a cap having an internal cavity, the side wall of which is threaded for rotatable engagement with the threaded portion of the body, said cap also having a vertical discharge duct which leads from said cavity and alines with the first-named duct; and a movable valve in said cavity to control communication between said ducts, said valve embodying upper and lower fibrous disks for contact with the top wall of the cavity and the top face of said body, a central metal disk disposed between the fibrous disks and a metal stem rigid with the metal disk and having upper and lower portions extending through the fibrous disks, the last-named portion projecting loosely into the outlet duct in the body and having a relatively small diameter as compared with the diameter of said duct; substantially as described.

In testimony whereof I affix my signature.

GEORGES BABINET.