

No. 856,903.

PATENTED JUNE 11, 1907.

F. H. PALMER.
CLOSURE.

APPLICATION FILED AUG. 29, 1906.

Fig. 1.

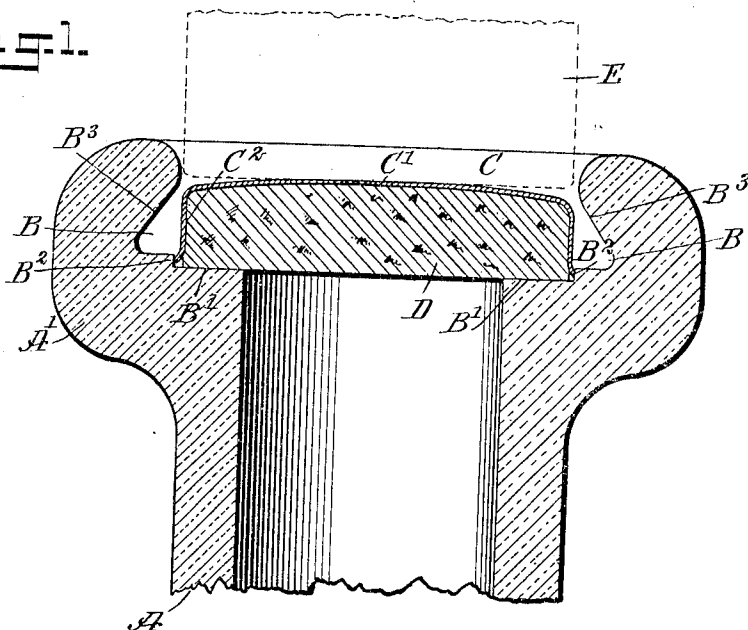
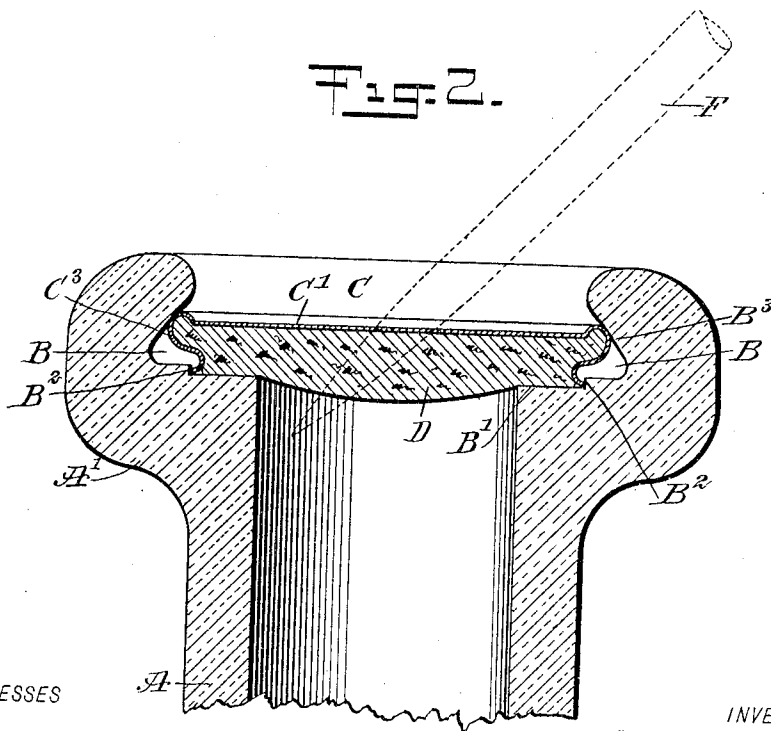


Fig. 2.



WITNESSES

Geo. H. Maylor
Rev. J. H. Hordley

INVENTOR

Frank H. Palmer

BY *Munn & Co*

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK H. PALMER, OF NEW YORK, N. Y.

CLOSURE.

No. 856,903.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK H. PALMER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Closure, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved internal closure for the necks of bottles, jars and other packages, and arranged to hermetically close and seal the package in a very simple manner and with economical means.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the views.

Figure 1 is a sectional side elevation of a bottle having the closure in position to be expanded, and Fig. 2 is a like view of the same, showing the closure expanded and the bottle neck sealed.

The bottle or other package A to be hermetically sealed by the improved closure has its neck A' formed with an internal annular recess B, the bottom B' of which is provided with an annular upwardly extending shoulder B², and the side wall B³ of the recess is inclined upwardly and inwardly, as plainly indicated in the drawings. The closure consists essentially of a metallic cap C and a packing disk D of cork or other suitable material, and the top C' of the cap C is preferably slightly arched, as indicated in Fig. 1, and the cap is provided with a depending flange C² within which is arranged the packing D. In order to hermetically seal the package A by the use of the closure, the latter is dropped into the neck A' of the bottle, so that the under side of the packing D rests on the innermost portion of the bottom B', and the lower edge of the rim C² abuts against the shoulder B². A suitable expanding tool E is now forcibly brought in contact with the top C' of the cap C, and moved downward, to cause an expansion of the cap in an outward direction, whereby the rim C² is forced into contact with the inclined or beveled side wall

B³ of the recess B, and is curved to form an inwardly extending clamping or retaining flange C³ engaging and clamping the peripheral edge of the packing D, to securely lock the latter in place in the cap C.

It is understood that as the lower edge of the rim C² of the cap C abuts against the shoulder B² a ready formation of the rim C² into the clamping flange C³ takes place, as outward expansion of the lower edge of the rim C² is prevented on account of abutting against the annular shoulder B².

It will also be noticed that by the pressure exerted by the expanding tool E the outer portion of the bottom of the packing D is pressed in firm contact with the inner portion of the bottom B', so that a hermetic sealing takes place both by the packing D at the bottom B' and by the flange C³ on the side wall B³ of the neck.

The cap C is preferably provided with the arched top C' to furnish sufficient expanding material for forming the sealing and retaining flange C³ in the manner above described.

In order to remove the closure from the neck of the bottle a suitable pointed tool F, indicated in dotted lines in Fig. 2, may be employed for prying the closure out of the neck of the bottle whenever it is desired to do so.

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

1. A bottle or like package having its neck provided with an interior annular recess, the bottom of which has a raised annular shoulder, and the side wall of the recess is inclined upwardly and inwardly, and an internal closure for the said neck and comprising a cap having a depending rim, the lower edge of which is adapted to abut against the said shoulder, and the side of the rim is adapted to come in contact with the said side wall to form a clamping flange on expanding the cap in the neck of the package, and a packing disk in the said cap and engaged at its peripheral edge by the said rim.

2. A bottle or like package having its neck provided with an annular recess and an annular shoulder spaced apart from the side wall of the recess, said side wall of the recess being beveled upwardly and inwardly, and an internal closure for the said neck, said closure comprising a cap having a depending

rim whose edge is adapted to engage the shoulder, and whose peripheral surface is adapted to come in contact with the said side wall when the cap is expanded in the recess
5 to force the rim into a clamping flange, and a packing disk in the said cap and engaged at its peripheral edge by the said depending rim.

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

FRANK H. PALMER.

Witnesses:

THEO. G. HOSTED,
E. C. NIELSON.