June 10, 1930. C. A. ZAROBSKY 1,762,852

CLOSURE

Filed March 2, 1928

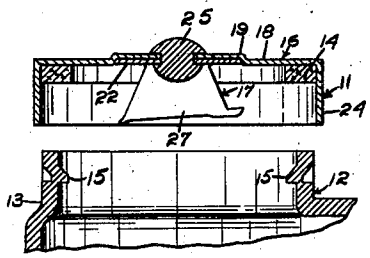


Fig. 1

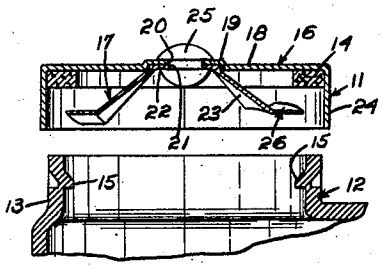


Fig. 2

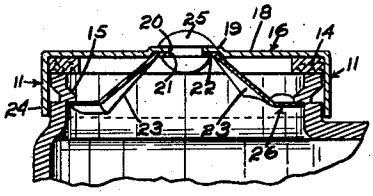


Fig. 3

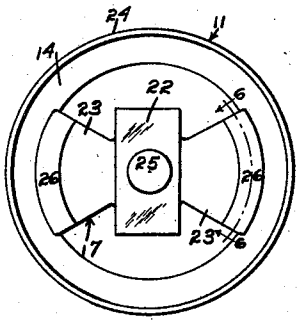


Fig. 4

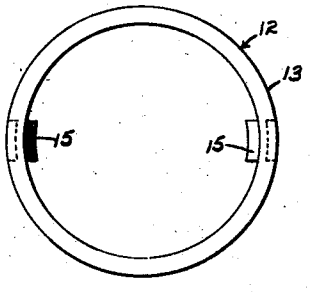


Fig. 5

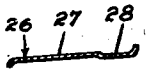


Fig. 6

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UNITED STATES PATENT OFFICE

CHARLES A. ZAROBSKY, OF CLEVELAND, OHIO, ASSIGNOR TO THE SIMPLEX CAP COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO

CLOSURE

Application filed March 2, 1928. Serial No. 258,546.

My invention relates to closures, and particularly to closures secured in position by bayonet joint means, and the principal object of my invention is to provide a new and improved closure of this type. In the drawings accompanying this specification and forming a part of this application I have shown, for purposes of illustration, one form which my invention may assume, and in these drawings:

Figure 1 is a vertical section through this illustrative embodiment of my invention taken at right angles to the direction of extent of the locking fingers,

Figure 2 is a vertical section taken longitudinally of the locking fingers, and therefore at right angles to Figure 1,

Figure 3 is a view similar to Figure 2, but showing the closure assembled on the tube which is to be closed,

Figure 4 is a bottom plan view of the closure,

Figure 5 is a top plan view of the tube, while

Figure 6 is a rectified section taken on the line 6—6 of Figure 4 and showing particularly the contour of the cam section of a locking finger.

The closure 11 shown herein is constructed for application to a tube 12 having its cylindrical wall 13 provided with a pair of diametrically-opposed struck-out inwardly-projecting lugs 15, and the closure 11 herein shown comprises an outer shell 16, and an inner locking member 17.

The outer shell 16 of the closure 11 comprises a skirt 24 depending from the outer periphery of a circular top section 18 provided at its center with a struck up rectangular boss 19; the locking member 17 comprises a central base section 22, a pair of fingers 23 projecting in opposite directions from the base section 22, and closing and locking cam sections 26 provided at the ends of the fingers 23 in position to engage beneath the lugs 15 on the tube 12 and provided with slightly inclined sections 27 adapted in cooperation with the lugs 15 to draw the closure 11 into position firmly seated against the open end of the tube 12, and with terminal portions 28 formed as recesses for receiving the lugs 15 to releasably hold the closure 11 in position so assembled on the tube 12; while the locking member 17 is secured assembled with the outer shell 16 by a single rivet 25 passing through alined apertures 20 and 21 in the boss 19 of the top section 18 of the outer shell 16 and the base section 22 of the locking member 17 to thus hold the locking member 17 assembled with the outer shell 16 with the base 22 positioned within the boss 19 holding the locking member 17 against rotation relative to the outer shell 16.

In order to provide the yield necessary in assembling the closure 11 on the tube 12 the fingers 23, and in fact the entire locking member 17, are formed of resilient material, such as stamped steel; and in order to provide a better seal between the closure 11 and the tube 12 the closure 11 is provided with a sealing gasket 14 carried below the margin of the circular top section 18 of the outer shell 16 in position to engage the edge of the cylindrical wall 13 of the tube 12.

From the above description it will of course be obvious to those skilled in the art that the closure 11 is applied to the tube 12 by longitudinal movement to assemble the closure 11 with its skirt 24 overhanging the tube 12, and that the closure 11 is secured to the tube 12 by rotation of the closure 11 relative to the tube 12 to bring the cam surfaces 26 of the fingers 23 beneath the lugs 15 projecting from the tube 12, first to draw the closure 11 tightly against the tube 12 by the operation of the inclined sections 27 of the fingers 23, and then to hold the closure 11 so assembled on the tube 12 by the reception of the lugs 15 within the recesses 28 formed at the terminal end of the cam sections 26.

Also from a consideration of the above disclosure it will be obvious to those skilled in the art that I have provided a closure which can be made at a low cost, and which will operate indefinitely with entire satisfaction, and under these circumstances it will of course be obvious that the embodiment of my invention herein shown and described accomplishes at least the principal

object of my invention. At the same time it also will be obvious that the particular embodiment of my invention herein shown and described embodies advantages other than those particularly pointed out or suggested herein, and that this particular embodiment of my invention may be variously changed and modified without departing from the spirit of my invention or sacrificing the advantages thereof, and it therefore will be understood that the disclosure herein is illustrative only, and that my invention is not limited thereto.

I claim:

1. For use with a tube provided with a plurality of partial bayonet joints, a closure comprising: a cap member having a top section; locking means having a plurality of fingers provided with partial bayonet joints complementary to and cooperating with said partial bayonet joints of said tube; cooperating irregularities on said top section and said locking means preventing relative rotation between said cap member and said locking means when said cap member and said locking means are assembled; and securing means securing said locking means assembled with said cap member.

2. For use with a tube provided with a plurality of partial bayonet joints, a closure comprising: a cap member having a top section, a single locking member having a plurality of fingers provided with partial bayonet joints complementary to and cooperating with said partial bayonet joints of said tube; cooperating irregularities on said top section and said locking member preventing relative rotation between said cap member and said locking member when said cap member and said locking member are assembled; and securing means securing said locking member assembled with said cap member.

3. For use with a tube provided with a plurality of partial bayonet joints, a closure comprising: a cap member having a top section; locking means having a plurality of fingers provided with partial bayonet joints complementary to and cooperating with said partial bayonet joints of said tube; cooperating irregularities on said top section and said locking means preventing relative rotation between said cap member and said locking means when said cap member and said locking means are assembled; and a single securing means securing said locking means to said cap member centrally of said top section.

4. For use with a tube provided with a plurality of partial bayonet joints, a closure comprising: a cap member having a top section; a single locking member having a plurality of fingers provided with partial bayonet joints complementary to and cooperating with said partial bayonet joints of said tube; cooperating irregularities on said top section and said locking member preventing relative rotation between said cap member and said locking member when said cap member and said locking member are assembled; and a single securing means securing said locking member to said cap member centrally of said top section.

In testimony whereof I hereunto affix my signature.

CHAS. A. ZAROBSKY.