

No. 649,453.

Patented May 15, 1900.

E. HOFFMAN.
CLOSURE FOR BOTTLES, &c.
(Application filed May 23, 1899.)

(No Model.)

Fig. 1.

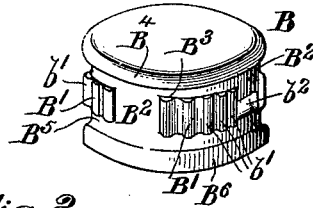


Fig. 2.

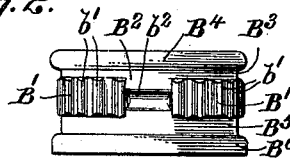


Fig. 3.

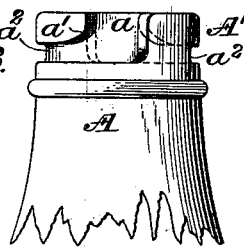


Fig. 4.

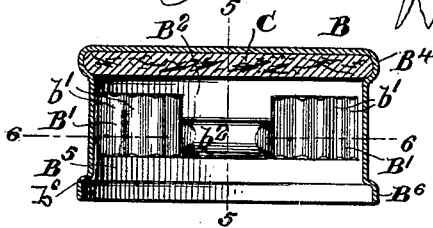


Fig. 5.

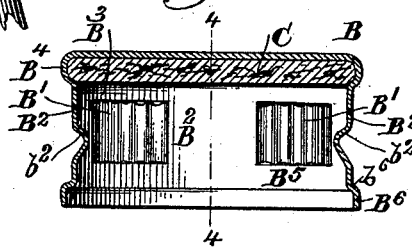
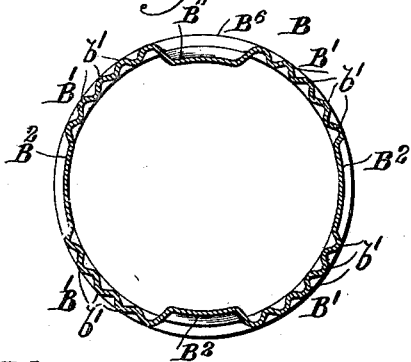


Fig. 6.



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EDMUND HOFFMAN, OF BRIDGETON, NEW JERSEY, ASSIGNOR TO HIMSELF, CHARLES E. E. WHITELEY, AND ROBERT P. FRIST, OF SAME PLACE, HENRY WHITELEY, OF PHILADELPHIA, PENNSYLVANIA, AND WILLIAM G. WHITELEY, OF WILMINGTON, DELAWARE.

CLOSURE FOR BOTTLES, &c.

SPECIFICATION forming part of Letters Patent No. 649,453, dated May 15, 1900.

Application filed May 23, 1899. Serial No. 717,839. (No model.)

To all whom it may concern:

Be it known that I, EDMUND HOFFMAN, a citizen of the United States of America, residing in Bridgeton, in the county of Cumberland, in the State of New Jersey, have invented a certain new and useful Improvement in Closures for Bottles and Similar Receptacles, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to cap-closures for bottles, jars, &c., and is in the nature of an improvement upon the closure described and shown in the patent issued to myself and Robert P. Frist November 1, 1898, No. 613,371.

The chief object of my invention is to strengthen closures of the general character described in the said former patent, and the leading feature of the invention is the addition to a cap of generally-similar construction to that of the former patent of a circumferential beading at the bottom of the sides of the cap and below the crimps, whereby the cap is rendered less liable to spread than is the case when the beading runs to the bottom of the sides.

Reference being now had to the drawings which illustrate my invention, Figure 1 is a perspective view of my improved sheet-metal cap; Fig. 2, a side elevation of the cap; Fig. 3, a side elevation of a bottle-neck adapted for use with the cap; Fig. 4, a side elevation of the cap, taken as on the section-line 4 4 of Fig. 5; Fig. 5, a side elevation of the cap, taken as on the section-line 5 5 of Fig. 4; and Fig. 6, a horizontal section of the cap, taken on the section-line 6 6 of Fig. 4.

A, Fig. 3, indicates the bottle, and A' the bottle-neck, formed, as in the Hoffman and Frist patent, with vertical slots (indicated at *a*) communicating on one side with inclined shoulders *a'*, which in turn run into horizontal shoulders *a''*.

B indicates the cap, the sides of which are crimped or corrugated, as indicated at *b' b'*, &c., these crimps being, as shown, formed in separate groups (indicated at *B' B'*) separated by plain facets, (indicated at *B² B²*, &c.) As

shown, there are four separate groups of corrugations separated by four plain facets. In some of the plain facets—two of them, as shown—inwardly-extending locking lugs or projections are formed, as indicated at *b²*.

I have illustrated the cap as having a circumferential beading (indicated at *B⁴*) at the top, in which is placed the cork, (also indicated at C,) this beading being formed by a circumferential groove (indicated at *B³*) formed immediately above the tops of the corrugations *b'*, merging into the metal where the sides merge into the top of the cap, as shown in the former patent to myself and Frist.

As already stated, the leading feature of my present invention consists in forming a circumferential beading at the bottom of the sides of the cap and below the ribs or corrugations *b'*. Preferably I form these as shown, making a circumferential groove (indicated at *B⁵*) immediately below the ribs or corrugations *b'* and below this groove a convex circumferential beading, as indicated at *B⁶*, having an outwardly-extending flange of metal *b⁶* connecting it with the grooved portion *B⁵*.

It is obvious that any circumferential beading formed below the vertically-ribbed sides will, so to speak, bind the ribbed portion of the cap and counteract its tendency to spread when the lugs are put under great strains, as they are in use. This is so not only because the unribbed beading has no surplus metal to permit it to expand without actually drawing out the metal, but also because in the rolling of the bead the metal is strengthened and stiffened; but while any circumferential beading, whether convex, concave, or plane, is advantageous a construction whereby a portion of the metal is caused to form an outwardly-extending flange *b⁶* is particularly advantageous, as such a circumferential flange in the beading adds great strength and stiffness to the cap.

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

1. A sheet-metal cap for closing bottles and similar receptacles having the upper part of

its sides indented with longitudinal crimps and formed also with inwardly-extending locking-lugs and having also a circumferential beading formed at the bottom of the sides
5 of the cap below the crimps and lugs to prevent spreading.

2. A sheet-metal cap-closure for bottles and similar receptacles having its sides indented with two or more groups of longitudinal
10 crimps separated by plain facets in some or all of which facets are pressed inwardly-extending lugs and a circumferential beading at the bottom of the sides of the cap below the crimps and facets to prevent spreading.

15 3. A sheet-metal cap-closure for bottles and similar receptacles having its sides indented with longitudinal crimps and inwardly-extending lugs, a circumferential groove formed below said crimps and lugs and a circumfer-
20 ential convex beading below said groove to prevent spreading.

4. A readily-removable sheet-metal cap-

stopper for closing bottles and similar receptacles having the upper part of its sides indented with longitudinal crimps and formed
25 also with inwardly-extending locking-lugs and having a circumferential beading formed at the bottom of the sides of the cap below the crimps and lugs to prevent spreading of said sides.

5. A readily-removable sheet-metal cap-
30 stopper for closing bottles and similar receptacles, having its sides indented with two or more groups of longitudinal crimps separated by plain facets, in some or all of which facets
35 are pressed inwardly-extending lugs, and a circumferential beading at the bottom of the sides of the cap below the crimps and facets to prevent spreading of said sides.

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Witnesses:

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