G. D. HAZEN.

COLLAPSIBLE TUBE.

APPLICATION FILED FEB. 21, 1910.

1,027,728.

Patented May 28, 1912.

Fig. 1.

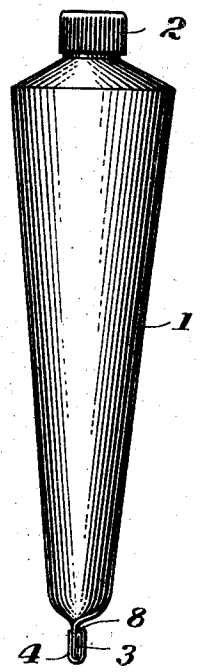


Fig. 2.

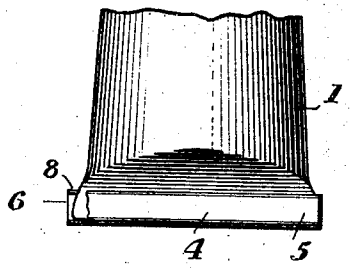
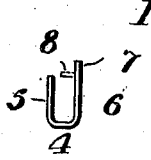


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE D. HAZEN, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO HAZEN-BROWN COMPANY, OF BROCKTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

COLLAPSIBLE TUBE.

1,027,728. Specification of Letters Patent. Patented May 28, 1912.

Application filed February 21, 1910. Serial No. 544,982.

To all whom it may concern:

Be it known that I, GEORGE D. HAZEN, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Collapsible Tubes, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings representing like parts.

For certain purposes (as for instance in automobile repair kits, tire repair kits) it is desirable to provide an extremely volatile and expansible fluid in convenient form, such as collapsible tubes, but on account of its expansive nature such tubes as now made tend to open out or unfold at the folded end, under pressure of the gas which accumulates from the mixture contained in the tube.

Accordingly my invention aims to provide a tube which cannot open or unfold under the expansive action of a volatile solvent or gas producing compound contained therein.

In the drawings, in which I have illustrated my invention, Figure 1 shows the same in edge elevation; Fig. 2 is a fragmentary view of the lower part, in side elevation; and Fig. 3 is an end view of the clip.

The body 1 of the tube and its closure 2 may be of any usual or preferred construction, made of flexible rolled sheet metal such as lead or alloy, as commonly used and well-known, having its lower end sealed or closed by being folded or rolled over in one or more folds 3. This folded over end I secure by providing a stiff metal clip 4 of tin, sheet iron or the like, which is U-shaped in cross-section as best shown in Fig. 3, one leg 5 thereof being of substantially the same length as the depth of the fold 3 and the other leg 6 being longer, as shown at 7, and this is bent over at a sharp angle as indicated by the dotted line 8 Fig. 3 and shown in full lines in Figs. 1 and 2. The clip is secured as shown in Figs. 1 and 2, the sharply bent over and in-turned edge 8 extending flat down upon the top upper edge of the fold, and the opposite edge or leg 5 extending flat along the vertical pinched side of the tube which does not contain the fold, the depending folded end being tightly embraced by the opposite parallel sides and bottom of the U-shaped clip.

In use, I have found that this construction will resist enormous pressure from within, as the right-angle bend or ledge 8 effectively resists that expansive movement which must take place before the fold can unfold.

I am aware that tubes have heretofore been made having the folded end secured by a U-shaped clip or embracing clip, but I wish it understood that this does not constitute my invention, which resides rather in the specific arrangement which accomplishes the results above explained and which have not been accomplished by previous constructions.

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

As an article of manufacture, a collapsible tube having its closed end folded flat and smooth on one side and on the other side projecting laterally in compacted form, combined with a rigid securing clip in the form of a stiff plate embracing said flat end, said clip having substantially parallel side portions, one of which lies flat against said smooth side and the other side terminating in a portion bent sharply to embrace the end of the fold and with its free end extending in adjacent the other side portion whereby said clip is closely fitted around all parts of the fold and adapted to withstand pressures tending to unfold the same.

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

GEORGE D. HAZEN.

Witnesses:
JOHN P. WORK,
WM. E. PATCH.