June 25, 1957 C. H. SOMERS 2,796,940

FIRE EXTINGUISHER CAP

Filed Sept. 19, 1955.

FIG-1

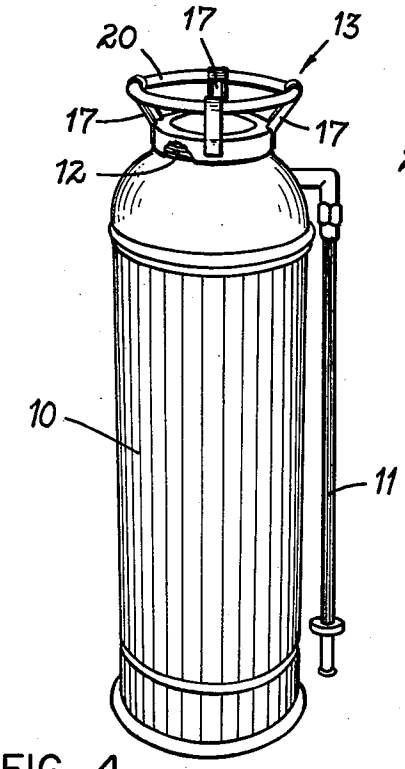


FIG-2

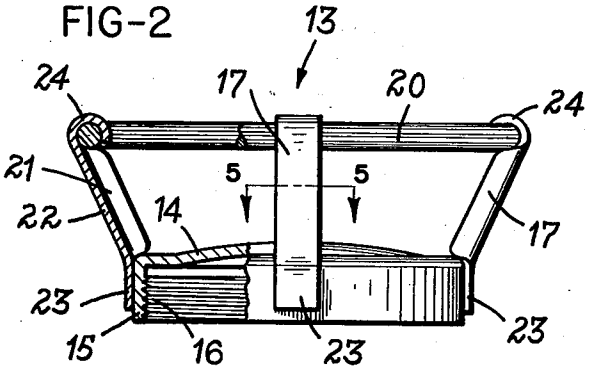


FIG-3

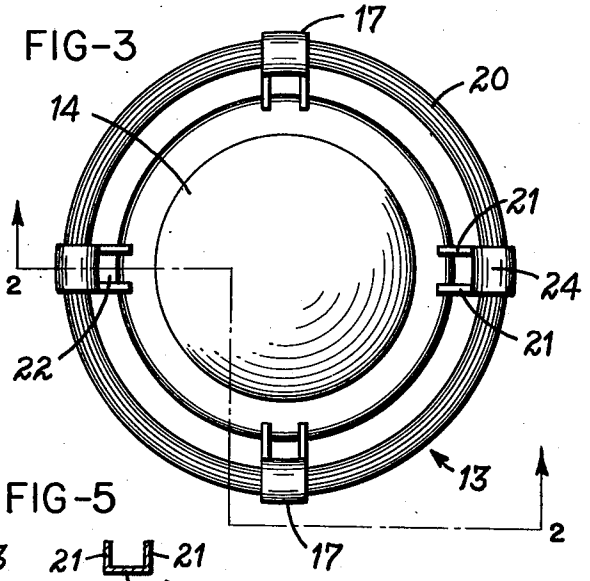


FIG-4

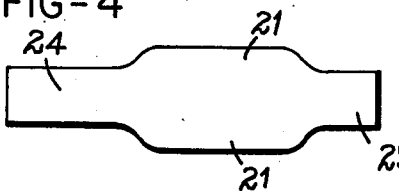


FIG-5

FIG-6

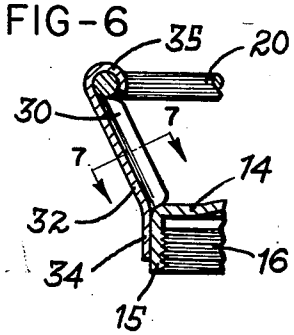


FIG-8

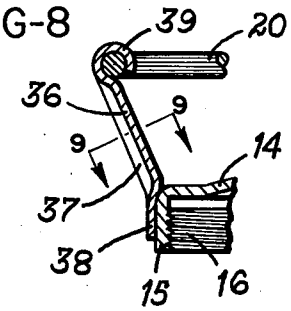


FIG-9

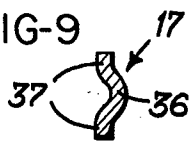
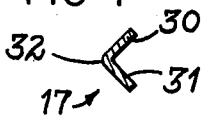


FIG-7



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FIRE EXTINGUISHER CAP

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5 Claims. (Cl. 169—30)

This invention relates to fire extinguishers, and more particularly to the cap for a fire extinguisher of the type wherein an annular handle or ring is fixed on the cover for use in carrying and operating the extinguisher.

A primary object of the invention is to provide an improved ring cap for such an extinguisher which is assembled from a plurality of parts without necessity for being cast in a single unit.

A further object of the invention is to provide such a cap which is characterized by shaped ribs, which may be fabricated from simple sheet metal stampings, for supporting the annular handle member.

Additional objects of the invention will be apparent from the following description, the accompanying drawings and the appended claims.

In the drawings:

Fig. 1 is a perspective view showing a fire extinguisher having a cap constructed in accordance with the invention.

Fig. 2 is a view on a larger scale, partly in perspective and partly in section on the line 2—2 of Fig. 3, showing the fire extinguisher cap of Fig. 1 embodying a channel-shaped rib.

Fig. 3 is a plan view of the fire extinguisher cap of Fig. 2.

Fig. 4 is a plan view of a blank for the rib of Fig. 2 prior to forming.

Fig. 5 is a section, on the same scale as Fig. 3, on the line 5—5 of Fig. 2.

Fig. 6 is a fragmentary view in section of a modified form of the invention having an angle-shaped rib.

Fig. 7 is a section on the line 7—7 of Fig. 6.

Fig. 8 is a fragmentary view in section of a different form of the invention having a fluted rib.

Fig. 9 is an enlarged section on the line 9—9 of Fig. 8.

Referring to the drawings, which illustrate preferred embodiments of the invention, Fig. 1 shows a fire extinguisher including a body portion 10 to which is connected a hose 11 and which is provided with a reduced portion 12 externally screw threaded for receiving a top cover or cap indicated generally by the numeral 13.

In the embodiment shown in Figs. 2 through 5, cap 13 includes top wall 14 and side wall 15 shown as being internally screw threaded at 16 for being received on the cooperating threaded portion 12 of the extinguisher body. It is provided with a plurality of fabricated, sheet metal ribs 17 fastened to the cover, extending upwardly away from it and supporting at their outer ends an annular handle or ring 20. The ribs have at least one longitudinally extending strengthening and stiffening flange and in the form here shown the portion of the ribs between the cover and the ring is channel shaped, having a longitudinally extending flange 21 for stiffening the ribs at each edge of the back portion 22. Flanges 21 terminate short of back portion 22 at both ends of the rib, leaving a bottom extending portion or tab 23 and an upper extending portion or tab 24.

Lower tab 23 is shaped to extend in overlapping relation along the side wall 15 of the cover, and the adjacent ends of flanges 21 are formed to extend in overlapping relation along the top wall of the cover. In assembling the ring cap, these portions are securely bonded to the cover by soldering, welding, brazing or other convenient manner, providing a comparatively simple assembly which is nevertheless strong and secure.

Similarly, the upper end or tab 24 of the rib is formed to be bent over and enclose, or at least partly enclose, ring 20 in supporting relation thereto. For further strengthening the assembly, the upper ends of flanges 21 should be so shaped and positioned that when ring 20 is in position with tab 24 enclosing the ring in supporting relation the ring is seated securely against them, and is firmly pressed against the ribs. The assembly may be further strengthened by bonding or fusing the ring to the ribs by soldering, welding, or other suitable form of fusing the metal.

As is apparent, rib 17 may conveniently be manufactured as a flat metal blank cut or stamped from sheet metal stock of appropriate thickness, as indicated in Fig. 4, and bent into the desired shape by a simple forming operation. Alternatively the ribs may be formed from steel channel bars of appropriate size.

Figs. 6 and 7 illustrate a modified form of the invention in which the ribs 17 instead of being channel-shaped, as in the form first described, are in V-shaped or angular form, having their flanges 30 and 31 intersecting along the edge 32 instead of being parallel as in the earlier described form. They also may be fabricated as flat sheet metal blanks including suitable tabs 34 and 35 at their lower and upper ends which may be shaped into the desired form. Alternatively, they also may be fabricated by shaping and flattening the ends of angle stock. Final assembly is made in substantially the same manner as in the case of the channel rib form.

A further form of the invention is shown in Figs. 8 and 9 in which the rib is essentially a substantially flat metal strip in which the stiffening flange is provided by one or more flanges 36 extending longitudinally thereof, intermediate its edges 37, and being fluted in cross-section to provide the necessary strength. It is desirable in this form for the central flange or flanges to be sufficiently deep that the lower and upper ends of the flanges will bear against the top wall 14 of cover 17 and also against ring 20 and when the unit is assembled and the ribs soldered, welded, or otherwise fused to the top and the ring, will thus cooperate with lower and upper ends 38 and 39 of the ribs to provide a strong braced construction.

It will accordingly be seen that the invention provides a simple fabricated ring cap construction for a cover of a fire extinguisher which can be assembled from a plurality of fabricated metal parts, having all the advantages of the conventional but expensive use of castings while effecting substantial savings in manufacture.

While the forms of device herein described constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to these precise forms of device, and that changes may be made therein without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. A fabricated ring cap for a cover of a fire extinguisher comprising a plurality of ribs in the form of sheet metal stampings fastened to said cover and extending upwardly and outwardly therefrom, and a ring at the outer ends of said ribs, the portion of said ribs between said cover and said ring having at least one longitudinally extending flange to stiffen the same, said

ring seating against the upper edges of said flanges and the outer ends of said ribs being folded over said ring in partially encircling supporting relation therewith.

2. A fabricated ring cap for a cover of a fire extinguisher comprising a plurality of ribs in the form of sheet metal stampings fastened to said cover and extending upwardly and outwardly therefrom, each said rib having at least one longitudinally extending flange to stiffen the same, the lower portion of each said rib extending downwardly in overlapping relation with the side wall of said cover to a point spaced above the lower edge of said cover, another portion of each said rib extending in overlapping relation along the top wall of said cover, and a ring at the outer ends of said ribs, said ends of said ribs being folded at least partly over said ring in supporting relation thereto.

3. A fabricated ring cap for a cover of a fire extinguisher comprising a plurality of ribs in the form of sheet metal stampings fastened to said cover and extending upwardly away therefrom and a ring secured at the outer ends of said ribs, the portion of said ribs between said cover and said ring being substantially channel-shaped in cross section and the outer ends of said ribs being folded at least partly over said ring in supporting relation thereto.

4. A fabricated ring cap for a cover of a fire extinguisher comprising a plurality of ribs in the form of sheet metal stampings fastened to said cover and extending upwardly away therefrom and a ring secured at the outer ends of said ribs, the portion of said ribs between said cover and said ring being substantially V-shaped in cross section and the outer ends of said ribs being folded at least partly over said ring in supporting relation thereto.

5. A fabricated ring cap for a cover of a fire extinguisher comprising a plurality of ribs in the form of sheet metal stampings fastened to said cover and extending upwardly away therefrom and being fluted in cross section, and a ring secured at the outer ends of said ribs, the portion of said ribs between said cover and said ring being substantially fluted in cross section and the outer ends of said ribs being folded at least partly over said ring in supporting relation thereto.

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