Aug. 24, 1954 S. O. SCHLESINGER 2,686,919

UNIFORM CAP CONSTRUCTION

Filed July 8, 1948 2 Sheets-Sheet 1

Fig. 1.

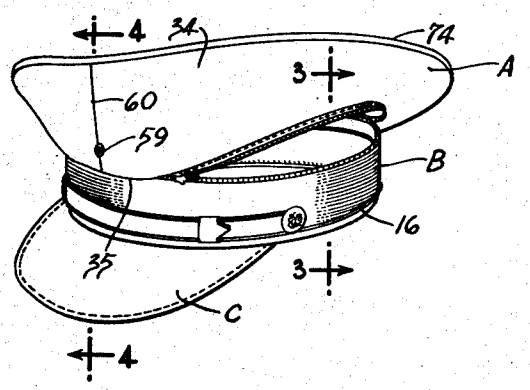


Fig. 2.

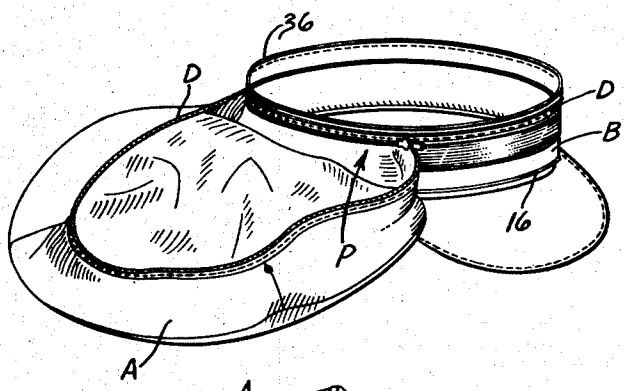


Fig. 3.

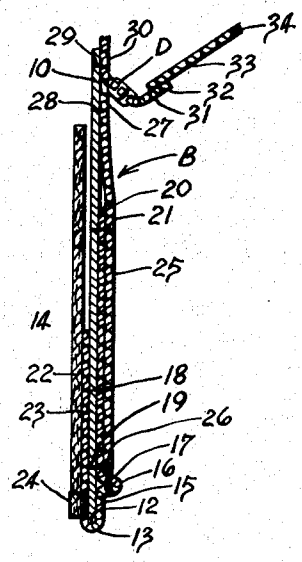


Fig. 4.

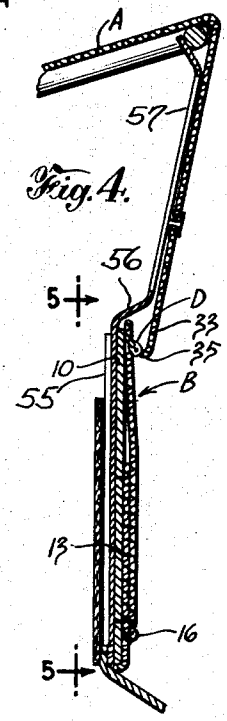
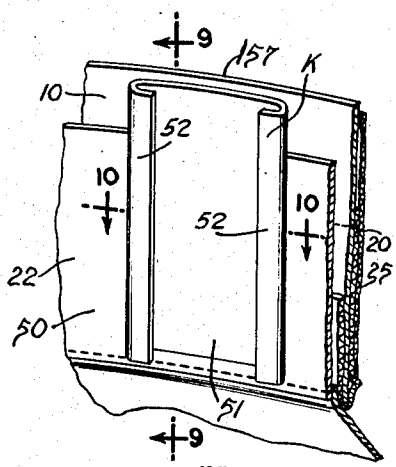


Fig. 5.



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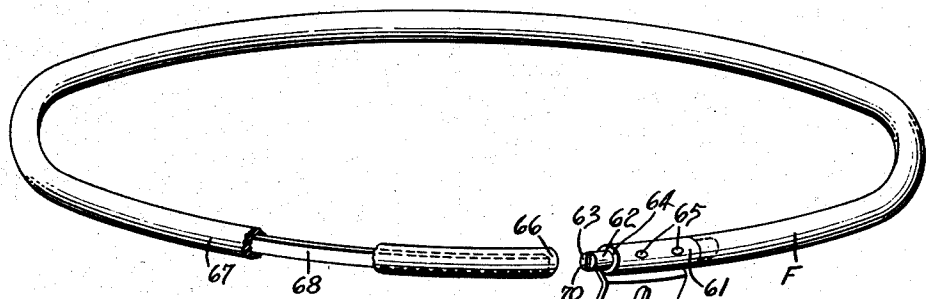


Fig. 6.

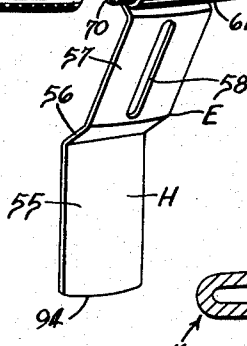


Fig. 9.

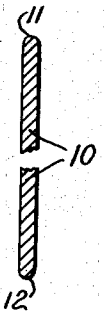


Fig. 10.

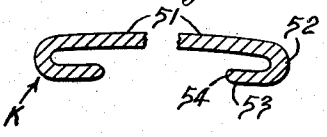


Fig. 7.

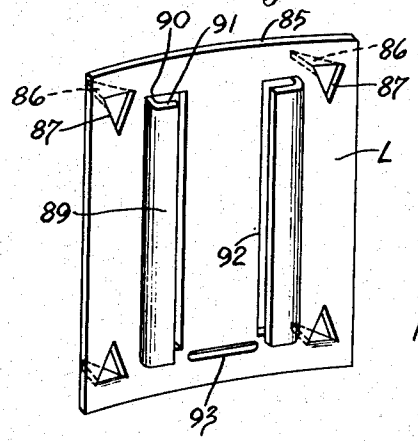


Fig. 8.

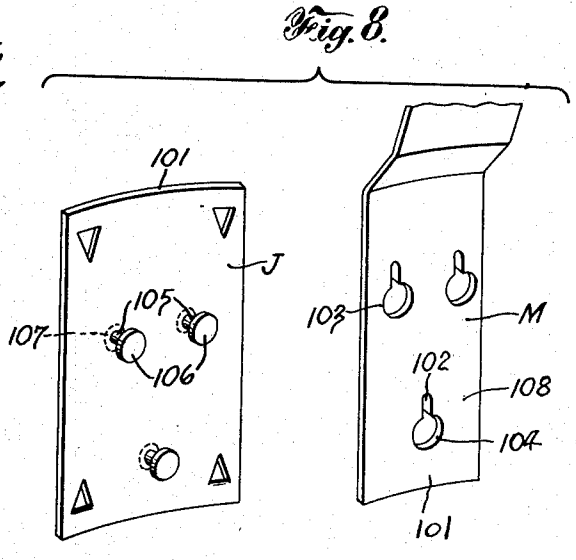


Fig. 11.

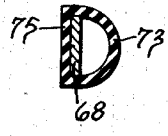


Fig. 12.

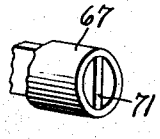
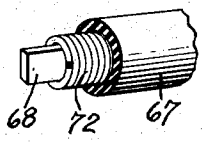


Fig. 13.



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UNIFORM CAP CONSTRUCTION

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Application July 8, 1948, Serial No. 37,661

8 Claims. (Cl. 2—195)

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The present invention relates to a uniform cap construction and it particularly relates to a uniform cap useful for military, naval or uniformed services in general.

It is among the objects of the present invention to provide a novel uniform cap construction which may be inexpensively manufactured, which will be durable and attractive in appearance and which may be readily changed from stiff to collapsed crown or top condition.

Still further objects and advantages will appear in the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration and explanation only and not by way of limitation, since various changes therein may be made by those skilled in the art without departing from the scope and spirit of the present invention.

In detachable or replaceable cap hoods or tops, it is usually necessary to remove various split pins and other attachments in order to remove the top or cover, for change from summer-light to winter-dark materials or to remove the top or cover for cleaning.

In a preferred construction, according to the present invention, the top is attached to head-encircling band position by a reversed slide fastener. The tape of the side of the fastener attached to the head-encircling band extends downwardly and the tape of the side of the fastener attached to top or cover extends upwardly.

When the detachable top or cover is attached to the head-encircling band, the slide fastener will draw the lower part of the top down over the upper end of the head-encircling band, giving the dressy flare top appearance.

The invention also contemplates the provision of a detachable front support of metal or plastic, in which the lower element of the front support will most readily slide downwardly into a receiver fastened to the head-encircling band by plastic adhesion or metallic fastening.

A tubular or resilient grommet may be detachably connected to the top of the front support and may preferably consist of a circular tube of rubber material. It may also consist of a closely wound coil, which if desired may be covered by rubber. Preferably a flatleaf spring with its flat plane extending vertically, is included in either the tubular rubber grommet or the coil spring grommet or both.

If it is desired to have a collapsed or crushed crown or cover, the grommet or circular top support may be removed from the front support.

Then the vertical front support may be removed from the head-encircling band. This may be readily accomplished by sliding the lower part of the vertical front support out of the slideway receiver provided on the inside of the head band or removing the lower part of the vertical front support from the keyhole connections provided therefor.

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The invention also consists in certain new and original features of construction and combination of parts, hereinafter set forth and claimed and as to its other objects, features and advantages, the mode of operation and manner of its organization, these may be better understood by referring to the following description considered in connection with the accompanying drawings forming a part thereof in which:

Fig. 1 is a side perspective view of a military or official cap construction showing the crown partly removed.

Fig. 2 is a side perspective view similar to Fig. 1 with the visor turned at an angle of about 90° to the right and with the crown substantially completely removed from the band of the cap.

Fig. 3 is a vertical transverse fragmentary sectional view upon the line 3—3 of Fig. 1 and upon an enlarged scale as compared to Fig. 1.

Fig. 4 is a fragmentary vertical transverse sectional view upon the line 4—4 of Fig. 1 and upon an enlarged scale as compared to Fig. 1.

Fig. 5 is a fragmentary inside perspective view of the front portion of the headband portion cap upon the line 5—5 of Fig. 4, showing the front support receiver.

Fig. 6 is a top perspective view, partly in section, of the front support as well as the grommet.

Fig. 7 is an inside perspective view upon an enlarged scale as compared to Figs. 1 and 2, showing the slide receptor which may be utilized at the front of the head band of the cap to receive the lower end of the front support.

Fig. 8 is a separated perspective view showing an alternative form of slide receptor and lower end front vertical support element.

Fig. 9 is a diagrammatic transverse vertical sectional view upon an enlarged scale of one type of plastic head-encircling inner band.

Fig. 10 is a diagrammatic transverse vertical sectional view upon an enlarged scale of one type of a slideway receiver for the front support, which may be mounted upon the inside front portion of the plastic inner band, as shown in Fig. 9.

Fig. 11 is a vertical detailed transverse sectional view upon an enlarged scale of a rubber tubular grommet with an enclosed flat spring stiffener.

Fig. 12 is a fragmentary detailed perspective view upon an enlarged scale of an alternative form of a rubber tubular grommet with a flat leaf spring enclosed.

Fig. 13 is a fragmentary detailed perspective view of an alternative form of a combination grommet with an outer rubber tube, an intermediate closely wound coil spring and an inside vertical flat leaf spring.

Referring to Figs. 1 and 2, the military cap which is shown by way of illustration has a removable crown or top A, a head-encircling band section B and a visor section C.

The reversed slide fastener connection D is located at the bottom edge of the crown or top A and the top edge of the band B.

At the front of the hat may be positioned the vertical structural member, front member, or emblem carrier E, shown best in Fig. 6, as well as the top or crown expanding or stiffening grommet member F. The lower part of the vertical structural element may consist of a straight imperforated metal or plastic piece H (see Fig. 6) or a piece having spaced keyhole shaped eyelets as indicated at M (see Fig. 3). The slide receptor or support K, L or M for the lower end H or M of said vertical member E may be mounted in the inside of the member B and may consist of a plastic receiver K or metal receiver as indicated at L and M.

Referring specifically to Figs. 1 to 4, the main structural element or the encircling band B as shown in Figs. 3 and 4 has a central stiffener or inner band 10 which may be of rattan but in the construction shown is preferably of an extruded thermoplastic material, ethyl cellulose being preferred. In extruding the ethyl cellulose in the form of a relatively thin band, the upper and lower edges are rounded as indicated at 11 and 12 in large scale in Fig. 9. This will give maximum strength for thinness of the strip and permit maximum flexibility both laterally and longitudinally of the band with suitable stiffness to support the hat structure.

To the stiffening band 10 is sewn the fabric covering 13, which extends around the lower end 12 of the stiffening member 10 as indicated at 13 and then upwardly to terminate at 14 (see Fig. 3). The position 14 is about one-third of the way up the inside face of the stiffening band 10.

The felt or fabric covering 13 extends upwardly on the outside face of the stiffening band 10 as indicated at 15 and then is formed into a bead or loop 16 which is stitched as indicated at 17.

Above the bead 16 the fabric covering 13, as indicated at 18, is stitched to the stiffening band at 19. Then it extends upwardly about two-thirds the width of the stiffening band 10 to the point 20 where it is stitched to the stiffening band or inner band 10 as indicated at 21.

Stitching as indicated at 19 and 21 is the preferred method of attaching the fabric material 13 to the stiffening band 10. Such attachment may also be accomplished where the stiffening member is a thermoplastic resin, such as ethyl cellulose, by an organic solvent or suitable adhesive solution. The inside leather or other sweatband 22 is sewn to the inside ply 23 of the covering fabric 13 by the stitching 24.

The outside of the band carries a removable braid 25. The lower edge 26 of the braid 25 abuts the bead 16. The upper edge 27 of the braid 25 is stitched at 28 to the stiffener 10. The upper edge 27 of the braid 25 is just below the stitched attachment 29 of the upper tape 30 of the slide fastener D to the inner band 10. The lower tape 31 of the slide fastener D is stitched at 32 to the lower edge 33 of the side fabric 34 of the crown or top A.

Normally the separable slide fastener D would tend to lie in the position indicated at P in Fig. 2, and it is initially attached and finally separated in the position as shown at P in Fig. 2.

When the crown or top A is completely applied as indicated in Figs. 1 and 4, the slide fastener D will be positioned substantially vertically between the upper part of the stiffener 10 and the lower portion 33 of the crown A. The slide fastener D will extend downwardly to form the closely clinging fold 35 which will extend entirely around the cap, giving it a particularly decorative and dressy appearance.

The bias of the upper slide fastener tape 30 is downwardly, while the bias of the lower slide fastener tape 31 is upward, so that the position as indicated in Fig. 4 will normally be assumed, concealing the slide fastening attachment D with assurance that the crown or cap will not pull up exposing the slide fastener.

At the back of the band B the ends of the stiffening or plastic strip 10 may overlap and be adhesively connected to each other or riveted or sewn together. This junction is preferably offset to one side from the junction of the braid 25, which is desirably at the central back portion of the band B. The slide fastening D will also begin and end at the rear central portion 36.

At the front part 50 of the band 10 (see Fig. 5) the extruded plastic member K may be positioned with its base or channel 51 adhesively attached to the band 10 or sewn thereto. As shown in the enlarged section of Fig. 10, the plastic receiver channel or piece 51 has the upturned edges 52. These edges 52 extend inwardly at 53 to terminate at the rounded edges 54. This construction will give maximum strength to the extruded plastic strip K.

The receiver K of Fig. 10 is designed to receive section H of the vertical structural member E of Fig. 6. As shown, the member H has a central portion 55 slightly curved outwardly to fit the curve of the plastic receiver or channel or piece 51 forming part of the receiver K. The member H has an outwardly and upwardly flanged portion 56 which may serve as a stop by abutting the top edge 157 (see Fig. 5) of the stiffening member 10. From the flange 56 the structural member E has an upwardly and forwardly extending portion 57 carrying the slot 58 to receive the threaded leg or fastening member of the cap ornament, emblem device or insignia. This leg is to be inserted through the opening 59 in the flare of the top portion A.

The slot 58 permits considerable variation in the position of the eyelet 59 to fit different designs of ornaments, insignia, and covers.

The structural element E may be of metal, as may also the receiver K. It is preferably formed from an extruded ethyl cellulose or other thermoplastic material.

The top portion of the structure E is turned over as indicated at 61 to receive a plug member 62, the ends 63 of which extend beyond the edge 64 of the turned-over portion 61. This plug member 62 may be removable from the turned-over portion 61. It is desirably, however, riveted in place as indicated at 65.

The projecting ends 63 of the plug 62 are de-

signed to fit tightly in airtight fashion in the ends 66 of the rubber tube 67 of the stiffening structure or grommet F. If desired, the plugs 63 may extend sufficiently beyond the ends of the sleeve 61 so that they will create a substantial compression of air in the tube 67 and stiffen said tube without inclusion of a stiffening spring band 68.

In such case, to aid the stiffening effect of the partly inflated rubber tube 67 itself, such rubber tube may have a semi-circular section or flattened inside section 75, as indicated in Fig. 11, instead of the circular section as indicated in Fig. 11.

In the preferred embodiment, however, a thin flat leaf spring 68 may be inserted into the rubber tube 67 and extend throughout the length thereof and fit into slots 70 in the ends of the plug 62. This is indicated diagrammatically in Fig. 12. In Fig. 12 the ends 71 of the leaf spring 68 are held frictionally in said slots 70. If desired, instead of, or in addition to, the rubber tube 67, it is possible to utilize a closely wound coil spring 72. This coil spring 72 may enclose the leaf spring 68 as shown in Fig. 13 to give satisfactory stiffening effect to the circular top element or grommet F of Fig. 6.

In the embodiment of Fig. 11, the curved or circular portion 73 preferably rides against the edge 74 of the cap while the flat portion 75 contacts and positions the leaf spring 68.

In the alternative receiver structure as indicated at L in Fig. 7, a curved metal base plate 85 is shown having prongs 86 stamped out of the openings 87. These prongs 86 enable attachment directly to the rattan or thermoplastic stiffening element 10. On the opposite side of the prongs 86 may be positioned the slides 89 stamped out integrally from the body 86. The slides 89 have the inturned portions 91 which overlie the openings 92. Where the element or flange 56 of the structural member E does not satisfactorily stop against the top edges 157 of the stiffener 10, an additional stopping is desired and a boss or protrusion 93 may be provided to stop the lower edge 94 of the lower insert section H of the vertical structural member E.

In the alternative structure of Fig. 8, the member M corresponds to the member H of Fig. 6. It has a base plate 101 with three triangularly arranged keyhole openings 102, each having a lower circular portion 103 and an upper extended portion 104.

These keyhole portions are designed to engage the outwardly extending rivets or pins 105 having enlarged heads 106 and which are pinned or otherwise soldered or welded at their bases 107 to the base portion 108 of the receiver element J.

It is thus apparent that the present invention provides a most artistic, attractive and durable uniform military or naval cap, in which the cover may be most readily and simply removed by the wearer for cleaning or seasonal change without disengaging split ends or other fasteners and in which the top or crown may either be worn in crushed or collapsed position, as may be desired. The construction as shown lends itself either to a metal or rattan or plastic skeleton construction and the connection between the parts may be made either by metal fastenings or by plastic, adhesive attachments. The entire cap lends itself most satisfactorily to mass production.

As many changes could be made in the above uniform cap construction and many apparently

widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having now particularly described and ascertained the nature of the invention and in what manner the same is to be performed, what is claimed is:

1. In a uniform cap construction, a detachable top and a head-encircling band and a completely separable slide fastener connection between the lower edge of the top and the upper edge of the head-encircling band, said slide fastener connection having two tapes, one attached to the band and one attached to the top, and interengaged teeth at the edges of said tapes, the teeth and tape attached to the top being below the teeth and the tape attached to the band when the top and the band are conneced by the slider of the slide fastener connection.

2. In a uniform cap construction, a detachable top and a head-encircling band and a completely separable slide fastener connection between the lower edge of the top and the upper edge of the head-encircling band, said slide fastener connection having two tapes, one attached to the band and one attached to the top, and interengaged teeth at the edges of said tapes, the teeth and tape attached to the top being below the teeth and the tape attached to the band when the top and the band are connected by the slider of the slide fastener connection, said connection having its attachment tapes so attached that the tape attached to the encircling band being stitched at its upper edge to the upper edge of the head-encircling band and extending downwardly and the tape attached to the top being stitched to the lower edge of the detachable top at its lower edge and extending upwardly.

3. In a uniform cap construction, a detachable top and a head-encircling band and a completely separable slide fastener connection between the lower edge of the top and the upper edge of the head-encircling band, said slide fastener connection having two tapes, one attached to the band and one attached to the top, and interengaged teeth at the edges of said tapes, the teeth and tape attached to the top being below the teeth and the tape attached to the band when the top and the band are connected by the slider of the slide fastener connection, said connection having its tapes so attached to the top and the encircling band so that it will draw the lower edge of the top down over the upper edge of the head-encircling band.

4. In a military type cap with detachable crown and an encircling head band detachably to carry said crown, said crown having an outside surface and a lower encircling edge to carry a slide fastener tape and said head band having an upper edge and an outside surface to carry another slide fastener tape, a slide fastener connection having two tapes with interlocking teeth, one tape being attached adjacent the upper edge of the head band on the outside surface of the head band with its teeth extending downwardly and the other tape being attached to the outside surface of the crown adjacent to the lower edge of the crown with the teeth extending upwardly, whereby in attached position when the slide fastener connection is in such connected position that the tapes and interlocking sets of teeth thereof will be in reversed position as compared

to the relative position of the head band and crown.

5. A military type cap construction having a removable inverted frustro-conical crown having a lower edge and a head-encircling cylindrical band having an upper edge and a reverse slide fastener connection having opposite tapes and engaging teeth, one tape of the slide fastener attached to the band being stitched to the band adjacent the upper edge of the band with the teeth of the fastener extending downwardly away from the upper edge of the band and the tape being above the teeth and the other tape of the slide fastener attached to and adjacent the lower edge of the crown having the tape stitched so that the teeth extend upwardly, so that the tape of the crown is below the tape of the band giving these tapes reverse position as compared to the uppermost position of the crown and lowermost position of the band when the crown and the band are connected by the fastener connection with the teeth interlocking and engaged.

6. A cap construction having a head-encircling band and a front vertical support member, said band having a receiver element and the lower end of said support member engaging said receiver element, said receiver element having a plurality of vertical keeper elements to engage the lower side edges of said support member, said encircling band being of a plastic material and said receiver element also being of a plastic material and cemented to said band at the front of the cap construction.

7. A cap construction having a head-encircling band and a front vertical support member, said band having a receiver element and the lower end of said support member engaging said receiver element, said receiver element having inturned side edges engaging the lower side edges of the vertical structural element, said encircling band being of a plastic material and said receiver element also being of a plastic material and cemented to said band at the front of the cap construction.

8. A cap construction having a head-encircling band and a front vertical support member, said band having a receiver element and the lower end of said support member engaging said receiver element, said receiver element having a vertical runway receiving and engaging the lower side edges of the vertical structural element, said encircling band being of a plastic material and said receiver element also being of a plastic material and cemented to said band at the front of the cap construction.

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