March 29, 1955 W. C. MacPHERSON 2,704,847

STIFFENER FOR CAP

Filed Dec. 3, 1951

Fig. 1.

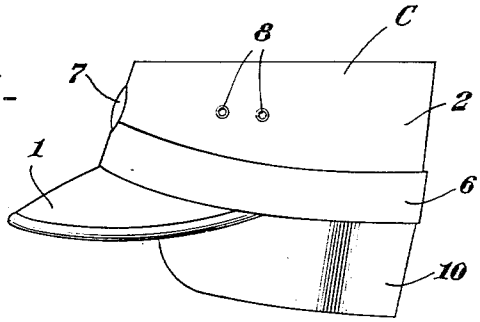
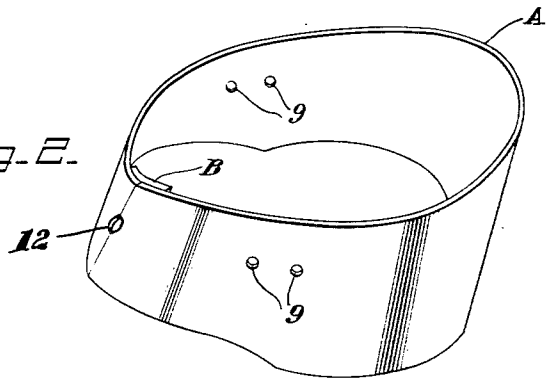


Fig. 2.



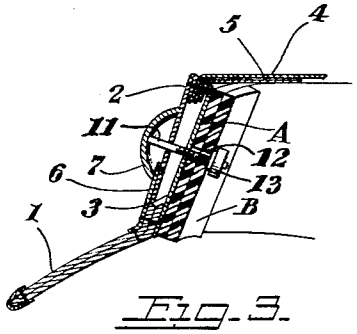


Fig. 3.

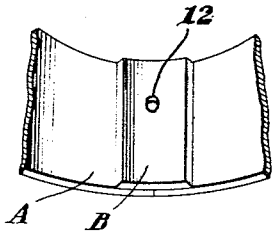


Fig. 4.

INVENTOR.

William MacPherson

United States Patent Office

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STIFFENER FOR CAP

William Coatsworth MacPherson, Chevy Chase, Md.

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2 Claims. (Cl. 2—195)

This invention relates generally to uniform caps and in particular to the cylindrical stiffener which fits within the cap and under the ear flaps and to certain means depending upon the rigidity of the stiffener for protection of the wearer from injury from a blow.

One object of my invention is to provide a stiffener which is light in weight.

Another object is to provide a washable base or stiffener for facilitating the cleaning or washing of the cap without removing the stiffener.

Another object is to provide a method of stiffening the cap with tension to provide a starched or pressed appearance without the necessity of ironing, pressing or starching.

Another object is to provide a rigid stiffener, stiff enough to protect the wearer's head from injury from an accidental blow on the cap but flexible enough to absorb part of the shock and thereby prevent abrasion of the skin or skull of the wearer's head.

Another object is to provide a hard surface of the cap fabric by tension between it and the stiffener to give fabric-resistant quality against collecting dust, grime, soot or other soiling matter.

Another object is to provide a stiffener which need not be replaced because of extreme sweat or wear under normal or adverse conditions.

Another object is to provide a stiffener which is flexible enough to be packed in a duffle bag or suitcase without damage to stiffening or cap.

Another object is to provide a method of preventing sweat reaching the visor or surrounding cap fabric nearest the forehead thereby increasing the service life of the cap by avoiding sweat rot and mildew thereof.

Another object is to provide an improved type of stiffener with open top and air ports or holes in the side thereof aligned with holes in the cap, for good ventilation.

Another object of my invention is to provide a secure base to which insignia may be attached.

Other objects and advantages will become apparent from a consideration of the following detailed description, taken in connection with the accompanying drawing wherein a suggestive embodiment of the invention is shown. However, it may be understood that the invention is not limited to the details disclosed, but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

Figure 1 is a side elevation of a typical uniform cap with which the stiffener of this invention may be used to advantage;

Figure 2 is a perspective view looking down upon the stiffener with the front seam to the left;

Figure 3 is a fragmentary vertical section, enlarged, through the front end portion of the cap with the stiffener and front seam and strengthened and improved insignia strip in assembled relation therewith; and

Figure 4 is a fragmentary sectional perspective view looking toward the back side of the front seam and insignia strip.

The present cap C may be conventional in that it comprises a band **6**, preferably of cloth, supporting at its front a visor **1**. To the top of the band is sewn the outer piece **2** of a head encircling fabric member, the inner piece **3** of which is sewn at its top to said outer piece **2** and at its bottom to the bottom of said band **6**. The crown of the cap is flat and composed of upper and lower pieces **4** and **5** respectively, sewn at their edges to the top of the head encircling member. This construction is best shown in Figure 3. Attached to the inside of the band and at the bottom of the cap is a crescent-shaped double thickness of material, preferably the same fabric, with the inside of fur-like finish for the protection of the ears in severely cold weather and described as ear flaps **10**.

The present invention is concerned primarily with a removable, cylindrical, semi-rigid, yet flexible, tension stiffener A which extends circularly within the cap and under the ear flaps (when folded into the cap) being formed preferably from a flat pattern joined at its abutting ends by means of a strip B.

The stiffener of my invention is in the form of a section of a cylinder with special angles at the front and sides which will adequately fill the entire space under the ear flaps **10** and in the cap to remove all slack from the fabric. This stiffener may be moulded by injection or other known means, but preferably will be cut from the flat sheet of synthetic plastic in a special design and joined to form a cylindrical section by the strip B, with glue, heat and pressure, moulding sweating, screws in elongated slots, or other means most practical and known in the art.

Both the double thickness created by strip B, and the rigid characteristics of the form A under the sides and ear flaps, offer stiff resistance to an accidental blow on the cap with protection for the wearer's head by absorbing, spreading or diverting the shock. The most prevalent danger from accidental blows is from side or top striking blows of the riffe or carbine in drill or exercise practice. Another danger is from small falling objects on the cap and head.

The moisture-proof or water-proof characteristics of the plastic used, which may be of cellulose acetate, for example, allows the complete scrubbing or cleaning of the outside and inside exposed portions of the cap without removing the stiffener or the insignia **7**, which is fastened to the cap by means of the threaded stud **11**, which projects through an aperture **12** in the stiffener and is capped by the nut **13**. If necessary to remove the insignia **7**, the stiffener will remain in place, being held in place by the tension of the stiffener against the fabric and by the ridges formed by the seams between the pieces of cloth forming the cap and earflaps.

The low heat of thermal set of the plastic permits the stiffener to rapidly assume the exact shape of the wearer's head, causing a more comfortable condition.

The other characteristics of the plastic are that it is highly resistant to aging or deterioration and possesses reshaping susceptibility when considerable bending or overheating damage occurs.

Since human sweat does not affect the plastic and does affect the fabric and stitching, this invention lengthens the life of the cap as well as improves its general appearance and facilitates care and cleaning.

By varying the thickness of the plastic in the stiffener tension, flexibility and rigidity may be varied.

Since material of construction is highly elastic within all ranges of atmospheric and human body temperature, any deformity short of total destruction will correct itself in the absence of pressure exerted externally.

I claim:

1. A removable stiffener for use with a fabric cap of the type having a substantially flat crown, said stiffener comprising a flat strip of semi-rigid but flexible synthetic plastic sheet material bent to substantially cylin-

drical shape with its ends secured together to conform to the shape of the head encircling portion of said cap and having a diameter such that the stiffener may be seated in said cap by means of a force fit, said stiffener strip being retained in cylindrical shape by means of a seam strip heat-sealed to the abutting ends of said stiffener strip.

2. A stiffener as claimed in claim 1 made from a single sheet with its abutting ends and seam strip shaped to be positioned at the front of the cap for which it is intended thus to provide additional rigidity to the front portion of the cap.

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