Sept. 10, 1963 M. PLASTINO 3,103,015

HEAD-PROTECTING HEAD GEAR

Filed Feb. 1, 1962

FIG. 1

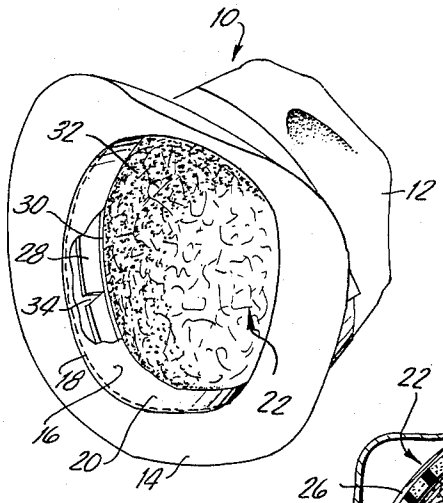
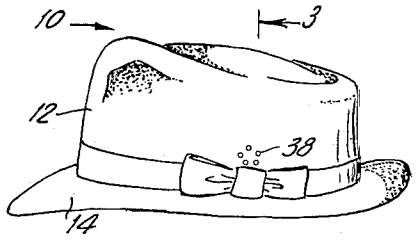


FIG. 2



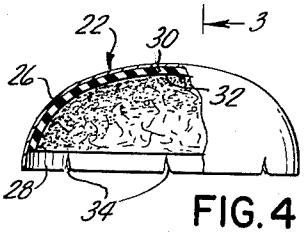
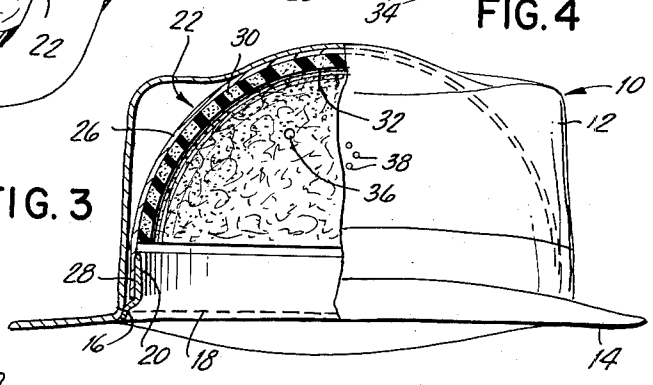


FIG. 4

FIG. 3



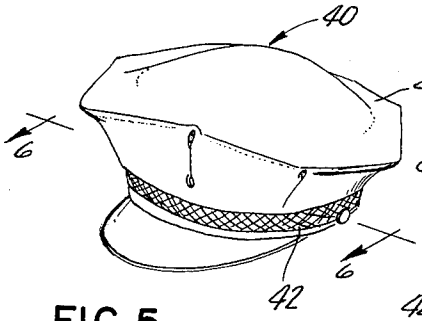


FIG. 5

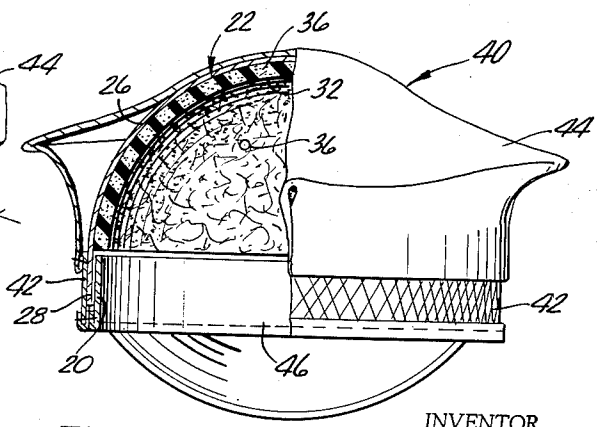


FIG. 6

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HEAD-PROTECTING HEAD GEAR

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The present invention relates to head gear and, more particularly, to head-protecting head gear, and especially to head protecting head gear suitable for street or dress wear.

Various types of head gear to protect the head against injury from a blow have heretofore been known. However, in substantially all instances, such head protecting head gear has been of a special type, as in the form of a helmet, or the like, that was suitable for wear only on particular occasions or under special circumstances, as during certain types of games or on a construction location, or in the course of performing other hazardous tasks. Such special forms of head-protecting head gear were, generally, unfit or improper for ordinary street or dress wear, where the person who desires head protection does not desire to attract attention to himself as a result of wearing an unusual or strange head covering.

It is the general object of the present invention to provide dress or street wear head gear that will protect the wearer against head injury without detracting from or calling attention to his or her appearance.

It is one object of the present invention to provide protective head gear, of the character described, which is easily and conveniently removably from and replaceable within the head gear, so that its use is optional with and convenient for the wearer.

It is another object of the present invention to provide protective head gear, of the character described, in which a protective shield is associated with a street or dress-wear heat or cap in a manner that it may be removable from the head with the hat or cap and replaceable thereon upon the replacement of the hat or cap upon the head.

It is still another object of the present invention to provide a street or dress-wear hat or cap with head protecting means that is of light weight and is otherwise relatively comfortable to wear.

It is yet another object of the present invention to provide head-protecting means for a street or dress-wear hat or cap that does not materially alter or detract from the appearance of the hat or cap.

It is a further object of the present invention to provide head protecting means for a street or dress-wear hat or cap that may be adjustable as to size, within limits, so that it need not be custom-produced for the wearer and may be economically provided in a limited number of sizes in ready-to-wear form, by processes and apparatus that are relatively easy and economical to practice and use.

The foregoing and other objects and advantages of the head-protecting head gear of the present invention will become more readily apparent to those skilled in the art from the embodiments thereof shown in the accompanying drawings and from the description following. It is to be understood, however, that such embodiments are shown by way of illustration only, to make the principles and practice of the invention more readily comprehensible, and without intent of limiting the invention to the specific details shown.

In the drawings:

FIG. 1 is a perspective view of a hat of the fedor a type, looking inwardly thereinto, showing the protective liner of the invention disposed therewithin; partly broken away to show details of construction and arrangement;

FIG. 2 is a side elevation of the hat of FIG. 1;

FIG. 3 is a front elevation, partly in section, of the

hat of FIGS. 1 and 2, with the section taken on the plane of line 3—3 of FIG. 2;

FIG. 4 is a side elevational view of a protective hat liner of the invention; partly in section, to show details;

FIG. 5 is a perspective view of a uniform cap having inserted therein a head protecting line of the invention; and

FIG. 6 is a rear elevational and partly sectional view, on an enlarged scale, of the uniform cap of FIG. 5, with the section taken on the plane of line 6—6 of FIG. 5.

Generally stated, the invention consists in the provision for a street or dress-wear hat, such as a felt or straw hat, conventionally used for street or dress wear, or for a uniform cap, or any other head gear that is formed with an inwardly foldable sweat band at its head-receiving opening, of a head protecting liner consisting of a shell formed of a rigid, but inherently resilient material and having a crown section which is lined on the inside with a compressibly resilient material and a marginal edge portion around the crown section that is insertable between the sweat band and the head receiving section of the head gear so that the protective liner may be easily and readily inserted within and removed from the hat or cap, and, when inserted, becomes part of the hat or cap to the extent of being removable from the head with the hat or cap and replaceable on the head with it, and is supported by it around the head with a distribution of its weight and without undue pressure upon the crown of the head.

More specifically stated and with reference to the embodiment of the invention illustrated in FIGS. 1 to 4, the same is shown to comprise a hat, such as a felt hat, generally designated as **10**, including a crown or head-receiving section **12**, a brim, **14**, and having the head admitting opening, **16**, to the edge portion of which is secured, by its outer edge, as at **18**, for inward folding, a sweat band, **20**.

Disposed within the crown section **12** of the hat **10** is a protective liner, generally designated as **22**, which consists of a shell that may be formed, preferably, of a synthetic plastic material of generally rigid and slightly resilient character and of sufficient thickness to resist impact. The shell consists of a crown portion, **26**, having the general shape and outline to fit loosely over the crown part of a head, and a marginal portion, **28**, extending from the edge of the crown portion, of a width substantially equal to the width of the sweat band **20**, and of general conformity to the head supporting side portion of a head; or, otherwise stated of a general outline to fit within the inwardly folded sweat band **20**. The shell may comprise a synthetic, preferably thermoplastic material, such as celluiose acetate or other plastic material having similar rigidity and inherent resilience, preferably in sheet form that may be molded economically by the vacuum molding process.

Secured to the inner surface of the crown portion **26** of the shell, as by any suitable adhesive, is a relatively thick, soft, and resiliently compressible lining, **30**, which may be formed of a spongy sheet material, such as sheet sponge rubber or rubber substitute, as polyethylene or polyester foam sponge, whose outer surface may, preferably be lined, as with a continuous film, **32**, as of vinyl.

The marginal portion **28** of the shell may be continuous around the circumference of the crown portion **26** or may be formed in contiguous, spaced sections separated by cut out darts, **34**, to render the marginal portion adjustable as to peripheral size, to a limited extent, or it may be in sections spaced a greater distance apart for the purpose of reducing the weight of the protective liner and of minimizing its head contacting areas and the possible discomfort that may result to a minimum. For the same

general purposes, the marginal portion **28** may be made thinner than the crown portion.

The shell of the protective liner **22** may be molded in a number of different sizes, which, because of the adjustability of the marginal, unlined portion **28**, need be only a limited number. It is insertable into the crown section **12** of the hat **10**, through the opening **16**, after the sweat band **20** has been folded outwardly, and after it is fitted in place the sweat band is folded back into place, to thereby engage over the marginal shell portion **28**, to retain the liner in place as well as to support it over a widely distributed area by the pressure of the hat distributed over a wide area and without pressure on the crown of the head. The same procedure may be followed in removing the protective liner **22**.

If desired, and preferably, ventilating openings, such as the spaced apertures **36**, may be provided in the crown portion **26** of the liner shell, which extend through the lining **30**. If desired, ventilating openings, in the form of spaced apertures **38**, may be formed through the hat crown **12**. Such openings **36** and **38** may be reinforced by eyelets, if desired, in a manner that is conventional and well known.

FIGS. 5 and 6 of the drawings illustrates the use of a protective liner **22** of the invention with a uniform cap, generally designated as **40**. The cap **40** is formed with the head receiving section consisting of the conventional, annular, generally stiff, head engaging band, **42**, to one edge of which is secured the expansible hood portion, **44**, and to the other edge of which is secured the inwardly folded sweat band, **44**. The protective liner **22** is inserted and held in the cap **40** in a manner similar to that shown in connection with the felt hat **10**; namely, by first folding the sweat band **44** outwardly, inserting and fitting the line into the head receiving portion of the cap, and then folding the sweat band **44** inwardly again over the marginal portion **28** of the liner.

This completes the description of the head protecting head gear of the present invention and of the protective liner used for the purpose. It will be apparent that the head gear of the invention may be optionally used with or without the protective liner, and that, when used with the liner, the latter becomes a part of the head gear, to be removable and replaceable therewith from and on the head.

It will also be apparent that the protective liner may be easily and conveniently and rapidly inserted into and removed from the head gear and that, when in place within the head gear, provides adequate protection to the head against injuring blows with a minimum of discomfort and irritation to the wearer.

It will likewise be apparent that the protective liner of the invention when used with a street or dress-wear hat or with a cap does not materially affect the appearance thereof or detract therefrom or from the appearance of the wearer and that such protective liner is a highly useful and desirable item for those who require protection for their head.

It will be further apparent that numerous modifications and variations may be made in the protective headgear of the present invention by any one skilled in the art, in accordance with the principles of the invention hereinabove set forth and without the exercise of any inventive ingenuity. I desire, therefore, to be protected for any and all such modifications and variations that may be made within the spirit of the invention and the scope of the claims hereto appended.

What I claim is:

1. Head protecting means for head gear having a head receiving section and an inwardly foldable sweat band secured at the opening of said head receiving section, comprising a shell formed of a resiliently rigid material, said shell comprising a crown portion adapted to cover the head above the ears and having a substantially planar edge, and a lining of compressibly rigid material secured on the inside of said shell, said lining being of a dimension so as to leave an unlined marginal portion of said shell adapted to fit between said sweat band and the wall of said head receiving section.

2. Head-protecting means for head gear having a head-receiving section and an inwardly foldable sweat band secured at the opening of said head-receiving section, comprising a shell formed of a relatively thin sheet of thermoplastic material of resiliently rigid characteristics, said shell comprising a crown portion adapted to cover the head above the ears and having a substantially planar edge, and a lining of relatively thick compressibly resilient sheet material secured on the inside of said shell, said lining being of a dimension so as to leave an unlined marginal portion of said shell adapted to fit between said sweat band and the wall of said head-receiving section.

3. Head protecting means for head gear having a head-receiving section and an inwardly foldable sweat band secured at the opening of said head-receiving section, comprising a shell formed of a relatively thin sheet of a resiliently rigid material, said shell comprising a crown portion adapted to cover the head above the ears and having a substantially planar edge, and a lining of a relatively thick layer of compressibly resilient material secured to and covering the inner surface of said shell, said lining being of a dimension so as to leave an unlined marginal portion of said shell adapted to fit between said sweat band and the wall of said head-receiving section.

4. The head protecting means of claim 3, wherein said marginal portion of said shell is formed with spaced cut-outs extending inwardly thereinto from the outer edge thereof.

5. Head-protecting head gear, comprising, in combination, a head covering having a head-receiving section having a head admitting opening provided therein and an inwardly foldable sweat band secured by an edge thereof to said head-on receiving section at its said head admitting opening, and a head protecting liner for said head covering comprising a shell formed of resiliently rigid material, said shell comprising a crown portion adapted to cover the head above the ears and having a substantially planar edge, and a lining of compressibly resilient material secured to and covering the inside of said shell, said lining being of a dimension so as to leave an unlined marginal portion of said shell adapted to fit between said sweat band and the wall of said head-receiving section.

6. The head-protecting head gear of claim 5, wherein said marginal portion of said shell is formed with cut-out portions extending inwardly thereinto from the outer edge thereof.

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