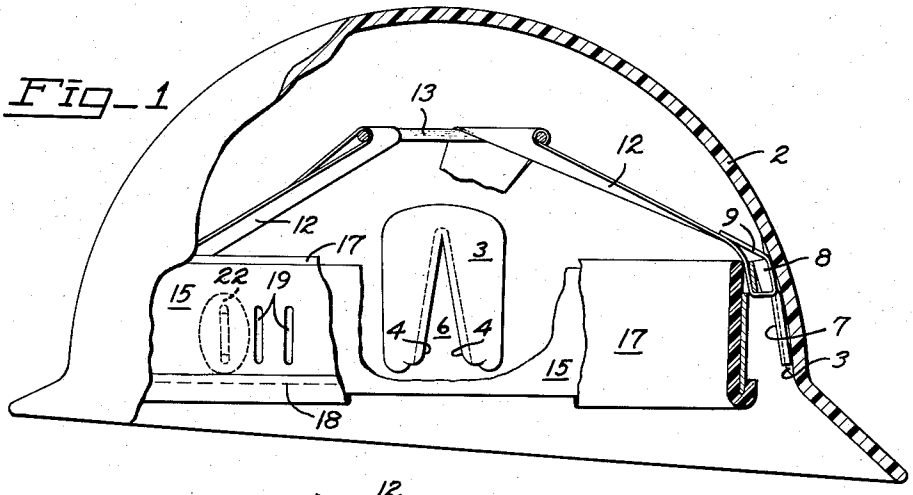
May 2, 1961 A. J. RUGGIERO 2,981,955

SAFETY HAT SUSPENSION HARNESS

Filed Oct. 11, 1957

Fig_1



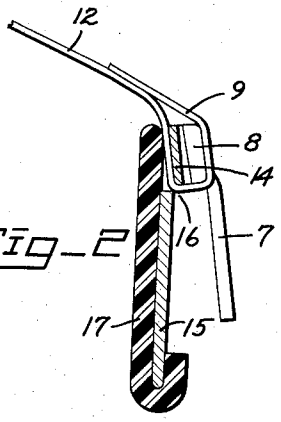


Fig_2

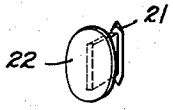


Fig_4

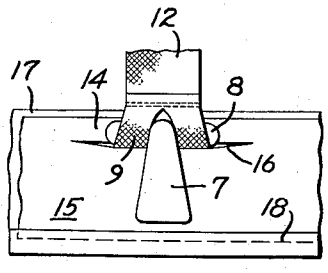


Fig_3

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SAFETY HAT SUSPENSION HARNESS

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3 Claims. (Cl. 2—3)

My invention relates to safety hats; and the principal object of the invention is to provide a suspension harness including an absorbent liner forming part of the head band and providing immediate contact between the head band and the wearer.

Another object is the provision of a suspension harness embodying an absorbent liner which can be readily rinsed out in water when saturated with perspiration, and replaced immediately in the hat.

Another object is the provision of a suspension harness embodying an absorbent liner which provides not only a highly absorbent medium, but also a particularly soft and comfortable contact with the head of the wearer.

Other objects will be brought out in the following description of the invention. I do not limit myself to the showing made by said description and the drawings, since I may use variant forms of the invention within the scope of the appended claims.

Referring to the drawings:

Fig. 1 is a side elevation of my safety hat and suspension harness, portions being broken away the better to disclose the structure.

Fig. 2 is an elevation and vertical sectional view through one side of the suspension harness, showing the wedge and crown strap in elevation and the head band in section.

Fig. 3 is a fragment in elevation, showing the lower end of a crown strap secured to a wedge and the mounting strip of the head band. The direction of the view is horizontally toward the center of the suspension harness.

Fig. 4 is a perspective view of the fastener button which secures the ends of the head band together.

Figs. 1, 3 and 4 are drawn to about one-half size. Fig. 2 is about actual size.

The embodiment of my invention herein described is achieved by a safety hat body in combination with a suspension harness including supporting or crown straps and a head band including a sweat pad. When my safety hat is made of molded non-conductive plastic, interlocking wedge and socket parts of similar non-conductive material are arranged between the head band and the lower portion of the hat crown. The socket part is disposed preferably on the crown and is molded integrally therewith, having flat inner surfaces extending only slightly within the sweep of the inner surface of the crown at its juncture with the brim. Other means of detachably securing the suspension harness to the hat body may be used.

The head band which lies just within the crown preferably comprises two thicknesses of material, the inner one a sweat pad in direct engagement with the head of the wearer, and the outer one constituting a mounting band or backing on which the sweat pad is secured and to which the ends of the supporting crown straps are made fast.

Secured in the end of each supporting or crown strap is a wedge block seated in its complementary companion socket. The wedge block is readily engaged in and disengaged from its socket, but even the light weight of the hat body seats and locks the parts securely together. Any blow on the hat results in movement of the wedge block in its complementary socket, tending to tighten the connection and impose a progressively severe braking action on, or resistance to the force of the blow which must be absorbed.

Since my hat must be worn many times when the surrounding temperature is sufficiently high to induce perspiration, I have provided in the head band of the hat a heavy absorbent pad forming the inner layer of the head band and therefore in immediate and direct contact with the forehead in a zone running around the head just above the ears. In this position the pad intercepts and holds drops of perspiration which would otherwise tend to run down face and neck.

My safety hat comprises a hat body of which the main portion is the crown **2**. Preferably the hat is molded of one of the nylons which has the desired qualities of dielectric strength, resilience and flexure. Integrally formed with the crown wall along its lower margin, are a plurality of pairs of flat non-conductive lugs **3** extending into the cavity of the crown a small amount, which only about doubles the thickness of the wall at that point. The reason for the low, flat quality of the lugs is to preserve a substantially even sweep around the inner surface of the crown, so that in the event accidental means drives the hat laterally against the head of the wearer, there are no projections to add penetration wounds to the blow.

The lugs **3** are disposed at the inside lower edge of the crown and extend upwardly in it, with their adjacent edges **4** undercut and diverging downwardly to provide a shallow dovetail socket **6** in which a non-conductive wedge block **7** of complementary shape interlocks.

The wedge block also molded of nylon, has an integral cross bar **8** at its upper or smaller end, which lies within the bifurcated loop **9**, formed at the lower end of the crown strap **12**.

Preferably the crown straps have loops **9** at each end, their central portions being gathered together in the tie cord **13** to adjust the position of the hat vertically on the head. Each loop **9** of the crown straps also encloses a relatively narrow section or strip **14**, separated from the mounting band **15** along its upper margin by the longitudinal slits **16**.

The mounting band is formed of relatively thin and stiff water resistant material such as a resinous coated and/or impregnated fabric so as to provide a sufficiently substantial backing strip or band for the soft and flexible sweat pad **17**.

The sweat pad is formed of strip material about ⅛" thick and 2" wide; and is secured by a line of stitching **18** to the mounting band along its lower outer edge, and then turned over the edge and upwardly to lie against the inside face of the mounting band as shown.

Extending across the middle portion of each end of the head band is a series of spaced parallel slots **19** so that the ends may be lapped together with slots in register for each head size. These slots extend through both mounting band and sweat pad, and when the opposite ends of the head band are adjusted with the desired slots in alignment, they may be fixed by the insertion of a button having a small head **21** to seat on the outer face of the mounting band, and a large flat head **22**, exposed on the inner face of the sweat pad, but half buried therein.

While any suitable absorbent material may be used for the sweat pad, I prefer to use a strip of foam plastic such as polyurethane. It has ample strength and capacity and washes out readily. When cleansing is desired, the entire suspension harness may be removed by detaching the fastener elements **6** and **7**, soused in water, squeezed out and replaced; or a spare harness inserted while the first

one dries. Wet or dry, the pad is pleasantly soft and yielding against the skin.

I claim:

1. In a safety hat suspension harness, a non-absorbent mounting band surrounding the head of the wearer, a plurality of crown straps to overlie the head of the wearer and secured to the upper part of the mounting band, a soft and absorbent sweat pad overlying the inside surface of the mounting band and continuous therewith, the lower edge zone of the pad being folded over the lower edge of the mounting band to overlie a narrow zone on the lower outside surface thereof, and means securing only the folded over portion of the pad to said narrow zone on the outside surface of the band.

2. A safety hat suspension harness structure in accordance with claim 1 in which means including aligned slots in the band are provided for securing the ends of the mounting band together in a selected head size.

3. A safety hat suspension harness structure in accordance with claim 1 in which a line of stitching through the lower narrow zone of the mounting band and only the folded over portion of the sweat pad secures the pad to the band.

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