Jan. 29, 1952 R. J. SAILER 2,584,094

WATERPROOF SWEATBAND FOR HATS

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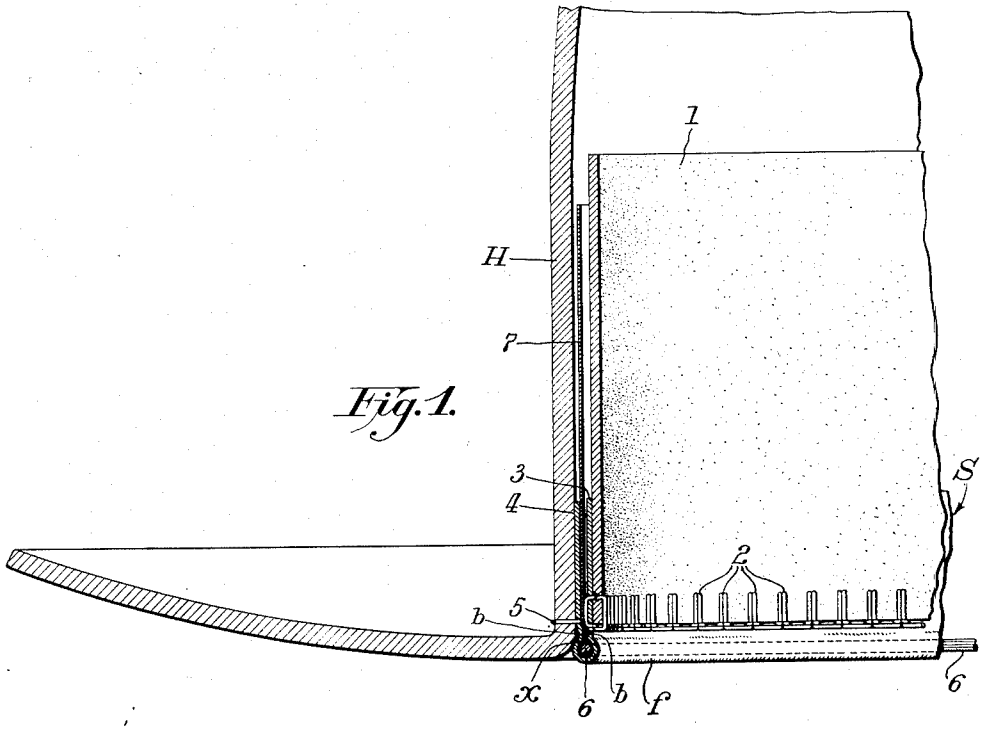


Fig. 1.

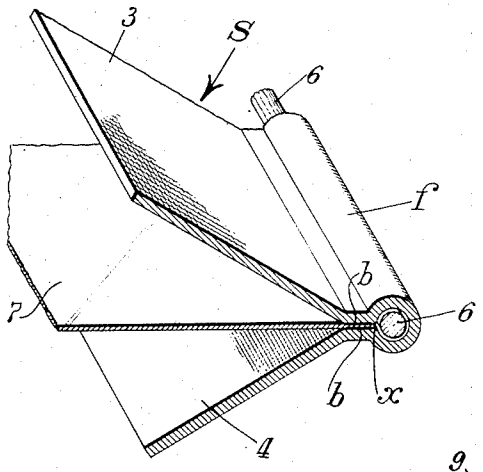


Fig. 2.

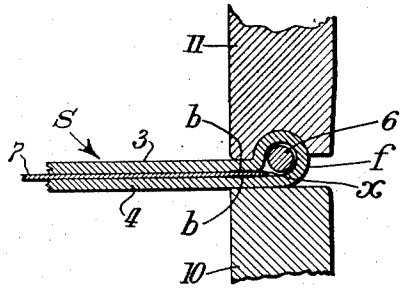


Fig. 4.

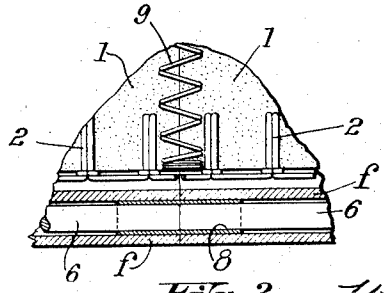


Fig. 3.

Witness:

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UNITED STATES PATENT OFFICE

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WATERPROOF SWEATBAND FOR HATS

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1 Claim. (Cl. 2—181)

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This invention relates to hats and more particularly to sweatbands therefor of the waterproof type.

Many waterproof sweatband constructions heretofore have been provided which are designed to prevent the passage of perspiration and oil from the head of the wearer through the sweatband and to the outside of the hat. When such passage is not prevented, this perspiration and oil cause soiling and discoloration of the hat and the outside hat band.

Certain ones of the waterproof sweatband constructions heretofore provided each includes a strip of waterproof material sewed between the leather sweatband and the body of the hat. In such constructions, the sewing stitches will, if not prevented, act as wicks to transmit perspiration and oil from the head of the wearer to the outside of the hat. To prevent this capillary action it heretofore has been the practice to apply to such stitches a waterproof liquid or viscous sealing agent. This is a costly and time-consuming operation which is objectionable to hat manufacturers.

The invention which forms the subject of United States patent to F. DeFeo, No. 2,387,567, October 23, 1945, overcame the necessity of waterproofing the attaching stitches by providing a construction in which the waterproof lining consists of an imperforate thermoplastic sheet which has a portion surrounding the reed and fused thereto and to the opposed flaps of a folded waterproof reed cover strip, one flap of the strip subsequently having sewed thereto a leather sweatband and the other flap eventually being sewed to the hat body. Thus, in the DeFeo construction, no stitches pass through the waterproof lining. In practice, however, this construction has not proven satisfactory because the thermoplastic sheet material completely surrounds and binds the reed and prevents relative endwise movement between the sheet and the reed; which relative movement is essential in the final assembling of the sweatband, as hereinafter will appear.

The conventional method of preparing a hat sweat construction for embodiment in a hat includes making the hat sweat and cutting it to the exact length required to fit within the hat but with the reed slightly longer, one end of the reed being flush with one end of the hat sweat and the other end projecting from the other end thereof. The two ends of the hat sweat are then united to form a substantially circular ring-like structure. This uniting operation consists in causing the flush end of the reed to be projected

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out of its enclosure sufficiently to have one end of a thin sheet metal ferrule slipped over the reed and frictionally held thereon. The reed and the ferrule are then pushed partly back into the surrounding portion of the reed cover strip. The other end of the reed is then trimmed to the proper length and inserted into the projecting end of the ferrule. The two ends of the hat sweat are then abutted and secured together as, for example, by zigzag stitching, with the ferrule entirely enclosed within the folded of the reed cover strip and preventing relative lateral movement of the two ends of the hat sweat at the lower edge thereof.

When the hat sweat is made in accordance with the DeFeo patent the thermoplastic material binds the reed so that the reed cannot be moved endwise in the fold of the reed cover strip as is necessary to have the ferrule attached thereto. Furthermore, the wrapping of the thermoplastic material about the reed prevents the insertion of the ferrule into the fold of the reed cover strip.

This invention has as its primary object to provide an improved waterproof sweatband of the type embodying a strip of bondable, waterproof, sheet material, a folded fabric reed cover strip having opposed flaps between which the thermoplastic sheet is bonded and a reed of any suitable material within the fold of the fabric strip.

Another object of the invention is to provide a hat sweat structure of the type described, in which the reed is capable of endwise movement relative to its enclosure so that the ends of the reed may be projected beyond the ends of the hat sweat to receive the connecting ferrule.

A still further object of the invention is to provide an improved hat sweat structure comprising an imperforate sheet of thermoplastic waterproof material bonded between the flaps of a folded reed cover strip, also of waterproof material, with a reed located in the fold of the strip; one edge of the thermoplastic sheet terminating adjacent the proximate side of the reed and not surrounding the reed.

Drawings depicting a preferred embodiment of this invention are annexed, and in such drawings, Fig. 1 is an enlarged sectional view through a hat having embodied therein a hat sweat made in accordance with the present invention.

Fig. 2 is an enlarged perspective view of a folded reed cover strip of waterproof material showing a reed inserted into the fold thereof and a sheet of waterproof thermoplastic material bonded along one edge between the opposed flaps of the strip.

Fig. 3 is an enlarged detail sectional view showing the means for connecting together the adjacent ends of the reed, the reed cover strip, and the leather sweatband; also the stitching for securing the sweatband to one flap of the reed cover strip.

Fig. 4 is an enlarged sectional view illustrating one means for bonding one edge portion of the sheet of waterproof thermoplastic material to the inner surfaces of the opposed flaps of the reed cover strip.

Referring more specifically to the drawings, the invention is disclosed as embodied in a hat sweat construction comprising a leather sweatband 1, of conventional form, attached, at its lower end, by stitches 2, to the inner flap 3 of a folded reed cover strip S. This strip is preferably made of oil silk, or other waterproof fabric, coated or impregnated with a bondable thermoplastic material. The other flap 4 of the strip S is adapted to be secured to the hat body H by stitches 5, as shown in Fig. 1. A fold *f* formed in the mid-portion of the strip S and connecting the flaps 3 and 4 encloses a reed 6 with sufficient clearance between the fold and the reed to prevent binding of the reed and to permit the insertion of a connecting ferrule later to be described. Bonded to the inner surfaces of the flaps 3 and 4, by relatively narrow bonds *b* extending along a line adjacent the reed 6, is a sheet of waterproof thermoplastic material 7 which, in an assembled hat, lies between the leather sweatband 1 and the hat body H. Thus perspiration and oil from the head of the wearer cannot be conducted from the sweatband 1 to the body of the hat.

A feature of my invention resides in having the lower edge of the thermoplastic sheet 7 terminate adjacent to the proximate side of the reed 6, as indicated at *x*, so as not to interfere with the free movement of the reed in the fold *f*.

One edge of the waterproof thermoplastic lining 7 may be inserted between the inner surfaces of the flaps 3 and 4 of the waterproof reed cover strip S, and bonded thereto as indicated at *b*, *b*, and the reed 6 inserted into the fold *f*, in a continuous operation, by a suitable electronic seaming machine as shown, for example, in the pending United States patent application of O. B. Reid, Serial No. 55,513, filed October 20, 1948, now Patent No. 2,551,851, dated May 8, 1951. Such a machine includes appropriate guiding elements and opposed electrodes 10 and 11 which bear upon opposite faces of the work closely adjacent to but at one side of the reed 6 and between which there is created an electric field of high frequency voltage which effects the bonding operation.

After the reed cover strip S and the thermoplastic waterproof sheet 7 have been bonded together with the reed 6 within the fold *f*, as shown in Fig. 2, the leather sweatband 1 is sewed to the flap 3 by the stitches 2. The composite structure, except the reed, is then cut to the exact length required to fit within a given hat, as above described. One end of the reed is then shifted endwise out of the fold *f* and a thin metal ferrule 8 (see Fig. 3) is slipped over the projecting end of the reed and frictionally secured thereto, leaving approximately one-half of the ferrule projecting beyond the end of the reed. The other end of the reed, then projecting beyond the other end of the fold *f*, is cut to the proper length and inserted into and frictionally engages the projecting end of the ferrule. The opposite ends of the strip S, the reed 6, the plastic sheet 7 and the sweat leather 1 are then brought into abutting contact and maintained in that position as, for example, by zigzag stitches 9 sewed through the sweat leather and the flap 3. Finally the completed structure is sewed to the hat body by stitches 5 uniting the body of the hat and the flap 4.

Having thus set forth the nature of the invention, what I claim herein is:

In a waterproof sweatband structure, a folded strip of waterproof fabric comprising two opposed and substantially flat flaps and a fold portion connecting said flaps, one of said flaps constructed and arranged to be attached to a hat body and the other designed to have a leather sweatband secured thereto, a reed slidingly mounted within and lengthwise of said fold portion, and a flat sheet of thermoplastic waterproof material having a longitudinal marginal edge portion, said sheet aligned flatwise between said flaps with its marginal edge portion disposed adjacent but free of the proximate side of said reed, said waterproof sheet material being bonded to said flaps along a line adjacent to but outside the confines of said fold portion so as to draw said fold portion directly about said reed which is slidingly mounted therein.

RUDOLPH J. SAILER.

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The following references are of record in the file of this patent:

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