Jan. 10, 1928. 1,655,773

J. C. PETERSON

SWEATBAND FOR HATS

Original Filed April 10, 1922 4 Sheets-Sheet 1

Fig. 1.

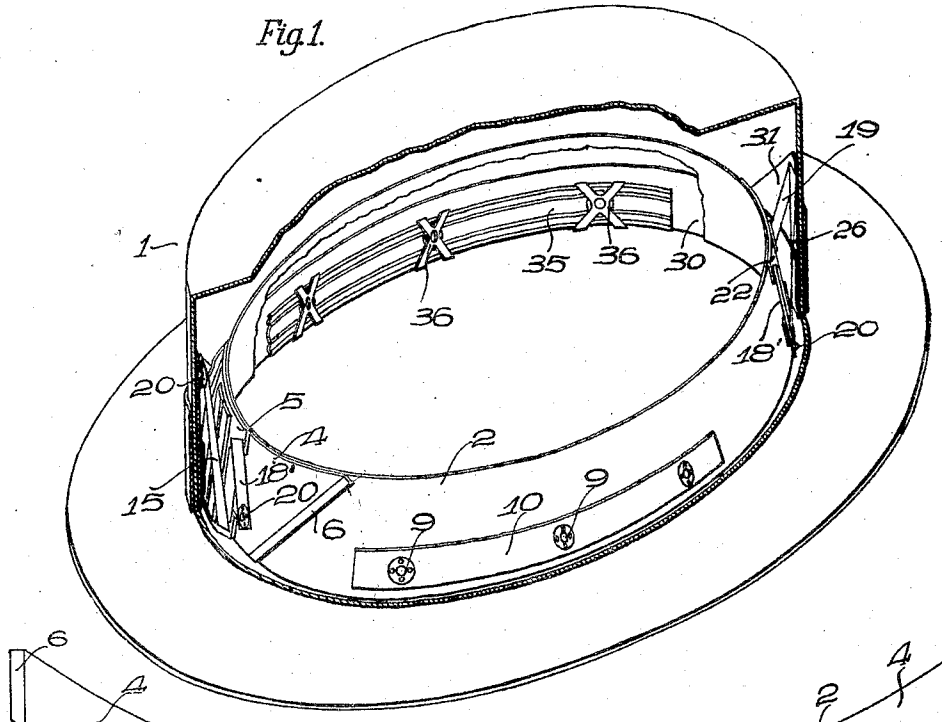


Fig. 2.

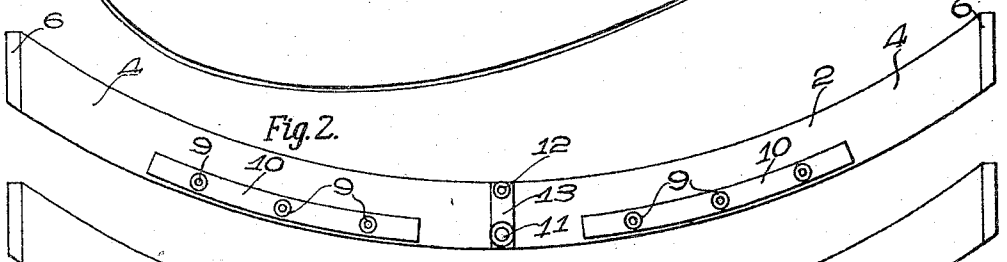


Fig. 3.

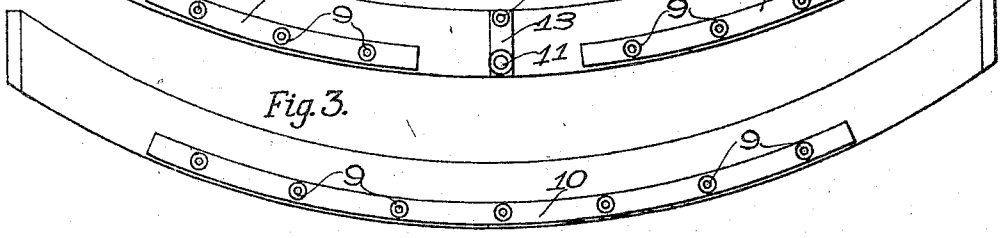


Fig. 4.

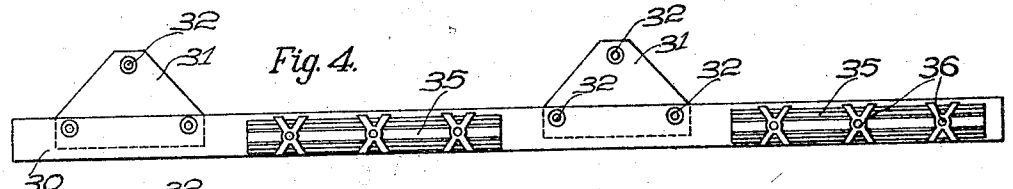
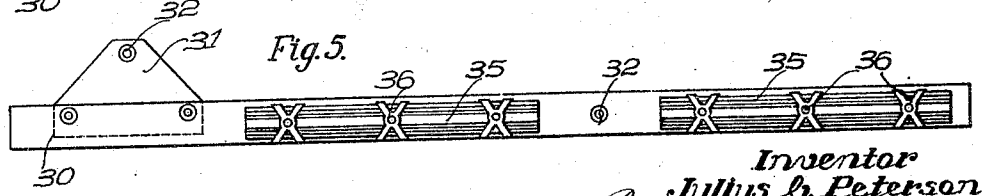


Fig. 5.



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Jan. 10, 1928. 1,655,773

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SWEATBAND FOR HATS

Original Filed April 10, 1922 4 Sheets-Sheet 2

Fig. 6.

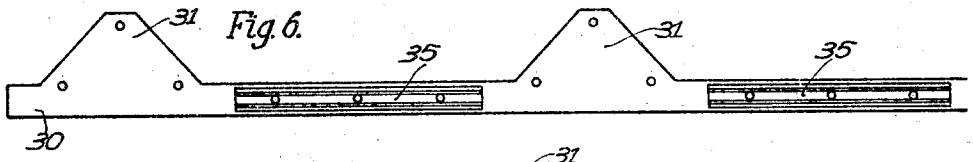


Fig. 7.

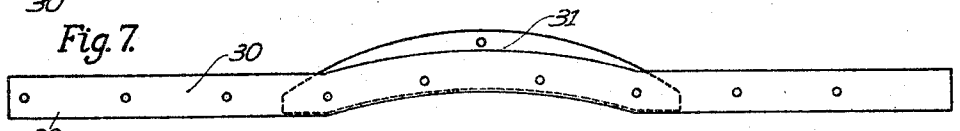


Fig. 8.

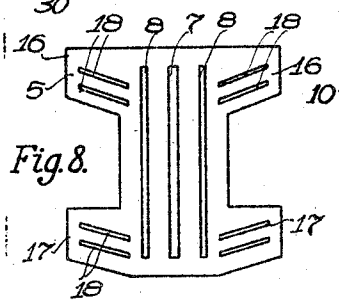


Fig. 9.

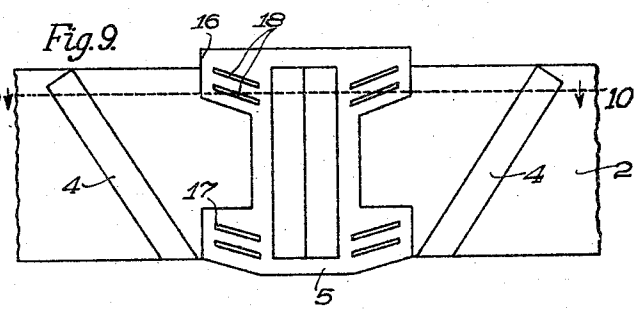


Fig. 11.

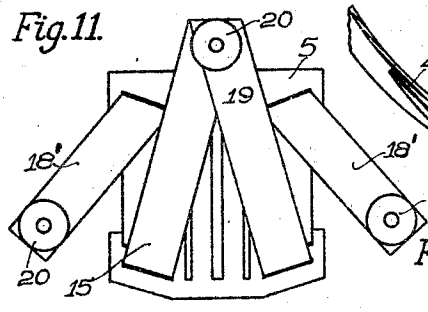


Fig. 10.

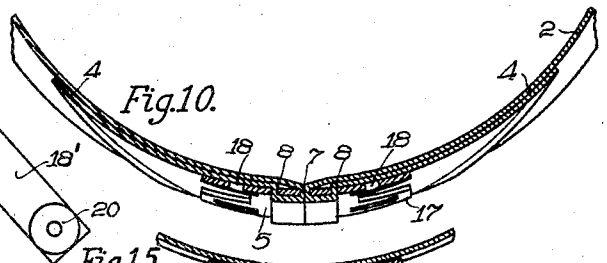


Fig. 15.

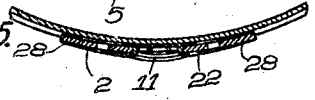


Fig. 12.

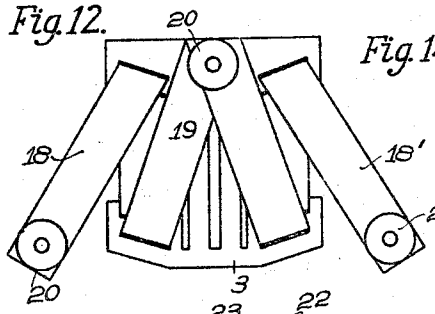


Fig. 14.

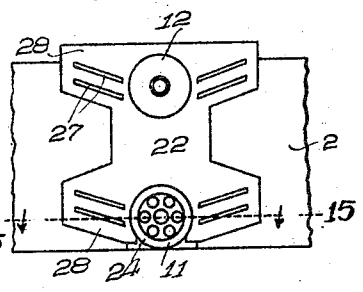
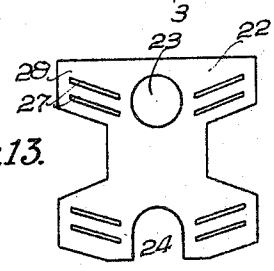


Fig. 13.



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Jan. 10, 1928. 1,655,773

J. C. PETERSON

SWEATBAND FOR HATS

Original Filed April 10, 1922 4 Sheets-Sheet 3

Fig.16.

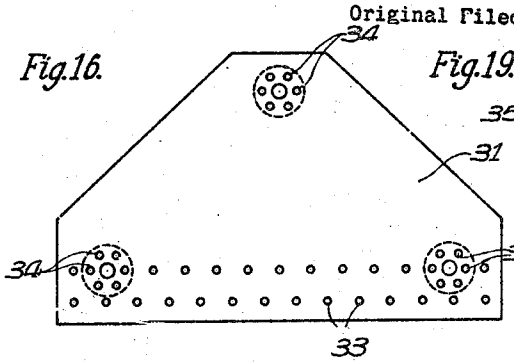


Fig.19.

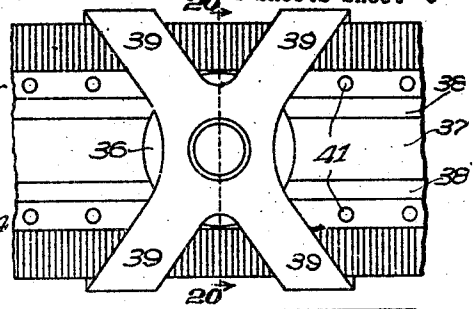


Fig.17.

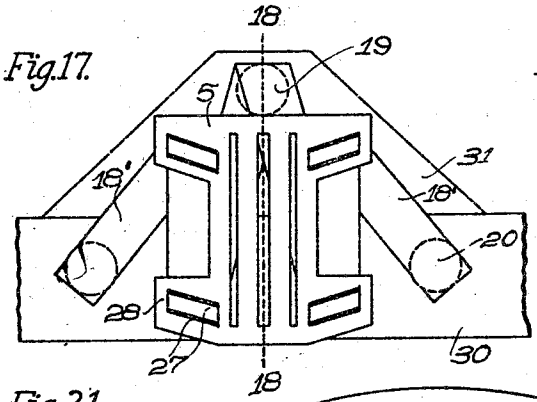


Fig.18.

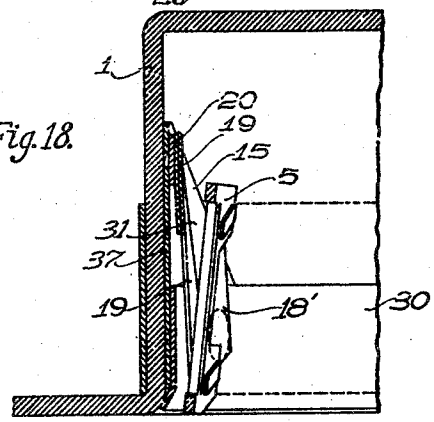


Fig.21.

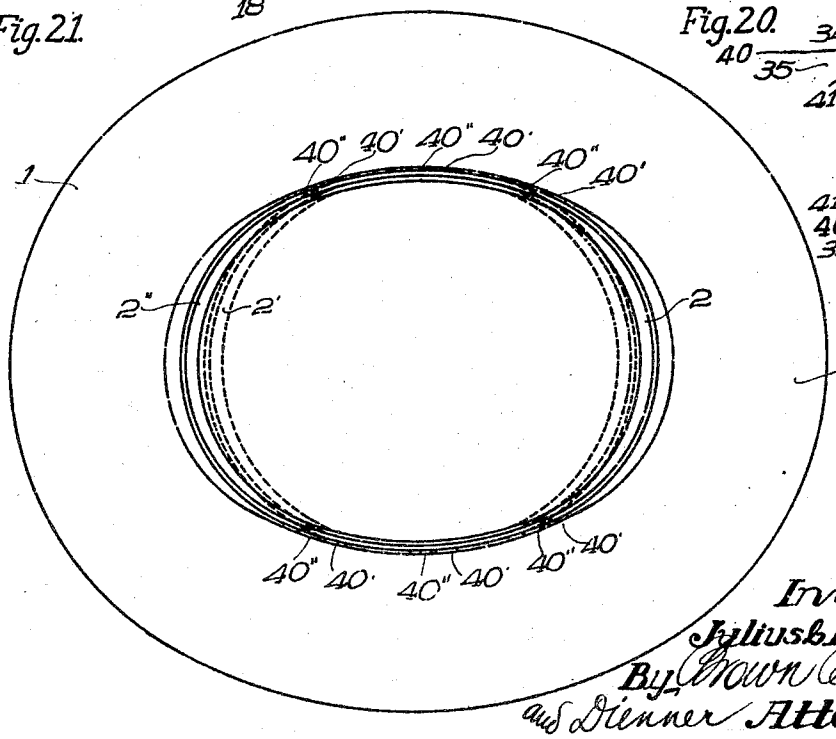
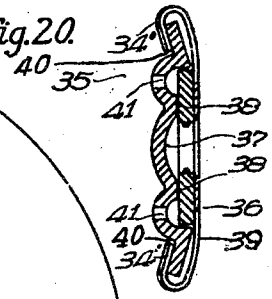


Fig.20.



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Jan. 10, 1928. 1,655,773

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SWEATBAND FOR HATS

Original Filed April 10, 1922 4 Sheets-Sheet 4

Fig. 22.

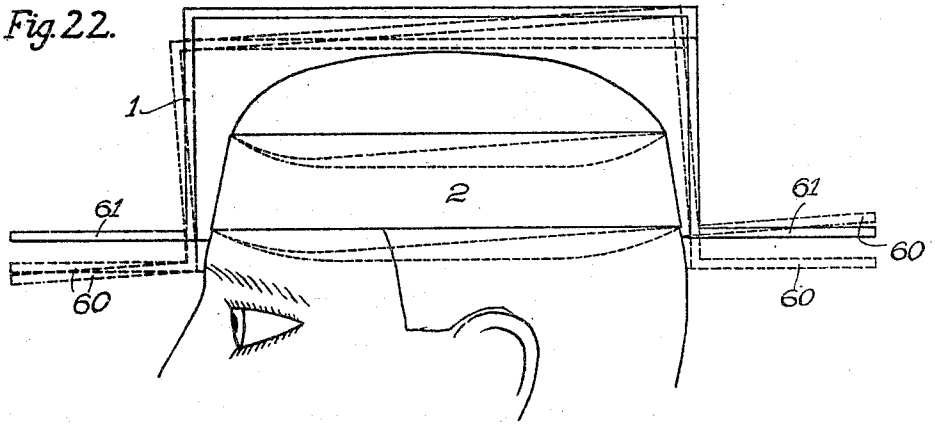


Fig. 23.

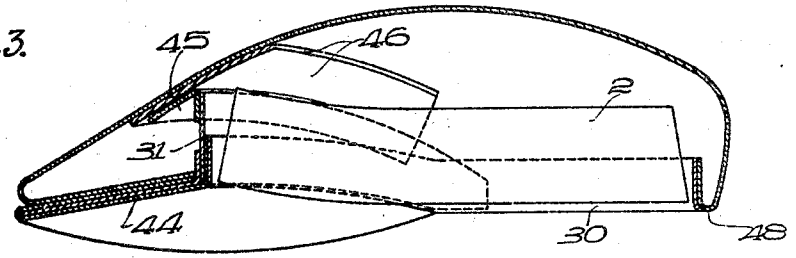


Fig. 24.

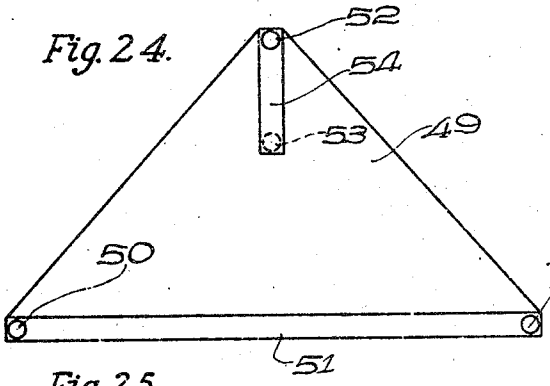


Fig. 25.

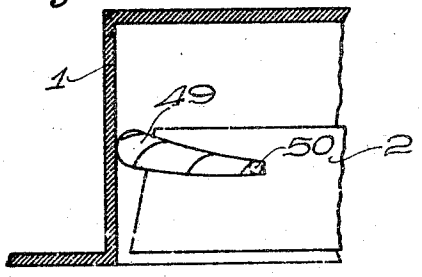


Fig. 26.

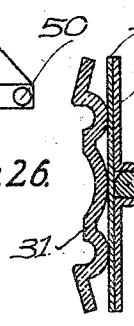
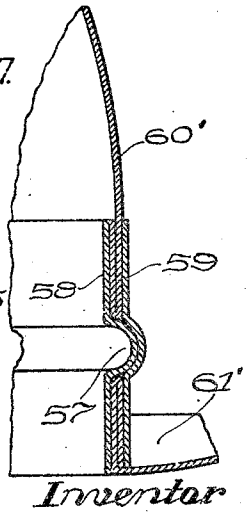


Fig. 27.



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Patented Jan. 10, 1928. 1,655,773

UNITED STATES PATENT OFFICE.

JULIUS C. PETERSON, OF ELGIN, ILLINOIS.

SWEATBAND FOR HATS.

Application filed April 10, 1922, Serial No. 551,166. Renewed May 16, 1927.

My invention relates to improvements in sweat bands for head gear, and more particularly to sweat bands which are adjustable and removable, such as is disclosed in United States Letters Patent, No. 1,349,472, issued to me.

The head is the most important part of the body as it contains the brain which controls the body. It is important that the supply of blood to the brain be adequate, and that circulation of the blood to the head be not interfered with by pressure on the veins and arteries. The temperature of the head should be kept even by ventilation particularly in hot weather. If the head becomes overheated, or is not properly supplied with blood, or if the head gear causes discomfort, the whole body is unfavorably reacted on. It is apparent then that designing the head gear so that it will be properly adapted to the particular head is of the utmost importance.

Among the requirements of comfort are: eliminating undue pressure at all points, particularly at the forehead which has no hair to cushion it; providing a smooth and yielding surface in contact with the forehead; allowing adequate ventilation with due regard to the condition of the weather, so that allowance for high and low temperatures can be made; and finally providing for a pleasing appearance of the head gear, which demands that it be worn in a position becoming to the wearer.

As a general rule, that part of the head where the sweat band is worn is smaller at the top than at the botton. If the sweat band is correspondingly smaller at the top than at the bottom, and is free to conform to the irregularities of the head, practically the whole of its inner surface will be in contact with the head. The total pressure on the head, due to the weight of the hat and sweat band will then be distributed over a large area, making the pressure at any particular point on the head small. Pressure from extraneous forces will likewise be widely distributed, and the large area of contact will prevent displacement of the hat by winds, or by jarring.

The lower edge of the ordinary sweat band is fastened directly to the hat, so that the stiffness of the hat itself must be overcome before the sweat band can yield to the irregularities of the head. If parts of the sweat band are not fastened directly to the hat, and do not come into contact with the hat, then those parts will be free to yield. If a slight movement is permitted between the hat and the sweat band, it will prevent the hat from jarring the head when the wearer is walking or riding.

I have found it advisable from actual experience to support the sweat band within the hat, so that it will have a floating action, whereby the sweat band is capable of free movement relative to the hat. The reasons for the desirability of this are numerous: First, as before stated, pressure caused by the stiffness of the hat and the irregularities of the head is entirely eliminated as the band is yielding, and hence, readily adapts itself to the irregularities of the head; second, circulation of air between the hat and head is permitted, which will never be destroyed by the position in which the hat is worn; third, discoloration of hat and hat band from perspiration passing through the sweat band is prevented; and fourth, tastes and fancies of passing styles may be adhered to, without destroying the original shape of the hat, so that the adoption of one style will not necessarily require changing to another hat, as the adjustment of the sweat band is the only required change.

Aside from the above, the feature of removability of the sweat band is more easily and readily attained. This is highly desirable and becomes important in that sweat bands may be used which will conform to the time of the year, providing coolness in the summer and warmth in the winter. Sweat bands are quickly soiled and should be cleaned frequently.

I provide a band adapter which is first placed in the hat and secured. End supports, which are part of the band adapter, are provided with securing devices which cooperate with securing devices on straps provided to suspend the sweat band at certain points, as for instance, at the ends of the hat. The straps are carried by buckles, which also function to adjust the vertical position of the sweat band in the hat, and to adjust the sweat band circumferentially. The sweat band engages the sides of the hat by means of other securing devices attached to the band adapter.

While I shall describe the invention in its particular embodiment, it is to be under-

stood that various changes and modifications may be made without departing from the scope of the invention.

In the drawings:

Figure 1 is a perspective view of a hat embodying my invention, part of which is broken away to illustrate the sweat band and adapter, each of these also being broken away to show their relative position, while the members for adjustably and removably holding the sweat band in position are shown in proper relation;

Figure 2 is a front elevation of the sweat band laid out flat;

Figure 3 is a front elevation of a modified form of sweat band;

Figure 4 is a front elevation of the band adapter also laid out flat;

Figures 5, 6 and 7 are modified forms of band adapters;

Figure 8 is a front elevation of the adjusting buckle;

Figure 9 is a detail view, illustrating the ends of the sweat band passed through the adjusting buckle;

Figure 10 is a section taken on line 10—10 of Figure 9, looking in the direction of the arrows;

Figure 11 is a detail view illustrating the adjusting strap properly arranged in the adjusting buckle;

Figure 12 is a similar view but showing the strap in a different position;

Figure 13 is a front elevation of the supporting buckle;

Figure 14 is a detail view, illustrating the supporting buckle mounted on the sweat band;

Figure 15 is a transverse section taken on line 15—15 of Figure 14, looking in the direction of the arrows;

Figure 16 is a front elevation of one of the adapter end supports;

Figure 17 is a detail assembly of the band adapter, end support and adjusting buckle with its strap mounted to the former two;

Figure 18 is a section taken on line 18—18 of Figure 17, but showing it as mounted within a hat;

Figure 19 is a detail view of the sliding securing device as used on the band adapter;

Figure 20 is a section taken on line 20—20 of Figure 19;

Figure 21 is a bottom plan view illustrating in outline the normal position of the sweat band in the hat, and in dotted lines the position of the band when contracted;

Figure 22 is a sectional view illustrative of the hat and sweat band as worn, showing different positions the hat may take on the head, through adjustment of the position of the sweat band in the hat;

Figure 23 is a sectional view of a cap adapted to receive my sweat band, the latter shown in outline elevation;

Figure 24 is a detail view of a muffler unrolled;

Figure 25 is a fragmentary detail view illustrating the muffler in position between the hat and sweat band to intercept ventilation;

Figure 26 is a transverse section through a modified adapter; and

Figure 27 is a fragmentary sectional view illustrating the form of hat adapted to carry the same.

Referring to Figure 1, the hat 1 is shown provided with a sweat band 2 of general truncated conical form, whose ends 4—4 are secured in the adjusting buckle 5. When laid out, the band 2 assumes the shape of an arc, being preferably woven in such shape to insure the permanency of said shape. This manner of forming the sweat band 2 has for its purpose the providing of one peripheral edge shorter than the other, so that, when the band is in use, the upper circumference will be of smaller diameter than the lower. The greater the degree of curvature, the greater will be the difference between the lengths of its edges. Bands of different curvatures can, therefore, be made for different shaped heads, insuring a perfect fit no matter what the shape is of the head. As indicated at 6 in Figure 1, the ends 4 of the sweat bands are tapered to facilitate their insertion through the slots 7 and 8 of the buckle 5.

The securing devices 9, which are in form of snap-fasteners, for attaching the sweat band to the hat, are securely fastened to the side strips 10, which are preferably sewed to the sides of the sweat band. In the same way, the button 11 and snap-fastener 12 are fastened to the end strip 13, which strip is then sewed to the sweat band midway between its ends. This method of construction strengthens the sweat band at the points where tension is applied, without detracting from its flexibility, and insures a smooth surface on the side of the sweat band coming in contact with the head.

The adjusting buckle 5, as shown in Figure 8, consists of a curved member conforming generally to the shape of the head, with a plurality of vertical slots 7 and 8, the slot 7 being centrally disposed and of greater width than the slots 8, each of which accommodates an end of the band 2. The ends 4 of the band enter this slot 7, and are passed again into and out of the slots 8, emerging at the concave side of the buckle 5, where they are permanently left while the band 2 remains in adjusted position for mounting within the hat. The surfaces between the slots 7 and 8 respectively, may be roughened. Thus friction developed between these roughened surfaces and sweat band 2, and bending of the band in passing through the slots 7 and 8 hold the ends of

the band securely in proper position relative to the buckle. Adjustment of the band, in order to obtain various circumferences to accommodate different sizes of heads, may be had by pulling the ends 4 of the band in either direction through the slots 7 and 8.

The buckle 5 is provided with two pair of wings 16—17, upper and lower respectively, and in these wings are formed the slots 18. The slots 18 are diagonally positioned with respect to slots 7 and 8, and function to retain a strap 15, which serves as means for securing the adjusting buckle 5 to the hat. The strap 15 preferably consists of a single piece of tape doubled in the middle, with each end first passing through the slots 18 in the lower wings 17, and then through the slots 18 in the upper wings 16, resulting in the two ends 18′ and the central portion 19 lying on the convex side of the buckle 5 which faces the hat. Securing devices 20 for holding the strap 15 to the hat are mounted at the ends of the portions 18′ and at the upper fold of the central portion 19. The securing devices 20 may be of any type suitable for the purpose, but, as shown, are preferably snap-fasteners, which can be handled with ease and facility.

The strap 15 is adjustable in the buckle 5 as to the relative lengths of the end and middle portions. When the various folds of the strap 15 are pulled tight between the diagonal slots 18, the strap 15 will be, in general, held securely in position relative to the buckle 5. The securing devices 20 will at all times maintain their respective positions with respect to the hat itself, and the adjustment of the ends 18 and central portion 19 has for its ultimate result the shifting of the adjusting buckle 5 relative to the strap 15. As will be later explained, such adjustment of the buckle 5 results in raising or lowering the sweat band within the hat.

A supporting buckle 22 is provided at the opposite diametrical side of the band 2 for supporting the same. In this instance, the supporting member 22 and band 2 are merely in hooked relation whereby the band will be suitably suspended at that end when the member 22 is properly secured in position within the hat. The snap fastener 12 of the band 2 is adapted to secure itself in the aperture 23, while the button 11 is adapted to lie in the opening 24. A strap 26 is employed to support the member 22 within the hat, and passes through diagonal slots 27 in wings 28 in a manner similar to that of the strap 15. The strap 26 is likewise provided with securing devices 20.

The securing devices 20 may be snapped directly onto the hat, but I prefer using a band adapter 30 upon which means are suitably provided for cooperating with the securing devices. The use of the adapter 30 has the particular advantages of obtaining proper positioning, and of permitting easy attachment and removal, of the devices 20.

In the preferred form of adapter shown in Figure 4, the strip 30 carries end supports 31—31 on which are fastened cooperating securing devices 32. The end supports are diametrically opposite each other when the adapter is in position within the hat, and are adapted to have their securing devices 32 cooperate with the devices 20 of the straps 15 and 26.

The adapter band 30 is of any suitable material and is made in such length as will suitably fit the interior of the hat when its ends are joined together. The end supports 31 are triangular in form and the securing devices 32 are disposed thereon so as to correspond in relative position to the securing devices 20 on the strap 15, as shown in Figures 11 and 12. Holes 33 are pierced in these end supports 31 for attaching them to the adapter band and to the hat, while holes 34 are provided for securing the fasteners 32. Due to the curvature of these end supports, the lower fasteners 32 are brought slightly toward the center of the hat, and as the top of the buckle 5 is nearer the center of the hat (in the vertical direction) than the bottom of the buckle, the ends 18 of the strap 15 are approximately parallel to the respective folds of the middle portion 19, when viewed from a position normal to the longer axis of the hat. Due to this construction, no pressure is applied to the buckle at either side, it being capable of free movement in the direction of the longer axis of the hat, thereby giving perfect flexibility to the part of the sweat band to which it is attached. The buckle 5 is also capable of sidewise movement, pivoting about the upper securing device on end support 31 as a center. Mounting of the buckle, therefore, does not require any great accuracy in order to function properly.

As shown in Figures 4, 5, 19 and 20, the adapter 30 is provided on the inner side with snap fastener side supports 35, which permit movement longitudinally along the adapter, of the female member 36 of the snap fastener. Registry of the male member 9 attached to the strip 10 of the sweat band is thereby afforded, and this arrangement eliminates the exceptional accuracy, which would otherwise be required, in attaching each respective member of the snap fastener in place. But this arrangement is primarily for overcoming the difficulty encountered, when the sweat band shrinks due to washing, or otherwise, and also when it stretches due to wearing. The central channel 37 of the member 35 receives the projecting stud of the male member 9 while the surfaces 38 provide suitable bearings for the sliding female

member 36. This latter member is provided with an X-shaped spring 39 having corrugated end fingers 34′, which cooperate at the back side with corrugated surfaces 40 on the side supports 35. Openings 41 are provided to secure the side supports 35 to the adapter 30. Pressure on the ends of the spring fingers 39 will disengage the corrugated surfaces, so that the members 36 may be shifted longitudinally to any position on the support 35. This adjustment will be found necessary where the sweat band shrinks due to washing. In Figure 21, I have shown in dotted lines 2′ the position of the sweat band after shrinking, and in full lines 2″ the position of the sweat band after being readjusted by means of the buckle 5. This adjustment necessitates shifting the female members 36 from the positions indicated at 40′ to the positions indicated at 40″, assuming the adjusting buckle 5 to be at the left end of the hat.

The supporting buckle 22 may be omitted and also the manner of attaching the band at the sides, such as the snap-fasteners 9 extending toward the end of the hat, with only one adapter end support 31 employed. The sweat band will then be formed to conform to the showing in Figure 3.

In Figure 6, I have shown a modified form of band adapter. Here, the end supports 31 are made integral with the adapter, which simplifies the construction and gives additional support to the crown of a soft hat, preserving its shape and preventing it from coming into contact with the sweat band.

In Figure 7, a modified form of adapter is illustrated which is adapted for embodiment in caps. The end support 31 is crescent shaped. As shown in Figure 23, the lower edge of this end support and inner edge of the visor 44 are securely fastened together, while a crescent shaped guard 45 is attached to the top of the end support, providing a broad support for the fabric of which the cap is made. A stiffener 46 is fastened to the fabric of the cap above the guard 45, preserving the shape of the cap and preventing the top thereof from coming in contact with the head. A fullness or roll 48 around the lower edge of the cap allows sufficient adjustment for the shrinking or stretching of the sweat band without the use of sliding securing devices. It will be understood, however, that sliding securing devices may be used in this construction also.

When the hat is worn in a position on the head where the lower end of the crown of the hat rests above the eyes, as shown in Figure 22, the sweat band 2 ought not to lower to a corresponding position, as it will cause discomfort because of binding against the eye brows. I have illustrated the showing in Figure 22 in outline for the purpose of making clear the exact relative position of the sweat band and head when the hat is lowered at the front. The dotted lines 60 represent the hat in lowered position, while the full lines 61 represent the hat worn in a higher position. The adjusting buckle 5, by means of the strap 15, and the buckle 22, by means of the strap 26, permit relative movement with respect to the height of the crown, of the sweat band, but for the present purpose it may be said that the hat has relative movement while the sweat band 2 remains in set position about the head. The male members 9, which are carried at the side of the sweat band 2, will draw the sides of the sweat band down and about the head when the hat is lowered from upper position, while the front and rear ends will remain undisturbed. The arrangement for accomplishing this has been explained in a very thorough manner hereinbefore, and hence, futher explanation of this arrangement is deemed unnecessary.

The desirability of quick removal of the adapter becomes apparent where the headgear is often soiled, as in athletic hats and caps, and the washing of same is required at frequent intervals. I propose placing a flexible wire 55 around the adapter 30 and providing a groove in the hat crown to receive the same. As illustrated in Figures 26 and 27, a spring 55 is retained in its position about the outside of the adapter 30 by means of a member 56 secured to the adapter. The groove 57 is formed in the hat by connecting the crown 60′ to the brim 61′ by strips 58 and 59.

The method of attaching the sweat band in the hat leaves open spaces at each end, which provide the necessary ventilation for the head when covered by the hat. When the weather is moderate, full ventilation is desirable, but in cold weather the amount of ventilation should be reduced so that the head may be kept warm. This regulation of the amount of ventilation is accomplished by the use of the muffler 49. As shown in Figure 24, this muffler is triangular in shape, and is provided at the base with a strip 51 adapted to carry the securing devices 50. A second strip 54 is attached to the muffler, to the ends of which are attached securing devices 52 and 53 to cooperate with each other in holding the muffler in a rolled-up position. The muffler is rolled up about the base, forming a slender roll tapering from the middle toward the ends, with the securing devices 50 exposed for attachment to either the hat crown or sweat band.

The adapter is fastened in the hat in approximately the same position as occupied by the ordinary sweat band. It is put in or taken out as a unit, so that the hat may be cleaned and blocked with the same facility as a hat equipped with the ordinary sweat band. The adjustments of the sweat band may be accurately made before insertion.

After adjustment, engagement of the securing devices is all that is required to insert the sweat band, and their disengagement all that is required to remove it.

It is apparent that the device herein described is capable of various modifications, and it is obvious that changes involving omission, alteration, substitution and reversal of parts, and even changes in the mode of operation, may be made without departing from the scope of my invention, which is best defined in the following claims:

I claim:

1. In combination with a hat, a sweat band in the hat, and a strap for attaching said band to said hat and located at one of the end portions of the sweat band, said strap being adjustable relative to said band to permit the latter to assume various positions within the hat.

2. In combination with a hat, a sweat band in the hat, a strap secured to one of the end portions of the sweat band, said strap being adjustable relative to said band to permit the latter to assume various positions within the hat, and securing devices at the free ends of said strap for attachment to the hat.

3. In combination with a hat, a sweat band in the hat, a strap for attaching said band to said hat and located at one of the end portions of the sweat band, a buckle carried by the sweat band adjacent to said strap, said buckle arranged to be adjustable on said strap whereby the sweat band is given various positions within the hat.

4. In combination with a hat, a sweat band in the hat, a strap for attaching said band to said hat and located at one of the end portions of the sweat band, a buckle carried by the sweat band adjacent to said strap, said buckle arranged to be adjustable on said strap whereby the sweat band is given various positions within the hat, said strap having securing devices at its free ends for attachment to the hat.

5. In combination with a hat, a sweat band in the hat, a strap for attaching said band to said hat and located at one of the end portions of the sweat band, a buckle carried by the sweat band adjacent to said strap, said buckle engaging said strap so as to provide central and end flaps, the relative length of the end flaps with that of the central flaps governing the position of said buckle and sweat band within the hat.

6. In combination with a hat, a sweat band in the hat, a strap for attaching said band to said hat and located at one of the end portions of the sweat band, a buckle carried by the sweat band adjacent to said strap, said buckle engaging said strap so as to provide central and end flaps, and securing devices at the free end of said central and end flaps for attachment to the hat.

7. In combination with a hat, a sweat band in the hat, straps for attaching said band to the hat, said straps located at the front and rear portions of the sweat band, buckles carried by the sweat band adjacent to said straps, said buckles being formed to permit the adjacent strap to have adjustability relative thereto whereby the sweat band may be adjusted to desired positions within the hat.

8. In combination with a hat, a sweat band in the hat, straps for attaching said band to the hat, said straps located at the front and rear portions of the sweat band, buckles carried by the sweat band adjacent to said straps, said buckles being constructed to carry said straps and hold them in a plurality of flaps said flaps having securing devices at their free ends for attachment to the hat.

9. In combination with a hat, of a sweat band in the hat, securing devices provided at certain points along the sides of said band, an adapter fastened to said hat and provided with securing devices which cooperate with said first securing devices, and guide members on said adapter for adjustably holding said second securing devices in desired positions to compensate for variations of position of the securing devices on the sweat band.

10. In combination with a hat, a sweat band in the hat, a support interposed between said band and said hat and being detachably secured to the former, said support formed with a plurality of wings having slots cut therein, and a strap adapted to be passed through said slots so as to be arranged in a series of flaps, said flaps having securing devices on their free ends for attachment to said hat.

11. In combination with a hat, a side support for attaching a sweat band in a hat, comprising a strip conforming to the curvature of the hat, bearing surfaces on said strip for slidably carrying the socket member of a snap-fastener, said socket member being provided with corrugated surfaces adapted for engagement with corrugated surfaces on said side support whereby the socket member may be adjusted to a desired position on the side support to align with engaging stud members on the sweat band.

12. In combination with a hat, a side support for attaching a sweat band in a hat, comprising a strip conforming to the curvature of the hat, bearing surfaces provided on one side to slidably carry a socket member, said socket member having a plurality of resiliently formed fingers for cooperating with said side support to lock the socket member in a desired position, and stud members on said sweat band for engaging in said socket members.

13. In combination with a hat, a band

detachably associated therewith, securing devices disposed at certain points on said band, an adapter removably secured to the inner side of said hat, and means adapted to be adjusted longitudinally along said adapter for cooperation with said securing devices on said band.

14. In combination with a hat, a band detachably associated therewith, securing devices secured at certain points on said band, an adapter removably secured to the inner side of said hat, securing devices on said adapter for cooperation with said securing devices on said band, and means for adjustably shifting said last securing devices longitudinally along said adapter whereby registry with securing devices on the band may be had after distortion of said band.

15. In combination with a hat, a band detachably associated therewith, said band being adjustable as to length, means for attaching certain points of said band to certain points on said hat so as to leave a space therebetween to provide for ventilation, and a rolled muffler adapted for insertion to intercept said ventilation.

In witness whereof, I hereunto subscribe my name this 6th day of April, 1922.

JULIUS C. PETERSON.