

Jan. 28, 1964

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3,119,904

TELEPHONE HEAD SET CUSHIONING MEANS

Filed Sept. 6, 1960

Fig. 1

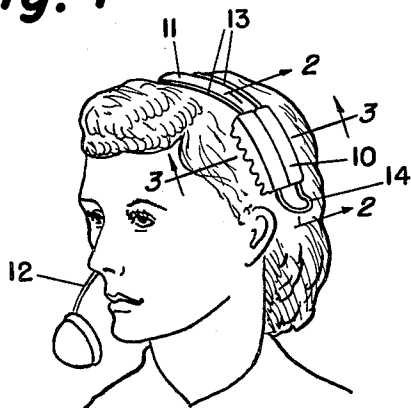


Fig. 2

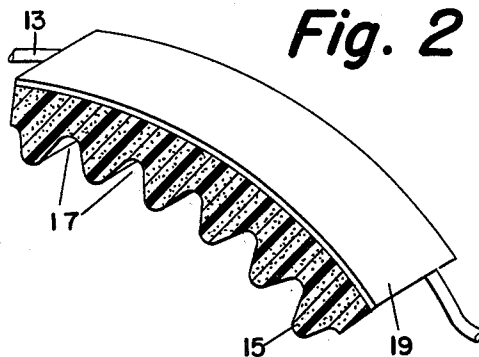


Fig. 3

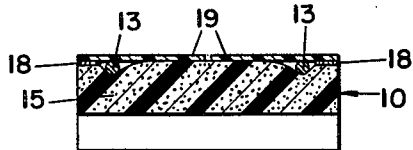


Fig. 4

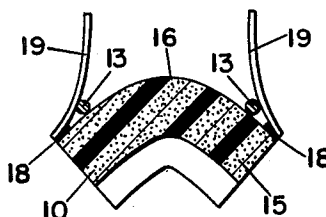
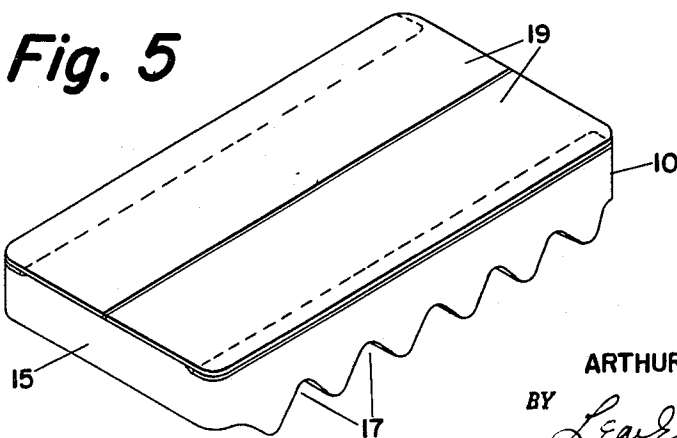


Fig. 5



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1

3,119,904

TELEPHONE HEAD SET CUSHIONING MEANS

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Filed Sept. 6, 1960, Ser. No. 54,276

9 Claims. (Cl. 179-178)

This invention relates to a resilient head pad adapted to be easily slipped onto the headband of the ear phone headsets normally used by telephone switchboard operators, amateur radio operators, and others.

The headsets in general use today usually employ a band which traverses the top of the head and comes down across the temples as a means of securing the headset to the head of the user. The head band may take a variety of forms, such as a steel spring band which may or may not be covered with a fabric, or a pair of spaced wires, or any one of a number of other headband forms. In general, the headbands are spring tensioned so that they firmly grip the head of the wearer to insure that the headset does not slip off. The firm grip upon the head, in time, can lead to discomfort and sometime headaches as a consequence of the pressure exerted upon the head by the spring pressure of the headband, generally in the temple regions.

In order to obviate the annoying pressure exerted by the headband, pads of various sorts have in the past been devised which have been fairly effective for their purpose. However, the known types of pressure relieving pads have themselves created other problems. For example, these pads seriously restrict air circulation in the region where they contact the head and thus lead to excessive perspiration and associated discomfort. Additionally, most of the pads are quite cumbersome in appearance and are not readily positionwise adjustable upon the headband, nor are they easy to attach and remove therefrom. Moreover, practically all of such headband pads are characterized by structural weaknesses associated with the means for securing the headbands to the pads, and hence, in time the pads tear around the region of securement and tend to become dislodged or completely disengaged from the headband.

A primary object of this invention is to provide a novel telephone set headband cushioning pad for relieving pressure upon the head of the wearer.

Another object of this invention is to provide a novel headset headband cushioning pad which provides for free circulation of air between the head and the pad to thereby prevent excessive perspiration on the head of the wearer, and to also provide an absorbent surface to readily absorb the small amount of perspiration which might occur in an environment of relatively high heat.

Still another object of this invention is to provide a novel headset headband cushion which may be readily installed or detached from the headband in a matter of a very few seconds, and which may be shifted in position just as readily, but which yet when attached to the headband is securely installed thereupon and has no tendency to be dislodged or shifted from its desired position.

A further object of this invention is to provide a novel headset headband cushion which may be installed upon headsets having an ear phone for each ear just as quickly and easily as upon headsets having only one ear phone, and in which the usual cushioning pad may only be installed over the free temple end having no ear phone normally attached thereto.

The foregoing and other objects of the invention will become apparent from a reading of the following specification in conjunction with an examination of the appended drawings, wherein:

FIGURE 1 is a perspective view of the head of a telephone switchboard operator wearing a headset upon

2

which is installed the novel headband cushioning pad according to the invention;

FIGURE 2 is an enlarged perspective view, shown in section, of the novel cushioning pad according to the invention as would be seen when viewed along the lines 2-2 of FIGURE 1;

FIGURE 3 is a cross-sectional view through the novel headband cushioning pad as would be seen when viewed along the lines 3-3 of FIGURE 1;

FIGURE 4 is a cross-sectional view similar to that of FIGURE 3, but illustrating the cushioning pad longitudinally arcuately deformed to spring open the headband retaining means and illustrating one method of attaching and detaching the headband; and

FIGURE 5 is an enlarged perspective view of the novel cushioning pad according to the invention which clearly illustrates one form of the pad in its entirety.

In the several figures, like elements are denoted by like reference characters.

Referring first to FIGURE 1, it is observed that the novel head cushioning pad according to the invention is designated generally as 10 and is attached to the headband 11 of a headset designated generally as 12, the pad 10 being disposed over the left temple of the headset wearer proximate the free end of the headset. The headband 11 is shown for purposes of illustration as being of the double wire type formed from a wire reverse bent upon itself to provide a pair of parallel disposed, generally head conforming, wires 13 having a somewhat outwardly turned closed loop end 14. As previously noted, this type of headband might just as readily have been fabric covered, as with a sleeve of material, or could have been a flat covered or bare spring steel band, or other type. In any event, regardless of the type of headband utilized, the principles of construction of the novel cushioning pad enable it to be readily attached regardless of the particular type of headband used.

As seen in FIGURE 1, and as more clearly shown in the other figures, the cushioning pad 10 comprises a generally rectangular pad of resilient spongy material 15, such as sponge rubber or foamed plastic, and has a top flat planar surface 16 and a corrugated bottom surface characterized by parallel extending grooves or furrows 17 oriented transversely to the longer dimension of the pad. This particular furrow orientation, while not mandatory, is deemed to be most satisfactory as an anti-slip device and to best favor the free circulation of air there-through between the under-surface of the pad and the head of the wearer. The grooves 17 are formed of sufficient depth so that the normal compression effect exerted upon the pad by the headband wires 13 when seated upon a wearer's head is not sufficient to compress the pad to an extent which would bring the grooves into close engagement with the head and thereby prevent the free circulation of air therethrough.

Adhesively secured to the pad top surface longitudinal margins, as by means of an adhesive 18, are a pair of door like flaps 19. The flaps 19 are preferably made of a semi-rigid flexible substance such as one of the many plastic materials readily available today, and are illustrated in the figures as being congruent with the upper surface of the pad resilient material 15 when the flaps are closed as illustrated in FIGURES 1, 3 and 5. The flaps 19 are, of course, much stronger and more rigid than the resilient spongy material 15 which forms the cushion proper, and hence the entire structure is much stronger and more serviceable than the normally encountered pads which are formed solely of some sort of soft material. The usual pad heretofore known was generally slitted at two spaced points so that the headset looped end 14 could be woven therethrough to enable the pad to be pushed upward onto the wires 13. In a

3

relatively short time the spring tension of the wires tends to tear through the pads which were already weakened by the slits and the pad then needs to be replaced. Such a result cannot occur with the novel cushioning pad according to the present invention because there are no slits or other equivalent structural weaknesses in the composite pad assembly.

As best seen in the showing of FIGURE 3, the pad 10 when installed upon the headband 11 of FIGURE 1, securely encloses the headband wires 13 between the upper surface 16 of the resilient material 15 and the undersurface of the door like flaps 19, the flaps 19 exerting sufficient downward pressure upon the wires 13 to somewhat deform the flat top surface 16 of the resilient material 15 and thereby provide a very effective frictional grip of the pad upon the headband wires. The frictional grip is such that normal usage, involving putting on and taking off of the headset 12, does not cause displacement of the pad relative to the headband wires 13, but the friction is not so great that it prevents shifting adjustment of the pad upon the wires to a desired point by the headset wearer. As will be realized, and as illustrated in the showing of FIGURE 2, when the pad 10 has been installed upon the headband 11, the flaps 19 assume an arcuate curve in a plane parallel to the centrally extending longitudinal proximate edges of the flaps. This, of course, biases the flaps in such a sense as to prevent their springing open of their own accord, and thereby in effect acts as a very effective locking device which prevents accidental dislodgment of the pad structure from the headband. Additionally, it will be realized that when the headset is being worn, the pressure of the head against the bottom of the pad 15 of itself prevents the door-like flaps 19 from opening.

As best illustrated in FIGURE 4, the flaps 19 may be quickly and easily opened out by applying finger pressure to opposite side edges of the pad to flex the same into the transverse arcuate form shown, whereupon the headband wires 13 may be quickly slipped in between the opened out flaps (or slipped out for detachment), and upon releasing the finger pressure on the pad the latter will resiliently spring back to its planar form and automatically close the flaps 19 down against the upper surface of the resilient material 15 in the manner clearly illustrated in FIGURE 3.

From the foregoing description and the appended drawings, it should be now clear that all of the objects of the invention are easily and expeditiously effected, and although the invention has been described in connection with a particularly illustrated embodiment thereof, it is apparent that variations and modifications of the same will now naturally occur to those persons normally skilled in the art without departing from the essential scope or spirit of the invention, and accordingly it is intended to claim the same broadly as well as specifically as indicated by the appended claims.

What is claimed as new and useful is:

1. A resilient cushioning pad to be attached to the headband of a telephone headset or the like for cushioning the head of the headset wearer against the pressure exerted thereon by the headband, comprising in combination, a pad of resilient material having a head-engageable bottom surface of varying depth as measured in a direction normal to the head when placed thereagainst, the bottom surface variation being provided by a plurality of head-engageable spaced-apart projections extending from the body of the pad effective to prevent contact of the major portion of the bottom surface of the pad with the head when said projections are pressed against the head by the headband so that air may circulate relatively freely between the head and the pad, and means for quick detachably securing the pad to the headset headband.

2. The cushioning pad according to claim 1 wherein the spaced-apart projections extending from the body of

4

the pad are a plurality of furrows extending completely thereacross and oriented transversely to the length of the headband to which the pad is to be attached to provide the bottom surface of varying depth by means of which air circulation is effected.

3. A resilient cushioning pad to be attached to the headband of a telephone headset or the like for cushioning the head of the headset wearer against the pressure exerted thereon by the headband, comprising in combination, a pad of resilient material having a head-engageable bottom surface and a headset headband engageable top surface, and a pair of independent flaps secured independently to said pad and overlying at least a portion of the pad top surface, said flaps projecting toward each other transversely across the top surface of the pad and being normally disposed to lie substantially flatwise against said top surface but being manually partially springable thereaway from to thereby admit the headband of a headset, and being thereafter springable back to normal position when manually released to thereby clasp the headband between said flaps and pad top surface.

4. The cushioning pad according to claim 3 wherein said flaps are made of a semi-rigid flexible material and are secured to the top surface of said resilient pad, said flaps rigidifying the pad to form a durable composite structure.

5. The cushioning pad according to claim 3 wherein said flaps are secured to said resilient pad along the marginal edges of the top surface of the latter which extend substantially in the same direction as the length of the headband to which the pad is to be secured.

6. A resilient cushioning pad to be attached to the headband of a telephone headset or the like for cushioning the head of the headset wearer against the pressure exerted thereon by the headband, comprising, in combination, a pad of resilient material having a head-engageable bottom surface, and a pair of flaps secured to said pad for overlying a portion of a headset headband and clamping the latter between said flaps and said pad, the bottom surface of said pad being formed with a plurality of furrows extending transversely completely thereacross to provide a bottom surface of varying depth and through which furrows air circulation is effected.

7. A resilient cushioning pad to be attached to the headband of a telephone headset or the like for cushioning the head of the headset wearer against the pressure exerted thereon by the headband, comprising, in combination, a pad of resilient material having a head-engageable bottom surface and a headset headband engageable top surface, and a pair of flaps secured to said pad and overlying at least a portion of the pad top surface, said flaps being normally disposed to lie substantially flatwise against said top surface but being manually partially springable thereaway from to thereby admit the headband of a headset, and being thereafter springable back to normal position when manually released to thereby clasp the headband between said flaps and pad top surface, the bottom surface of said pad being formed with a plurality of open-ended furrows extending completely thereacross and oriented transversely to the length of the headband to which the pad is to be attached to provide a bottom surface of varying depth by means of which air circulation is effected.

8. A resilient cushioning pad to be attached to the headband of a telephone headset or the like for cushioning the head of the headset wearer against the pressure exerted thereon by the headband, comprising, in combination, a pad of resilient material having a head-engageable bottom surface of varying depth as measured in a direction normal to the head when placed thereagainst, the bottom surface variation being provided by a plurality of head-engageable spaced-apart projections extending from the body of the pad effective to prevent contact of the major portion of the bottom surface of the pad with the head when said projections are pressed against the

5

head by the headband so that air may circulate relatively freely between the head and the pad, said pad also having a headset headband engageable top surface, and a pair of flaps secured to said pad and overlying at least a portion of the pad top surface, said flaps being normally disposed to lie substantially flatwise against said top surface but being manually partially springable thereaway from to thereby admit the headband of a headset, and being thereafter springable back to normal position when manually released to thereby clasp the headband between said flaps and pad top surface.

9. A resilient cushioning pad to be attached to the headband of a telephone headset or the like for cushioning the head of the headset wearer against the pressure exerted thereon by the headband, comprising, in combination, a pad of resilient material having a head-engageable bottom surface of varying depth as measured in a direction normal to the head when placed thereagainst, the bottom surface variation being provided by a plurality of head-engageable spaced-apart projections extending from the body of the pad effective to prevent contact

6

of the major portion of the bottom surface of the pad with the head when said projections are pressed against the head by the headband so that air may circulate relatively freely between the head and the pad, said pad also having a headset headband engageable top surface, and a pair of independent flaps secured independently to said pad and overlying at least a portion of the pad top surface, said flaps projecting toward each other transversely across the top surface of the pad and being normally disposed to lie substantially flatwise against said top surface but being manually partially springable thereaway from to thereby admit the headband of a headset, and being thereafter springable back to normal position when manually released to thereby clasp the headband between said flaps and pad top surface.

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