

April 27, 1954

H. HERRICK

2,676,738

HARNESS FOR HEARING AID UNITS

Filed Oct. 3, 1952

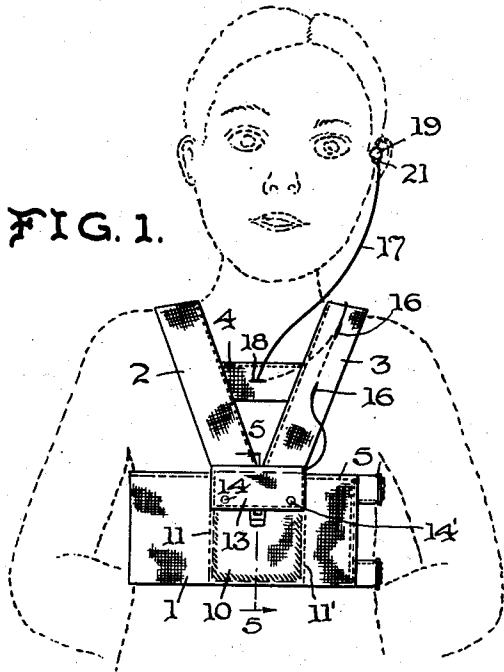


FIG. 1.

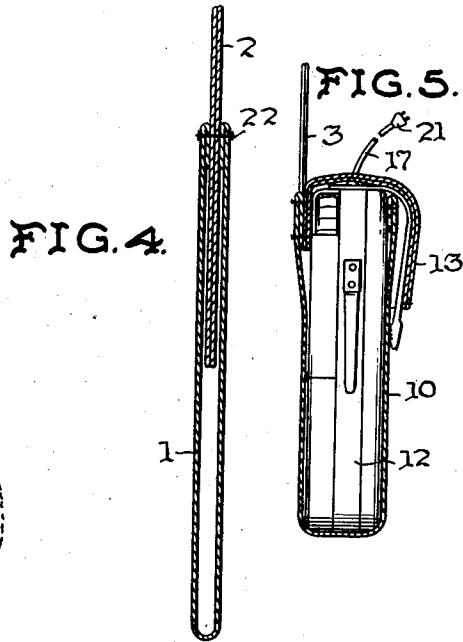


FIG. 4.

FIG. 5.

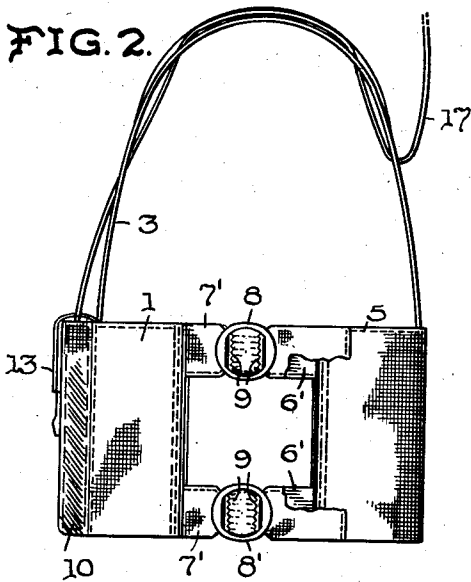


FIG. 2.

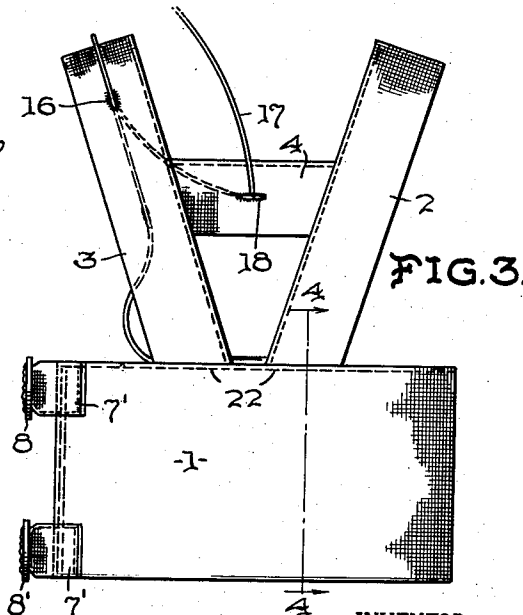


FIG. 3.

INVENTOR.
HELEN HERRICK
BY *Rennie E. Smith*
Walter Barrow & Taylor
ATTORNEYS

UNITED STATES PATENT OFFICE

2,676,738

HARNESS FOR HEARING AID UNITS

Helen Herrick, Oakland, Calif.

Application October 3, 1952, Serial No. 312,971

4 Claims. (Cl. 224-5)

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This invention relates to a harness for supporting the battery and amplifying mechanism of a hearing aid, and particularly to such a harness which may be worn by small children.

The manner of carrying a hearing aid, as far as small children are concerned, presents considerable difficulties due to the fact that their clothing often does not have the necessary pockets to support the battery and amplifying mechanism, and also due to the fact that the activities of the normal small child are such that the amplifying mechanism is subject to excessive vibration and shock, which are apt to seriously damage it.

In accordance with the present invention, there is provided a harness which may be worn over a child's shirt or dress, but under any coat which a child may wear, which has a pocket for receiving the battery and amplifying unit of such size that the battery and amplifying unit will fit snugly therein, so that it will be subjected to a minimum of vibration and shock during the normal activities of the child. The pocket preferably is formed in a waistband section of the harness which is supported on the child by shoulder straps. One of the shoulder straps, preferably the one which passes over the shoulder of the least preferred hand of the child is provided with openings through which the cord is laced. By means of such openings the cord may be laced through the shoulder straps of the harness to the back thereof from which it emerges to be connected to the earpiece. The construction of the harness is such that the shoulder straps and waistband, respectively, may be lengthened to permit enlargement of the harness as the child grows.

The invention will be further described in connection with the accompanying drawings, but it is to be understood that such further disclosure and amplification is merely by way of exemplification, and the invention is not limited thereto except to the extent set forth in the subjoined claims.

In the drawings:

Fig. 1 is a front elevation of the harness;

Fig. 2 is a side view thereof;

Fig. 3 is a side elevational view of the harness;

Fig. 4 is a cross-sectional view showing the manner in which the ends of the shoulder straps are secured to the back of the waistband, the same being taken on line 4-4 of Fig. 3; and

Fig. 5 is a cross-sectional view taken on line 5-5 of Fig. 1.

Referring to the drawings, the harness, which may be made of any flexible material, but preferably of a relatively heavy, washable textile material, comprises a waistband 1 which is adapted

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to surround the body of a child and to be supported from the child's shoulders by means of a pair of shoulder straps 2 and 3. The shoulder straps preferably are connected together at the back by a cross-strap 4 to prevent them from slipping off of the wearer's shoulders.

The waistband preferably is formed from a single band of material which is folded upon itself, with the free ends of the folds being at the top and stitched together, as at 5. The waistband itself is not continuous and the ends thereof are provided with straps 6, 6' and 7, 7'. The ends of the straps 6, 6' have buckles 6, 6' secured to them for adjustably receiving the straps 7, 7' to permit adjustment of the waistband to the size of the particular child wearing the harness. The buckles preferably are of the type through which the straps are threaded and which have serrated edges, such as shown at 9, which grip the straps threaded through them, so that the greater the strain which is applied to the straps, the tighter they will be gripped by the buckles. Such buckles are of well known construction and need no further description.

At the front of the waistband and directly below the front ends of the shoulder straps, the waistband is provided with a pocket 10. This pocket preferably is formed by a pair of vertical lines of stitching 11 and 11' extending through the folds of the waistband and by not stitching together the upper edges of the folds between the lines of stitching 11 and 11'. The pocket 10 is for receiving the battery and amplifying unit 12 of a hearing aid. The pocket has a flap closure 13 stitched to the back fold of the waistband, within the pocket. The free end of the flap closure normally is secured in its closed position by separable fasteners 14 and 14' of the "gripper" type. These fasteners have male and female members carried, respectively, by the outer fold of the pocket and the flap closure.

The use of the "gripper" type fasteners for securing the pocket flap closed, and the type of buckles above described, are particularly desirable, since both not only are readily available and easily manipulated, but are familiar to children since they appear on most commercially-made garments which they wear in their every day clothing.

One of the shoulder straps, preferably the one opposite the preferred hand of the child, is provided with a series of openings 16 of the button-hole type, through which the conducting cord 17 from the hearing aid unit 12 is laced. In harnesses of the size for most children, three openings 16 for the lacing of the cord are sufficient, and the opening most remote from the front end of the shoulder straps preferably is just beyond

the top of the shoulder of the child. The cross-strap 4 is also provided with an opening 18, similar to the opening 16, through which the cord also is laced. By having the cord 17 laced through the openings 16 and 18, it is caused to lie relatively flat against the shoulder straps, so that there is no looping of it, such as would enable it to be readily caught during the normal play or other activities of the child wearing the harness. Thus, breakage of the cord and possible damage to the unit 12 or the earpiece 19 is reduced to a minimum. The end of the cord 17 is provided with the usual type of pronged connector 21 for insertion into the usual openings in the earpiece. The length of the cord is sufficient that after it has been threaded through the openings 16 in the shoulder strap and the opening 18 in the back strap, it may be passed upwardly along the back of the child, behind his ear, and connected to the earpiece.

The back ends of the shoulder straps 2 and 3 are secured to the top of the back of the waistband by stitching 22. However, the length of the shoulder straps is such that a portion of substantial length extends downwardly into the waistband between the folds thereof, where they are completely concealed from view.

By having the waistband adjustable by means of the buckles 8 and 8', and by having the shoulder straps of such length that substantial portions thereof extend downwardly into the waistband, the harness is made adjustable so that it will not have to be replaced as the child grows. The adjustable buckles provide ample adjustment for the increase in the size of the body of the child; and by ripping the stitching 22 and pulling the back ends of the shoulder straps outwardly from the waistband to the desired extent, and restitching, adequate adjustment is made for the growth of the child in height. Consequently, the harness may be worn by a child for two or three years.

The width of the waistband will be adjusted to the length of the particular battery and amplifying unit 12, and as indicated above, the width of the pocket will be such that the unit snugly fits therein. The snug fitting of the unit 12 in the pocket is important, since otherwise the unit 12 would be permitted to shift and vibrate in the pocket, with possible resulting damage thereto.

Breakage or damage to the battery and amplifying unit 12 is reduced to a minimum since the child does not touch it other than to turn it on and off, and adjust the volume of amplification. In a similar manner, damage to the earpiece is reduced to a minimum, since the lacing of the cord 17 through the openings in the shoulder strap 3 and the cross-strap 4 causes the cord to lie close to the body of the wearer, so that there is less danger of it being caught with resulting jerking of the earpiece from the ear of the child.

While the invention has been described in connection with the preferred embodiment thereof, it is to be understood that various changes may be made in the details of construction thereof without departing from the spirit of the invention.

I claim:

1. A harness for a hearing aid unit comprising a waistband, said waistband comprising material folded upon itself with the upper edge portions of the folds being secured together, shoulder straps having their front end portions secured to the front of the waistband and their back end portions to the back of the waistband, and a pocket for a hearing aid unit at the front of the waistband, one end portion of each of the shoul-

der straps being secured to the waistband near the top thereof and the shoulder straps at such end each having portions of substantial length extending into the waistband between the folds thereof below the point of attachment of said end portions of the shoulder straps to the waistband, whereby the said ends of the shoulder straps may be unsecured from the waistband, the ends of the shoulder straps relatively adjusted with respect to the waistband, and the shoulder straps re-secured to the waistband at a different point to adjust the effective length of the shoulder straps.

2. A harness for a hearing aid comprising a waistband, a pocket for a hearing aid unit in the front of the waistband, shoulder straps having their front end portions secured to the front of the waistband and their back end portions secured to the back of the waistband, and a cross-strap connecting the back portions of the shoulder straps at a distance above the waistband, said cross-strap having means for receiving and guiding a cord from a hearing aid in said pocket and for maintaining a portion thereof at the back of the wearer, whereby when such a cord is passed over a wearer's shoulder and through said receiving and guiding means it may extend from said receiving and guiding means upwardly along the wearer's back and behind his ear to an ear piece in the wearer's ear.

3. A harness for a hearing aid as set forth in claim 2 in which the pocket is positioned directly beneath the connection of the front end portions of the shoulder straps to the waistband so that the strain caused by the weight of a hearing aid in the pocket is taken directly by the shoulder straps, and in which the cord receiving and guiding means of the cross-strap is an opening in the cross-strap through which the cord is adapted to pass.

4. A harness for a hearing aid comprising a waistband formed of a band of material folded upon itself and secured at the top, shoulder straps having their front end portions secured to the front of the waistband and their back end portions secured to the back of the waistband, at least one of the end portions of each shoulder strap being stitched to the waistband between the folds thereof and near the top thereof along a line spaced a substantial distance from the adjacent end of the shoulder strap, such end portions of each of the shoulder straps beyond said lines of stitching extending into the waistband between the folds thereof whereby the stitching which secures said end portions of the shoulder straps to the waistband may be ripped out, the ends of the shoulder straps relatively adjusted to the waistband and the shoulder straps restitched to the waistband along a different line to adjust the effective length of the shoulder straps.

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