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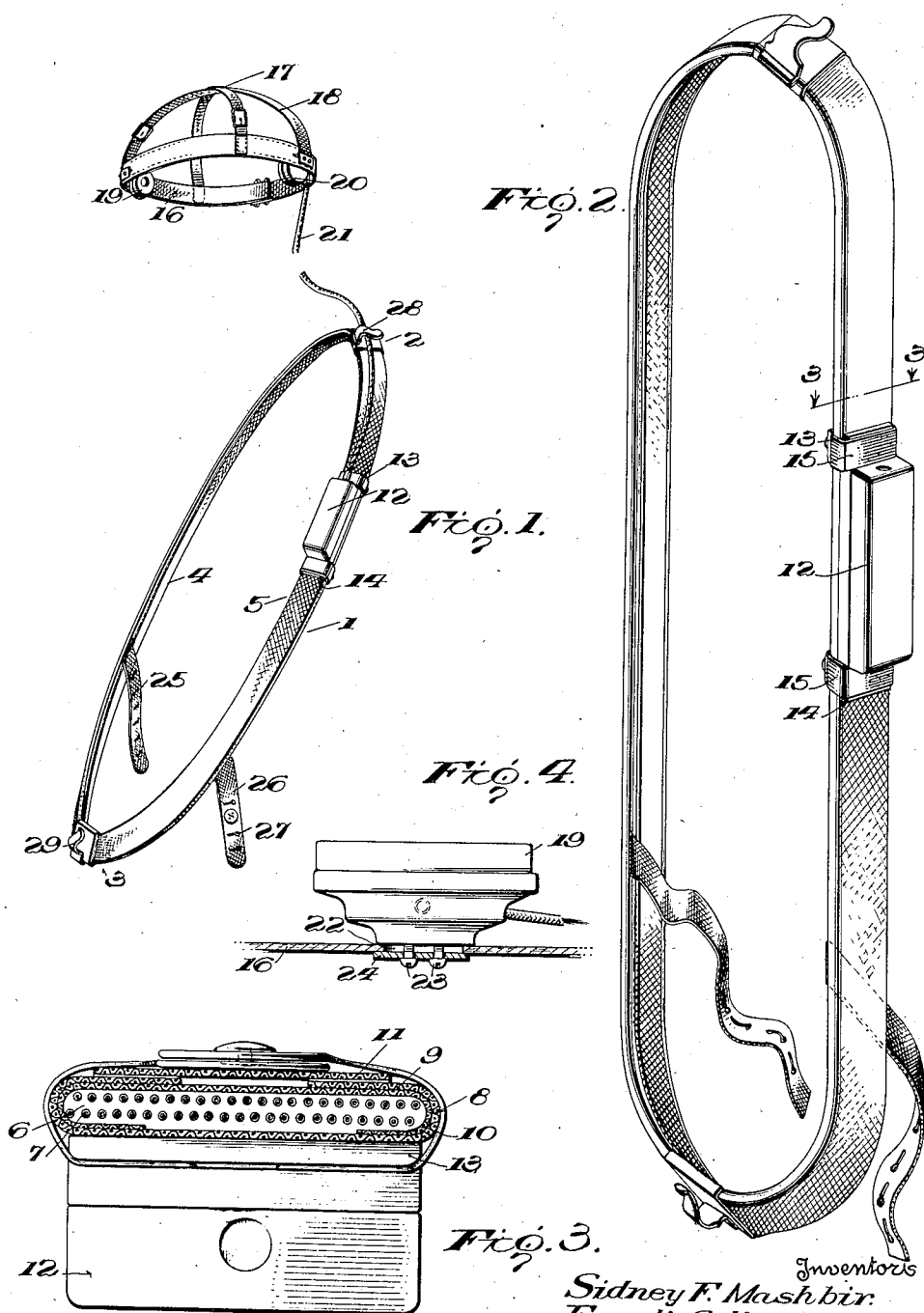


Fig. 3.

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ANTENNA BELT

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This invention relates to portable antenna devices and, more particularly, is intended to provide a belt which may be worn about the body and interiorly of which are arranged antenna members which are preferably in the form of turns of wire extending longitudinally of the belt.

It is an object of the invention to provide a portable antenna of the character specified in which the antenna wires are disposed and arranged within the hollow annulus of a belt, from whence they may be led to the exterior of the belt to be connected to a radio receiving device which may be mounted, if desired, on the belt. Preferably, also, the belt is so formed as to adapt itself to the body of the wearer.

A further object of the invention is to provide a portable antenna device which will include a minimum number of parts, but which will be strong and rugged in construction, and capable of cheap and efficient manufacture.

Other objects and features of novelty will be apparent from the following description and the annexed drawing, it being expressly understood, however, that the invention is in no way limited by such description and drawing, or otherwise than by the appended claims.

Referring now to the drawing, in which similar reference numerals refer to like parts:

Fig. 1 is a perspective view showing the antenna belt and headset according to the present invention;

Fig. 2 is a perspective view showing the antenna belt alone;

Fig. 3 is a view, partly in section, taken on the line 3—3 of Fig. 2, and

Fig. 4 is a view showing the novel means for attaching the ear-phones to the head-piece, being an enlarged view of parts shown in Fig. 1.

Referring to the drawing, it will be seen that the antenna belt, denoted generally by numeral 1, comprises an endless belt or loop member which, as shown in Fig. 3, is generally flat in cross-section in order that it may fit closely to the body of the wearer, as is usual in belt constructions. The belt 1 is adapted to be disposed about the body of a person, being preferably intended to be hung from one shoulder by the portion 2, while the diametrically-opposed portion 3 of the belt is intended to be disposed about the opposite side of the wearer's body at approximately the waist-line. It will be observed that the belt is so fashioned and wound that every portion thereof is adapted to fit snugly against the corresponding portion of the wearer's body. To this end, the portion 2 is disposed at an angle to the plane

of the loop whereby it rests flatly and comfortably on the wearer's shoulder. The intermediate portions 4, 5, which are preferably disposed diagonally across the back and chest of the wearer, are so formed with reference to the shoulder portion 2 that they also lie flat on the body of the wearer. The waist portion 3 of the belt is disposed at an angle to the plane of the loop which angle is approximately equal to that of shoulder portion 2 and it will be noted that portions 2 and 3 are so disposed that they converge upwardly of the plane of the loop. Due to the described construction, the antenna belt will fit the wearer's body snugly at all points and will be correspondingly more comfortable and efficient.

The above-described belt comprises an outer covering 8 of fabric or other material, which defines an annular, flattened interior chamber, in which are arranged the antenna wires 6. Such wires comprise continuous, annular convolutions which are preferably so wound within the belt that they are disposed in one or more superimposed layers, as clearly disclosed in Fig. 3. These wires may be insulated with latex or other suitable insulating material 7, as shown.

The covering 8 may be made from fabric or other suitable material and the manner in which it is disposed around the wires 6, 7 is immaterial if a complete watertight covering of the wires is effected. In the embodiment illustrated in Fig. 3, the covering comprises two elongated strips 9, 10 which are of sufficient width to extend approximately around the wire assembly, and which are so disposed that the midportion of each covers the longitudinal edges of the other. A finishing strip 11 is disposed across the opening between the longitudinal edges of member 8. It will be noted that each of the strips 9, 10, 11 is preferably of such a length as to extend completely around the loop 1 in order that the number of junctures and edges may be reduced to a minimum. The strips may be cemented, or otherwise attached together, in order to insure a watertight casing for the wires.

Mounted on any portion of the belt, preferably on that portion thereof which crosses the chest, is a radio receiving device 12, of any suitable type. This receiving device may be mounted on the belt by any suitable means and in the present embodiment it is shown as being provided with the end flanges 13, 14 which lie flat against the belt and are attached thereto by any suitable means such as the straps or elastic bands 15. It will be obvious that the receiving device may be

attached to the antenna belt by permanent means, such as by rivets, or by any other suitable means.

Means are provided for attaching the above-described antenna belt to the clothes of the person employing such belt, and such means comprise the depending straps 25, 26 which are attached to opposite sides of the belt loop at points adjacent the waist-portion 3. Such straps may be formed of resilient or non-resilient material, as desired, and are preferably provided with eye-lets or other attaching means 27, whereby such straps may be attached to the belt or trousers of the wearer as desired. It will be apparent that when the belt is fastened to the clothes in this manner it will be securely and firmly held in place on the wearer's body, but may be easily detached therefrom.

Mounted adjacent the shoulder portion 2 of the antenna belt is an open-ended hook or catch member 28, the same being so disposed that it opens away from the neck of the wearer. A similar clasp or hook 29 is disposed at the waist portion 3 of the belt, and it will be noted that this clasp is so disposed that it opens upwardly. These clasps are for a purpose which will be explained hereinafter.

The present invention also contemplates the provision of a head set having a novel construction and arrangement. Such a head set is disclosed in Fig. 1 of the drawing and comprises an annular band 16 which is adapted to be placed about the head, and a plurality of cross-bands 17, 18, which are attached at their ends to the band 16 and which cross each other at the top of the head and are attached together at that point. All of these bands, or any of them, may be made adjustable in length, whereby they may be fitted to the head as desired. Further, all of these bands are preferably formed of resilient material whereby a snug fit is obtained, although certain of the bands may be formed of non-resilient material if desired.

Mounted on the interior face of the annular band 16 at diametrically opposed points are the ear-phones 19, 20, of any desired and suitable type. These phones are connected by a two-wire cable 21 to the output terminals of the receiving device 12, one of the wires of the cable being connected to each of the phones. It will be noted that one of the wires passes through or along the cross-band 18 in order to reach the ear-phone 19, and is preferably disposed within said cross-band.

Referring to Fig. 4, it will be seen that an adjustable connection is provided between the ear-phone 19 and the annular band 16 of the head-set. Such connection comprises a slotted plate 22 which is disposed in the band 16 in such a way that the same defines a slot extending longitudinally of the band for a very short distance, and being disposed on approximately the longitudinal center-line of the band. Such slot is adapted to be disposed directly at the point of attachment of the ear-phone 19 to the band 16, and through such slot extend the shanks of pins or screws 23

carried by the ear phones, and to the outer ends of which are attached a plate 24, which is of larger area than the slot. The slotted plate 22 is received snugly between the backing plate 24 and the base of the ear-phone 19, whereby it will be apparent that the ear-phone 19 may be moved longitudinally of the slot in plate 22 for a limited distance, thereby permitting the wearer to adjust the ear-phone to a desired position.

When the head-set is not being used, it may conveniently be hung over the hook or clasp 29 of the antenna belt, whereby it will be out of the way but will be always in a convenient position where it may be readily secured when desired. At times when the head set is being used, the cable 21 may be looped or disposed through the hook or clasp 28, whereby it will be maintained away from the body of the wearer.

It will be apparent that when it is desired to employ the antenna and receiving apparatus according to the present invention, the antenna belt 1 may be slung about the shoulder, with the portion 3 thereof adjacent the waist. The straps 25, 26 may be clipped to a belt or to the clothes of the wearer in order to maintain the antenna belt in position. The head set may be placed on the head and the adjustable connection between the ear-phones 19 and the annular band 16 operated in order to adjust the ear-phones to the user.

We have described and illustrated herein one embodiment of our invention but it will be apparent to those skilled in the art that other embodiments and modifications may be practised in carrying out the invention and without departing from the limits thereof, for the limits of which reference must be had to the appended claims.

What is claimed is:

1. An antenna belt comprising an endless hollow loop of impervious material having oppositely disposed portions thereof extending in opposite directions at acute angles to the plane of the loop, and other portions connecting said first-named portions and being disposed substantially at right angles to the plane of the loop, and a plurality of turns of wire disposed within the material of said loop.

2. A portable antenna comprising a belt adapted to be worn about the body and comprising an annular covering of impervious material defining an endless interior opening extending throughout the entire length of the belt, said belt having portions thereof disposed angularly with respect to the plane of the belt and being adapted to engage the shoulder and waist of the wearer, and other portions connecting said angularly disposed portions and being arranged substantially at right angles to the plane of said belt, and a plurality of turns of wire disposed within said annular interior opening.

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