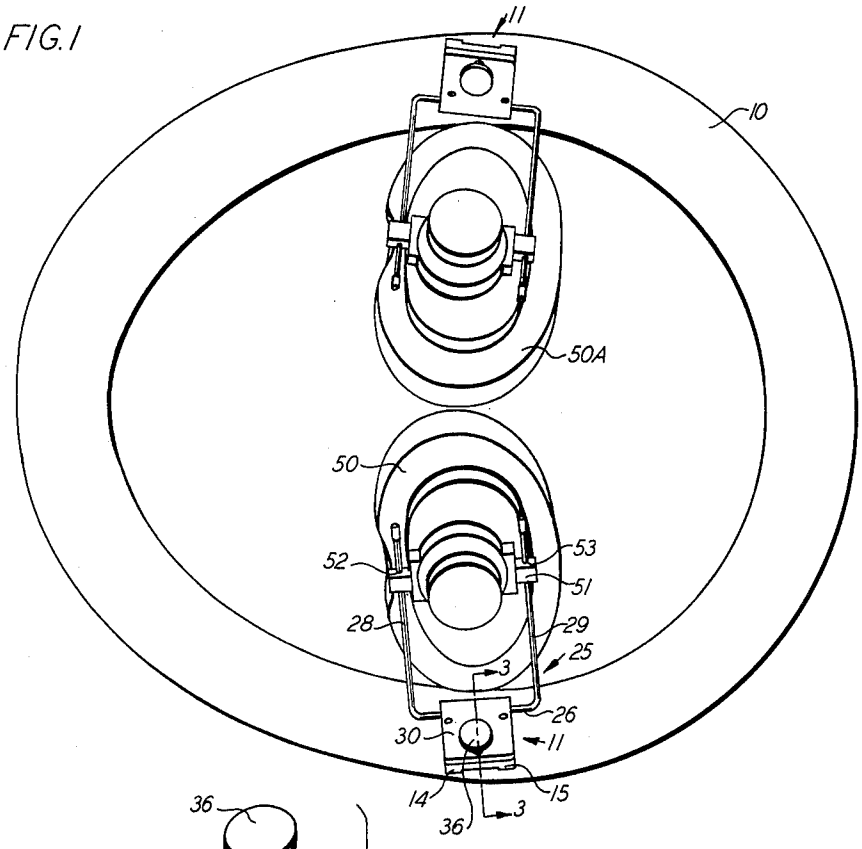
July 26, 1966 E. C. SCANLON 3,263,032

ADJUSTABLE HINGE FOR EAR PHONE ATTACHED TO A HEAD SUPPORT

Filed May 2, 1963

FIG. 1



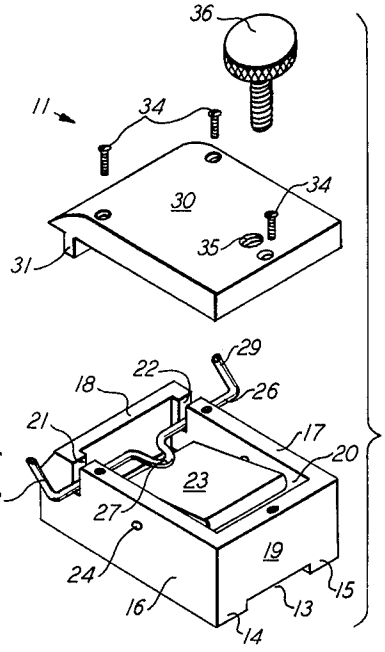


FIG 2

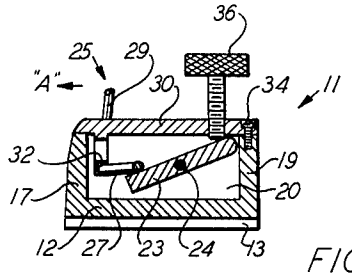


FIG. 3

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ADJUSTABLE HINGE FOR EAR PHONE ATTACHED TO A HEAD SUPPORT

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3 Claims. (Cl. 179—156)

This invention relates to a hinge connection between ear phones and a head support and more particularly to adjustable hinge means whereby the ear phones may be minutely adjusted in relation to the pressure exerted by the ear phones upon the ears.

Radio receivers, telephone receivers (ear phones) and the like, are normally attached to a head band whereby the receivers exert considerable pressure on the ears, and the continued use thereof often becomes painful. It is also necessary when the listener desires to carry on local conversation to remove the head band from the head, or at least to raise it manually from the ears in order to hear. When this is done part or all of the receiving message is lost.

It is an object of the present invention to provide a structure whereby the relation of the receivers to the ears may be adjusted to suit these different conditions and to relieve the pressure on the ears by a simple adjustment without removing the structure from the head.

The present invention is in the nature of a hinge support adjustably attaching an ear phone to a head support.

Other objects of the present invention will be pointed out in part and become apparent in part in the following specification and claims.

Referring to the drawings in which similar characters of reference indicate corresponding parts in all the figures:

FIGURE 1 is a perspective view of the new and improved adjustable hinge, for ear phones, attached to a head support.

FIGURE 2 is an exploded perspective view of the several parts constituting the new adjustable hinge.

FIGURE 3 is a vertical cross sectional view taken on a medial line through the new adjustable hinge, as on line 3—3 of FIGURE 1.

The support to which the present adjustable hinge connection is applied includes a band **10**, adapted to embrace the top of the head. Band **10** may be the rim of a hard hat, as illustrated in FIGURE 1, or it may be the band of a conventional head set in common use by telephone and radio operators.

A hinge, generally indicated by reference numeral **11**, consists of a rectangular box like structure having a bottom **12** provided with a groove **13** which forms parallel legs **14**, **15** and integrally formed walls identified as right side wall **16**, left side wall **17**, front wall **18** and rear wall **19**. These four walls form an open topped chamber **20**.

Right side wall **16** and left side wall **17** are provided with oppositely located and parallel slots **21**, **22**, respectively.

A lever **23** is pivotally mounted in chamber **20** by means of a pintle **24** supported in right side wall **16** and left side wall **17**.

A U-shaped wire bracket, generally indicated by reference numeral **25**, comprises a base **26** having a crook **27** and two parallel legs **28**, **29**. Base **26** lies within slots **21**, **22** with crook **37** overlying lever **23**.

A cover **30** provided with two oppositely located and parallel projections or ears **31**, **32** is fastened to right side wall **16**, left side wall **17** and rear wall **19** by means of screws **34**. Ears **31**, **32** are located in parallel slots **21**, **22**, respectively, and overlie base **26** to form the upper portion of a bearing for base **26**. Cover **30** encloses the top of chamber **20**. Cover **30** is provided with

a tapped hole **35**. A thumb screw **36** is rotatively mounted in cover **30** through tapped hole **35**.

Thumb screw **36** engages lever **23** on one side of pintle **24** thereby to pivot lever **23** against crook **27** and rotate base **26** and legs **28**, **29**.

Bottom **12** through legs **14**, **15** is fastened to band **10** by any conventional means, such as screws, rivets or as illustrated, by adhesive means.

Referring to FIGURE 1 wherein is illustrated a pair of receivers or ear phones **50**, **50A** adapted to be placed against the ears of the user. The receivers or ear phones **50**, **50A** may be either electrical or acoustical and may be constructed of any desirable composition. Secured to some convenient surface of ear phone **50** is a block **51**, preferably made of plastic. Block **51** is provided with two oppositely and parallel located wire bracket receiving orifices **52**, **53**, which are slidingly mounted upon parallel legs **28**, **29** respectively.

The adjustability of the ear phones becomes self evident from the illustration in FIGURE 3. Rotation of thumb screw **36** toward lever **23** pivots lever **23** around pintle **24** and thereby lever **23** lifts crook **27** upwardly to pivot legs **28**, **29** in the direction of arrow "A." Conversely, rotation of thumb screw **36** away from lever **23** allows legs **28**, **29** to move in a direction opposite to arrow "A."

Ear phone **50** is adjustably mounted along legs **28**, **29** through block **51**. Ear phone **50** is normally under the influence of gravity so as to tend to force wire legs **28**, **29** in a direction opposite to arrow "A."

Having shown and described a preferred embodiment of the present invention by way of example, it should be realized that structural changes could be made and other examples given without departing from either the spirit or scope of this invention.

What I claim is:

1. An adjustable hinge for an ear phone attached to a head support comprising a band, a hinge consisting of a box structure, means fastening said box structure to said band, a lever, means pivotally mounting said lever within said box structure, a cover, means fastening said cover to said box structure, a thumb screw rotatively mounted in said cover for movement toward and away from said lever, a wire bracket, means pivotally mounting said wire bracket to said box structure, means on said wire bracket engageable with said lever for pivotal movement by said lever, an ear phone, a block means fastening said block to said ear phone, and means attaching said block to said wire bracket.

2. An adjustable hinge consisting of a box structure having a bottom, a right side wall, a left side wall, a front wall, a rear wall and a chamber, two parallel slots, one slot being located in the right side wall and the other slot being located in the left side wall, a lever, a pintle supported on one end in the right side wall and on the other end in the left side wall, said pintle pivotally mounting said lever in said chamber, a U-shaped bracket provided with a base having a crook and two legs, said base being located in said two parallel slots with said crook overlying said lever, a cover provided with two parallel ears, means fastening said cover over said chamber and to said box structure with said two parallel ears overlying said base, and rotatable means rotatively mounted in said cover for movement toward and away from said lever to pivot said lever and said U-shaped bracket through said crook.

3. An adjustable hinge for an ear phone attached to a head support comprising a band, a hinge consisting of a box structure having a bottom, right and left side walls, a front wall and a rear wall, means fastening said hinge to said band, two oppositely located and parallel slots

located in said right and left side walls respectively, a chamber formed in said box structure, a lever, a pintle supported on opposite ends in said right and left side walls respectively, said pintle pivotally mounting said lever in said chamber, a U-shaped wire bracket comprising a base having a crook and two parallel legs, said base being located in said parallel slots with said crook overlying one end of said lever, a cover having two oppositely located and parallel ears, said two ears being located in said two oppositely located and parallel slots, respectively, said two ears overlying said base, said cover overlying said chamber, means fastening said cover to

said box structure, a thumb screw, means rotatively mounting said thumb screw in said cover, said thumb screw engaging said lever to pivot said lever and said crook, an ear phone, a block, and means fastening said block to said ear phone, two wire receiving orifices in said block, said two parallel legs located, respectively, in said two wire receiving orifices.

No references cited.

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