May 16, 1944. J. W. WELSH 2,349,218

HEADBAND FOR WELDER'S HELMET

Filed Feb. 27, 1941

Fig. 1.

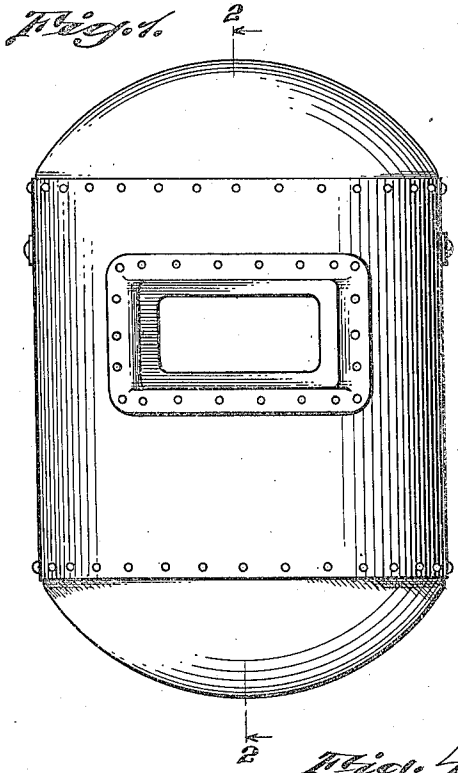


Fig. 2.

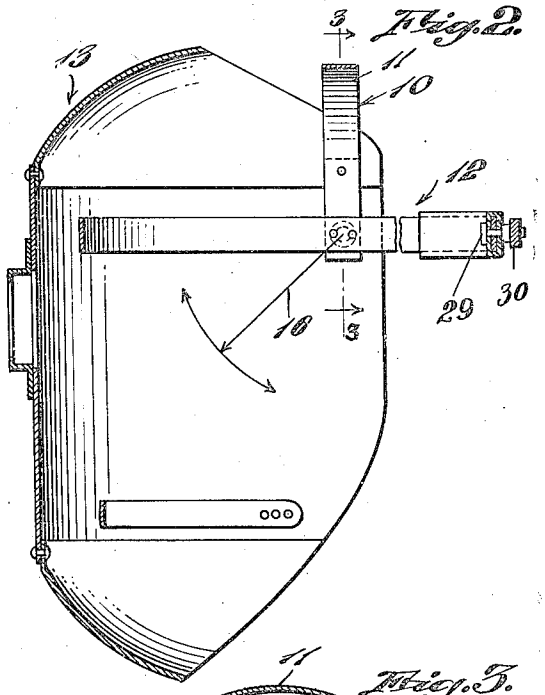


Fig. 3.

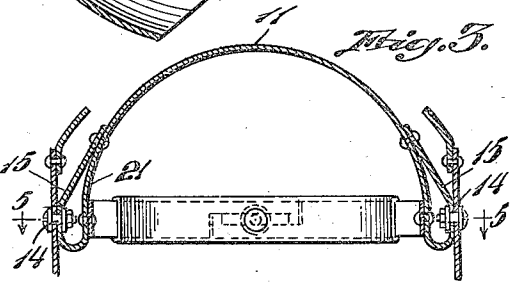


Fig. 4.

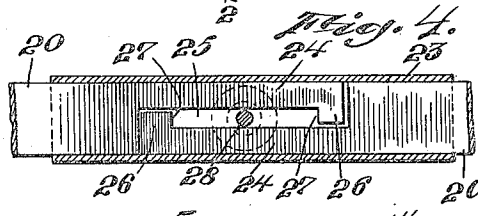


Fig. 5.

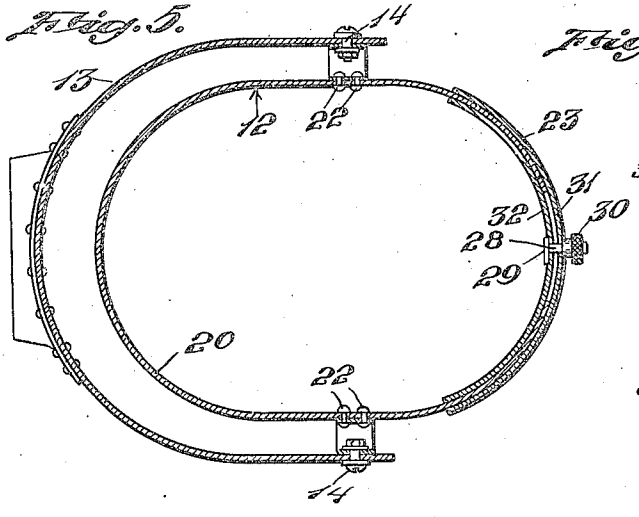


Fig. 6.

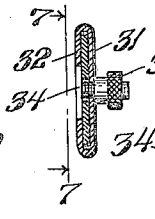
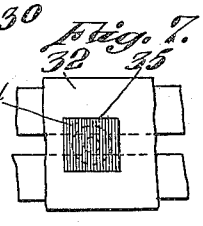


Fig. 7.



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HEADBAND FOR WELDERS' HELMETS

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Application February 27, 1941, Serial No. 380,836

2 Claims. (Cl. 2—8)

This invention relates to a welder's helmet, and more particularly to the headband which supports the shield in position in front of the face.

A welder's helmet usually consists of a shield which is supported from the head by means of a band about the upper portion of the head with a strap extending across the top of the head. The shield is pivotally mounted upon this band so that the shield may be raised from in front of the face by tilting it upon its pivotal mounting. The band which encircles the head must fairly well fit the user and consequently is made adjustable for the accommodation of the various-sized heads. This adjustment usually consists of some sort of turn buckle type of threaded arrangement necessitating an oppositely threaded screw member, nuts for the screw member, and mountings for the nuts, in some sort of pivotal fashion. The assembly is expensive. Its adjustment is exceedingly limited and when in contracted position, relatively long threaded parts are exposed which may become easily injured or bent to prevent further adjustment.

One of the objects of this invention is to provide an adjustment which cannot easily become damaged or put out of order even though the helmet be subjected to rough treatment.

Another object of the invention is to increase the range of adjustment possible in such a headband.

Another object of the invention is to materially lessen the cost of providing adjustment in such a headband.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is a front elevation of the welder's helmet;

Fig. 2 is a central section on line 2—2 of Fig. 1, showing the headband and shield;

Fig. 3 is a section on line 3—3 of Fig. 2, showing the pivotal mounting of the shield from the head support;

Fig. 4 is a section through the adjustable overlapping portions of the headband;

Fig. 5 is a section on line 5—5 of Fig. 3;

Fig. 6 is a sectional view through the adjusting nut, showing a modified arrangement;

Fig. 7 is a view on substantially line 7—7 of Fig. 6, with portions broken away.

A welder's helmet usually consists of a head-supporting device, generally designated 10 in the drawing, consisting of a strap 11 to extend over the top of the head and a band, designated generally 12, to extend about the top of the head. A shield 13 is supported in pivotal relation by means of pivot pins 14 extending through the outer portion 15 of the looped-back portion of the headband 11. This enables the shield to be swung about its pivot through the arc indicated by the radius 16 (see Fig. 2) from a position in front of the face to a position above the head.

The headband, designated generally 12, shown in a complete elliptical relationship in Fig. 5, consists of a rather stiff structure, such as fiber. A band of suitable width, designated 20, is secured to the inside loop portions 21 of the strap 11 by pairs of rivets 22 to prevent any pivotal relationship of this band with reference to the strap, while its end portions extend telescopingly into the opposite ends of a flattened tube 23, as seen in Figs. 3, 4, and 5. The end portions 24 of this band 20 are reduced in width sufficiently so that one may extend past the other and leave a space 25 between their adjacent edges while the very tip ends of these portions 24 are provided with fingers 26 to provide abutting surfaces 27 one within the path of the other as the end portions are slid into and out of the tube in a telescopic manner. A threaded bolt 28 extends through the space 25 between these end portions 26 and is provided with a head 29 at the inner side of the tube 23 and is provided with a thumb nut 30 on the outer side of the tube 23. By turning up this nut 30, the opposite walls 31 and 32 of the tube 23 are brought into firm engagement with the reduced end portions 24 to hold these portions in various different positions of adjustment to vary the embracing size of the band 12. The abutment surfaces 27 will engage the member 28 so as to limit the expansion of the band 12 and prevent the end portions from being inadvertently withdrawn from the tubular member 23.

In some cases, it may be desirable to have the head 29 flush with the inner surface of the tubular member, and in Fig. 6, I have illustrated a head 34, square in cross section, set into a square opening 35 in the wall 32 of the tubular member so as to have its head surface flush with the inner surface of the tubular member 32.

The band may be lengthened and shortened an amount equal to the reduced portion 24 which may be varied so that all different-sized heads from the largest to the smallest may be provided for. By a single nut and bolt, which may be very inexpensively made, and the fashioning of

the band in suitable shapes, which may be die cut, I provide a very simple adjustment of almost unlimited length and an adjustment which will withstand rough treatment without becoming damaged or getting out of order.

I claim:

1. In a welder's helmet, a tubular member having an inner surface to contact the wearer's head, a headband having its end portions reduced in width and telescoped within said tubular member, one extending along and in the same plane with the other, the adjacent faces of the opposed walls of the tubular member being spaced in conformity with the thickness of the said end portions and one of the walls of the tubular member having an opening therein, a threaded member having a head non-rotatably supported in said opening with its outer surface flush with inner surface of the tubular member and having a shank extending between said reduced end portions and through the opposite and outer wall of said tubular member, and a nut on said shank to draw the head to bind the reduced portions against relative movement.

2. In a welder's helmet, a tubular member having an inner surface to contact the wearer's head, a headband having its end portion reduced in width and telescoped within said tubular member, one extending along and in the same plane with the other, the adjacent faces of the opposed walls of the tubular member being spaced in conformity with the thickness of the said end portions and one of the walls of the tubular member having an opening therein with a rectilinear edge, a threaded member having a head with a rectilinear edge engaging the rectilinear edge of said opening to prevent rotation thereof and having the end of the head flush with the said inner surface of said tubular member and said threaded member having a shank extending between said reduced end portions and through the opposite wall of said tubular member, and a nut on said shank to draw the head to bind the reduced portions against relative movement.

JAMES W. WELSH.