Sept. 26, 1944. G. M. SHIPP 2,359,164

ATTACHMENT FOR WELDERS' HELMETS

Filed April 8, 1943 2 Sheets-Sheet 1

Fig. 1.

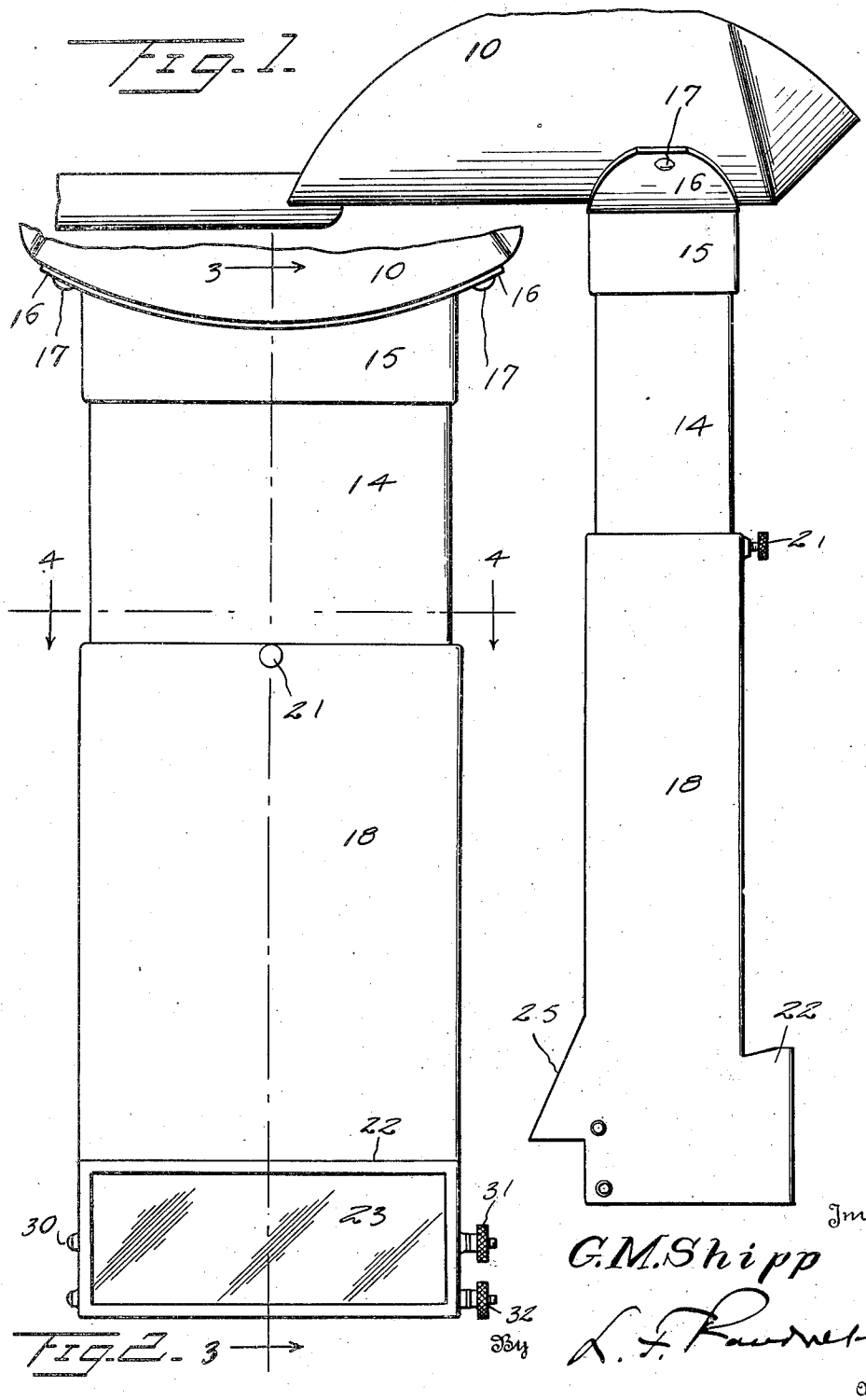


Fig. 2.

Inventor

G. M. Shipp

By L. F. Randolph

Attorney

Sept. 26, 1944. G. M. SHIPP 2,359,164

ATTACHMENT FOR WELDERS' HELMETS

Filed April 8, 1943 2 Sheets-Sheet 2

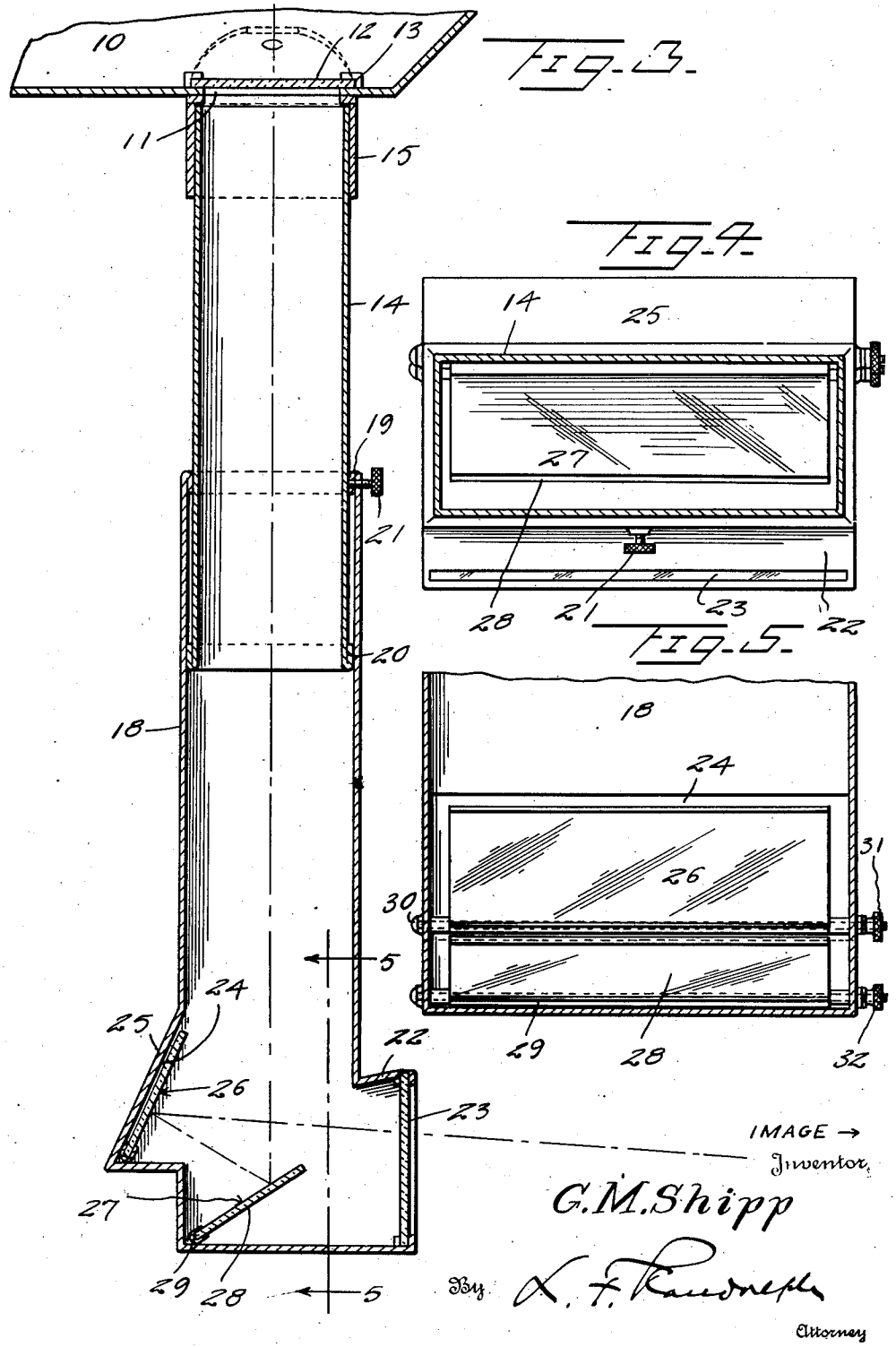


Fig. 3.

Fig. 4.

Fig. 5.

Inventor,
G. M. Shipp
By K. F. Randolph
Attorney

Patented Sept. 26, 1944

2,359,164

UNITED STATES PATENT OFFICE

2,359,164

ATTACHMENT FOR WELDERS' HELMETS

Guy M. Shipp, Navy Yard, S. C.

Application April 8, 1943, Serial No. 482,303

2 Claims. (Cl. 88—68)

This invention relates to an attachment for a welder's helmet and it generally aims to provide a means which will give additional protection for the eyes especially when working in restricted places.

Further, an object is to provide a means whereby the arc during welding will be reflected for observation of the welder.

Still further, it is aimed to provide a structure which will form an attachment for the usual helmet worn by welders, and a construction which is adjustable and in which the reflecting means is protected against a slag produced incident to welding.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:

Figure 1 is a view in elevation showing my attachment in place on a welder's helmet, the latter being shown fragmentarily;

Figure 2 is a front elevation of the parts of Figure 1;

Figure 3 is a longitudinal sectional view taken on the line 3—3 of Figure 2;

Figure 4 is a cross-sectional view taken on the line 4—4 of Figure 1; and

Figure 5 is a detail section taken on the line 5—5 of Figure 3.

Referring specifically to the drawings, 10 designates a welder's helmet. This helmet is shown fragmentarily and may be of any of the conventional forms in use. At 11 helmet 10 has an observation opening as usual, covered by transparent glass or any equivalent 12 suitably secured over the opening by overlapping means as at 13.

In carrying out my invention I provide an opaque tube 14 which is fastened in any suitable manner within an attaching socket or collar 15, the tube being soldered together for instance, and the socket having tangs or ears 16, riveted or bolted as at 17 to the wall of the helmet. It will be noted that the socket or collar 15 including the ears 16 is fitted intimately and on the same curve as the front of the wall 10, so as to exclude light.

An outer tube 18, of opaque material like the tube 14, is slidably and adjustably mounted on the tube 14 but in a manner to remain in adjusted position through their mutual frictional engagement as at flanges 19 and 20 on the respective tubes, and which are engageable to prevent detachment of the tubes. If desired, a binding screw 21 may be threaded to the tube 18 for engagement with the tube 14 to hold the tubes positively at the desired adjustment.

At the side of the tube 18 and adjacent its outer end a tubular extension 22 is formed, and therein a transparent glass or other element 23 is mounted to protect the interior of tubes and parts therein against flying slag incidental to welding.

At the rear of the tube 18, in line with the panel or light 23, is an inclined reflector 24 preferably located at the desired angle in an offset 25 of the tube 18. This reflector at a surface 26 receives the image of the arc during welding through the window 23, and reflects it onto the surface 27 of a reflector 28 suitably secured at the proper angle at the lower end of the tube 18. As a result the welder through the window 12 will observe the reflected image on the upper surface 27 of reflector 28.

It will be realized that the eyes of the welder accordingly will be greatly protected as a result of the invention, especially in restricted space since the reflection of the arc will be viewed in the mirror surface 27, the tubular structure will protect the window 12 and the eyes of the welder and such protection is enhanced by the window 23 which particularly will protect the reflectors.

Both reflectors 24 and 28 preferably are adjustable so that they may be disposed at the proper angles for the reflection of the arc. To this end, each of said reflectors is carried by a rod 29 with which it is rigid, the ends of the rods being journaled in the wall of the tube 18. Said rods at one end have heads 30, and at the other end are screw threaded at 31 and have knurled nuts 32 threaded thereon so that they may be tightened against the wall of tube 18 to bind and secure the reflectors at the desired angles.

Various changes may be resorted to provided that they fall within the spirit and scope of the invention.

I claim as my invention:

1. In combination with a welder's helmet having an observation window, tubular means of opaque material secured directly to the helmet in a light-excluding manner in line with said window, said tubular means having a window therein at an angle to the first-mentioned window, first and second reflectors within the tubular means to receive an image through the second-mentioned window and reflect it through the first-mentioned window, said tubular means hav-

ing a lateral extension in which the second-mentioned window is provided, said tubular means having an offset above the base of the second-mentioned window in which the first-mentioned reflector is disposed, the other reflector being in front of the first-mentioned reflector and disposed below the same, and the second-mentioned window having a protecting light therein.

2. The combination of claim 1 wherein a socket is provided in which said tubular means is disposed, said socket having an edge conforming to the contour of the helmet and including ears also conforming to the contour of the helmet, and secured thereto.

GUY MITCHELL SHIPP.