Dec. 25, 1945. T. H. GRINDROD ET AL 2,391,565

WELDER'S MASK

Filed March 14, 1944

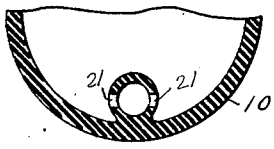


FIG. 3

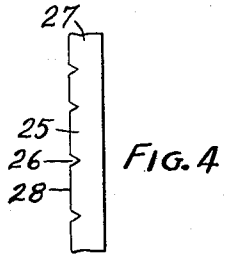


FIG. 4

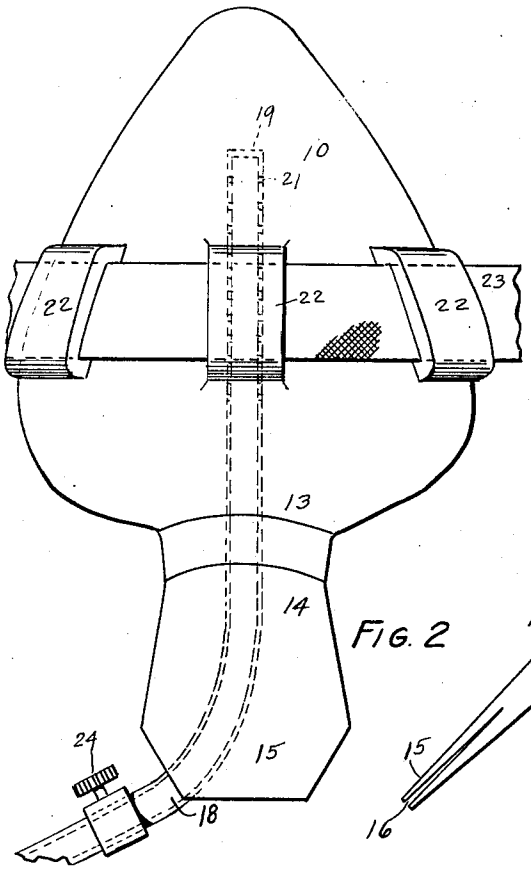


FIG. 2

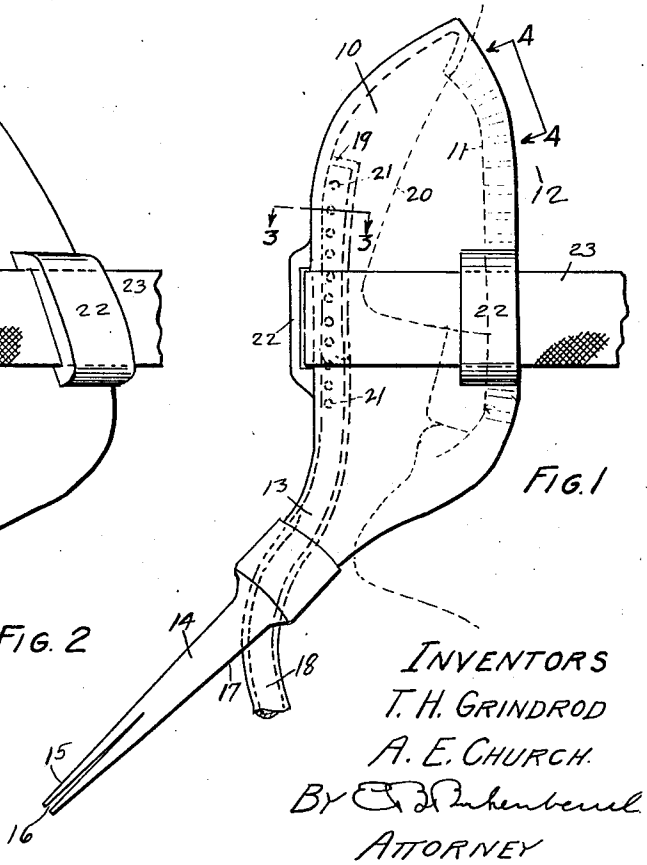


FIG. 1

INVENTORS
T. H. GRINDROD
A. E. CHURCH.
BY [illegible]
ATTORNEY

Patented Dec. 25, 1945

2,391,565

UNITED STATES PATENT OFFICE

2,391,565

WELDER'S MASK

Thomas H. Grindrod and Arthur E. Church,
Portland, Oreg.

Application March 14, 1944, Serial No. 526,371

1 Claim. (Cl. 128—146)

This invention relates generally to the welders' art and particularly to a welder's mask.

The main object of this invention is to provide an improved form of welders' mask whereby the wearer will be protected from the fumes arising from the welding or cutting operation, at the same time afford a means of cooling the face of the wearer, as well as affording fresh, cool air for breathing purposes.

These and other objects will become more apparent from the specifications following as illustrated in the accompanying drawing, in which:

Fig. 1 is a side elevation of the device, with a portion of the fastening strap broken away.

Fig. 2 is a front elevation of Fig. 1.

Fig. 3 is a fragmentary section taken along the line 3—3 in Fig. 1.

Fig. 4 is a fragmentary elevation taken along the line 4—4 in Fig. 1.

Similar numbers of reference refer to similar parts throughout the several views.

Referring in detail to the drawing, there is shown a nose piece 10 which is fairly rigid and which has an inturned edge 11, which is somewhat flexible and adapted to provide a cushion between the nose piece 10 and the face 12 of the wearer. The lower end 13 converges toward an outlet opening which is connected to a flexible tube 14, whose tip 15 is provided with a slit 16 which permits the device to function as a flap valve through which air may be exhaled, but which will close in the opposite direction. Devices of this character are in common use and over which the device which we are about to describe is an improvement.

Extending through the side 17 of the tube 14 is a flexible hose 18 which extends upwardly along the interior of the nose piece 10 to the closed end 19. The portion of the hose 18 near the nose 20 of the wearer is provided with lateral perforations 21.

It is desirable to provide loops 22 on the nose piece 10 to receive a head strap 23 which is preferably elastic.

The hose 18 is provided with a valve 24 of any type suitable for regulating the flow of air through the hose 18 from a source of supply (not shown).

The operation of the device is as follows:

When in use with or without a welder's mask, the nose piece 10 is merely put into place in a manner to completely cover the nose and mouth of the wearer. The valve 24 is then adjusted to provide the desired amount of air, it being only necessary to provide an ample quantity as an excess will merely carry the exhaled air out through the tube 14 and between the edge 11 and the face thereby serving to cool the face of the wearer and avoid the overheating of the face, which is a common objection to all forms of masks.

In other words, there is at all times a pressure slightly above that of the surrounding atmospheric pressure, thereby insuring an outward flow of air at all times and making it impossible for any gas to enter the nose piece.

It will be understood that the cushion 11 may be smooth or fluted to encourage the flow of air along the face of the wearer without departure from our invention.

In Fig. 4 the flutes 25 are produced by forming notches 26 in the edge 27. The surface 28 is in direct contact with the skin of the wearer's face.

While we have thus illustrated and described our invention it is not our intention to be limited to this precise form, but it is our intention to cover all such forms and modifications of the device as fall fairly within the appended claim.

We claim:

A device of the class described consisting of a nose piece adapted to cover the nose and mouth of the wearer, the edges thereof contacting the cheeks of the wearer, said edges being fluted to permit the outward flow of air therethrough, and means for injecting fresh air along the front of the nose piece and discharging it outwardly in both directions toward the cheek engaging edges.

THOMAS H. GRINDROD.
ARTHUR E. CHURCH.