R. MONRO.

GAS MASK.

APPLICATION FILED APR. 30, 1919.

1,395,760. Patented Nov. 1, 1921.

Fig. 1

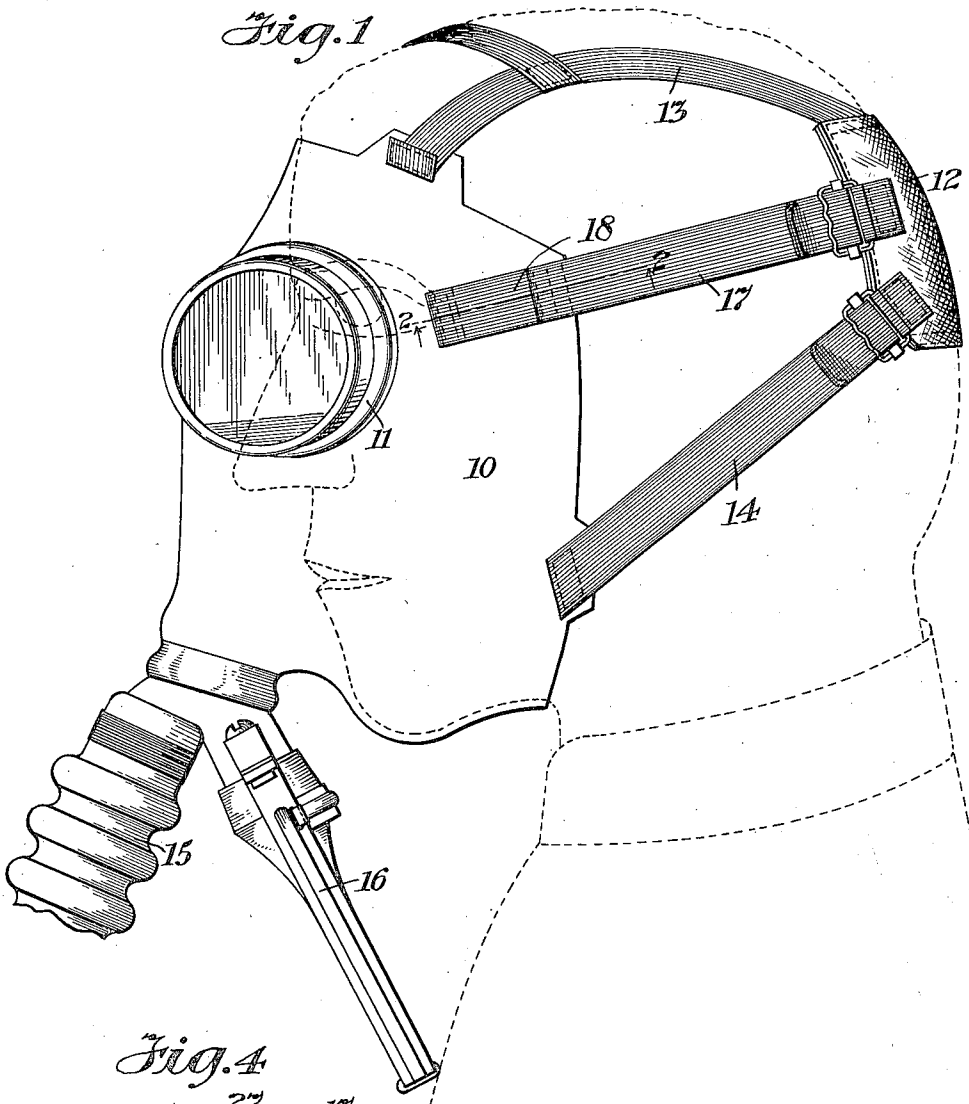


Fig. 4

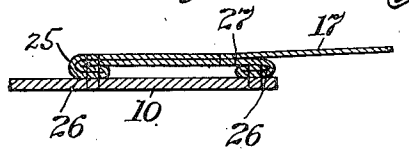


Fig. 2

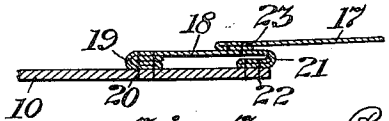


Fig. 3



INVENTOR

Randolph Monro

BY

Sewell & Sons

HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

RANDOLPH MONRO, OF NEW YORK, N. Y., ASSIGNOR TO WALDEMAR KOPS, OF NEW YORK, N. Y.

GAS-MASK.

1,395,760. Specification of Letters Patent. Patented Nov. 1, 1921.

Application filed April 30, 1919. Serial No. 293,613.

To all whom it may concern:

Be it known that I, RANDOLPH MONRO, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented an Improvement in Gas-Masks, of which the following is a specification.

In the development of gas masks particularly for the use of troops, difficulty was experienced in making a gas-tight joint between the edges of the hood of the mask and the face of the wearer particularly at the temple portions of the head, due to the fact, that many persons have more or less marked depressions or channels in the head at the temple portions thereof extending substantially from the eyes or adjacent the eyes to the temples. The object of my present invention therefore is to overcome the difficulty of making the gas mask fit the head at the temple portions thereof. I have found that this difficulty may be overcome by employing a strip or tape of suitable material and so attaching it to the mask and to a predetermined harness strap as to cause the mask to be depressed at the temple portions thereof in order to make a tight seal between the hood of the mask and the temples of the wearer, and the particular construction of the strap and the manner in which it is attached to the mask and the harness will be hereinafter more particularly described.

In the drawing:

Figure 1 is a side elevation of the gas mask in which my present invention is embodied.

Fig. 2 is a cross section on line 2—2, Fig. 1,

Fig. 3 is a view similar to Fig. 2 showing position of parts when tension is applied thereto, and

Fig. 4 is a modified form of connection.

Referring to the drawing, the body or hood of the gas mask is indicated at 10. This, as is usual, is fitted with eye pieces 11. The harness by which the gas mask is secured in position on the head of the wearer and as indicated, preferably comprises a pad member 12 to which at one end the top straps 13 are secured, the opposite ends of these straps being suitably attached to the upper front portions of the hood of the mask. The bottom straps of the harness are indicated at 14 and these extend from the pad member 12 to the lower opposite portions of the hood of the mask. Also as is customary, the hood or body of the mask is provided with the hose 15 or inhaling tube and the flutter valve 16 which as illustrated may be so combined as to be attached or secured in the mask at the same place.

17 represents the side straps which at one end are also connected to the edge of the pad 12 and at their opposite ends are secured as hereinafter described, to the strap, which together with the manner of attaching the same involve the present invention. In order to obtain the desired results in making the gas mask tight at the temple portions of the head of the wearer, I prefer to employ an auxiliary strap or tape member 18. At one end this is folded several times on itself as indicated at 19 and attached to the hood or body of the mask forward of the temple portions thereof and adjacent the eye piece section. As indicated in Fig. 2, after being folded at one end as indicated at 19, this auxiliary strap is secured to the hood or body of the mask by lines of stitching indicated at 20. The opposite end of the auxiliary strap 18 is also preferably folded on itself and after being looped as indicated at 21, the folded portions of this end of the tape is secured to the body or hood of the mask adjacent the edge thereof by lines of stitching indicated at 22 or otherwise. The mask end of each harness strap 17 is then secured to an auxiliary strap 18 by lines of stitching 23 in a position slightly farther from the edge of the mask than the position at which the turned end of the auxiliary strap is secured to the edge of the mask along the lines of stitching 22.

It will now be understood that when the mask is placed in position on the head of the wearer and the tension applied to the side straps 17, this will be extended or directed through the auxiliary strap 18 to the forward end thereof, tending to overturn the folded portions at this end of the auxiliary strap from the position shown in Fig. 2 to that shown in Fig. 3, whereby the underlying portion of the body or hood of the mask will be depressed or turned in or indented, as indicated at 24 so as to cause the same to fit the channels at the temple portions of the head of the wearer. It will furthermore be understood that the attachment of the side straps 17 to the auxiliary strap 18 along the lines of stitching 23 makes it impossible for the edge of the mask to be turned inwardly

so as to hamper to any extent the rapid adjustment of the mask to place in proper position on the head of the wearer.

By reference to Fig. 4, it will be seen that instead of employing separate or auxiliary straps 18, the end of the side or intermediate straps 17 may be continued, that is, made sufficiently long to be folded on themselves as indicated at 25 and secured to the body of the mask, and that their extremities to be attached to the edge portion of the hood of the mask as indicated at 26, while the overlying portions of the tape are secured to each other by suitable lines of stitching 27 or otherwise. The function and action of this construction is precisely similar to that described in connection with the form of the invention shown in Figs. 2 and 3.

I claim as my invention:

1. In a gas mask, a hood, a harness, and a connection for securing the harness to the hood so constructed as to cause the hood to wrinkle at the temple portions thereof thereby improving the fit of the hood to the face of the wearer.

2. In a gas mask, a hood, a harness including temple straps, and auxiliary straps each secured to the forward or mask ends of the temple straps and also to the hood so that tension applied to the temple straps is transmitted to the auxiliary straps to cause the same to wrinkle the hood at the temple portions thereof whereby the wrinkled portions of the hood are made to fit the temple channels in the head of the wearer.

3. In a gas mask, a hood, a harness including temple straps, and auxiliary straps each folded on itself at the end and secured to the hood member adjacent the eye piece and at the temple section and folded on itself at the other end and secured to the temple section of the hood adjacent the edge thereof, each auxiliary strap being also connected to the corresponding temple strap of the harness intermediate of the connections between the auxiliary strap and the hood so that tension applied to the temple straps is transmitted to the auxiliary straps causing the same to wrinkle the temple sections of the hood whereby the same are made to fit the temple channels of the wearer and the edge of the hood is prevented from being inturned in adjusting the same to place.

4. In a gas mask, a hood, a harness, and a tension strap attached along spaced lines to the hood at the temple section thereof, with a part of the harness being connected to the said strap intermediate of its spaced lines of connection to the hood so that when tension is applied to the strap from the harness the strap causes a pull intermediate of the lines of its attachment to the hood to cause the temple section of the hood to be wrinkled to better fit the head of the wearer.

5. In a gas mask, a hood, a harness, an auxiliary strap attached to the hood along spaced lines at the temple section thereof, and a tension strap attached to the auxiliary strap intermediate of its spaced lines of attachment to the hood so that when tension is applied to the said tension strap there is a pull exerted on the auxiliary strap between its line of attachment to the hood to cause the temple section of the hood to wrinkle to better fit the head of the wearer.

6. In a gas mask, a hood, a harness, and straps attached to the temple sections of the hood along spaced lines, with parts of the harness attached to the said straps intermediate of the spaced lines of attachment between the straps and the hood, whereby when tension is applied to the straps from the harness there is a pull exerted on the said straps to cause the temple sections of the hood to be wrinkled to thereby better fit the head of the wearer.

7. In a gas mask, a hood, a harness, and auxiliary straps connected along spaced lines to the temple sections of the hood, with parts of the harness secured to the said auxiliary straps intermediate of the spaced lines of connection to the hood so that when tension is applied through the said parts of the harness to the said auxiliary straps there is a pull exerted on each auxiliary strap to cause the adjacent portion of the hood to wrinkle to thereby better fit the head of the wearer.

8. In a gas mask, a hood with harness connected thereto, and means for improving the fit of the mask by wrinkling the hood when in use.

9. In a gas mask, a hood with harness connected thereto, and means for improving the fit of the mask by wrinkling the hood at the temples of the wearer when the mask is in use.

10. In a gas mask, a hood with strap harness connected thereto, and means for improving the fit of the mask by wrinkling the hood by tension produced in said strap harness when said mask is in use.

Signed by me this 21st day of April, 1919.

RANDOLPH MONRO.