May 2, 1939. V. HORÁK 2,156,852

GAS MASK

Filed Oct. 26, 1936

Fig. 1.

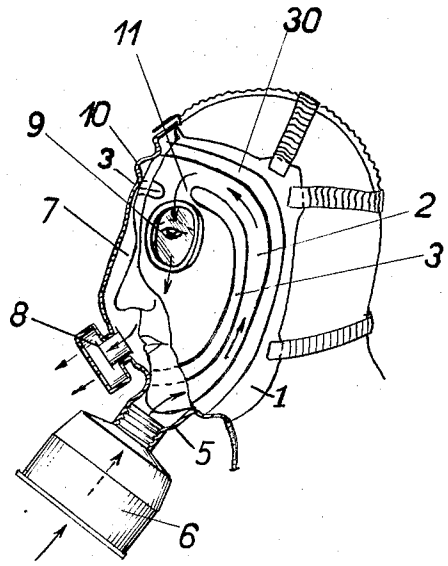


Fig. 2.

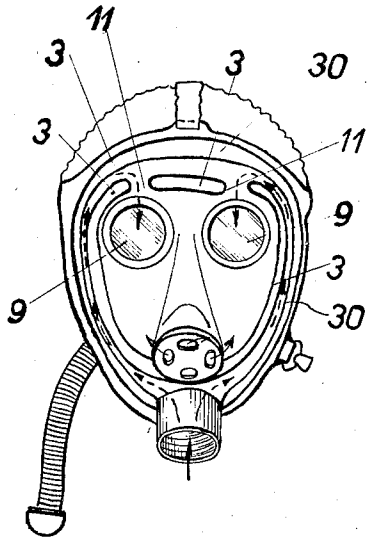


Fig. 3.

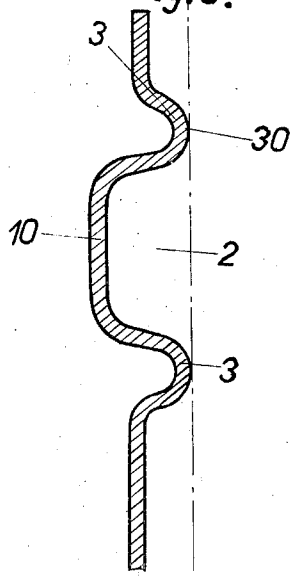


Fig 4.

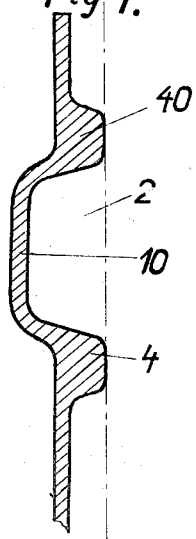
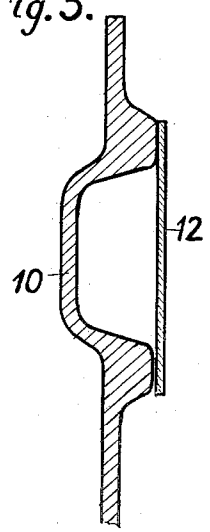


Fig. 5.



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GAS MASK

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2 Claims. (Cl. 128—141)

This invention relates to a gasmask of elastic material for instance rubber as protection against gas of that type in which the inhaled air is conducted into the interior of the mask so that it passes over the eyeglasses or near the same. In the mask according to the invention the path along which the inhaled air flows is determined in such a manner that the air after having flown through the filter, arranged at the lowest point of the mask, at the chin of the person who is wearing the mask, ascends through channels at both sides of the mask up to the height of the eyeglasses. From these channels the inhaled air flows into the free space in the gasmask and through the whole space in avoiding dead spaces as much as possible. The construction of the gasmask according to the invention presents the following advantages: The inhaled air cools the face of the person wearing the mask, maintains the face dry and allows the natural respiration of the skin. Depositing of water from condensation between mask and face, especially on the glasses and near the same, is prevented so that water from condensation can deposit only on the portions of the gasmask near the mouth of a person who wears the mask, i. e. near the exhaling valve, through which this water can be discharged. The space of the mask destined for the air admission is therefore completely separated from that portion of the mask on which sweat deposits.

According to the invention channels, open towards the face of the wearer, are formed on the inner side of the mask by pressing or in any suitable manner. The channels are formed between two parallel depressions or between two ribs and the open inner side of the channels may be closed by a strip of elastic material stuck to one of the ribs bearing against the other rib.

An embodiment of the invention and several modifications are illustrated by way of example in the accompanying drawing in which:

Fig. 1 shows the gasmask in elevation, partly in section.

Fig. 2 is a front elevation.

Figs. 3 to 5 show on enlarged scale in cross section different forms of channels for the admission of the inhaled air, Fig. 3 showing a channel formed by parallel depressions in the wall of the gasmask, Fig. 4 showing a channel open towards the inner side with reinforcing ribs, and Fig. 5 showing a channel closed on all sides.

In the form of construction of the gasmask shown in Figs. 1 to 3 arcuate channels **2** are in the wall **1** of the gasmask made of elastic material and formed by parallel depressions **3** and **30** on either side of the channel, or, as shown in Fig. 4, by two similarly extending ribs **4** and **40**. This channel extends from the filter **6** screwed in the chin portion of the mask and from the tubular extension **5** of the filter, bifurcates directly behind this tubular extension **5** into two channels **2** extending the one on the one side and the other on the other side of the mask towards the forehead of the wearer of the mask and ending above the eyeglasses **9**. The inhaled air flows from the channels **2** along the eyeglasses and then into the hollow space in the mask in the direction towards nose and mouth of the wearer. The exhaled air is discharged through a discharge valve **8**.

The portion **10** of the wall of the mask between the depressions **3** may, if desired, be bulged outwards as shown in Figs. 1 and 3 to protrude from the plane of the adjacent wall portions, in order to enlarge the cross sectional area of the air admission channel. At the points where the air flows out of the channels **2** into the space **7** under the mask the inner one (**3**) of the two depressions **3**, **30** or the inner one (**4**) of the two ribs **4**, **40**, is interrupted above the eyeglasses at the point **11** at either side of the mask so that the air can flow under the eyeglasses **9** at this point, cooling these eyeglasses and keeping them free from water of condensation. The outer depression **30** or rib **40** extends, without interruption along the circumference of the mask or of the face of the wearer and assists thus in the tight fitting of the gasmask on the face.

The admission channel **2** for the inhaled air may also be tubular, i. e. closed at the inner side by a partition **12** (Fig. 5) stuck only on the depressions or ribs and resting freely on the other depression or rib in order that the hollow space of channel **2** can be easily cleaned or disinfected when the mask has been removed from the face.

The depressions **3**, **30** or ribs **4**, **40** form at the same time a certain reinforcing of the wall of the mask so that the mask does not lie directly on the face and the face is consequently permanently flushed by the inhaled air.

By the depressions or ribs forming the air admission channels the manufacturing of the mask is not at all complicated as the masks can be made as usual with the aid of accordingly shaped moulds.

The air admission channels **2** need not extend up to the forehead portion of the mask, they can be shorter than shown and terminate from the

sides or from below in the space under the eyeglasses.

I claim:

1. A gasmask, comprising in combination, eye pieces, a body of elastic material, such as rubber carrying said eye pieces and having a narrow edge portion adapted to bear against the face of the wearer on both cheeks over the forehead and under the chin, an inhalation socket formed at the chin portion of said body, two ribs formed on the inner side of said body substantially parallel with the edge of the body said ribs adapted to bear against the cheeks, chin and forehead and support said body on the face of the wearer to form an enclosed space over the eyes, nose and mouth portions and to form with the face an annular passage leading from said socket along each cheek and onto the forehead where the inner rib is interrupted over each eye piece to establish communication between said passage and said space, an exhalation valve leading from said space opposite the mouth of the wearer, and a filter fitted in said inhalation socket.

2. In a gasmask as specified in claim 1 a screw threaded sleeve fitted in the inhalation socket and a screw threaded extension on the filter detachably screwed into said socket.

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