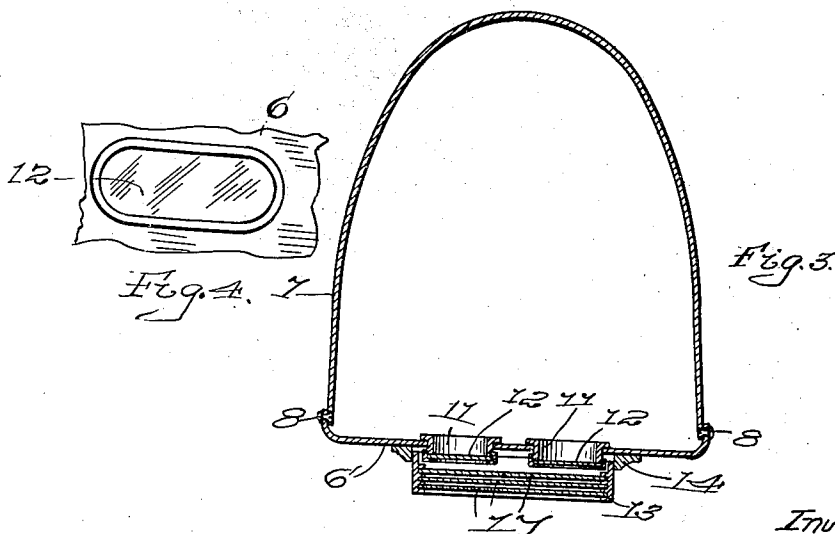
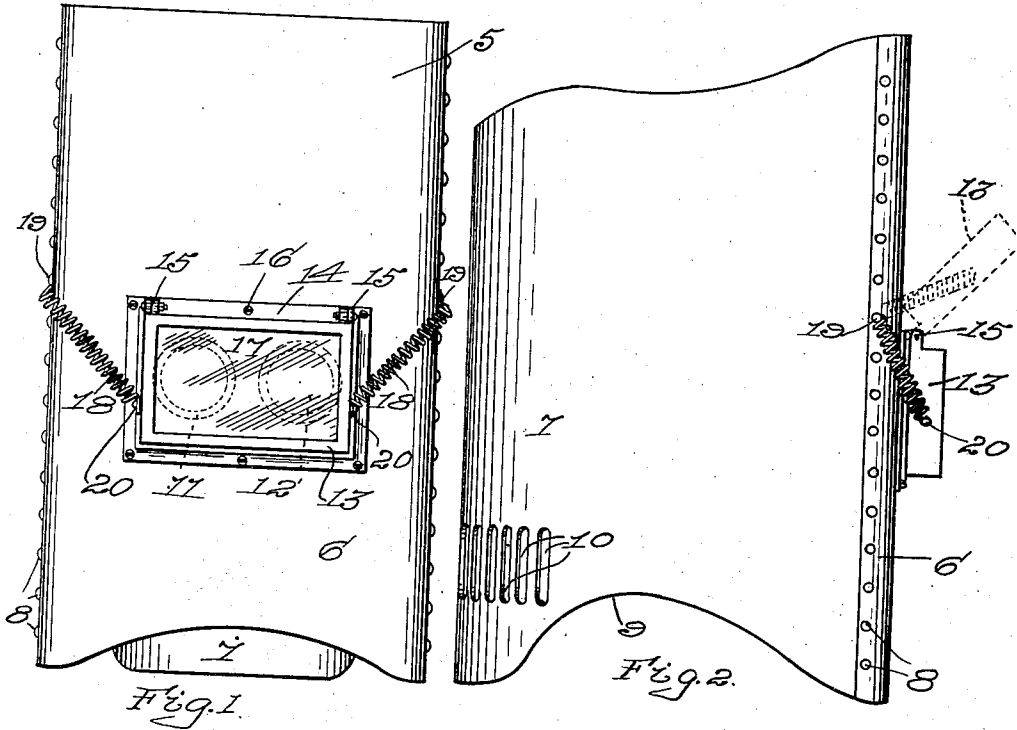


1,306,550.

Patented June 10, 1919.



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UNITED STATES PATENT OFFICE.

ROBERT MALCOM, OF CHICAGO, ILLINOIS.

HELMET.

1,306,550.

Specification of Letters Patent. Patented June 10, 1919.

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To all whom it may concern:

Be it known that I, ROBERT MALCOM, a citizen of the United States, residing at Chicago, Cook county, State of Illinois, have
5 invented certain new and useful Improvements in Helmets, of which the following, taken in connection with the drawings, is a description.

My invention has for its object the production of a helmet, designed more particularly for use in welding, or similar operations where it is necessary to protect the eyes of the wearer from extreme heat and brilliant light, which can be readily placed
10 in position or removed, and one which will protect both the eyes and head of the wearer.

A further object of my invention is to provide a helmet of the class described,
20 formed of non-inflammable, non-heat conducting material, which, when in use, rests upon the shoulders of the wearer, and which protects the head from heat and the eyes from brilliant light.

Another object of my invention is the production of a head protector or helmet of the class described, adapted to be placed over the head of the wearer, the lower end of which conforms to the outline of his
30 shoulders, and the upper end being open, which in connection with slots near the lower end thereof, provides sufficient ventilation.

A further object of my invention is to provide a helmet designed more particularly
35 for use in welding or similar operations, having two independent sets of glasses or lenses, one of which is relatively dark in color, and which may be moved out of alignment with the eyes and returned to the
40 original position when desired.

Other objects will appear hereinafter.

In the accompanying drawings I have illustrated what I now consider the preferred form of my invention, although I
45 wish to be understood as contemplating such modifications and variations as come within the scope of the appended claims, and in these drawings:

Figure 1 is a front elevation of my device;
50 vice;

Fig. 2 is a side elevation of the same;

Fig. 3 is a transverse sectional view, and

Fig. 4 is a modified form of lens and holding rim.

Referring to these drawings, 5 represents
55 the body portion of the helmet, which is

formed of suitable non-inflammable material, such as fiber. It may consist of two pieces, a front portion, 6, and a rear portion, 7, as illustrated, or it may be formed
60 of a single piece of material. When the two piece construction is used, the parts may be secured to each other by rivets 8, or in any other suitable manner. The back portion, 7, is preferably bent so that the helmet is substantially semi-elliptical in cross
65 section, as shown in Fig. 3.

The lower edge, 9, is shaped to conform to the body of the wearer, the sides resting upon his shoulders, and the weight of the
70 helmet being supported thereby. The slots, 10, are provided preferably near the lower edge of the helmet, to facilitate ventilation.

On the front of the helmet, at points where they will be in line with the eyes of
75 the wearer when the helmet is in position, are mounted the cylindrical eye cups, 11, although an elongated window (Fig. 4) can be substituted for said eye cups with equally good results. The glasses or lenses, 12, are
80 removably secured in said eye cups, as shown in Fig. 3.

The lens holding frame, 13, is positioned over the eye cups, 11, and is movably mounted on the frame, 14, at 15, as shown
85 in Fig. 1. The frame, 14, is secured to the helmet by the screws, 16, or by any other suitable means. The lenses, 17, are mounted in said frame, as shown in Fig. 3, and are of relatively dark color. Said lenses, 17,
90 of which there are preferably a plurality, as shown in Fig. 3, are of sufficient density to protect the wearer's eyes from the brilliant light incident to oxy-acetylene welding and the like.
95

The coil springs, 18, are secured to the helmet at 19, and to the frame, 13, at 20. These springs are so arranged that when the frame, 13, is in lowered position, as
100 in Fig. 1, it is firmly held in place by the tension of said springs, and when in raised position, as indicated by the dotted lines in Fig. 1, it is firmly held in place by the tension of the springs.

When the helmet is in position, the back
105 of the wearer's head contacts with the rear of the helmet, and the helmet is tilted slightly forward, so that the lower edge of the front side thereof contacts with the wearer's chest. The top of the helmet is
110 open, thereby providing ample ventilation.

During the welding operation, the frame,

13, is in lowered position, so that the eyes of the operator will be protected from the otherwise blinding light. When, however, the flame is temporarily shut off, the lenses, 17, are of such density as to obscure the vision of the wearer. The frame, 13, may then be raised to the position indicated in dotted lines in Fig. 2, thereby obviating the necessity of removing the helmet. When the frame is raised, the lenses, 12, protect the eyes from loose particles which may be in the air.

I claim:

1. A helmet or head protector, comprising a body portion adapted to fit over the head of the wearer and to rest upon the shoulders, both ends of said helmet being open, said helmet being provided with openings in the front thereof, and glasses or lenses mounted in said openings.

2. A helmet comprising a shell adapted to fit over the head of the wearer and to rest upon the shoulders, said helmet being substantially semi-elliptical in cross section, and formed of non-heat conducting material, said helmet having the upper end thereof open, and having a plurality of openings arranged therein to permit continuous passage of air therethrough, and said helmet having openings in the front thereof, and glasses or lenses mounted in said openings.

3. A helmet comprising a body portion adapted to fit over the head of the wearer, and having its lower edges shaped to conform to the outline of the shoulders, said helmet having openings therein so positioned as to permit the passage of air

therethrough, and two independent sets of glasses or lenses mounted on said helmet in alinement, with each other.

4. A helmet, comprising an elongated shell, substantially semi-elliptical in cross section, and having its lower edges shaped to conform to the outline of the shoulders of the wearer, and two independent sets of glasses or lenses, one being mounted in said helmet, and the other movably mounted thereon, said helmet having openings therein so positioned as to permit the passage of air therethrough.

5. A device of the class described, comprising a shell adapted to fit over the head of the wearer and to rest upon the shoulders, two independent sets of glasses or lenses mounted thereon, one of said sets of lenses being relatively dark in color, and means for moving said last mentioned set of lenses out of alinement with said other set of lenses.

6. A helmet comprising a shell adapted to fit over the head of the wearer, and having its lower edges shaped to conform to the outline of the shoulders, two independent sets of lenses, one being mounted in said helmet, and the other being mounted in a frame, said frame being movably mounted on said helmet, and adapted to be raised out of alinement with said first mentioned lenses, means for holding said frame in raised position, and means for holding said frame in lowered position, substantially as described.

In testimony whereof I have signed this specification.

ROBERT MALCOM.