

W. F. ENGELFRIED & G. A. ELPERS.
HELMET.

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1,131,350.

Patented Mar. 9, 1915.

Fig. 1.

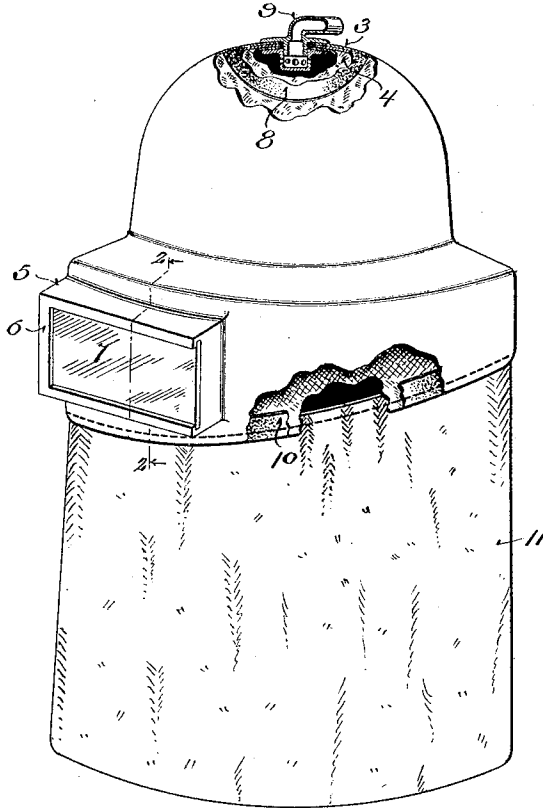
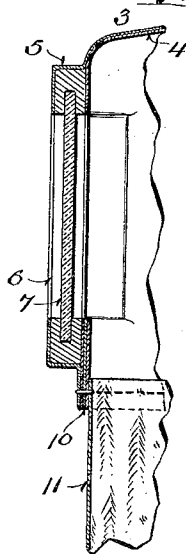


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM F. ENGELFRIED AND GEORGE A. ELFERS, OF MILWAUKEE, WISCONSIN.

HELMET.

1,131,350.

Specification of Letters Patent.

Patented Mar. 9, 1915.

Application filed May 11, 1914. Serial No. 837,674.

To all whom it may concern:

Be it known that we, WILLIAM F. ENGELFRIED and GEORGE A. ELFERS, both citizens of the United States, and residents of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Helmets; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide simple, economical, efficient and light weight seamless helmets for the use of sand-blast operators to protect their heads, faces and eyes from flying sand; said helmets being also designed as protectors for workmen where dust abounds.

Figure 1 of the drawings represents a perspective view of a helmet in accordance with our invention partly broken away and provided with a depending curtain, and Fig. 2, a sectional view of a fragment of the helmet and curtain, the view being indicated by line 2—2 in Fig. 1.

Referring by numerals to the drawings, 3 indicates an outer and 4 an inner layer of a papier-mâché helmet having a depending rim-flange of gradually increasing width from rear to front, and the flange is provided at the front with an angular hollow projection 5 in which a guide-frame 6 for a sliding pane 7 of glass or other suitable transparent material is molded.

A reinforce 8 of cloth or other suitable material is provided between the layers 3 and 4 central of the top or elsewhere of the helmet dome as may be most convenient or desirable in practice, and a separable air-distributing nozzle 9 is clamped in connection with this reinforced portion of said dome to have its outlet within the helmet. Another reinforce 10 of cloth or other suitable material is provided between the layers 3 and 4 of the depending rim-flange of the helmet and a curtain 11 is sewed to said flange, the stitching being through the reinforce. It is preferable, as shown in Fig. 2, to extend the reinforce material 10 upward between layers of the papier-mâché facing the lower rail of the frame 6 aforesaid.

The projection of the rim-flange of the

helmet is a window through which the person wearing the helmet views his work, and the same being glazed his eyes are protected from flying sand and dust that would otherwise find their way into said helmet. The curtain 11 falls over the shoulders of the person wearing the helmet to exclude sand and dust, and the general construction of the helmet is such as not to interfere with a free circulation of air around the head of the wearer.

By making the helmet of papier-mâché it is very light and durable, while at the same time it is stiff and seamless throughout, these being important advantageous features of our helmet over those made from canvas or other textile fabric for the use of sand-blast operators and workmen exposed to excessive dust.

Because of the frame 6 above specified, a new pane 7 of glazing may be readily substituted for any that becomes broken or too much dimmed by contact with flying sand.

We claim:

1. A molded stiff helmet of light material having an integral depending rim-flange, a guide frame molded in a front projection of the flange, and a pane of glazing material in sliding engagement with the frame.

2. A papier-mâché helmet having an integral depending rim-flange provided at the front with an angular hollow projection, and a guide frame for a pane of transparent material molded in said projection.

3. A manufacture comprising a papier-mâché helmet having an integral depending rim flange provided at the front with an angular hollow projection in which a guide frame for a pane of transparent material is molded, an air distributing nozzle in connection with the dome of the helmet to discharge therein, and a curtain suspended in connection with the flange aforesaid.

In testimony that we claim the foregoing we have hereunto set our hands at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

WM. F. ENGELFRIED.
GEO. A. ELFERS.

Witnesses:

N. E. OLIPHANT,
M. E. DOWNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."