Feb. 20, 1968 R. S. V. BOLLE 3,369,255

FACE PROTECTOR

Filed Feb. 23, 1967

Fig. 1

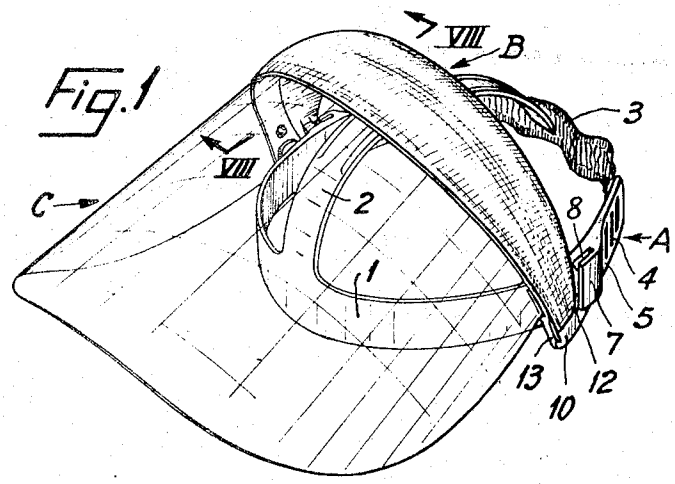


Fig. 3

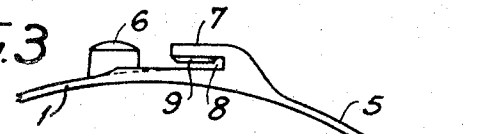


Fig. 2

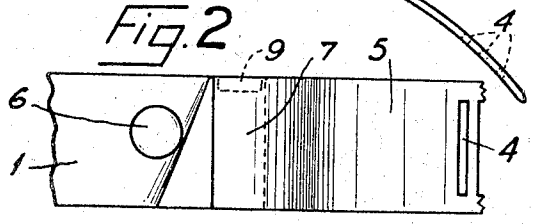


Fig. 4

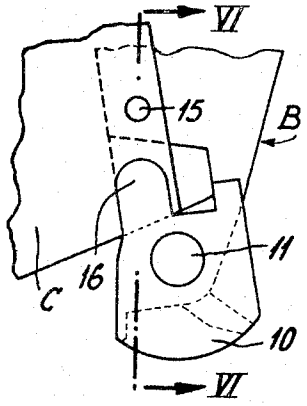


Fig. 6

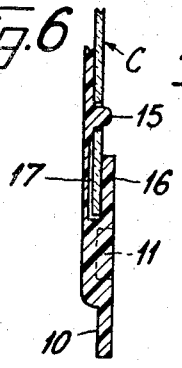


Fig. 5

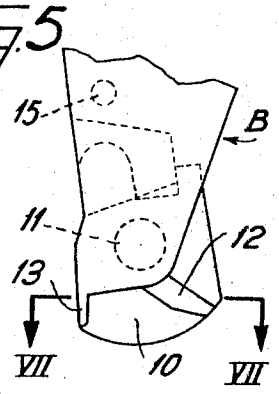


Fig. 8

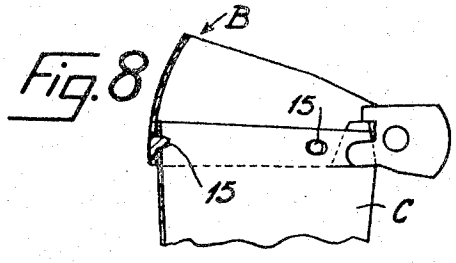
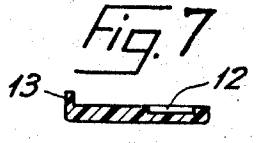


Fig. 7



Robert Seraphin Victor BOLLE

Karl F. Ross

Attorney

United States Patent Office

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FACE PROTECTOR

Robert Seraphin Victor Bolle, 58 Rte. de Marchon, Oyonnax, Ain, France

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ABSTRACT OF THE DISCLOSURE

A face protector is disclosed having a screen support pivotally connected to a headband so that the protector can be raised and held in the up position.

This invention relates to face protectors with a screen for covering the face. When this screen is not required, it can be raised like the visor of the helmet of a suit of armour, and held in that raised position.

Known protectors of this kind have pivots between the part that is attached to the head and the raisable screen. These pivots are generally connected to means for holding the screen elastically in its various positions. The manufacture of such protectors is generally expensive, and the protectors often suffer from the disadvantage that the screen is not held positively in its various possible positions.

According to the present invention, a face protector comprises an element that can be attached to the wearer's head, and at least one screen-supporting visor element, one of these two elements having a cylindrical pivot and a tab defining a flat slot near to the pivot, the plane of the slot being substantially perpendicular to the axis of the pivot, while the other element has a flat portion adapted to engage in the slot, and a cylindrical recess adapted to cap the pivot.

These elements are preferably made from tough moulded plastics material.

The elasticity of such elements enables them to be force-fitted together so that they cannot be pulled apart by ordinary handling forces.

The tab preferably has a projection thereon, projecting into the slot, and the flat portion preferably has one or several recesses therein which co-operate with the projection, so that the screen-supporting element may be held in one or several positions in which the projection engages with a recess.

The screen-supporting element is preferably a convex arch, the two ends of such an arch having means as above described for pivotally attaching the screen-supporting element to the element attachable to the wearer's head. The latter element is advantageously in the form of a head-band or of a cap made of moulded bands, and preferably comprises a frontlet, the two ends of which are closed by an elastic band, and a band attached by one end to the centre of the frontlet and forming a crest.

The screen is preferably attached to the screen support by studs projecting from the inside face of the screen support and by tongues moulded integrally with said screen support and parallel with the inside face thereof. Advantageously, on the inside face of the screen support there are provided depressions corresponding to the positions of the tongues.

The invention is particularly useful when applied to protectors for road-users such as cyclists. A transparent or slightly coloured wind-shield is then provided attached to the screen-supporting element. The invention may also be applied to helmets used in industry to provide protection against excessively bright furnaces, flying particles

or excessive noise. The screen may then be made of any appropriate material, for example of fine netting, reinforced transparent material or absorbent material.

The following description with reference to the accompanying drawings, will serve to illustrate the invention. In the drawings:

FIG. 1 is a perspective view of a complete protector according to the invention.

FIG. 2 is an elevation, and FIG. 3 a plan of part of the protector in FIGURE 1.

FIGS. 4 and 5 are diagrammatic plans of the two faces of one end of the screen support element of the protector.

FIG. 6 is a section along line VI—VI of FIG. 4.

FIG. 7 is a section along line VII—VII of FIG. 5.

FIG. 8 is a section along line VIII—VIII of FIG. 1.

The protector shown in FIG. 1 consists of a headband or cap A, on which is pivotally mounted a screen support element B, having a screen C mounted thereupon.

The headband is a moulded member comprising a frontlet **1** and a crest **2**. The two ends **5** of the frontlet are connected by an elastic band **3**, which passes through apertures **4** at each end of the frontlet **1**. The circumference of the headband may be varied by varying the aperture **4** through which band **3** passes.

Each of the temporal parts of the frontlet (FIGS. 2 and 3) has a pivot **6** and a tab **7**, which define a space in the form of a slot **8**. The inner face of the tab has a projection **9**.

The screen support element B is moulded in the form of a truncated narrow sector of a hollow sphere each end of which has a flat portion **10** for engaging in a slot **8**, and a cylindrical recess **11**, which fits onto the pivot **6**. The flat portion **10** has a recess **12**, in which the projection **9** engages when the screen is in the raised position shown in FIG. 1, and a projecting stop **13**, which abuts the tab **7** when the screen is lowered for use.

The screen element C is a semi-rigid transparent sheet, which is attached to the screen support B by studs **15**, which project from the inside face of the screen support and enter apertures punched in the sheet.

As can be seen from FIGURE 6, the ends of the top edge of the screen element C are gripped behind tongues **16**, integrally moulded with the support element B. The efficiency of these tongues is increased by their being opposite a shallow depression **17** in the inside face of the support, so that the ends of the screen element C are both gripped and wedged in the ends of the screen support element B.

In use, the screen support element B with its screen C is joined to the headband by inserting the flat portions **10** into the slots **8** in such a way that the recesses **11** engage the pivots **6**. One or several recesses **12** may be provided to keep the screen in the raised or half-raised position. The stops **13** serve to hold the screen in the lowered position, while preventing it from being pressed against the face of the wearer.

By constructing the protector from two moulded members in this way the screen support means may be easily and securely attached to the cap, the screen may be readily attached to the screen support, and the screen is held positively in all its useful positions.

I claim as my invention:

1. A face protector which comprises a headband attached to the wearer's head, at least one screen-supporting visor element pivotally attached to said headband, said headband having a cylindrical pivot and a tab defining a flat slot adjacent said pivot, said slot being substantially perpendicular to the axis of said pivot, said screen-supporting visor element having a flat portion engaged in

said slot and a cylindrical recess for receiving said pivot, whereby said element is rotatably mounted on said headband.

2. A face protector according to claim 1 wherein portions of the headband and element are made from tough moulded plastic material.

3. A face protector according to claim 1 wherein the tab has a projection thereon projecting into said slot, said recess in said element cooperating with said projection whereby said screen-supporting visor element may be held in at least one position in which the projection engages with the recess.

4. A face protector according to claim 1 wherein the screen-supporting element is in the form of a truncated narrow sector of a hollow sphere, each end having a flat portion to engage in a slot.

5. A face protector according to claim 1 wherein the headband attached to the wearer's head comprises a frontlet, said frontlet having two ends closed by an elastic band, and a strip extending from the center of the frontlet and forming a crest.

6. A face protector according to claim 1 including a screen attached to the screen support by studs projecting from the inside of the screen support and by tongues moulded integrally with said screen support and parallel with the inside face thereof.

7. A face protector according to claim 6 wherein the inside face of the screen support includes depressions corresponding to the positions of the tongues.

References Cited

UNITED STATES PATENTS

2,390,006	11/1945	Severy	2—8
2,461,604	2/1949	Huntsman	2—8
2,829,374	4/1958	Malcom	2—9
3,021,527	2/1962	Larsen	2—8

HERBERT F. ROSS, *Primary Examiner.*