United States Patent [19]

Ramsay

[11] **3,781,914**

[45] **Jan. 1, 1974**

[54] **SAFETY HELMET VISORS**

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[22] Filed: **Feb. 11, 1972**

[21] Appl. No.: **225,450**

[30] **Foreign Application Priority Data**

Feb. 15, 1971 Great Britain 4,643/71

[52] **U.S. Cl.** **2/10**

[51] **Int. Cl.** **A61f 9/04**

[58] **Field of Search** 2/9, 6, 8, 10; 74/527

[56] **References Cited**

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[57] **ABSTRACT**

A safety helmet visor comprises a curved transparent faceshield having an arcuate slot formed therethrough at each end thereof. A capping member is fitted through each slot and internally of the faceshield is secured to the headband which is mountable on the helmet. Each capping member provides cam portions engageable with the slot so that the faceshield can be moved in an arc, and spring means act between the capping member and the slot to take up play and define positions at which the faceshield is held locked in place.

6 Claims, 4 Drawing Figures

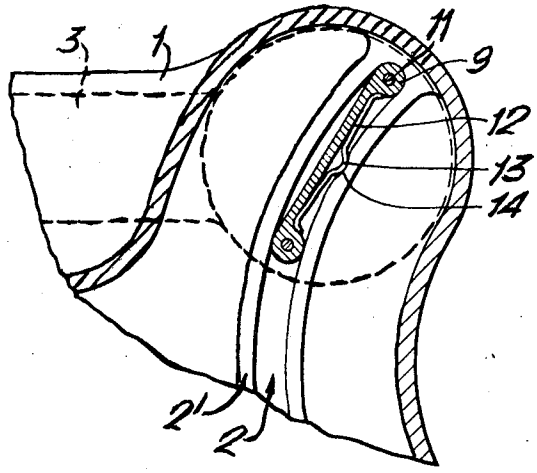


FIG. 1.

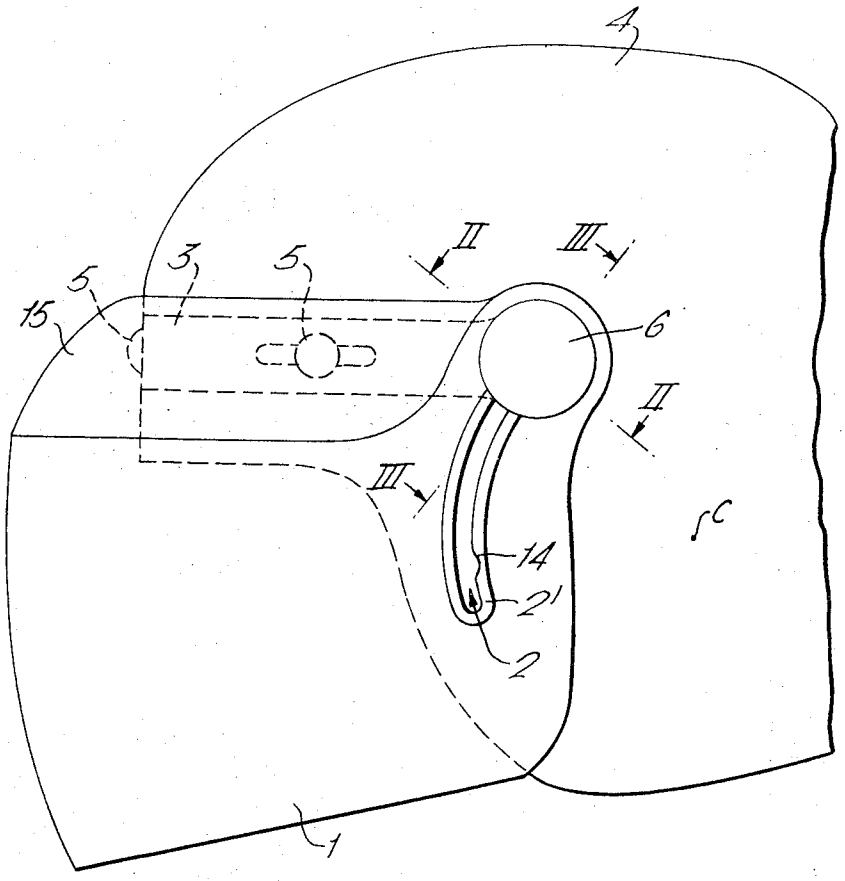


FIG. 2.

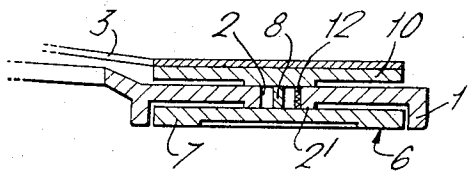


FIG. 3.

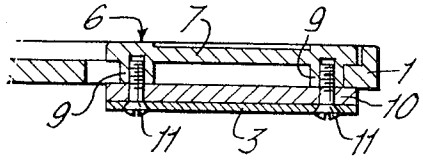
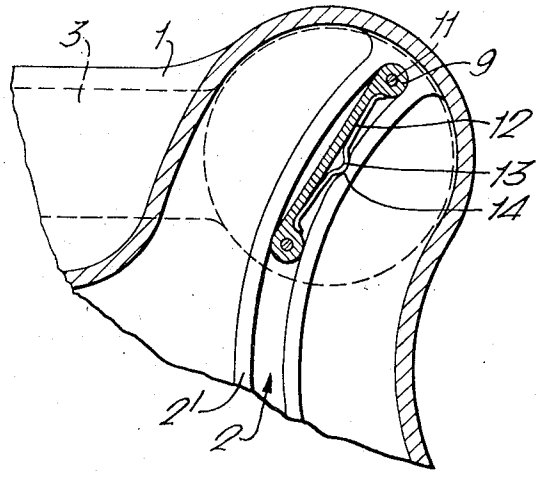


FIG. 4.



SAFETY HELMET VISORS

FIELD OF THE INVENTION

This invention relates to safety helmet visors.

DESCRIPTION OF THE PRIOR ART

Modern safety helmets are usually provided with a number of male press stud parts mounted on the portion of the helmet above the wearer's forehead to allow a visor to be mounted on the helmet. The visor essentially consists of two parts, a flexible metal headband and a curved transparent, plastics material faceshield. The headband is provided with female press stud parts corresponding to the male parts on the helmet and the faceshield is mounted on the headband so as to be movable, on the helmet, from a lowered position in front of the wearer's face to a raised position in which it is clear of the wearer's face. The faceshield may be mounted on the respective ends of the headband so as to be pivotable about a single axis or alternatively may be mounted so as to be movable through an arc of a circle. In the latter case, it is known to provide two spaced studs on each end of the headband and, on the inner surface of the faceshield, a blind channel adjacent to each end of the faceshield for reception of the studs.

SUMMARY OF THE INVENTION

It is an object of this invention to provide an arcuately movable safety helmet visor of simplified construction.

It is a further object of the invention to provide a safety helmet visor of a construction which readily lends itself to manufacture by moulding techniques.

In accordance with the invention, a safety helmet visor comprises a curved transparent faceshield having an arcuate slot extending therethrough adjacent to each end thereof, a headband provided with securing means whereby the headband can be detachably mounted on a safety helmet, and a capping member at each end of the faceshield extending from the external surface thereof into the associated slot where the capping member is secured to the end of the headband to link the faceshield to the headband, the part of each capping member which extends into the associated slot comprising a pair of spaced cam portions engageable with the slot to enable the faceshield to be movable arcuately relative to the capping member.

Preferably, the visor includes spring means associated with each capping member, each spring means being seated on the one hand against the part of the capping member which lies within the slot and on the other hand against the wall of the slot.

Preferably, the wall surface of each slot is indented to define positions where the spring means can locate itself by a snap fitting as the faceshield is moved relative thereto.

In a preferred embodiment, the part of each capping member extending into the slot comprises a pair of cylindrical studs linked by a linear rib therebetween.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more readily understood from the following description of a preferred embodiment of safety helmet visor which is given by way of example and with reference to the accompanying drawings, in which:

FIG. 1 is a side view of a visor in accordance with the invention mounted on a safety helmet;

FIG. 2 is a cross-sectional view taken along the line II—II of FIG. 1;

FIG. 3 is a cross-sectional view taken along the line III—III of FIG. 1; and,

FIG. 4 is a view of part of FIG. 1, partially cut away and on an enlarged scale.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, the safety helmet visor comprises a curved transparent faceshield **1**, preferably moulded from a plastics material, for example a polycarbonate, having an arcuate slot **2** extending therethrough adjacent to each of its ends. Each slot **2** is bounded by an area **2'** of greater thickness to provide reinforcement of the faceshield. Each slot **2** describes an arc, for example of about 90°, about a point C which is located rearwardly of the respective end of the faceshield **1** when the latter is in place upon a safety helmet **4**, so that the faceshield **1** is pivotable about an axis interconnecting the two points so defined. A headband **3**, for example of pressed steel, is designed to be mounted on the front portion of the safety helmet **4** in known manner by press studs **5** or some equivalent male and female connecting means on the headband and helmet.

As shown most clearly in FIGS. **2** and **3**, the faceshield **1** is coupled to the headband **3** by means of a pair of cap members **6**, preferably moulded from a polyamide material such as nylon, located one at each end of the headband **3**, the latter being enlarged at each end to be substantially co-extensive with the caps. Each cap member **6** consists of a disc-like element **7** having a rib **8** projecting from one surface thereof substantially along a diameter of the disc. Each end of the rib is enlarged to form a cylindrical stud **9**, with the axes of the studs **9** lying slightly to one side of the central plane of the rib **8**. The rib **8** and the studs **9** project into the slot **2** to the full depth thereof and abut a moulded plastics material spacer **10**, for example of nylon, which is provided between the headband **3** and the faceshield **1**. A pair of screws **11** or equivalent securing means extend through the headband **3** and spacer **10** and are held in the studs **9** of the cap member to link the headband and faceshield together.

As shown in FIG. **4**, a leaf spring **12** having an outwardly convex central portion **13** is retained in position against one surface of the rib **8** by having its ends abutting the studs **9**. A pair of grooves **14** are provided in the side of the slot **2** adjacent to the spring **12**, the grooves **14** being positioned relative to the ends of the slot so that the projecting central portion **13** of the spring locates in one or other of the grooves **14** to retain the faceshield **1** in either the raised or lowered position. Clearly, a greater number of grooves **14** could be provided if desired, or alternatively, if the spring has appropriate characteristics, the grooves might be dispensed with.

In the embodiment herein described the slot **2** is slightly wider than the diameter of the studs **9** to ensure easy sliding movement of the studs in the slot. The resulting degree of play which would allow unwanted pivotal movement between the faceshield **1** and the headband **3** is taken up by the leaf spring **12**.

The faceshield may be provided with an integral tinted sun visor **15** (FIG. 1), which in the lowered position of the visor forms, in effect, a helmet peak.

I claim:

1. A safety helmet visor comprising a curved transparent faceshield having an arcuate slot extending therethrough adjacent to each end thereof, a headband provided with coacting securing means whereby the headband can be detachably mounted on a safety helmet, and a stationary capping member at each end of the faceshield extending from the external surface thereof into the arcuate slots, means securing each of the capping members to the headband to link the faceshield to the headband, the part of each capping member which extends into the arcuate slot comprising a rib extending substantially lengthwise of the arcuate slot and terminating at its ends in a pair of cam portions engaging with the walls of the arcuate slot, spring means being positioned between each of the ribs and a wall of each of the arcuate slots to provide for controlled arcuate movement of the faceshield relative to the capping members, said walls of each slot including at least two recesses formed therein facing said spring means, each

spring means having a bowed portion cooperating and snap fitting in said recesses as the faceshield is moved relative to the capping members.

2. A safety helmet visor as claimed in claim **1**, wherein each spring means is a leaf spring.

3. A safety helmet visor as claimed in claim **1**, in which each capping member comprises a disc-like element having said rib projecting from one side thereof substantially along a diameter of the disc.

4. A safety helmet visor as claimed in claim **1**, in which on each capping member said cam portions comprise a pair of cylindrical studs and the rib is a substantially linear rib therebetween.

5. A safety helmet visor as claimed in claim **4**, in which the axes of said studs lie on a line to one side of the central plane of the rib.

6. A safety helmet visor as claimed in claim **1**, which includes a spacer of a synthetic plastics material between the headband and the faceshield in the region of each capping member, with the capping member ribs abutting the respective spacers.

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