

Spectacles

The invention relates to goggles, in particular work safety goggles. It can also be provided for other goggles, such as sports goggles, optical goggles
5 or the like.

Various nose pads for goggles are known from JP 2005-128066 A. The nose pads have nose pad elements which are fixable to a goggles frame by means of coupling pieces. Each nose pad element has a surrounded interior.
10 A free lateral web is in each case provided opposite to a coupling piece. The interiors allow an elastic deformation of the nose pad element.

WO 2007/148352 A1 discloses various nose pads for goggles. A nose pad comprises two opposite nose pad elements which are each provided with
15 inner nose pad webs. Furthermore, each nose pad has a retaining body the head of which is disposed in a mount formed in the nose pad element.

A pair of goggles is known from EP 0 239 659 A1 which has a nose pad for supporting a nose of a goggles wearer. The goggles frame is provided
20 with slot holes for inserting soft pads.

A nose pad for goggles is described in US 5 526 070. The nose pad comprises rigid nose pad element fixing portions, which can be fixed to the goggles frame or a goggles lens. Furthermore, the nose pad comprises a
25 soft element partially surrounding the rigid nose pad element fixing portions. The nose pad also has a second soft element connected by tubular pieces to the first soft element.

DE 79 32 968 U1 discloses a side web portion for goggles frames with side web supports arranged so as to be inclinable at the eye edges by means of a point fastening. Side webs platelets, which are soft and resilient, are pivotably mounted on the side web supports.

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Goggles disclosed in DE 298 05 378 U1 comprise a frame and a nose bridge attached to the frame. The nose bridge in turn has two annular loops arranged at spaced-apart ends of the nose bridge.

10 US 2 270 330 describes goggles having a goggles frame and a nose pad molded onto the goggles frame. The nose pad comprises nose pad elements, which are peripherally closed and surround an inner space. The nose pad elements substantially have the shape of a drop.

15 From the prior art, by means of public prior use, a large number of goggles are furthermore known that are supported by means of their nose pads

relative to the nose of a wearer or goggles wearer. The nose pads generally comprise nose pad elements, which are configured in the manner of a pad or cushion. The drawback in these known goggles is that these often slip during wear and/or are uncomfortable during wear.

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Proceeding from this, the invention is based on the object of providing goggles, which provide extremely high wearing comfort. Furthermore, the goggles are to be particularly securely seated on the nose of a wearer and be economical to produce.

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This object is achieved according to the invention by the features disclosed in claim 1. The core of the invention is that the nose pad elements are hollow and virtually continuous in their peripheral direction. It is advantageous if the, in particular, unfilled interior is open at the end on one

15 side or both sides. The interior is preferably continuous in each case. The nose pad elements, for example, have a circular ring-like, oval, ovoid or rectangular contour. An elongate shape is preferred. The nose pad is preferably arranged on the goggles frame. However, it can also be arranged on the at least one goggles lens.

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The nose pad element-nose pad web also allows comfortable wearing and a secure hold.

The nose pad element fixing portions bring about an extremely secure

25 fixing of the respective nose pad element.

Molding the nose pad elements to the nose mount allows extremely economical production. Furthermore, the nose pad elements are thus fixed to the nose mount without risk of loss.

The wedge-like design ensures an extremely secure and loadable connection between the nose pad elements and the nose mount.

5 It is advantageous if the goggles have two goggles lenses. According to an alternative configuration, the goggles have precisely one one-piece, continuous goggles lens.

10 The goggles frame and the at least one goggles lens may be configured separately. Alternatively, they are connected to one another in one piece.

Other advantageous configurations of the invention are given in the sub-claims.

15 The configuration according to claim 2 leads to nose pad elements that are particularly economical to produce. Furthermore, nose pad elements of this type provide a high degree of wearing comfort and a particularly good hold. The nose pad elements are preferably formed from thermoplastic elastomers based on styrene block copolymers (TPE-S). It is advantageous if the nose pad elements have a Shore hardness A between 40 and 80,
20 preferably between 50 and 70. They are preferably soft.

The configuration according to claim 3 is extremely advantageous for manufacturing reasons. The nose mount is expediently formed from polycarbonate (PC) and/or thermoplastic polyurethane (TPU).

25 According to claim 4, the nose mount is fastened to the goggles frame. The nose mount may be releasably or non-releasably fastened to the goggles frame.

The nose mount according to claim 5 thus limits a nose receiving space to receive the nose of a wearer.

5 The configuration according to claim 6 leads to a nose pad, which, on the one hand, provides high stability and, on the other hand, particularly pleasant wearing comfort.

10 The configuration according to claim 7 leads to a nose pad allowing extremely comfortable wearing and, on the other hand, secure fixing of the goggles on the goggles wearer.

The configuration according to claim 9 also allows extremely secure and comfortable wearing of the goggles.

15 At least one goggles holding means for holding the goggles on the head of the goggles wearer is preferably provided, the at least one goggles holding means preferably being a pivotable goggles arm. Alternatively, the goggles holding means is configured as a holding band, which runs round the back of the head of a wearer. It is advantageous if the at least one goggles
20 holding means is attached to the goggles frame or to the at least one goggles lens.

A preferred embodiment of the invention will be described below with reference to the accompanying drawings, in which:

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Fig. 1 shows a rear, perspective view of goggles according to the invention,

Fig. 2 shows a front view of the goggles of Fig. 1, no goggles lenses being shown, and

Fig. 3 shows a longitudinal section along the section line III-III
5 shown in Fig. 2.

Mutually corresponding parts are provided with the same reference numerals in Figs. 1 to 3. Details of the embodiment described in more detail below may also individually be an invention or be part of a subject of
10 the invention.

Goggles shown in their totality in Fig. 1 comprise a goggles frame 1, two goggles lenses 2 held by the goggles frame 1 and two goggles arms 3 articulated at the end to the goggles frame 1. Furthermore, the goggles
15 comprise a nose pad 4, which is arranged centrally on the goggles frame 1, with two mutually opposing nose pad elements 5. The goggles are symmetrical with respect to a plane of symmetry S, which runs between the two goggles lenses 2. The goggles frame 1 is preferably formed from a plastics material. The goggles have a viewing direction B.

The goggles frame 1 comprises an upper frame part 6 and a nose pad holding part 7 projecting centrally downwardly from the upper frame part 6. Alternatively, the goggles frame 1 may completely run round or surround the goggles lenses 2.

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The goggles lenses 2 adjoin the frame part 6 at the bottom and laterally on the outside adjoin the nose pad holding part 7. They may be tinted.

The upper frame part 6 has two mutually opposing ends 8. The goggles arms 3 are articulated by means of corresponding bearing arrangements 9, which allow a conventional pivoting of the goggles arms 3, at the ends 8.

A nose mount 10 is rigidly connected to the lower free end of the nose pad holding part 7. The nose mount 10 and the nose pad holding part 7 can be releasably or non-releasably fastened to one another. The nose mount 10 is arcuate. It runs downwardly outwardly from the nose pad holding part 7.

The nose mount 10 has a nose side 11 and an outside 12 opposing the nose side 11. When the goggles are worn properly, the nose side 11 of the nose mount 10 faces the nose of the wearer, while the outside 12 is accordingly remote from the nose of the wearer. The nose mount 10 is formed from a plastics material, which may be identical to the plastics material of the goggles frame 1. It has a high rigidity, so that it is substantially unyielding or hard.

The nose pad elements 5 have a common fixing region 13, which is fastened to the nose mount 10. The fixing region 13 extends on the nose side 11 of the nose mount 10 between the lower ends 14 of the nose mount 10 and connects the nose pad elements 5 to one another. The nose pad elements 5 may alternatively be configured separately. The nose pad

elements 5 are advantageously molded or injection-molded by their fixing region 13 to the nose mount 10.

Each nose pad element 5 furthermore comprises a nose pad web 15, which runs adjacently from the respective lower end 14 of the nose mount 10 in the direction of the nose pad holding part 7. The nose pad webs 15 are elongate and connected by their ends to the fixing region 13. They run between their fixed ends substantially freely in each case, so the nose pad webs 15 are given a certain flexibility. The fixing region 13 and the nose pad webs 15 are connected to one another in one piece. They are formed from a plastics material, which is softer, preferably substantially softer, than the plastics material of the nose mount 10. The nose pad webs 15 are configured in such a way that they are yielding, soft or flexible. Interiors 16 are limited laterally outwardly by the nose pad webs 15 and the fixing region 13. As a result, the interiors 16 are peripherally closed. The nose pad elements 5 are preferably configured as peripherally closed loop bodies. At the nose pad elements 5, the fixing region 13 has nose pad element fixing portions 17. The nose pad webs 15 run substantially parallel and spaced apart from the nose pad element fixing portions 17.

The nose pad element fixing portions 17 and the adjacent region of the nose mount 10 are in each case configured in a wedge-like manner in the viewing direction B of the goggles. As emerges, in particular from Fig. 3, the nose pad element fixing portion 17 tapers substantially continuously in the viewing direction B of the goggles, while the nose mount 10, in accordance with the viewing direction B of the goggles, widens there substantially continuously. Accordingly, the interiors 16 also widen substantially continuously in the viewing direction B of the goggles. That direction, in which the goggles wearer looks through the goggles lenses 2

when the goggles are used properly is taken to mean the viewing direction B of the goggles. The nose pad elements 5 are substantially open in the viewing direction B.

- 5 When the wearer wears the goggles, the goggles arms 3 rest laterally on the head of the wearer. The goggles lenses 2 are arranged in front of the eyes of the wearer, while the nose of the wearer projects into the nose receiving space 18 limited by the nose mount 10. The nose of the wearer can rest at the top on the fixing region 13. Furthermore, the nose pad elements 5 rest
- 10 flat with their nose pad webs 15 laterally on the nostrils of the wearer. The nose pad webs 15 adapt here to the respective shape of the nose of the wearer. They may curve accordingly between their fixed ends into the respective adjacent interior 16. The nose pad element fixing portions 17 are arranged spaced apart from the nose of the wearer.
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- Each nose pad element fixing portion 17 is substantially arranged in the direction perpendicular to the viewing direction B of the goggles with respect to the associated adjacent nose pad web 15. Each nose pad fixing portion 17 is arranged between the associated, adjacent nose pad web 15
- 20 and the nose mount 10 or the adjacent goggles lens 2. Each nose pad element fixing portion 17 has a greater spacing from the nose of the goggles wearer than the associated, adjacent nose pad web 15 when the goggles are worn properly by the goggles wearer. The nose pad webs 15 are located opposite one another and limit a nose receiver for receiving the
- 25 nose of the goggles wearer when the goggles are worn properly.

Claims

1. Goggles, comprising
 - a. at least one goggles lens (2),
 - 5 b. a goggles frame (1), which carries the at least one goggles lens (2),
and
 - c. a nose pad (4) for support relative to the nose of a goggles wearer,
the nose pad (4) comprising at least two mutually opposing nose
pad elements (5) and a nose mount (10) to carry the nose pad
10 elements (5), the nose pad elements (5) being, in each case,
peripherally closed continuous bodies surrounding an interior (16),
 - wherein each nose pad element (5) has a partially free, lateral
nose pad element-nose pad web (15) for placing on the nose of
the goggles wearer, the nose pad element-nose pad web (15)
15 preferably being yielding, and
 - wherein each nose pad element (5) has a fixed, lateral nose pad
element fixing portion (17), which runs opposite the associated
nose pad element-nose pad web (15) and substantially parallel
thereto, with the nose pad elements (5) being fixed to the nose
20 mount (10) by means of the nose pad element fixing portions
(17),
characterized in that
 - d. the nose pad elements (5) are molded onto the nose mount (10),
and
 - 25 e. the nose pad element fixing portions (17) and the nose mount (10)
are wedge-like, in each case, substantially in the viewing direction
(B) of the goggles, at least in the regions adjoining the nose pad
element fixing portions (17), the wedge course of the nose mount

(10) and of the nose pad element fixing portions (17) being in opposite directions in the viewing direction (B) of the goggles.

2. Goggles according to claim 1, **characterized in that** the nose pad elements (5) are formed from a first plastics material.
3. Goggles according to claim 1 or 2, **characterized in that** the nose mount (10) is formed from a second plastics material.
4. Goggles according to claim 3, **characterized in that** the nose mount (10) is fastened to the goggles frame (1).
5. Goggles according to claim 3 or 4, **characterized in that** the nose mount (10) is substantially arcuate.
6. Goggles according to any one of claims 3 to 5, **characterized in that** the nose pad elements (5) are in each case softer, preferably substantially softer, than the nose mount (10).
7. Goggles according to any one of the preceding claims, **characterized in that** the cross-sectional area of the interior (16) of the nose pad elements (5) changes, preferably widens, in the viewing direction (B) of the goggles.
8. Goggles according to any one of the preceding claims, **characterized in that** the nose pad elements (5) have an elongate basic shape for resting on the nostrils of the goggles wearer, viewed substantially in the viewing direction (B) of the goggles.

9. Goggles according to any one of the preceding claims, **characterized in that** the mutually opposing nose pad elements (5) run obliquely with respect to one another.
- 5 10. Goggles according to any one of the preceding claims, **characterized in that** the nose pad element fixing portions (17) are arranged spaced apart from the nose of the goggles wearer when the goggles wearer is wearing the goggles.
- 10 11. Goggles according to any one of the preceding claims, **characterized in that** the nose pad elements (5) are open substantially in the viewing direction (B) of the goggles.
12. Goggles according to any one of the preceding claims, **characterized**
15 **in that** the nose pad elements (5) rest flat with their nose pad element-nose pad webs (15) laterally on the nostrils of the goggles wearer when the goggles wearer is wearing the goggles.