

SPECTACLES FRAME WITH TELESCOPIC HINGES WITH OFFSET SPRING

Field of the invention

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The field of the invention is that of spectacle frames.

Background of the invention

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A spectacle frame includes a frame front face and two sides each articulated to a lateral tenon on the frame front face via a hinge.

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In the open position, a spectacle side extends substantially at a right angle from the general plane of the frame front face.

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A telescopic hinge enables the side to be opened beyond this right angle. Thanks to this "over-opening" it assures greater comfort when the frame is on the nose and prevents the risk of damaging or deforming the frame and the sides.

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A spectacle frame telescopic hinge generally includes a spring that presses the side against the head but is precisely what enables the over-opening.

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A telescopic hinge generally includes two elements assembled on an articulation pin and respectively fastened to a frame front tenon (frame front element) and a side (side element), more particularly the shank of the side which is the core on which the side is formed when this core does not in itself from the side. The hinge may equally be fixed directly to the side, even when it includes a shank, the fixing being operative at the end of the side that is also called the side tenon.

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The side element fastened to the side includes a slide mounted, on the one hand, on the articulation pin and, on the other hand, in a sheath fastened to the core or to the side itself. The slide slides in the sheath against and subject to the action of a spring, generally a compression spring, also extending inside the sheath.

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In frames of the type outlined above, the side hinges, because of the presence of the spring, are therefore relatively bulky and heavy. Moreover, and again because of this fact, at the level of the hinges the sides are relatively thick. All this contributes to increasing the weight of the frame in the region of the frame front face, which is not conducive to comfort, notably for the nose of users which is marked by the bridge that

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joins the two frame front face parts supporting the lenses.

It is this problem that the applicants have sought to solve by proposing their invention.

Summary of the invention

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To this end, the invention concerns a spectacle frame including a frame front face extended by two lateral tenons and two sides articulated to the tenons about articulation pins of two telescopic hinges, each with a frame front element fastened to a tenon and a side element fastened to a side, the side element of a hinge including a slide articulated to the frame front element and slidably mounted in a sheath against and subject to the action of a spring, which frame is characterized in that the slide of a side hinge extends as far as the free end of the side, of tubular shape and providing said sheath, a sleeve, fixed to the end of the slide, being slidably mounted in the end of the side in which said spring also extends to cooperate with the sleeve.

Thanks to the invention, and the hinge spring being offset in the free end of the side, part of the mass that was at the front, in the hinge, has been transferred to the back, in the end of the side, which reduces the weight pressing down on the nose of the user and improves comfort.

Moreover, if, as in the preferred embodiment, the side end is open and blocked by the sleeve that is removable, the spring being at this end, it is easily accessible to be replaced by another, possibly of different shape.

It is advantageous if end of the slide is externally threaded and the sleeve is internally threaded and screwed to the slide.

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The sheath in the side preferably includes, at the end of the side, an enlarged portion in which the spring extends and having a bottom on which the spring bears.

Brief description of the drawing

The invention will be better understood in the light of the following description of a preferred embodiment of the frame of the invention given with reference to the appended drawing in which:

- FIG. 1 is a perspective view from above of a classic spectacle frame;
- FIG. 2 is a view of a side of the frame of the invention as if it were transparent;
- FIG. 3 is an exploded view of the end of the temple from FIG. 2; and
- FIG. 4 is a view in section of the temple from FIG. 2.

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Detailed description of a preferred embodiment

Referring to FIG. 1, a classic prior art spectacle frame includes a frame front face 1 intended to receive lenses, generally optical lenses, and a right-hand side 2 and a left-hand side 3, in the example represented, the latter 2 folded against the rear of the frame front face 1 in the closed position and that 3, in the open position substantially perpendicular to the general plane of the frame front 1. The frame front 1 is extended laterally, substantially at a right angle, by two lateral frame front tenons 4, 5 to which the sides 2, 3 are articulated by means of two hinges 6, 7, here so-called telescopic hinges.

A telescopic hinge – for example the left-hand hinge 7 – includes a frame front element 8, fastened to the frame front tenon 5, and a side element 9, fastened to the side 3, to be more precise, here, to the core 15 of this side on which it is formed. The two hinge elements are articulated on an articulation pin 11 fastened to the frame front element 8.

The hinges 6, 7 of the two sides 2, 3 are identical.

This having been made clear, the sides of the frame of the invention will now be described, which are otherwise classic.

The two sides are always identical.

One side 15 is articulated, at one end, to a lateral tenon of the frame front face via a hinge 20, also called a telescopic hinge, including a frame front element 21, fastened to the tenon, and a side element 22 fastened to the side 15 including a slide 23 articulated on the frame front element 21 about an articulation pin 24 and slidably mounted in a sheath 25 formed in the side 15, which is therefore tubular.

The slide moves in the sheath 25 against and subject to the action of a spring 26 disposed at the other end 28 of the side, called the free end, in an enlarged portion 27 of the sheath 25.

The end 29 of the slide 23 is externally threaded and screwed into an internally threaded sleeve 30 blocking the sheath 25, 27 that extends as far as the edge of the side end 28 blocked by an embellisher plug 31.

Generally speaking, it may be said that the side end 28 is open and that it is blocked by the sleeve 30. This sleeve 30 is removable and thus enables an appropriate spring 26 adapted to the intended usage to be fitted as a function of its force. Being accessible, the spring 26 can be

replaced. The spring 26, which is a compression spring, is thus accommodated in the enlarged part 27 of the sheath 25 bearing at both its ends on the bottom 32 of this enlarged, on the one hand, and on the inward facing end face 33 of the sleeve 30.

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On side closing or over-opening pivoting, the slide 23 is drawn inside the sheath 25 in the direction of the free end 28 of the side toward the hinge 20. As it moves, the slide 23 draws with it the sleeve 30, which compresses the spring 26.

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In the rest state, with the side closed or open, the spring 26 is relaxed, after sliding of the slide 23 in the other direction by virtue of the action of the spring 26.

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It will be noted that the end 34 of the slide 23 disposed inside the hinge has a hook or eyelet shape so as to be able to turn about the articulation pin 24.

Claims

- 1 A spectacle frame including a frame front face extended by two lateral tenons and two sides articulated to the tenons about articulation pins of two telescopic hinges, each with a frame front element fastened to a tenon and a side element fastened to a side, the side element of a hinge including a slide articulated to the frame front element and slidably mounted in a sheath against and subject to the action of a spring, which frame is such that the slide of a side hinge extends as far as the free end of the side, of tubular shape and providing said sheath, a sleeve, fixed to the end of the slide, being slidably mounted in the end of the side in which said spring also extends to cooperate with the sleeve.
2. A frame as claimed in claim 1, wherein the side end is open and blocked by the sleeve which is removable, the spring being inside this end.
3. A frame as claimed in claim 2, wherein the end of the slide is externally threaded and the sleeve is internally threaded and screwed to the slide.
4. A frame as claimed in any one of claims 1 to 3, wherein the sheath in the temple includes, at the end of the side, an enlarged portion in which the spring extends and having a bottom on which the spring bears.