

Assembling and tightening device of the two parts of a
slit glass-carrying circle of spectacles.

The present invention has for object an assembling and tightening device of the two parts of a slit glass-carrying circle of spectacles.

The assembling and tightening of the slit glass-carrying circles of spectacles give raise to several problems, either during the mounting of the glass or later when the spectacles are in use.

As a matter of fact, the assembling and tightening device must, preferably, for permitting an easy mounting of the glass, be arranged in such a way as to achieve the assembling of the two parts of the glass-carrying circle, not tightened, permitting the easy engagement of the glass into the circle. The optician can then, once the glass is located in the circle, maintain the latter and the glass with one hand and effects the tightening with the other one.

During the tightening, there is a risk a too high pressure be exerted on the glass which can then become chipped, even split. Consequently, it is desirable that the tightening device be arranged in such a way as to prevent the glass be submitted to an exaggerated force.

Such a force can occur later, when important variations of temperature, for instance, occur, which produce, especially when the glass-carrying circle is made of metal, nocive effects of dilatation or of contraction.

The object of the present invention is to furnish an assembling and tightening device of the parts of a glass-carrying circle of spectacles which responds to all these requirements.

This object is achieved owing to the means defined in claim 1.

The drawing shows, by way of example, one embodiment of the object of the invention and a modification.

Fig. 1 is an elevational view of a portion of spectacles.

Fig. 2 is an axial sectional view of a first embodiment of the assembling and tightening device of the two parts of the glass-carrying circles represented in Fig. 1.

Fig. 3 is an axial sectional view, similar to this of Fig. 2, of a modification of this assembling device, and,

Fig. 4 is a perspective view of a detail of this modification.

The facial portion of the spectacles represented in Fig. 1, generally designated by reference 1, comprises two slit glass-carrying circles the two parts of which are designated by references 1a and 1b, respectively. These two glass-carrying circles are connected to each other by a nasal bridge 1c.

The assembling and the tightening of the two parts 1a and 1b of each of the glass-carrying circle is achieved by a screw 2 the only front part of which, designated by reference 2a, is threaded, which is screwed in the part 1a of the circle.

The part 1b of the circle is provided with a cylindrical recess 3, the bottom of which, designated by reference 1d, is provided with a hole 4 through which

passes the stem of the screw 2. The part of the screw which is not threaded carries a coil spring 5 located in the recess 3 which bears on the one hand on the bottom 1d of the recess and on the other hand on the head of the screw, designated by reference 2b. At last, the threaded portion 2a of the screw 2 extends beyond the part 1a in which it is screwed, the protruding portion presenting, flush with the outer face 6 of the part 1a, an annular groove 7 in which is engaged a pinch-shaped washer 8, known under the name of circlip. The width or height of this groove 7 is such that a part thereof is situated inner the part 1a of the glass-carrying circle.

Owing to this arrangement, the optician which wants to mount a glass, such as the glass 9, engages the screw 2, provided with the spring 5, in the part 1b of the glass-carrying circle and starts screwing the screw. The two parts of the glass-carrying circle remain then slightly distant one from each other, the spring 5 being not compressed, that permits to place easily the glass 9 in the circle.

Holding the circle with one hand, the optician exerts a slight pressure on the two parts 1a and 1b and, with the other hand, screws the screw 2 by means of a screw driver. He stops the operation at the moment the resistance to the screwing indicates that a suitable tension of the spring 5 is reached.

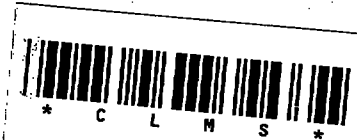
The optician makes then choice, in a set of circlips 8 of several thicknesses he has at his disposal, this one the thickness of which corresponds to the width of the portion of the annular groove 7 of the screw which is situated beyond the face 6 of the part 1a of the glass-carrying circle. He engages into the groove 7 the circli 8 he has chosen, this circlip achieving this way the locking of the screw preventing the screw being untimely untightened.

It is necessary to be able to dispose of circlips of several thicknesses since the final longitudinal position of the screw 2 with respect to the part 1a of the glass-carrying circle varies in function of several factors such as the tolerances of manufacturing of the frame of the spectacles and of the glasses, the pressure the optician wants to apply to the glass, etc.

Owing to the present arrangement, the assembling of the glasses is very easy and can be effected without risk of damaging the glasses. Moreover, variations of tension due to the differencies of temperature are without effect on the glasses since they are absorbed by the spring 5.

The experience shows that the spring plays the role of dumping the shocks, protecting the glasses when the spectacles are submitted to a possible fall.

The modification of figs. 3 and 4 distinguishes from the first embodiment by the fact that the spring 5 is replaced by a cambered washer 10 located in the recess 3 of the part 1b of the glass-carrying circles. This washer, engaged on the stem of the screw 2, is interposed between the head 2b of the screw and the bottom of the recess 3. It has the advantage, with respect to the coil spring of the first embodiment, of not only urging axially the screw 2 for preventing it from rotating on itself, while creating a friction on the threads of the screw screwed in the part 1a of the glass-carrying circle, but also to produce a direct connection, by friction, between the screw and the part 1b owing to the fact that, when the washer is slightly pressed by the head of the screw, it pinches by its central hole the stem of the screw and urges it, by its periphery, on the lateral wall of the recess 3. Hence a double effect of friction prevents the screw from an untimely untightening.



CLAIMS

1. Assembling and tightening device of the two parts of a slit glass-carrying circle of spectacles, characterised by the fact that the said assembling is achieved by means of a screw screwed in one of the parts of the said circle and passing through a passage provided in the other one, a resilient device being interposed between the second part of the circle and the head of the screw in such a way that the tightening force be determined by the tension of the said resilient device.

2. Device as claimed in claim 1, characterized by the fact that the screw extends beyond the part of the circle in which it is screwed, this screw presenting, situated flush with the face of the said part on which it protrudes, an annular groove in which is engaged a circlip producing this way the locking of the screw preventing the latter being untimely untightened.



3. Device as claimed in claim 2, characterized by the fact that the width of the said annular groove is such that the latter is partially situated inner the part of the circle in which the screw is screwed, in such a way that, according to the longitudinal position of the said screw with respect to the said part, circlips of several thicknesses can be used so that be achieved an efficient locking of the screw.

4. Device as claimed in claim 1, characterized by the fact that the resilient device is constituted by a coil spring engaged on the stem of the screw which is located in a recess provided in the second part of the circle, recess the bottom of which is provided with a hole traversed by the stem of the screw.

5. Device as claimed in claim 1, characterized by the fact that the resilient device is constituted by a cambered washer engaged on the stem of the said screw and which is interposed between the head of the latter and the second part of the circle.