Z bend eyeglasses temple

Description

Modern eyeglasses frame consists of the rim and the temples. The three common types of temple designs are the library temple, skull temple and cable temple. Of these three types of designs, the skull temple design is the most commonly used as it provides a balance of comfort and grip. However, frames with a skull temple still suffer from frequent slipping down on the user's nose due to inadequate support. Several modifications of the temple design have been proposed to address the issue of slipping eyeglasses. However, these temple tip designs focus on enhancing support either from the back of the ear as in the case of skull temple and cable temple or at the side of the head as in the library temple design where the temple is straight.

This invention describes a "Z" temple tip design to provide more support for the frame as shown in FIG1. The first bend [1] is at the top of the ear so that the frame is supported by the back of the ear. The second bend [2] is located approximately mid-way down and away from the back of the ear to form a "Z" configuration such that the frame is also supported by the side of the head and the temporal bone. At this horizontal position, the temple tip reaches out to the temporal bone that runs along the back of the ear and presses against it to gain the support. The "Z" configuration also allows the temple tip to bend [1] closer to the back of the ear as the second bend [2] below would bring the temple tip away from the mastoid process as it is commonly known that pressure on the mastoid process would cause discomfort to the user. Trade practice to avoid the mastoid process was either to have a gentler curve down the back of the ear or bend the temple tip away from the head. Both practices reduce the needed support for the frame in the skull temple design. With our invention, the curve can be brought closer to the back of the ear and the temple tip hugging the side of the head.

It is the intention of this invention that the temple has a "Z" configuration to have two supports. The first point of support is at the first bend [1] that contours down the back of the ear. The second bend [2] that is projected outwards from behind the ear extends the temple to engage the temporal bone to gain a second support. The temple segment after the second bend [3] shall be substantially long to engage the temporal bone just behind the back of the ear. To increase the normal force pressing against the temporal bone, the tip of the temple end may be bent towards the head [3] as shown in FIG 2.

There are several key differences between the skull temple design and our invention. In the skull temple design, there is only one bend down behind the ear and any bends, shapes or designs thereafter does not provide mechanical support to the frame. In our invention, there are two bends with the second bend [2] turning the temple tip outwards from the back of the ear. This second bend [2] in our invention allows the temple to reach the temporal bone to provide substantial mechanical support for the frame.

In the preferred embodiment, the first bend [1] starts from the top of the ear and contours down the back to the middle of the ear and bends away [2] from the back of the ear. Thereafter, the temple tip extends substantially [3] to reach the temporal bone. The temple ends [3] may be bent inward towards the head to exert a stronger holding force on the

temporal bone. The “Z” configuration temple tip may be metal, full plastic or plastic with metal inserts.

An alternative embodiment is the temple tip segment after the second bend is deliberately enlarged to provide more support.

An alternative embodiment is the temple tip segment after the second bend is thickened to provide more lateral force on the side of the head.

An alternative embodiment is an attachment to a skull temple tip such that it forms the “Z” configuration.

In yet another embodiment, the "Z" configuration is an attachment to the temple.

Figure 1 Side view of the “Z” profile temple tip showing the bend at the top and the second bend below.

Figure 2. Top view of the temple tip showing the end segment [3] after the second bend [2] tilted inwards to give more normal force towards the temporal bone.

Claims

1. We claim a temple tip design comprising of at least two bends with one downward bend over the top of the ear of the wearer and a second bend turning the temple tip towards the back of the head wherein,

2. Said second bend in claim 1 brings the temple tip to a substantially horizontal position away from the back of the ear.

3. Said second bend in claim 1 is at approximately the middle of the ear.

4. Said second bend in claim 1 is an attachment that extends away from the back of the ear.

5. Said temple tip in claim 1, is in the form of an attachment.

6. Said temple tip in claim 1 is part of a whole temple piece.

7. The segment of the temple tip after the second bend in claim 1 is angled towards the head.

8. The segment of the temple tip after the second bend in claim 2 is thickened.

9. The segment of the temple tip after the second bend in claim 2 is enlarged.

10. Said second bend in claim 1, is below the top of the temple by 1 cm or more.

11. Length of the temple after the said second bend in claim 1 is more than 1 cm.

12. Length of the temple after the said second bend in claim 1 is more than 2 cm.