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Leblanc

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[54] **STRAP LENGTH ADJUSTMENT DEVICE**

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[52] **U.S. Cl.** ..... **24/200,** 2/14 L
[51] **Int. Cl.** **A61f 9/02,** A44b 11/00
[58] **Field of Search** 2/14; 24/198, 199, 24/200

[56] **References Cited**

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[57] **ABSTRACT**

A one-piece integrally molded plastic strap length adjusting device for threading on the head strap of a pair of sport goggles. The device has a pair of easily threadable openings on either side of a cover plate and another opening with gripping means to receive and hold the end of the doubled back strap in its correctly adjusted position.

2 Claims, 3 Drawing Figures

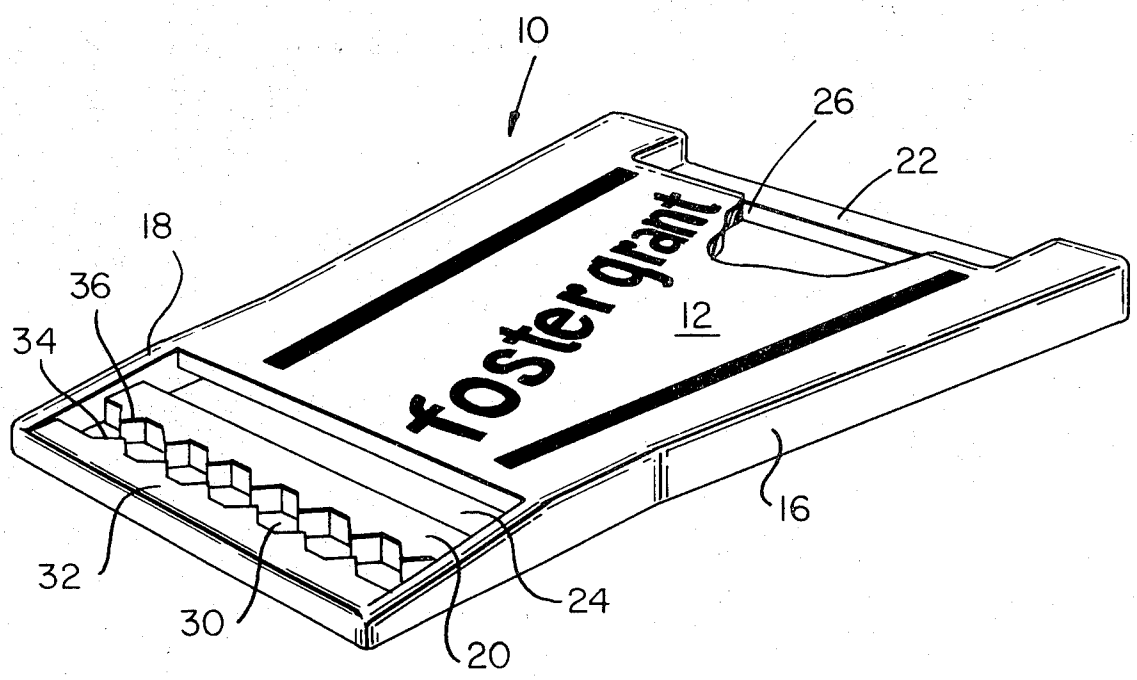
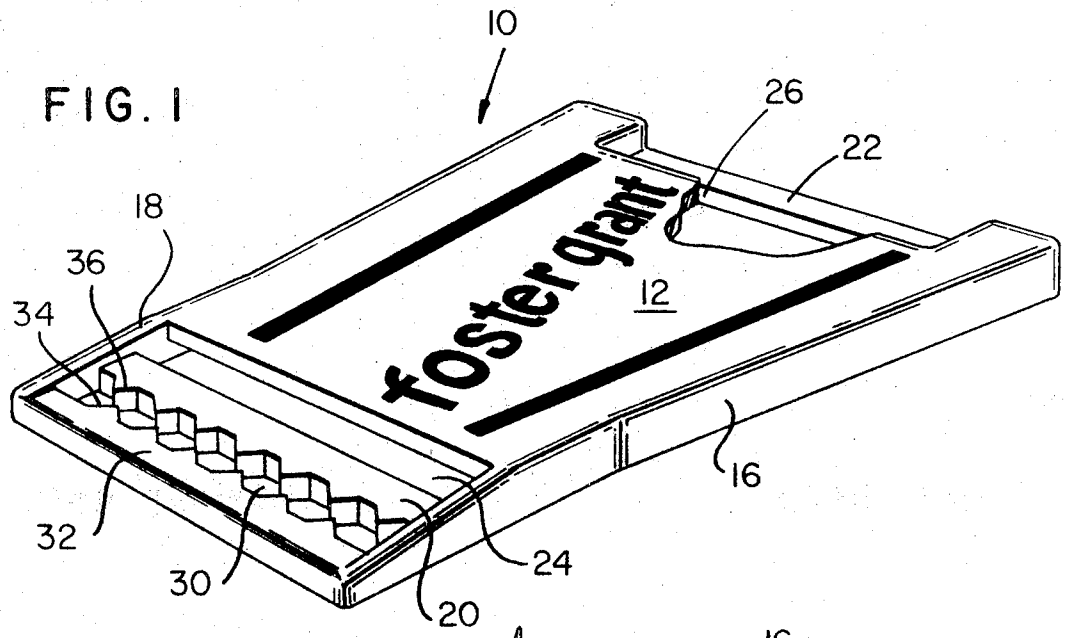


FIG. 1



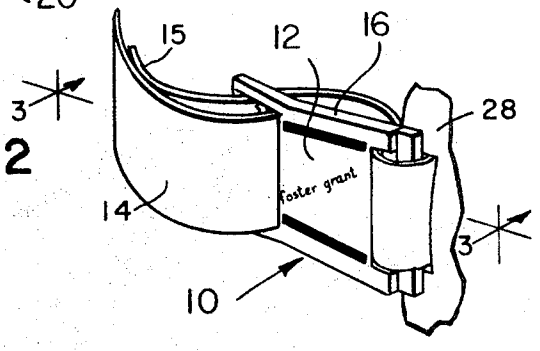


FIG. 2

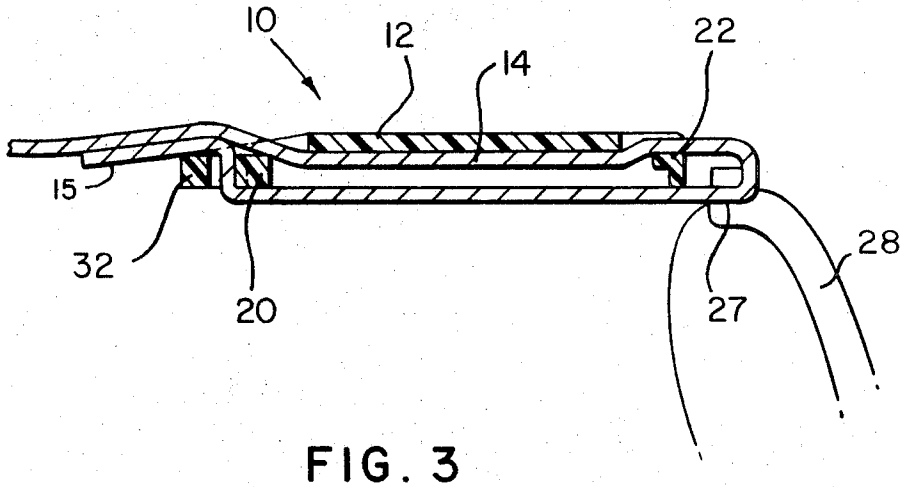


FIG. 3

STRAP LENGTH ADJUSTMENT DEVICE

BACKGROUND OF THE INVENTION

This invention is directed towards a device useful in adjusting the length of straps, for example, those head straps which may hold a pair of sport goggles on the head of a wearer. It is important that these straps be easily and permanently adjustable to just the desired length so that they are comfortable for long periods of use and will not let the goggles slip when the user experiences quick head movements which are encountered in skiing or other similar active sports.

It is desireable that the strap length adjustment device be easy and inexpensive to manufacture and water and weather resistant for outdoor use. For these reasons the one-piece integrally molded plastic devices as disclosed herein are found to serve their purpose well and have certain advantages over older metal type devices disclosed in earlier patents and literature.

OBJECTS AND SUMMARY OF THE INVENTION

An object of the invention is to provide a strap length adjusting device which is of molded plastic material and easily threaded with said strap and includes means to hold said strap at its adjusted length.

Another object is to provide a strap length adjustment device wherein portions of the strap passing through openings provided in the device never bind against each other and the openings are easily threaded with the strap.

Pursuant to the above objects the strap length adjusting device includes a cover plate behind which the strap passes being threaded through openings on either side of the cover plate. The strap is then threaded through the strap held member such as the lens retaining portion of a pair of ski goggles and then is doubled back behind the length adjustment device, the end and a measured amount of strap passing through still another opening in said device which has tooth means to grip the strap and hold it in its correctly adjusted position.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the strap length adjusting device of the invention.

FIG. **2** is a perspective view of the device showing it in functional position on a pair of goggles.

FIG. **3** is a sectional view of the device taken along line 3—3 in FIG. **2**

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring specifically to the drawings **10** indicates generally the strap length adjusting device. The top portion, as shown in FIG. **1**, consists substantially of a cover plate **12** having a substantially planar surface extending for at least about half of the overall length of the device and extending substantially across the width thereof. This provides a surface for imprinting an insignia thereon such as the trademark shown in the drawing. The cover plate also provides a guiding surface for the strap **14** which is threaded thereunder as shown in FIG. **3** through openings on either side of the plates. To form the openings a pair of side members **16** and **18** are made to extend the length of the device extending along each longitudinal side of said cover plate. The

side members **16** and **18** are both longer and thicker than the cover plate **12.**

A pair of cross members **20** and **22** join the side members **16** and **18** and are located slightly beneath and are longitudinally spaced from the cover plate to define openings **24** and **26** through which the strap is threaded. The slightly lower position of the cross members with respect to the cover plate provide for easier threading of the strap therethrough and minimizes binding.

As shown in FIGS. **2** and **3** the strap **14** after passing under cover plate **12** may then pass through the opening **27** in the end portion of a ski goggle lens **28,** and then is doubled back behind the strap length adjusting device **10.** The end of the strap **15** is threaded through a third opening **30** provided adjacent one of the ends of the device, as shown. This opening is formed by a cross member **32** extending between side members **16** and **18** and having teeth **34** thereon bordering opening **30.** When the end of the strap is pulled through opening **30** the desired length, the teeth **34** will grip strap **14** and prevent it from being pulled back through opening **30.** While teeth **34** may provide adequate gripping of the strap it is also of use to provide further teeth **36** on the opposing cross member surface bordering opening **30.** The opposed teeth **34** and **36** will then more positively grip strap **14** therebetween.

It is important that the double-back end of the strap does not pass back through an opening already threaded through by a portion of the strap. This arrangement, frequently found in the prior art, makes threading difficult and can also cause extremely annoying binding of the strap portions against one another making adjustments of the length of the strap both difficult and time consuming.

The terms "lower" and "beneath" used in the description and the claims of the invention refer to the orientation of the strap length adjusting device as shown in the drawings.

Thus, the disclosed one-piece molded device performs the objects of the invention in a most effective manner and in an easily and inexpensively manufactured form.

I claim:

1. A strap length adjustment device consisting of an integrally molded one-piece plastic element including:

a cover plate having a substantially planar surface extending for at least about half of the overall length of said device and extending substantially across the width thereof;

a pair of side members extending along each longitudinal side of said cover plate and being of greater length and thickness than said cover plate;

a pair of cross members joining said side members and located slightly lower than the cover plate and spaced therefrom a distance to leave an opening between each of said cross members and said cover plate so that a strap may be threaded through said openings under said cover plate before being attached to a strap held member and doubled back behind said strap length adjustment device;

a toothed cross member extending between the ends of said pair of side members at a position which is slightly spaced from one of said other cross members forming an opening adjacent one of the ends of the device for receiving the doubled back end of the strap, whereby the strap end is threaded

through the opening and said toothed cross member grips the strap and prevents the end thereof from slipping.

2. The strap length adjustment device as defined in claim 1 wherein both cross member surfaces bordering said opening receiving the doubled back end of the strap have gripping teeth formed thereon.

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