

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



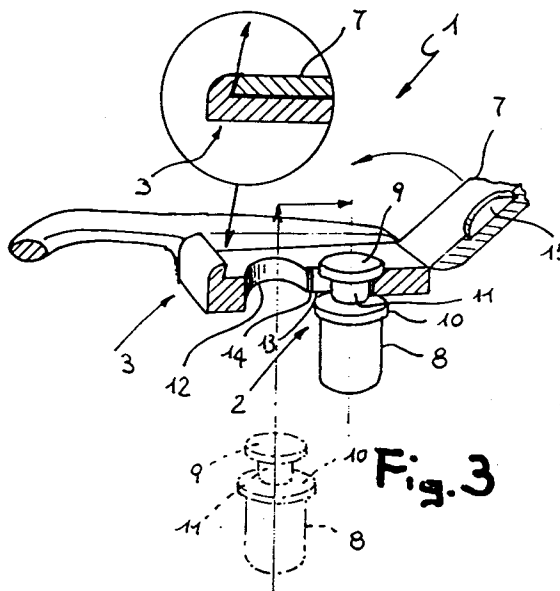
(11) Publication number:

0 468 354 A2

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **91111934.5**(51) Int. Cl.⁵: **A43C 11/00**(22) Date of filing: **17.07.91**(30) Priority: **27.07.90 IT 2156790 U**(43) Date of publication of application:
29.01.92 Bulletin 92/05(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR LI LU NL SE(71) Applicant: **ASOLO S.r.l.**
Largo Augusto, 3
I-20122 Milano(IT)(72) Inventor: **Tanzi, Giancarlo**
Via Papa Luciani, 2
I-31020 Vidor (Treviso)(IT)(74) Representative: **Rapisardi, Mariacristina, Dr.**
Proc.
STUDIO TECNICO LEGALE RAPISARDI Largo
V Alpini 15
I-20145 Milano(IT)(54) **Closure device for the fastening of an item of footwear.**

(57) The closure device for the fastening of an item of footwear comprises means (2) for removable connection between an element (3) for retaining a closure element (4) of the item of footwear (6) and the upper (5) of the item of footwear (6).

**EP 0 468 354 A2**

The present invention relates to a closure device for the fastening of an item of footwear.

As is known, footwear suitable for practicing a particular sport have recently undergone a considerable technical evolution.

In particular, a well-defined type of footwear, with innovative characteristics capable of giving top-level performance to the user, has been studied and manufactured for each sport.

For example, the type of fastening of an item of footwear is one of the characteristics which more markedly affects the quality of the shoe, especially if said shoe is for mountaineering and/or skiing/excursion use and for any other kind of use.

Footwear of the above type normally has a fastening system defined by a plurality of elements for retaining respective elements for securing said footwear, such as for example laces, hooks, straps and the like.

Said retention elements are rigidly associated with the upper of the shoe by means of one or more rivets.

From the above it can be easily understood that in case of breakage of a retention element which defines the fastening system of current footwear, replacement of said retention element entails a hardly negligible amount of work which must be performed by an expert person provided with particular equipment.

Essentially, due to the breakage of a very simple and inexpensive element it is necessary, if one requires a job adequate to the quality of manufacture of the shoe, to take said shoe to a technical support center or to an expert shoemaker, with a consequent waste of time and money.

In known footwear, since said footwear is mass-produced, it is furthermore not possible to modify the type of fastening according to the different shapes of the feet of the users and/or to their natural variation in volume after a more or less long period of time except by merely slackening or tightening the securing elements, such as the laces or other equivalent elements, of said item of footwear.

In fact it is not possible, in current footwear, to modify the mutual position of the elements which retain the securing elements, such as laces or straps or elements equivalent thereto, or to vary their point of connection to the upper of the shoe.

The aim of the present invention is to eliminate the above described disadvantages by providing a closure device for the fastening of an item of footwear which allows to move as required, in a simple and rapid manner, the position of the various elements which retain the securing elements, such as laces or straps, or any other equivalent element, and/or to possibly replace them in case of breakage.

Within the scope of this aim, an important object of the invention is to provide a closure device for the fastening of an item of footwear wherein the means which connect the retention elements and the upper of the item of footwear are defined by a single part, so as to reduce reserves in stock or at the retailer, with a consequent decrease in the management and manufacturing costs of said reserves.

Not least object of the invention is to provide a closure device for the fastening of an item of footwear which allows, in a simple and rapid manner as already mentioned, to replace the elements which retain the laces or the like so as to be able to also vary their coloring, so as to give said item of footwear a different aesthetic appearance.

This aim, these objects and others are achieved by a closure device for the fastening of an item of footwear, characterized in that it comprises means for removable connection between an element which retains a securing element and the upper of the item of footwear.

Further characteristics and advantages will become apparent from the detailed description of a closure device for the fastening of an item of footwear according to the invention, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a lateral elevation view of an item of footwear provided with the closure device according to the invention;

Figure 2 is a perspective view of a ring-like retention element on which a covering element, shown in longitudinal cross-section, is subsequently associated;

Figure 3 is a view of the manner in which a retention element, shown in partial cross-section, can be connected to the upper of the item of footwear by virtue of the removable connection means; and

Figure 4 is a perspective view of the retention element illustrated in Figure 3 and made of plastic material according to the invention.

With reference to the above figures, the closure device according to the invention, generally indicated by the reference numeral 1, comprises removable means, generally indicated by 2, for connecting an element, generally indicated by 3, for retaining a closure element, for example a lace 4, as illustrated in Figure 1, and the upper 5 of an item of footwear 6.

Obviously, in the case shown by way of example the closure element is a lace, but it is understood that it might be a strap with Velcro or a hook or an equivalent element.

Advantageously, the retention element 3 can be entirely made of plastic material, as illustrated in Figures 3 and 4, or can be made of metal, in a

conventional manner, as illustrated in Figure 2.

In both cases, the retention element 3, whether made of plastic material or metal, comprises an element 7 for covering the connection means 2; said element is associable, in a snap-together manner, above the retention element 3, as will be specified in greater detail hereinafter.

More particularly, the connection means 2 comprise at least one pivot 8 which has, in an end portion, a first enlarged region and a second enlarged region, indicated by 9 and 10 respectively, which are mutually rigidly connected by means of a spacer 11.

Conveniently, the retention element 3 has at least one slot defined by a first seat and by a second seat, indicated by 12 and 13 respectively, which are mutually connected and inside which the spacer 11 is inserted after the pivot 8 has been connected in a conventional manner to the upper 5 of the item of footwear 6.

More specifically, the first enlarged region 9 is larger than the second enlarged region 10, whereas the cross-section of the spacer 11 is narrower than that of the first and second enlarged regions 9 and 10.

As regards the first and second seats 12 and 13, it can be seen that the first seat is substantially smaller than the second enlarged region 10 but is larger than the first enlarged region 9, so that the latter can be easily inserted in said first seat until the second enlarged region 10 abuts against the bottom of the retention element 3.

Subsequently, by virtue of the fact that the spacer 11 is narrower than the second seat 13, it is possible, by performing a translatory motion parallel to the faces of the enlarged regions 9 and 10, to insert said spacer, and thus the pivot 8, inside the second seat 13, thus connecting it to the engagement element 3.

A narrow region 14 is furthermore provided between the first seat 12 and the second seat 13 and allows the snap-together insertion of the spacer 11 in the second seat 13, furthermore providing a valid retention of the engagement element with the pivot 8.

So that the retention element cannot slip off the pivot 8, as illustrated in figures 2 and 3, a recess 15 is defined on the covering element, and the first enlarged region 9 is accommodated therein when the covering element 7 is placed snap-together above the engagement element 3.

Merely for greater precision, it is noted that when the retention element 3 is made monolithically of plastic material (Figures 3 and 4), the covering element is rotated about its pivoting axis and is inserted snugly in the retention element by means of a wedge-shaped end or, although this is not illustrated, by means of a hook which engages a

corresponding recess or by means of any other system suitable for the purpose.

If the retention element is made of metal (Figure 2), the covering element is arranged above it and engages snap-together the edges of said retention element.

The operation of the closure device for the fastening of an item of footwear according to the invention is evident from what has been described and illustrated.

In particular, with reference to Figure 3, it can be seen that once the pivot 8 is inserted, and more precisely once its first enlarged region 9 has been inserted in the first seat 12 of the retention element, the second enlarged region 10 rests against the surface of the retention element so that it is possible to insert the spacer 11 in the second seat 13 in a snap-together manner by virtue of the presence of the narrow portion 14.

In this manner, the retention element remains rigidly associated with the pivot 8 in an extremely valid manner also by virtue of the recess 15 defined on the covering element.

Finally, since the height of the spacer 11 is equal to the thickness of the retention element 3, the latter has no relative motion with respect to the pivot 8 except for a possible rotation about the axis thereof.

In practice it has been observed that the closure device according to the invention is particularly advantageous in that it allows the easy replacement of a possible broken engagement element as well as a rapid change in the position of a retention element, for example of the ring type 16, with one for example of the hook type 17, without thereby requiring a number of parts greater than the parts which compose the current engagement elements of a conventional shoe.

The shape of the pivot 8 for its removable connection to the retention element can obviously also be varied.

The first enlarged region 9 might be oval and insert in a corresponding oval slot, the major axis whereof is orthogonal to that of the enlarged region 9, of the retention element when it is arranged correctly on the item of footwear.

In practice, the materials employed, as well as the dimensions, may be any according to the requirements and to the state of the art.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. Closure device for the fastening of an item of footwear, characterized in that it comprises means (2) for removable connection between an element (3) which retains a closure element (4) of the item of footwear and the upper (5) of the item of footwear. 5
2. Device according to claim 1, characterized in that it comprises an element (7) for covering said connection means, said covering element being associated in a snap-together manner with said retention element. 10
3. Device according to claim 1, characterized in that said connection means comprise at least one pivot (8) which has, in a first end portion, a first enlarged region (9) and a second enlarged region (10), said first enlarged region being larger than said second enlarged region. 15
20
4. Device according to claim 3, characterized in that said pivot comprises a spacer (11) for the rigid connection of said first and second enlarged regions, said spacer being narrower, in cross-section, than said first and second enlarged regions. 25
5. Device according to claim 1, characterized in that said retention element comprises at least one slot (12, 13) with which said first enlarged portion engages. 30
6. Device according to claim 5, characterized in that said slot has a first seat (12) and a second seat (13) which are mutually connected, said first seat being substantially wider than said second enlarged region and being narrower than said first enlarged region, and in that said spacer is substantially narrower than said second seat. 35
40
7. Device according to claim 5, characterized in that said slot comprises, between said first and second seats, a narrow region (14) for the snap-together connection of said spacer in said second seat. 45
8. Device according to claim 2, characterized in that said covering element has at least one recess (15) for the accommodation of said first enlarged region of said pivot for its retention in said second seat of said slot. 50
9. Device according to claim 1, characterized in that said retention element is defined by a monolithic body made of plastic material. 55

