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(54) **Hook for footwear and the like**

(57) The invention relates to a hook (1) for footwear and the like, of a type comprising means (2) for attachment to a vamp or other equivalent element, and means (3) providing a passage for the lace and having a relevant surface for engagement therewith, on which sur-

face the same lace may slide and transmit a tying force; the hook (1) is provided with elastic means (6) located in a region which is either directly or indirectly acted upon by the force transmitted by the lace, said means being able to give an elastic reaction to the same force.

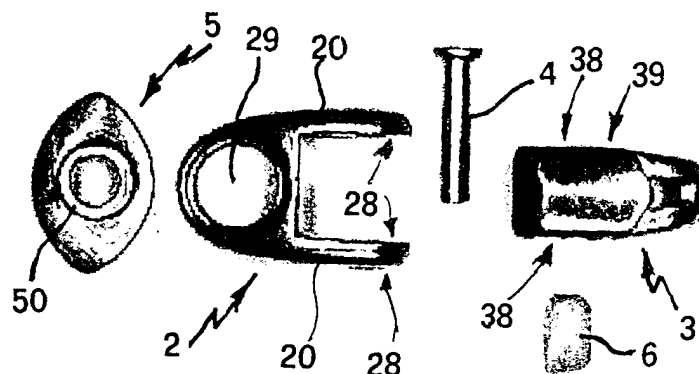


Fig. 2

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Description

[0001] The present invention relates to a hook for footwear or the like, that is, it relates to a hook or loop allowing the passage of a lace used for joining two opposite edges of a vamp or other structure having likewise two edge to be united by a lace.

[0002] Many types of footwear are known in which the edges of the vamp are joined together by laces which go through a plurality of hooks or loops of open or closed ring type and disposed in pairs over the edges.

[0003] In order to properly lacing up the footwear article, the lace must go through the loops with a given tension force, which depends on the type of footwear article, on its use, on the form of the foot, etc.

Once the shoe is laced up, some variations may occur in the foot/shoe relationship which are due, for example, to the bending of the foot and of the shoe's vamp being worn, and which cause corresponding variations in the tying force transmitted by the lace to the shoe via the hooks through which the same lace is made to go. These variations may in the long run deform the shoe and cause inconvenience to the wearer.

With the current footwear, that is, with the hooks currently produced, there is no way of limiting such drawbacks.

[0004] The main object of the present invention is to overcome the above mentioned drawbacks by providing a hook which is able to give an elastic reaction to the force exerted thereon.

[0005] This result has been achieved, according to the invention, by providing a hook for footwear and similar articles which has the characteristics disclosed in the claim 1. Further characteristics being set forth in the dependent claims.

[0006] The advantages deriving from the present invention lie essentially in that it is possible to obtain a hook for footwear and the like which is provided with elastic means able to give a reaction to the forces transmitted onto the same hook, which is simple to make, effective and characterized by an extremely limited cost. Among the advantages of the present invention is the fact that the shoe is made easier to lace up by the reaction of the elastic means during the tensioning of the lace.

[0007] These and other advantages and characteristics of the invention will be best understood by anyone skilled in the art from a reading of the following description in conjunction with the appended drawings given as a practical exemplification of the invention, but not to be considered in a limitative sense, wherein:

- Fig. 1 shows a plan view from above of a possible embodiment of the present hook;
- Fig. 2 is an exploded top view of the embodiment of the previous figure;
- Fig. 3 shows a plan view from above of a further possible embodiment of the present hook;

- Fig. 4 is an exploded top view of the embodiment of Fig. 3;
- Fig. 5 shows a side view of a possible embodiment of a portion of the hook according to the present invention.

[0008] Illustrated in the appended drawings - as one possible embodiment of the invention - is a hook (1) of a so-called closed-mouth type, that is, a hook having a substantially closed channel (30) intended to provide a passage for the lace (not shown). The novel concept underlying the present invention can of course be applied to hooks having a partially open channel. Also non-limiting, in the present invention is the use of a hook (1) of a type made up of two parts (2) and (3) pivoted between them.

[0009] As set forth above, a hook for footwear and the like, according to the invention, is of a type which comprises means for attachment to a vamp or other equivalent element and means providing a passage for the lace and having a relevant surface for engagement therewith, on which surface the same lace may slide and transmit a tying force. A hook (1) according to the present invention, is provided with elastic means located in a region which is either directly or indirectly acted upon by the force transmitted by the lace, and said means are able to give an elastic reaction to the same force. In particular, the hook (1) may be of a type consisting of a first portion (2) to be attached to the vamp having said attachment means, and a second portion (3) connected to the first one via relevant coupling means and on which means are provide for engagement with the lace.

The portion (2) is made up of a first body (2) having a substantially fork shape defined by two arms (20). The two arms (20) are provided with relevant seats (28) disposed in correspondence of an axis (z-z) so as to receive a pin (4) forming the connection means between the two portions (2) and (3).

The second portion (3) has a channel (30) allowing the lace to pass through, and a perforated seat (39) for the pin (4) to go through and form the pivoted coupling with the first portion (2).

[0010] In the illustrated embodiment, the elastic means consist of a portion of elastomeric material (6), located and acting on the second portion (3), within a seat (38) adjacent to the perforated seat (39) which accommodates the pin (4); as best visible in Fig. 5, the two seats (38) and (39) may be defined by a single hole. In practice, the elastic means (6), that can be made from plastics material or formed by spring means, are disposed on one side of the pin (4) at a region acted upon by the force transmitted by the lace.

For the attachment of the vamp, means may be provided likewise those illustrated and which comprise a perforated portion (2) of the hook in correspondence of the first portion (2) and, in the example of photos 1 and 2, also a perforated strap. The perforated portion (29) of

the example of figures 1 and 2 has a hole of a diameter larger than that of the stem of a rivet, or similar vamp's fastening means. The perforated strap (5) has a central, substantially cylindrical portion (50) being complementarily engageable with a rivet, or similar fastening means, and having such an outer diameter as to allow the insertion of the perforated portion (29) of the hook prior to the fastening of the rivet. In practice, the perforated strap (5) is placed directly onto the vamp, with the central portion (50) facing outwardly in order to receive the hook's first portion (2) which is fitted onto the cylindrical portion (50) in correspondence of the perforated portion (29). Once the rivet has been inserted and tightened, the strap (5) will result solid to the vamp, while the hook (1), owing to the stable but substantially loose coupling with the strap (5), will be able to rotate partially about the rivet.

In a possible embodiment not shown, the hook (1) can be fixed to the vamp also by means of a relief directly formed on the body of the first portion (2).

Claims

1. Hook (1) for footwear and the like, of a type comprising means for attachment to a vamp or other equivalent element, and means providing a passage for the lace and having a relevant surface for engagement therewith, on which surface the same lace may slide and transmit a tying force, hook characterized in that it is provided with elastic means (6) located in a region which is either directly or indirectly acted upon by the force transmitted by the lace, said means being able to give an elastic reaction to the same force.
2. Hook according to claim 1, especially of a type consisting of a first portion to be attached to the vamp having said attachment means, and a second portion (3), connected to the first one via relevant coupling means and on which means are provided for engagement with the lace, hook characterized in that said elastic means (6) are provided in correspondence of said coupling means (4) between the two portions (2, 3) of the hook (1).
3. Hook according to claim 2, wherein said connection means have a pivot axis between said two portions, hook characterized in that said elastic means (6) are disposed and act in correspondence of said axis (z-z).
4. Hook according to claim 1, of a type comprising a first portion (2) for attachment to the vamp, which first portion consists of first body (2) having a substantially fork shape defined by two arms (20) being provided with seats (28) for receiving a pin (4), and a second portion (3) with a channel (30) allowing

the lace to pass through, and a perforated seat (39) for said pin (4) to go through and form the pivoted coupling with said first portion (2), hook characterized in that said elastic means (6) are located and made to act on the second portion (3), within a seat (38) adjacent to the perforated seat (39) which accommodates the pin (4) at a region acted upon by the force transmitted by the lace.

5. Hook according to one of the preceding claims, characterized in that said elastic means (6) are formed by a portion of elastomeric material.
6. Hook according to one of the claims 1 to 4, characterized in that said elastic means (6) consists of spring means.
7. Hook according to one of the preceding claims, characterized in that said means for attachment to the vamp comprise a perforated portion (29) of the hook of a diameter larger than that of the stem of a rivet, or similar vamp's fastening means, and a perforated strap (5) with a central, substantially cylindrical portion (50) being complementarily engageable with a rivet or similar fastening means, and having such an outer diameter allowing the insertion of the perforated portion (29) so as to provide a stable but substantially loose coupling between said strap and said hook in order to let the hook rotate at least partially about the rivet.
8. Hook according to one of the claims 2 to 6, characterized in that said elastic means for attachment to the vamp comprise a relief directly formed on the body of said first fastening portion (2).

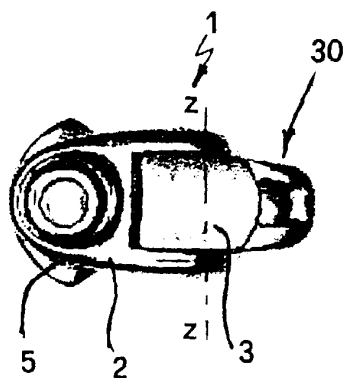


Fig. 1

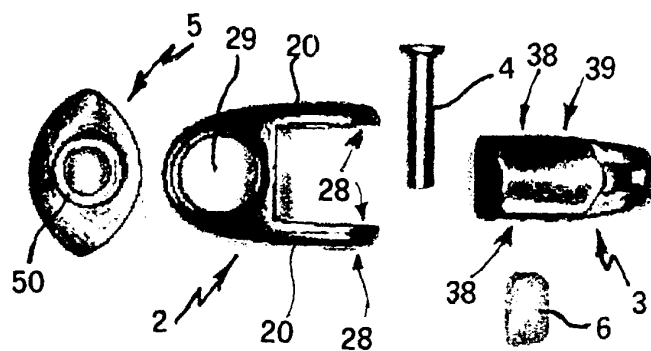


Fig. 2

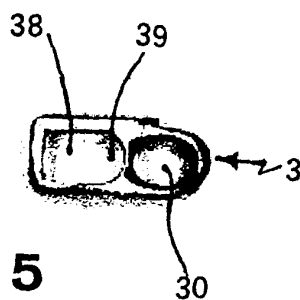


Fig. 5

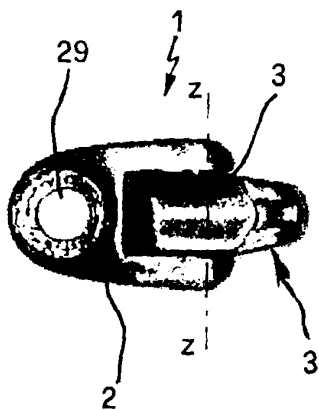


Fig. 3

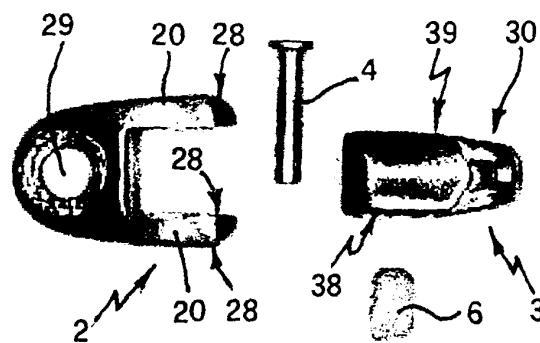


Fig. 4



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EUROPEAN SEARCH REPORT

Application Number
EP 99 83 0760

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 7 March 2000	Examiner Claudel, B
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EPO FORM 1503 03/92 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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