

**FOOTWEAR FASTENER CONNECTABLE TO LACING EYELETS****Technical Field**

The invention relates to footwear fasteners.

**5   Background Art**

It is known to use clips instead of laces to fasten shoes and other footwear. Such clips can be used with shoes which are designed to be used with laces, and which are thus provided with two rows of eyelets on either side of the shoe opening in conventional fashion. The clip has two parts which can be attached to the eyelets in one way or another, and releasably attached to each other in order to fasten the shoe. This provides a number of advantages over the use of conventional laces. For example, the shoe can be fastened in a single operation by clipping the two parts of the clip together, which is considerably quicker and more convenient than tying laces together. Furthermore, unlike in the case of laces, there is no risk of the clip becoming undone after the shoes have been worn for prolonged periods of time. A further advantage is that, once the clip has been properly adjusted to suit a particular user, the clip ensures that the same tension is applied to the shoe every time the clip is used. In the case of laces, it is often necessary to retie the laces several times in order to achieve the correct amount of tension. This, of course, is time consuming and inconvenient. Moreover, if the footwear is to be used by a professional sports man or woman, it may become a matter of considerable importance that the tension in the shoes can be guaranteed to be correct each time the shoes are worn.

Although such clips provide a number of advantages over conventional laces, they are also prone to some disadvantages. For example, the clips are usually formed from a relatively large number of separate components, thus making them more expensive to manufacture and assemble. Furthermore, known clips can be difficult to release, particularly if the clips are under a fair amount of tension.

30       The invention seeks to provide an improved footwear fastener.

**Disclosure of Invention**

According to a first aspect of the invention there is provided a footwear fastener for fastening an item of footwear having an opening for allowing adjustment of the footwear, and a plurality of eyelets arranged in two rows located on either side of the opening, the fastener comprising a two-part clip, the two parts of which are interengageable, and at least one elongate connecting strip which is integrally formed with one of said parts and adjustably attached to the other of said parts, the connecting

strip being adapted to pass through two eyelets, one in each of said two rows, so as to secure said two eyelets together when the two parts of the clip are interengaged.

Preferably, the connecting strip is formed of a material which is more elastic  
5 than the material of the part of the two-part clip with which it is integrally formed.

This can be achieved, for example, by using a two-material injection moulding process.

10 Conveniently, the part of the two-part clip to which the connecting strip is adjustably attached comprises at least one slot adapted to receive, and adjustably secure, a portion of the connecting strip.

The invention also independently provides, in a second aspect a footwear  
15 fastener for fastening an item of footwear having an opening for allowing adjustment of the footwear, and a plurality of eyelets arranged in two rows located on either side of the opening, the fastener comprising a two-part clip, the two parts of which are interengageable, and at least one elongate connecting strip connected to the two parts of the clip and adapted to pass through two eyelets, one in each of said two rows, so as to  
20 secure said two eyelets together when the two parts of the clip are interengaged, wherein a first of said parts is provided with at least one hook-like member adapted to hook onto the second of said parts when the first and second parts are interengaged, and the first part is also provided with a release member which projects beyond the hook-like member and which overlies at least a portion of the second part when the two parts  
25 are interengaged, and wherein the release member is arranged so that an upward pull on the release member by a user causes the hook-like member to disengage from the second part, thus allowing the first and second parts of the clip to separate.

Conveniently, the release member lies in the same general plane as the first  
30 part of the clip. Alternatively, the release member can be upwardly inclined relative to the plane of the first part, for example at an angle of around 45°.

In one embodiment of the invention, the connecting strip is integrally formed with one of said parts and adjustably attached to the other of said parts.

35

Preferably, the connecting strip is formed from an elastic material.

For the avoidance of doubt, it is stated that any of the features of the second aspect of the invention can be included in the first aspect thereof, and vice versa.

### Brief Description of the Drawings

An embodiment of the invention will now be more particularly described, by way of example only, with reference to the accompanying drawings, in which:

5

Figure 1 is a plan view of the first and second parts of a two-part clip embodying features of the invention, the clip being shown in its disengaged configuration;

10

Figure 2A is a side view of a portion of the first part of the two-part clip shown in Figure 1;

Figure 2B is a view of the underside of the portion of the first part of the clip shown in Figure 2A;

15

Figure 3 is a cross-sectional view through the clip shown in Figure 1 when the two parts of the clip are interengaged;

20

Figure 4 is a plan view, on a reduced scale, of the two-part clip shown in Figure 1, when the two parts of the clip are interengaged;

Figure 5 is an enlarged view of a portion of the second part of the clip shown in Figure 1;

25

Figure 6 shows three cross-sectional views taken through the portion of the second part of the clip shown in Figure 5; and

Figure 7 is a side view of the portion of the second part of the clip shown in Figure 5.

30

### Best Mode for Carrying Out the Invention

Figure 1 shows a two-part clip 2 comprising a first part 4 and a second part 6, for fastening a shoe. The second part 6 comprises five elongate elastic connecting strips 8, which are indicated schematically in Figure 1. Although the five connecting strips 8 are all identical with each other, only one of the connecting strips 8, namely the lowermost connecting strip 8 shown in Figure 1, is shown in full, and this connecting strip 8 is shown with two breaks 10, indicating that the connecting strip 8 is longer than illustrated in Figure 1. The connecting strips 8 are integrally moulded with a rigid body part 12 of the second part 6 of the clip 2. The body part 12 comprises an

elongate spine portion 14 having five rib portions 16 extending perpendicularly therefrom. Each rib portion 16 supports a corresponding connecting strip 8.

The first part 4 of the clip 2 comprises a similar elongate spine portion 18,  
5 integrally formed with five similar rib portions 20. Each rib portion 20 defines two slots 22 and 24. The first part 4 is also provided with an integral release member 26, which will be described in greater detail below.

In use, the two spine portions 14 and 18 are positioned generally along the  
10 opening of a shoe (not shown), and the connecting strips 8 are passed through respective eyelets extending along both sides of the shoe opening. The connecting strips 8 are then passed through the respective slots 22 and 24 in the first part 4, thus ensuring that both parts of the two-part clip are attached to the eyelets along the sides of the shoe opening. The first and second parts 4 and 6 are then brought together, as  
15 indicated by the dotted lines 28 in Figure 1, and interengaged in order to fasten the shoe. Small projections 30 are provided along the connecting strips 8 for engagement with the slots 22 and 24. The projections 30 allow the tension of the fastener to be adjusted to suit the comfort of the user.

Figure 2A shows a side view of a portion of the first part 4 of the clip 2. It  
20 can be seen from Figure 2A that hook-like members 32 are integrally formed below the spine portion 18, and located between the rib portions 20. There are thus four hook-like members 32 in total, each comprising a downwardly projecting portion 32, and a lower laterally projecting portion 36. The same portion of the first part 4 is shown  
25 from below in Figure 2B.

Figure 3 is a cross-sectional view through the first and second parts 4 and 6 when the two parts 4 and 6 are interengaged. The interengagement is achieved by hooking the hook-like members 32 over the spine 14 of the second part 6, as shown in  
30 Figure 3. The second part 6 is illustrated by dotted lines in Figure 3. It will be seen that the release member 26 lies in the same general member plane as the first part 4, and projects beyond the hook-like members 32 and over the second part 6. When the user wishes to release the clip, the user simply lifts the release member 26, which causes the hook-like members 32 to become disengaged from the spine 14. It will be  
35 appreciated that the release member 26 provides the user with a mechanical advantage when releasing the clip. As can be seen from Figure 4, the release member 26 projects just over half way along the lengths of the rib portions 16 of the second part 6.

Turning to Figures 5 to 7, the construction of the second part 6 is shown in greater detail. The second part 6 is formed from a two-material injection moulding process, such as that which can be carried out using equipment manufactured by Nissei Plastic Industrial Co. Ltd, of 6th Floor, KYU Building, 1-9-4 Kajicho, Chiyoda-ku, Tokyo, 101, Japan. In particular, the connecting strips 8 are formed from an elastic flexible material, such as Desmopan 385E or 192 or 786. "Desmopan" is a registered trade mark of Bayer Australia Limited (of 875 Pacific Highway, PO Box 903, Pymble, NSW 2073), and the body part 12 of the second part 6 is formed from a rigid material, such as Desmopan KA 8372 or 472.

The second part 6 is formed as a single integral piece by the injection moulding process. As indicated by the dotted lines 40 shown in Figure 5 (and also in Figure 1), the flexible, elastic material 42 of the connecting strips 8 extends along the entire lengths of the spine portion 14 and rib portions 16.

Figure 6 shows the cross-sectional shape of the second part 6 at three positions, labelled A, B and C in Figure 5, along the length of the arm shown in Figure 5. As can be best seen from Figures 6 and 7, the flexible, elastic material 42 of the connecting strips 8 is contained within a lower rectangular groove 44 defined in the underside of the body part 12, which is formed from a rigid material 46.

A further advantage of the above-described arrangement over the use of laces alone is that the two parts 4, 6 of the clip can be used to display information, such as advertising information. For example, advertising information and/or trade marks or names (not shown) can be applied, either by paint or adhesive labels, to the upper surfaces of the two parts 4, 6, and particularly to the large upper surface of the release member 26. Additionally or alternatively, a separate information displaying component (not shown) can be attached to the two-part clip, either permanently or releasably. Such a component could, for example, take the form of a small plate adapted to clip onto one of the spine portions 14, 18, or onto any other suitable part of the two-part clip. Such a separate component may extend along most of the length of the two-part clip, and/or conceal most, or at least a substantial part, of the two-part clip when the clip is attached to a shoe.

The foregoing describes only preferred embodiments of the present invention, and modifications, obvious to those skilled in the art, can be made thereto without departing from the scope of the present invention.

**CLAIMS:**

1. A footwear fastener for fastening an item of footwear having an opening for allowing adjustment of the footwear, and a plurality of eyelets arranged in two rows located on either side of the opening, the fastener comprising a two-part clip, the two parts of which are interengageable, and at least one elongate connecting strip which is integrally formed with one of said parts and adjustably attached to the other of said parts, the connecting strip being adapted to pass through two eyelets, one in each of said two rows, so as to secure said two eyelets together when the two parts of the clip are interengaged.

2. A footwear fastener as claimed in Claim 1, wherein the connecting strip is formed of a material which is more elastic than the material of the part of the two-part clip with which it is integrally formed.

3. A footwear fastener as claimed in Claim 2, wherein the two-part clip is formed by a two-material injection moulding process.

4. A footwear fastener as claimed in any preceding claim, wherein the part of the two-part clip to which the connecting strip is adjustably attached comprises at least one slot adapted to receive, and adjustably secure, a portion of the connecting strip.

5. A footwear fastener for fastening an item of footwear having an opening for allowing adjustment of the footwear, and a plurality of eyelets arranged in two rows located on either side of the opening, the fastener comprising a two-part clip, the two parts of which are interengageable, and at least one elongate connecting strip connected to the two parts of the clip and adapted to pass through two eyelets, one in each of said two rows, so as to secure said two eyelets together when the two parts of the clip are interengaged, wherein a first of said parts is provided with at least one hook-like member adapted to hook onto the second of said parts when the first and second parts are interengaged, and the first part is also provided with a release member which projects beyond the hook-like member and which overlies at least a portion of the second part when the two parts are interengaged, and wherein the release member is arranged so that an upward pull on the release member by a user causes the hook-like member to disengage from the second part, thus allowing the first and second parts of the clip to separate.



- 7 -

6. A footwear fastener as claimed in Claim 5, wherein the release member lies in the same general plane as the first part of the clip.

7. A footwear fastener as claimed in Claim 5, wherein the release member is upwardly inclined relative to the plane of the first part.

8. A footwear fastener as claimed in Claim 7, wherein the release member is upwardly inclined relative to the plane of the first part at an angle of around 45°.

10

9. A footwear fastener as claimed in Claim 8, wherein the connecting strip is integrally formed with one of said parts and adjustably attached to the other of said parts.

15

10. A footwear fastener as claimed in any one of Claim 5 to 9, wherein the connecting strip is formed from an elastic material.

20

11. A footwear fastener as claimed in any one of Claims 1 to 4, or any one of Claims 5 to 10, which is further provided with an information displaying component attached to one of said two parts, the information displaying component being adapted to overlie at least a portion of the two-part clip during use thereof.

