

HOOKS AND EYES INCLUDING FASTENINGS

FOR A GARMENT

The present invention relates to hooks and eyes including fastenings for use on garments, the fastenings being of a type having at least two spikes projecting from a base for being pierced through the garment and for being clenched at the underside of the garment.

As shown in Figure 1 of the accompanying drawings, which is a perspective view of a hook and an eye, each including a prior art fastening, a known hook 1 and eye 2 each include fastening means which comprises a flat base 3 and a pair of flat spikes 4, 4 projecting perpendicularly from the base 3 for being pierced through a garment and then for being clenched at their tip and portions to take a hasp (not shown) at the underside of the garment. However, because of its merely flat configuration, the prior art fastening tends to be easily bent or otherwise deformed around the shoulder or joint between the base 3 and the respective spike 4 when the

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latter is pierced and clenched, especially if the garment is made of twilled thick fabric such as jean or denim. With this arrangement accurate and stable attachment of the hook and eye members 1, 2 is
5 difficult to achieve.

According to the present invention, there is provided a hook and eye each including a respective fastening for use on a garment, comprising:

- (a) a base;
- 10 (b) a hasp having at least two apertures
- (c) at least two spikes initially projecting from said base for being pierced through the garment into the apertures of said hasp, and for being deflected into a clenched condition against said hasp; and
- 15 (d) means disposed around a joint between said base and each one of said spikes for opposing deformation of said fastening around said joint when said spikes are pierced and clenched, said means comprising at least one cold-pressed groove opening into an outer surface of said fastening and extending longitudinally
20 thereof across said joint from the base to the spike, not extending along a substantial proportion of the length of each spike but terminating in the vicinity of said joint, said fastening thereby having a greater hardness in a region or regions around said one or more grooves than at other regions thereof, including
25 a substantial proportion of the length of each spike.

It is believed possible by means of the present invention to provide a hook and eye each having an improved fastening, for use on a garment, which is resistant to bending or other deformation around the shoulder or joint between a base and a respective spike when the latter is pierced through the garment and is then deflected to take a hasp at the underside of the garment, thus enabling easy and accurate attachment of hooks and eyes, studs, buttons, etc. to the garment.

10 The invention will be described by way of examples with reference to Figures 2 to 9 of the accompanying drawings.

In the drawings:-

15 Figure 1 (as mentioned above) is a perspective view of a hook and an eye, each having a prior art fastening;

Figure 2 is a perspective view of a hook and an eye, each having a fastening embodying the present invention;

20 Figure 3 is a perspective view similar to Figure 2, showing a modification of the fastening;

Figure 4 is a cross-sectional view taken along line IV-IV of Figure 2, showing a groove of rectangular

cross section;

Figures 5 and 6 are cross-sectional views similar to Figure 4, showing variations thereof; and

Figures 7, 8 and 9 are perspective views illustrating the manner in which the hook and eye are progressively assembled with their respective companion hasps.

Figure 2 shows a hook 10 and an eye 11, each having a fastening embodying the present invention.

10 The fastening comprises a flat base 12, and a pair of flat spikes 13, 13 initially (FIGS 2 and 7) projecting perpendicularly from the base 12 for being pierced through a garment (not shown) into a pair of apertures 14, 14 of a hasp 15, as shown in Figure 8, and then for
15 being deflected into a clenched condition at their tip end portions against the hasp 15 at the underside of the garment, as shown in Figure 9.

As better shown in Figure 2, the fastening of each of the hook 10 and eye 11 has a pair of grooves 16
20 each opening into an outer surface of the fastening and extending longitudinally thereof across a shoulder or joint 17 between the base 12 and a respective one of the spikes 13 from the base 12 to the spike 13, not extending along a substantial proportion of the length of the spike 13 but
25 terminating in the vicinity of the joint, as shown. The grooves 16 of Figure 2 have a rectangular cross section. Alternatively, the grooves 16 may be of a semi-circular cross section (Figure 5) or a triangular cross section (Figure 6). Further, the two grooves 16, 16 of one and the same fastening may be

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united at their confronting ends in the base 12, as shown in Figure 3.

The fastening may be made of stainless steel, brass or other suitable metal. In production, the
5 grooves 16 are formed by cold pressing to make the fastening harder in regions around the grooves 16 than at other regions thereof. This cold pressing not only increases the yield and tensile strength of the fastening around the grooves 16, but also reduces the
10 ductility of the fastening around the grooves 16.

However, a substantial proportion of the length of each spike 13, being devoid of such groove, is not hardened.

Having such cold-pressed grooves 16, the fastening is resistant to bending or other deformation at the regions around
15 the shoulder or joint 17 between the base 12 and the respective spike 13 when the latter is forced through a garment and is then clenched to take the hasp 15 at the underside of the garment, thus enabling easy and accurate attachment of the hook 10 and eye 11 to the garment with adequate firmness even if the garment is made
20 of twilled thick fabric such as jean or denim.

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CLAIMS:-

1. A hook and eye each including a respective fastening for use on a garment, comprising:

(a) a base;

(b) a hasp having at least two apertures;

5 (c) at least two spikes initially projecting from said base for being pierced through the garment into the apertures of said hasp, and for being deflected into a clenched condition against said hasp; and

(d) means disposed around a joint between said base and
10 each one of said spikes for opposing deformation of said fastening around said joint when said spikes are pierced and clenched, said means comprising at least one cold-pressed groove opening into an outer surface of said fastening and extending longitudinally thereof across said joint from the base to the spike,
15 not extending along a substantial proportion of the length of each spike but terminating in the vicinity of said joint, said fastening thereby having a greater hardness in a region or regions around said one or more grooves than at other regions thereof, including a substantial proportion of the length of each spike.

20 2. A hook and eye according to claim 1, said groove extending along the entire length of said base.

3. A hook and eye according to claim 1, said at least one groove being composed of a pair of separate grooves each
25 extending toward and terminating short of each other's confronting end.

4. A hook and eye according to any one of claims 1 to 3, the or each said groove having a rectangular cross section.



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5. A hook and eye according to any one of claims 1 to 3,
the or each said groove having a semi-circular cross section.
 6. A hook and eye according to any one of claims 1 to 3,
the or each said groove having a triangular cross section.
 - 5 7. A hook and eye substantially as described with reference
to and as illustrated in Figures 2 and 4 of the accompanying
drawings.
 8. A hook and eye substantially as described with reference
to and as illustrated in Figures 2 and 4 modified as in Figure 5
10 of the accompanying drawings.
 9. A hook and eye substantially as described with reference
to and as illustrated in Figures 2 and 4 modified as in Figure 6
of the accompanying drawings.
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