May 20, 1947. H. KOESTER 2,420,783

BELT HOOK PACKAGE

Filed Jan. 8, 1945

Fig. 1.

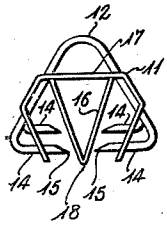


Fig. 2.

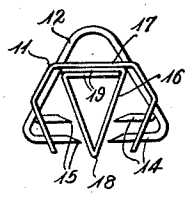


Fig. 3.

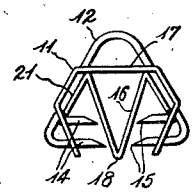


Fig. 4.

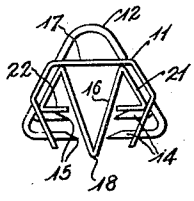


Fig. 5.

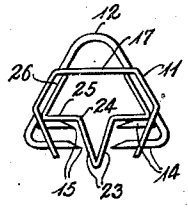


Fig. 6.

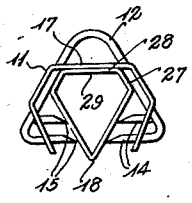


Fig. 7.

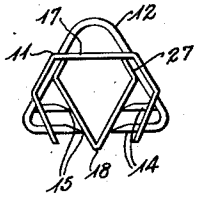


Fig. 8.

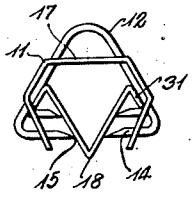
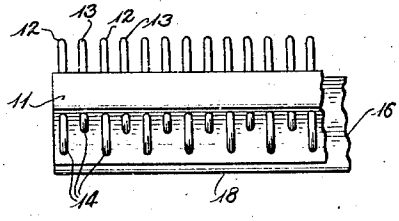


Fig. 9.



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BELT HOOK PACKAGE

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11 Claims. (Cl. 1—56)

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This invention relates to belt hook packages and particularly to an arrangement for facilitating the handling of the same.

The use of belt fasteners made up of a plurality of spaced, wire hooks each having opposed inturned sharpened prongs is well known in the art. It is also known to package these hooks by mounting them in spaced relation on U-shaped supports, either of paper or metal by which they may be attached to the belt before the support is removed. It is customary to make these supports of considerable length and to sell them to customers who cut them up into shorter lengths corresponding to the width of the belt to be spliced. These packages are characterized by having an open side into which the sharpened pointed prongs project laterally. When a plurality of these packages are packed in a box or other container they frequently become hooked together, making their separation difficult and tending to destroy the packages during the removal of any one package from the collection. These sharpened prongs, being exposed, are difficult to handle, and frequently injury occurs to the hands of a person removing them from the box or other receptacle in which they are packed.

The main object of the present invention, therefore, is to provide a filler or guard for protecting these packages against interlocking and also for preventing contact between the pointed prongs and the hands of persons handling the same. It is also proposed according to the present invention to so arrange this guard so that it may be removed readily, is of cheap construction, and will retain its position during the normal packing and handling of the individual belt hook package.

Other advantages will appear from the following description when it is read in connection with the accompanying drawing in which:

Figure 1 is a sectional view of a belt hook package showing a preferred form of guard applied thereto.

Figures 2 to 8, inclusive, are modified forms of the arrangement shown in Figure 1.

Figure 9 is a side elevation of a belt hook package embodying the present invention.

Referring first to Figure 1, the reference character 11 designates a support, substantially U-shaped in cross-section, made of sheet material

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such as paper, cardboard, metal, plastic or the like and having mounted therein a plurality of belt hooks 12 and 13. As shown these hooks are of two lengths so that when the fastener is secured on a belt to be spliced there will be two spaced lines of fastening means to distribute the stresses applied to the belt when it is running. Obviously more than two sets of hooks may be used if desired, but for purposes of illustration only two sets are shown, as this is the usual arrangement utilized in practice. The hooks 12 and 13 are of substantially V-shape, as shown in the drawings, and have inturned pointed prongs 14 which project laterally into the trough formed by the support 11 with the pointed end 15 of each prong in opposed spaced relation to the other end of the same prong, and with the prongs of hooks 12 spaced from those of hooks 13 in the assembled package.

Mounted within the trough formed by the support 11 is a substantially V-shaped guard 16 which preferably abuts the base 17 of support 11 and has its apex 18 lying in the trough and between the exposed ends 15 of the prongs. As shown in Figure 1, the sides of the guard 16 are in spaced relation to the ends 15 of the prongs. While this is preferred, it is not essential, provided the spacing is such as to prevent two of these packages from interlocking when thrown together in a container, and also provided the spacing between the guard and the prongs is sufficient to prevent the prongs from contacting the hands of a person handling the package.

When the guard 16 is made of a material possessing some resiliency, as for instance a strip of cardboard which is folded longitudinally at the apex line 18, the base of the triangle subtended by this card will tend to expand outwardly into contact with the hooks, thus tending to hold the guard in position. The guard may be withdrawn longitudinally from either end of the package. The package may then be cut to proper length and attached to the end of a belt to be spliced in the usual manner.

The arrangement shown in Figure 1 is preferred because of its simplicity. A minimum amount of cheap material is required and the guard is held in position securely enough for practical purposes. It is possible, however, to modify the guard in various ways in order to in-

crease the frictional contact between it and the support, one such modification being that shown in Figure 2.

In Figure 2 the guard is triangular in cross-section, and the base of the guard 16 comprises two overlapped ends 19 which contact the base portion 17 of the support. Except for the overlapped portions 19 the structure of Figure 2 corresponds precisely to that of Figure 1.

In Figure 3 the guard 16 carries angular extensions or wings 21 long enough to contact both the base portion 17 of the support and the prongs of the short hooks 13 wedging between the portion 17 and the prongs 14 in order to produce rigidity in the finished structure.

In Figure 4 the wings 21 of the guard 16 shown in Figure 3 carry integral horizontal extensions 22 lying on the horizontal portions of prongs 14, to further secure the guard in the trough.

Figure 5 of the drawing illustrates an additional modification in which the guard comprises a shortened V-shaped portion 23 bent at 24 to provide horizontal portions 25 contacting the prongs 14 of hooks 13, and other portions 26 extending upwardly and abutting the sides of the hook and contacting the base portion 17 of the support.

Figure 6 shows a modification in which the guard is polygonal in cross-section, and its V-shaped portion presents a wider angle adjacent the apex 18, and is bent to provide short sections 27 lying against the sides of the hooks and short horizontal sections 28 which meet at the center at 29, both of these portions 28 lying against the base 17 of the support. Here the sides of the V may contact the ends 15 of the prongs 14.

Figure 7 shows an arrangement similar to Figure 6 but with the horizontal portions 28 omitted. Here, as in Figure 6, the V-shaped portion of the guard makes a wide angle so that the sides of the V contact the points of the prongs 14.

A still further modification of the guard structure is shown in Figure 8. The V-shaped portion of the guard makes a wide angle as in Figures 6 and 7 so that the guard actually contacts the ends of the prongs. The guard does not extend up to the base 17 of the support in this arrangement, but merely carries two small reversely bent wings 31 lying against the inclined sides of the hooks and abutting the prongs 14 of each short hook 13.

It will be clear that all of the arrangements shown in the drawings have the common characteristic of protecting the hands of persons handling the packages, and to prevent interlocking between the various packages in a receptacle. Several forms of the invention have been illustrated in order to show the modifications which may be made without departing from the spirit and scope of the invention as expressed in the appended claims.

Having thus described the invention, what is claimed is:

1. A package of belt hooks comprising a support of sheet material of trough-like form having a series of substantially V-shaped belt hooks with spaced opposing pointed prongs mounted thereon with the angles of said belt hooks disposed adjacent the closed side of said support and the prongs projecting laterally into the trough adjacent the open side thereof; and a guard disposed in the trough and having an extended portion lying between the opposed ends of said prongs.

2. A package of belt hooks comprising a thin support, substantially U-shaped in cross-section and having a plurality of substantially V-shaped belt hooks with inturned sharpened ends mounted thereon in spaced relation with the angles of said belt hooks disposed adjacent the closed side of said V-shaped support and with the sharpened ends of the hooks substantially coincident with the open side of the U; and a plural plane guard disposed in said support and having an extended portion projecting between and in close proximity to the opposed sharpened ends of the hooks.

3. A package of belt hooks comprising a support of sheet material of trough-like form having a series of belt hooks with spaced opposing pointed prongs mounted thereon, with the prongs projecting laterally into the trough adjacent the open side thereof; and a guard of folded sheet material generally V-shaped in cross-section and having a base portion contacting the bottom of said trough, and a pointed portion lying in said trough in protecting relation to the pointed ends of the prongs.

4. A package of belt hooks comprising a trough of sheet material; a plurality of belt hooks having spaced opposed pointed prongs, said hooks being mounted in said trough with the prongs extending laterally into said trough from opposite sides thereof; and a guard disposed in said trough, said guard having a V-shaped portion with its apex extending between and beyond said pointed prongs.

5. A package of belt hooks comprising a trough-like support carrying a plurality of belt hooks with inturned sharpened ends extending into said trough; and a guard V-shaped in cross-section disposed in said trough with its apex between the ends of said hooks.

6. A package of belt hooks comprising a trough-like support carrying a plurality of belt hooks with inturned sharpened ends extending into said trough; and a polygonal guard disposed in said trough with a portion between the ends of said hooks, said guard comprising a V-shaped portion between the ends of said hooks, a pair of said side wings lying against the sides of said hooks and a base portion abutting the base of said support.

7. A belt hook package comprising an elongated support, U-shaped in cross-section and having a plurality of belt hooks carried thereon, said belt hooks having V-shaped portions with the ends of the V carrying inturned sharpened prongs extending into the space defined by the support; and a guard disposed in said support in protecting relation to the ends of said prongs, said guard comprising a V-shaped portion between the ends of the prongs, side wings attached to said portions and lying against the sides of the hooks, and meeting portions lying against the bottom of said U.

8. A belt hook package comprising an elongated support, U-shaped in cross-section and having a plurality of belt hooks carried thereon, said belt hooks having V-shaped portions with the ends of the V carrying inturned sharpened prongs extending into the space defined by the support; and a guard disposed in said support in protecting relation to the ends of said prongs, said guard comprising a V-shaped portion between the ends of the prongs, and a pair of side wings connected to the base of the V and lying against the sides of said hooks.

9. A belt hook package comprising an elongated support substantially trough-shaped in cross-section having a plurality of belt hooks mounted in spaced relation therein, said hooks having inturned sharpened prongs; and a guard

lying in said support, said guard being V-shaped in cross-section and having its apex disposed between the ends of said prongs and its base portions contacting the bottom of said trough.

10. A belt hook package comprising a trough-like support carrying a plurality of belt hooks with inturned sharpened ends extending into said trough; and a guard triangular in cross-section and disposed in said trough, said guard comprising a base abutting the base of said support, and an apex lying between said sharpened ends.

11. A belt hook package comprising an elongated trough-like support of sheet material carrying a plurality of longitudinally spaced belt hooks of substantially V-shaped formation and each having opposed inturned sharpened prongs

extending laterally into the support adjacent the open side thereof; and a guard of triangular cross-section disposed in said trough, said guard comprising a base of overlapped portions lying against the base of said support, and an apex lying between the ends of said prongs.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,885,237	Diamond	Nov. 1, 1932
2,164,049	Bray	June 27, 1939