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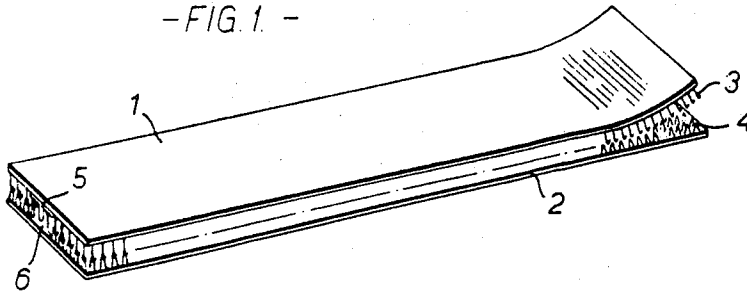
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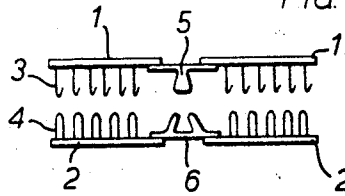
STRIP FASTENING MEANS

Filed Nov. 9, 1966

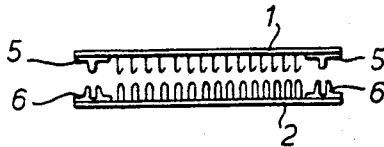
-FIG. 1.-



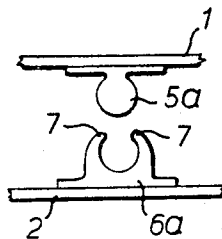
-FIG. 2.-



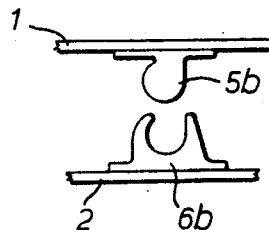
-FIG. 3.-



-FIG. 4.-



-FIG. 5.-



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STRIP FASTENING MEANS

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ABSTRACT OF THE DISCLOSURE

Strips of material having respectively interlocking pile surfaces of hooks and ribs to fasten the strips together are also provided with location means for ensuring alignment of the strips as they are pressed together. These location means are constituted by a continuous rib extending longitudinally along and united with one of the strips and which is adapted to be received within a complementary configured continuous channel which extends longitudinally along and is united with the other strip.

This invention relates to strip fasteners of the type comprising two complementary strips of material furnished with pile-like surfaces of which one comprises a multiplicity of hooks and the other a multiplicity of loops, which are interlocked with one another by compressing the two strips of material together.

The above type of fastening means are used for a wide range of applications, but what is considered the main difficulty with this type of fastener is that it is not self-aligning. For this reason when bringing the two parts of the fastener together care must be taken to locate one over the other in correct alignment. This care in lining up the two fastener parts is particularly applicable when the fastener is attached to what may be termed "unstable material" such as woven or knitted fabrics.

The main object of this invention is to provide an improved form of the above type of fastener which facilitates the alignment of the two parts.

According to the present invention there is provided strip fastening means comprising strips of material having interlocking complementary pile-like surfaces of hooks and loops, and linearly disposed interengaging location means adapted to cause self-alignment of the strips during their engagement.

The location means may comprise at least one channel and a complementary rib to enter thereto.

The, or each, channel and rib may be located intermediate the edges of the pile-like surfaces or along one or both of the said edges. The channel and/or rib may be deformable or resilient or flexible or a combination thereof.

The invention will now be more particularly described with reference to the accompanying drawing, in which:

FIG. 1 is a perspective view of a pair of interlocked strips with central interengaged rib and channel location means;

FIG. 2 is an end view of two sectional strips with modified interlocking rib and channel strips joining the strip sections;

FIG. 3 is an end view of a modified arrangement of two strips;

FIG. 4 is an end detail view of a modified sectional shape of rib and channel means; and

FIG. 5 is an end detail view of another sectional shape of rib and channel means.

In a particular embodiment of this invention, FIG. 1, the two parts 1 and 2 of strip fastening means are formed in known manner with pile-like hook and loop interlocking surfaces 3, 4 and furnished with complementary rib

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and channel means 5 and 6. The strip 1 is provided with one continuous rib 5 and the other strip 2 with a continuous channel 6 extending linearly of the strips. Such rib and channel may be formed integrally with the backing for the pile surfaces 3, 4 prior to or after the formation of the pile-like surfaces. Alternatively, the rib and channel formation may be combined with the strips by means of welding or adhesive or a stitching operation. The rib 5 and channel 6 may be formed of a plastics material and of any convenient cross-sectional shape that will allow them to interengage. Alternatively, the rib and channel may be shaped to interlock and may be such that the channel and/or rib may be resilient or deformable and of general flexible construction. As shown in FIG. 2, in one cross-sectional shape the channel 6 tapers so that it is narrower at its entrance and the rib 5 is of complementary shape. Thus the channel walls will open to receive the rib and then close to hold the rib. Alternatively, as shown in FIG. 4, the channel 6a is of part round section so that two side lips 7 are formed which can be pressed apart during the entrance of the rib 5a on the other part of the fastener and automatically close in again over the bulbous part of the rib. In another arrangement shown in FIG. 5 the rib 5b and channel 6b is of complementary hooked sectional shape to have an interlocking action.

The aforesaid rib and channel means may comprise a single rib and channel extending centrally of the two strips of the fastener as in FIGS. 1 and 2. Alternatively, a single rib and channel may extend down one edge of the strips or, as shown in FIG. 3, there can be a rib and channel down each edge of the strips as indicated. It will be understood the strips with the pile-like surfaces 3 and 4 may be formed entirely separately from the rib and channel means and the two joined together in any of the aforesaid ways. If the rib and channel is located in the centre of the strips then each strip may comprise two parts with pile-like surfaces joined together by a strip providing a rib or channel as shown in FIG. 2.

With this invention the two parts of the fastener can be engaged, say, at one end with the rib 5 and channel means 6 interengaged and then pressure can be applied along the length of the fastener until the closure is complete and during this operation the rib and channel means will mate and align the two parts of the fastener. The rib and channel means may serve solely for location purposes, i.e., merely interengage, or have a retaining action by interlocking. Also, whilst usually the rib and channel means are flexible, they could be at least semi-rigid to have a stiffening and/or form maintaining or assisting action, particularly when the invention is used on ladies garments.

The strips may be formed from material known under the registered trademark "Velcro."

What I claim is:

1. Separable fastener means comprising two strips of material to be placed face to face, said faces having interlocking complementary pile-like surfaces of hooks and loops respectively, and including complementary interengaging location members for aligning one strip longitudinally with the other, one said location member being constituted by a continuous channel extending longitudinally of and united with one of said strips and which opens in the direction of the other strip, and the other said location member being constituted by a continuous rib in alignment with and facing said channel, said rib being united with the other said strip and being entered into said channel as said strips are brought together in face to face contact.

2. Separable fastener means as defined in claim 1

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wherein said interengaging rib and channel are located intermediate the edges of said strips.

3. Separable fastener means as defined in claim 1 wherein said interengaging rib and channel are located along at least one edge of said strips.

4. Separable fastener means as defined in claim 1 wherein said interengaging rib and channel members are made from a flexible material.

5. Separable fastener means as defined in claim 1 wherein said interengaging rib and channel members are made from a semi-rigid material.

4**References Cited****UNITED STATES PATENTS**

1,959,318	5/1934	Sundback	-----	24—205 XR
3,176,364	4/1965	Dritz.		

FOREIGN PATENTS

246,968	11/1960	Australia.
183,720	11/1955	Austria.
360,592	4/1962	Switzerland.

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