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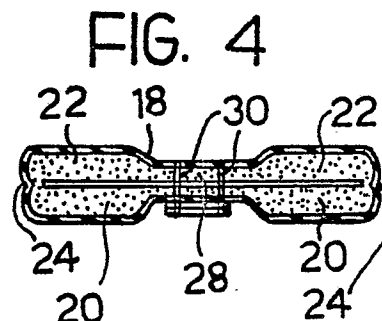
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54 **A shoulder strap for rucksacks and the like.**

57 The shoulder strap consists of a relatively wide strip of a relatively thick, soft, expanded sheet material covered externally by a skin (18) of fabric or the like. The strip includes two flaps (26) which are folded towards each other over a central region (28) and are sewn or otherwise fixed to that region (28).



A shoulder strap for rucksacks and the like

The present invention relates to a shoulder strap, particularly for a rucksack but useable for carrying any other container, such as, for example, a shoulder bag, on the shoulder.

The object of the invention is to produce a shoulder strap which has a soft, wide bearing surface, so that a relatively heavy load can be carried on the shoulder for a long time without causing any irritation or pain to the shoulder.

According to the invention, this object is achieved by means of a shoulder strap, characterised essentially in that it consists of a relatively wide strip of relatively thick, soft, expanded sheet material covered externally by a skin of fabric or the like, the strip including two flaps which are folded towards each other over a central region and are sewn or otherwise fixed to that region.

The characteristics and further advantages of the invention will become clear from a reading of the detailed description which follows with reference to the appended drawings, provided by way of non-limiting example, in which:

Figure 1 is a view of a rucksack provided with a pair of straps according to the invention,

Figure 2 is a perspective view of the shoulder strap seen from the inside with certain parts partially removed,

Figure 3 is a perspective view of the shoulder strap seen from the outside.

Figure 4 is a cross-section taken on the line IV-IV of Figure 3,

Figure 5 is a perspective view of an element from which the shoulder strap is produced, as seen from the covered side intended to remain on the outside, and

Figure 6 is a perspective view of the same element from the inside.

With reference to Figure 1, a rucksack Z includes two shoulder straps S, each produced according to the invention.

As can better be seen in Figures 2 and 3, each shoulder strap S is constituted by a strip 10 which is relatively wide (for example, 65 mm wide) and relatively thick (for example, 15 mm thick).

The strip 10 has a thinner and relatively squared rear end 12 which is sewn to the back of the rucksack in a manner not shown. The strip 10 is tapered or made narrower towards its other end, as indicated at 14. This tapered shape is particularly useful when the rucksack is carried by a woman, since it avoids any annoying interference with the bust region.

The front end of the strip 10 is provided with a buckle 16 for adjustable connection to a strap C which returns to the back of the rucksack Z in

known manner.

The structure of the shoulder strap according to the invention will better be explained with reference to Figures 5 and 6 and then to Figure 4.

Figures 5 and 6 show the main constituent element of the shoulder strap. This element consists of a wide strip of soft, expanded sheet material, such as polyurethane. This material is preferably of the closed-cell type so as not to absorb liquids, either during use or during hand- or machine-washing. The general thickness of the sheet material is approximately half the thickness of the shoulder strap to be produced.

On its face which is intended to remain in view, the element of Figures 5 and 6 is covered by a skin 18 of a synthetic fabric which may be the same as or similar to that of the body of the rucksack Z.

The element of Figures 5 and 6 is preferably produced by cutting and thermoforming. Amongst other things, the thermoforming produces longitudinal lateral ribs 20 and central ribs 22. The adjacent ribs 20 and 22 are separated by a line 24 of reduced thickness which acts as a crease. The lines 24 of reduced thickness are also produced by thermoforming.

The two creases 24 divide the element of Figures 5 and 6 into two side flaps 26 and a central region 28.

In order to make up the shoulder strap from the element of Figures 5 and 6, the two side flaps 26 are folded about the folding lines 24 according to the arrows A, until they fit over the central region 28 to produce the arrangement shown in Figure 4. As can be seen, in this configuration, the strip 10 includes two lateral thicker regions defined by the ribs 20 and 22, and a central thinner region. In this thinner region, the two folded side flaps are sewn or otherwise fixed together, as indicated at 30.

A finishing tape 32 and a strengthening tape 34 are fixed one on top of the other to the face of the strip 10 which is intended to remain on the outside, that is, facing the body, by the same stitching 30.

The buckle 16 is fixed to one end of the strengthening tape 34, the other end of which extends as far as the rear end 12 of the strip and is sewn therewith to the back of the rucksack.

As will be understood, the strengthening tape 34 is the part which is intended to support the weight of the rucksack Z and its contents, whilst the strip 10 of expanded material, folded into a double thickness, serves to distribute the load over a very wide area, particularly on the shoulder.

As will also be understood, by virtue of its structure, a shoulder strap according to the inven-

tion can be made up quickly and cheaply in practice, with the use of only one sewing machine.

Claims

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1. A shoulder strap for rucksacks and the like, characterised in that it consists of a relatively wide strip (10) of relatively thick, soft, expanded sheet material covered externally by a skin (18) of fabric or the like, the strip (10) including two flaps (26) which are folded towards each other over a central region (28) and sewn or otherwise fixed to that region (28).

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2. A shoulder strap according to Claim 1, characterised in that each of the two flaps (26) is connected to the central region (28) by a line (24) of reduced thickness which acts as a crease and is produced by the thermoforming of the expanded material.

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3. A shoulder strap according to Claim 1 or Claim 2, characterised in that the two folded flaps (26) have adjacent edges which together are covered by at least one tape (32, 34).

4. A shoulder strap according to Claim 3, characterised in that the tape or one of the tapes (34) is a strengthening tape.

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5. A shoulder strap according to any one of the preceding claims, characterised in that it has a shape in plan which is tapered (14) towards one of its ends.

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6. A shoulder strap according to any one of the preceding claims, characterised in that the expanded material is a closed-cell material.

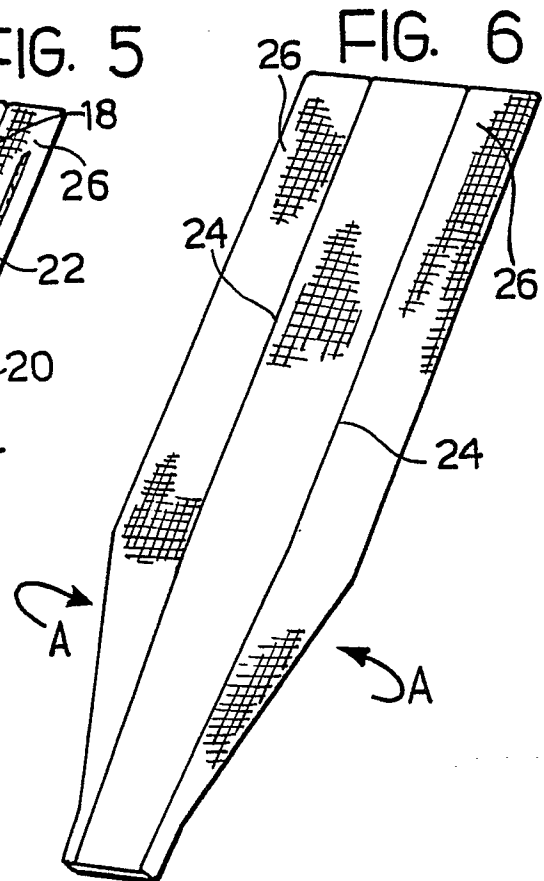
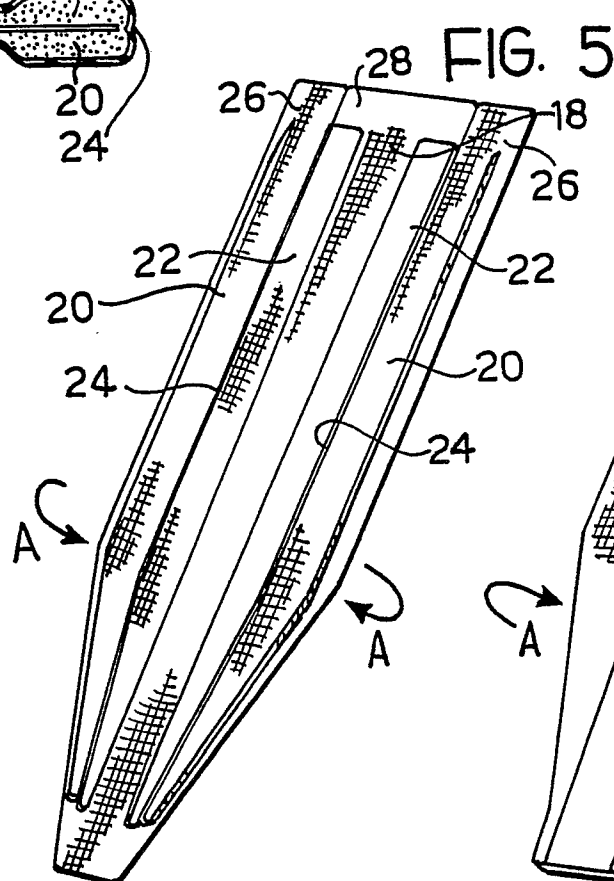
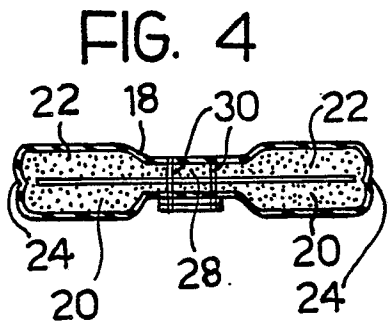
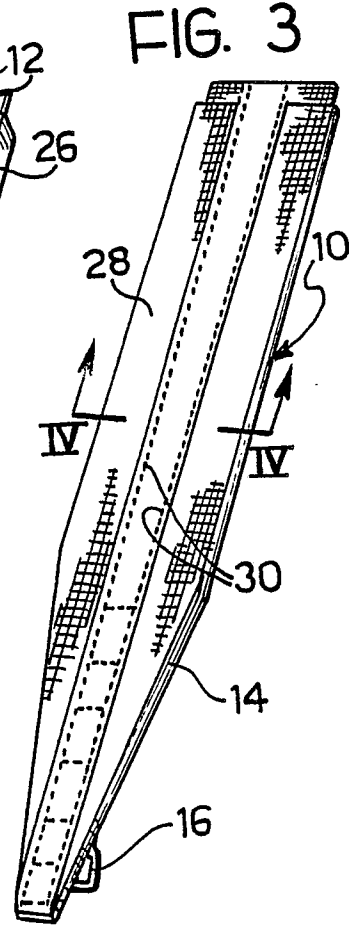
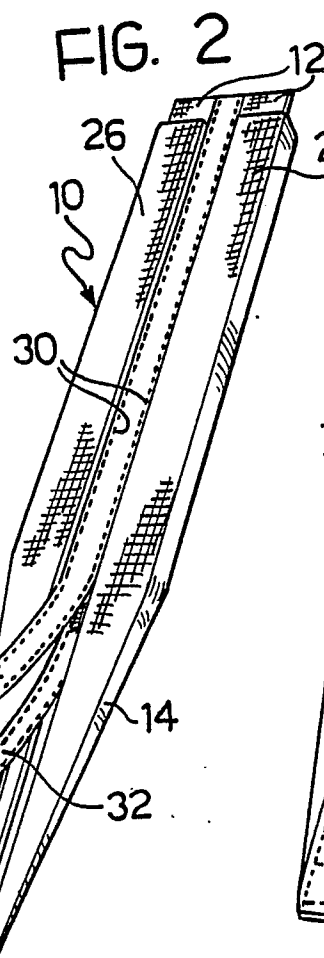
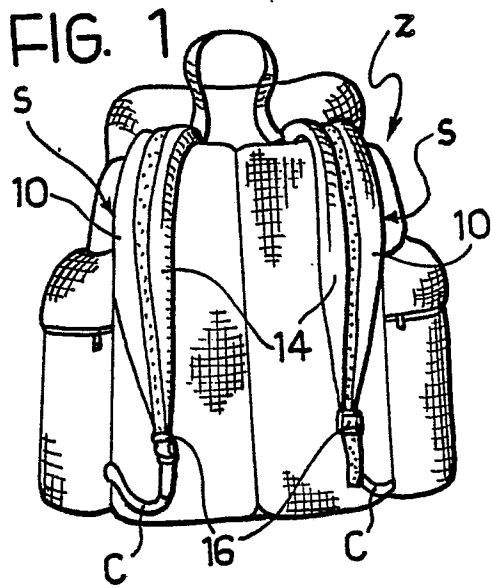
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	US-A-3908571 (MOTSENBOCKER) ----		A45C13/30 A45F3/04
A	CH-A-391207 (MILLET) ----		
A	US-A-2808188 (CHLUMSKY) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A45C A45F A41F A63B F41C
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	05 DECEMBER 1989	SIGWALT C.	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : Intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	