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EUROPEAN PATENT APPLICATION

②① Application number: **85103403.3**

⑤① Int. Cl.⁴: **A 45 F 4/02**

②② Date of filing: **22.03.85**

③③ Priority: **29.03.84 IT 5303084 U**
25.01.85 IT 6706785

④③ Date of publication of application:
02.10.85 Bulletin 85/40

⑧④ Designated Contracting States:
DE FR GB NL SE

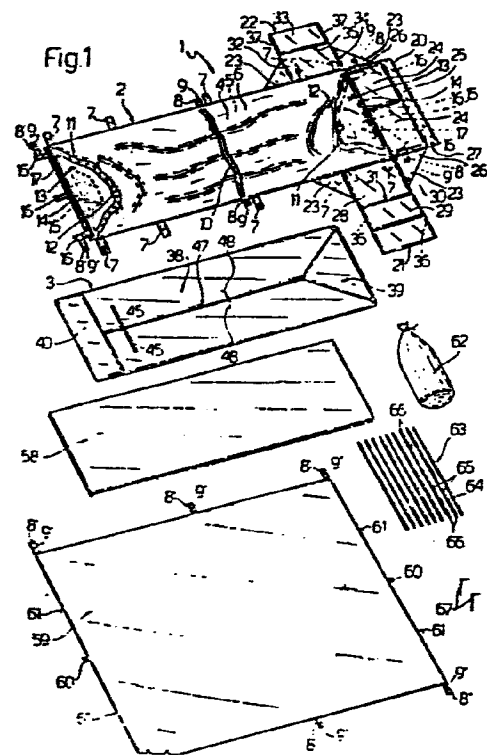
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⑤④ Convertible multipurpose bag.

⑤⑦ Convertible, multipurpose bag (1) comprising a first essentially rectangular member (4) made of foldable material and designed to form a compartment for accommodating at least one person; the said first member (4) being connected to second members (20, 21, 22) also made of foldable material and designed to fit over and enclose in compact manner the said first member (4), when the latter is packed up.



CONVERTIBLE MULTIPURPOSE BAG

The present invention relates to a convertible, multipurpose bag which may be used for travelling, outings,
5 scouting, survival, trekking, mountain-climbing, camping, boating, hunting, fishing, cross-country, clothing and rescue, and which may be used as a rucksack, suitcase, tent, hanging tent, raft, hammock, stretcher, sleeping-bag, poncho or hooded cape, floating tent, life-
10 jacket, toboggan, sun-shade, heat-reflecting screen, make shift sail and many others.

The gear for performing all the aforementioned functions at present consists of a number of different sets of equipment which cannot possibly be carried by one person
15 alone. Even carrying part of such a load is a painstaking job for the bearer in terms of weight and size.

The aim of the present invention is to provide a convertible, multipurpose bag designed to perform all the aforementioned functions, while at the same time providing for
20 a simple, safe, lightweight, compact structure that may easily be carried by one person alone.

With this aim in view, the present invention relates to a convertible, multipurpose bag, characterised by the fact that it comprises a first essentially rectangular member made of foldable material and designed to form
5 a compartment for accommodating at least one person, the said first member being connected to second members also made of foldable material and designed to fit over and enclose in compact manner the said first member, when the latter is packed up.

- 10 A preferred arrangement of the present invention will now be described by way of a non-limiting example with reference to the attached drawings in which :
- Fig.1 shows a knock-down view in perspective of various basic and optional members on the convertible, multi
15 purpose bag according to the present invention;
 - Fig.s 2 and 3 show respective rear and front views in perspective of the Fig.1 bag packed up;
 - Fig.s 4a, b, c and d show views in perspective of the convertible bag in Fig.s 2 and 3 being packed up;
 - 20 - Fig.s 5 and 6 show views in perspective of the convertible bag in Fig.1 being formed into a tent;
 - Fig.7 shows an enlarged part view of a detail on the Fig.6 tent;
 - Fig.8 shows a view in perspective of an interim stage
25 between the Fig.5 and 6 stages, for forming a tent;
 - Fig.s 9, 10, 11, 12, 13 and 14 show various uses which may be made of the convertible bag according to the present invention;
 - Fig.15 shows a top view of the hooded waterproof sleeping-bag in Fig.1;
 - 30

- Fig.s 16, 17, 18 and 19 show various uses which may be made of the Fig.15 sleeping-bag;

- Fig.20 shows various ways of transporting the convertible, multipurpose bag according to the present invention.

In Fig.1, the bag according to the present invention, and numbered as a whole by 1, comprises two main members: a foldable, cross-shaped sheet 2, conveniently made of waterproof, flameproof, buoyant, tearproof material, and a sleeping-bag 3 made of waterproof, heat-reflecting material (for survival at -30°C). In more detail, sheet 2 comprises a first rectangular member 4, conveniently 2 x 0.75 m in size and comprising a first bottom sheet 5 of the said size to which is fitted round the edges a second wider top sheet 6 so as to enable the formation of a tent top as described later on. Each long side on the said first member 4 is fitted with five equally-spaced loops 7 and, roughly halfway along, with a portion of ribbon 8 having a through hole 9 bordered by a ring. The said portions 8 match externally with a runner 10 formed across the middle of the second top sheet 6 for assembling tensioning bows on the tent as described later on. The ends of sheet 6 are provided with another two runners 11 having the same function as runner 10. Each short side of second top sheet 6 is fitted in the centre with a loop 12, while the opening on each said short side, between the first and second sheet 5 and 6, is closed in by an end sheet 13 connected by means of zip 14 and having a mosquito net 15 uncovered by means of a portion of the said sheet 13 connected in fast

open/close manner, e.g. using a known type of adhesive strip, conveniently Velcron. Each short side of the said first member 4 is fitted with three loops 16 through which is inserted and secured, e.g. by means of screws, 5 a rigid, conveniently hollow bar 17. The ends of the two outermost loops 16 are fitted with ribbon portions 8' parallel and similar to ribbon portions 8 and having respective through holes 9' bordered by rings. One short side of the said first member 4 is fitted with a first 10 rectangular flap 20; another two rectangular flaps, 21 and 22, being fitted towards the end of the two long sides adjacent to the said short side and extending perpendicular to the said long sides. All the said flaps 20, 21 and 22 are made of the same foldable material as 15 first member 4. Between the respective initial portions of flaps 21 and 22 and first member 4, on one side, and flap 20 on the other, four triangular sheets 23 are fitted for draining off water as described later on. Rectangular flap 20 is provided with three pockets of which 20 two 24 are alike and the third 25 on the end, and the outside openings of which are closed by zip 26 and adhesive fastener 27 (e.g. Velcron) respectively. The first and mid sections of flap 21 have a respective pocket, 28 and 29, the respective openings 30 and 31 of which 25 are closed by means of adhesive strips. Likewise, flap 22 has two pockets, 32 and 33, with respective openings 34 and 35 also closed by means of adhesive strips. The long sides of flap 21 are fitted on the underside with Velcron adhesive strips 36, whereas the upper side of 30 flap 22 is fitted along the short sides of pocket 33

with adhesive strips 37. For the sake of simplicity, other parts, such as loops, straps and buckles on sheet 2, are omitted in Fig.1 and described with reference to the other Figures.

5 As shown also in Fig.15, sleeping-bag 3 presents a fold-up envelope part 38 and a detachable end hood 39. Part 38 is essentially rectangular, conveniently 2 x 1.40 m in size and presents two projecting portions 40 on its short sides. The long sides of part 38 are fitted, on opposite
10 faces, with respective adhesive strips 41 and 42, whereas one short side is fitted with adhesive strip 43 on the same outer face of sleeping-bag 3 as adhesive strip 42. The opposite short side is fitted with adhesive strip 44, but only along projecting portion 40 and on the same in-
15 ner face of sleeping-bag 3 as adhesive strip 41. The long sides of part 38 are fitted, close to the end next to projecting portion 40 having adhesive strip 44, with two spaced pieces of adhesive strip, 45 and 46, parallel with the short side and on the same face as adhesive strip 42.
20 The long sides of part 38 are also fitted with respective mating parts of a zip 47 and with three equally-spaced additional strings 48. In the middle of part 38 is formed a rectangular opening 50 large enough to enable the passage of a man's head and closed by a flap 51 on the outer
25 face of sleeping-bag 3, the said flap 51 being joined to part 38 along one long side and joinable to the said part 38 along the opposite long side by means of mating adhesive strips 52 and 53, the former on flap 51 and the latter on part 38. The long side of flap 51 secured permanently to part 38 is fitted on the upper face with adhe-
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sive strip 54. End hood 39 is essentially rectangular with a folding notch 55 midway along one of its long sides. On the same long side, respective adhesive strips 56 and 57 are fitted along the edge on either
5 side of notch 55 and on opposite faces of hood 39, i.e. strip 56 on the underside and strip 57 on the upper side. Adhesive strip 56 on the underside also continues round the two short sides and the opposite long side. As shown in Fig.1, the bag 1 according to the present in
10 vention also comprises further members which may be used for various alternative functions, i.e. a mattress 58 conveniently made of closed-cell polyethylene, 2x0.75 m in size and designed to fit inside first member 4 on top of first bottom sheet 5 so as to provide for buoyancy
15 and shockproofing; and additional sheet 59 conveniently made of waterproof, foldable material, 2.40 x 1.46 m in size and designed to be spread over second top sheet 6 as described later on, the long sides of the said sheet 59 having three ribbon portions 8", similar to ribbon
20 portions 8 and 8' on foldable sheet 2, and in which are formed through holes 9" bordered by rings, the said additional sheet 59 also having a loop 60 midway along each short side and two hooks 61 on either side of the said loop 60; a sack 62 conveniently made of waterproof
25 nylon, 75 cm high by 28 cm in diameter, for holding food and clothing; a set 63 of flexible bars for forming tensioning bows, as described later on, and comprising three groups of three of the said bars, one bar 64 in each group having a cavity on each end and the other two 65
30 having smaller-section end appendixes 66; two pegs 67,

and a variety of ropes and ties (not shown) the function of which will be described later on.

As shown in Fig.1, for packing up and carrying bag 1, as shown in Fig.s 2 and 3, the set of flexible bars 63 is
5 placed inside pocket 25 on rectangular flap 20, additional sheet 59, pegs 67 and the ropes inside the two pockets 24 on flap 20, and other miscellaneous items, food, etc. inside the other pockets on flaps 21 and 22 and inside sack 62. Sleeping-bag 3, folded up as shown in Fig.1, is
10 placed over first member 4 of foldable sheet 2, the said first member 4 having mattress 58 inside on bottom sheet 5. Sack 62 is then placed on top of sleeping-bag 3, towards the bottom, next to rigid bar 17, and the whole rolled up inside foldable sheet 2 to line up with flaps
15 21 and 22, as shown in Fig.4a. As shown in Fig.4b, rectangular flap 20 is then folded over the roll formed by sheet 2 and is secured by tying the two straps 71 on the outer surface of foldable sheet 2 to respective buckle straps 70 on flap 20. As shown in Fig.4c, flap 21 is
20 first folded over the roll formed by sheet 2, followed by flap 22 which is folded over flap 21, so as to mate adhesive strips 37 with adhesive strips 36, after which, the whole is secured firmly by tying straps 73 on flap 22 to buckle straps 72 on flap 21. As shown in Fig.4d,
25 by rolling bag 1 over 180° so that the underside of sheet 2 is facing upwards, the strings on the sides of flaps 21 and 22 may then be joined by means of hooks 74 so as to secure flaps 21 and 22 firmly to bag 1. Along one long side of bag 1, a rigid bar 17 (the one under-
30 neath flap 20 on sheet 2 in Fig.1) projects outwards to

act as a handgrip for packed-up bag 1 which, being conveniently 75 x 45 x 20 cm in size, may, as shown in Fig. 2, be used as a shockproof, floating suitcase. As shown in Fig.3, on the underside of foldable sheet 2, a four-sided strap 75 is aligned between flaps 21 and 22 and
5 from which project, in the direction of the said flaps 21 and 22, two pairs of loops 76 and 77. By means of a pull-out sling strap 78 roughly three metres long, packed-up bag 1 as shown in Fig.2 may be carried like a ruck
10 sack. To do this, sling strap 78 is fitted through loops 79 on a cross-strap 80 on four-sided strap 75. Beyond the said loops 79, sling strap 78 forms two shoulder straps 81 (on to which are fitted padded, sliding shoulder pads 82). The end sections of the said shoulder straps 81 are
15 then tied to loops 77 and the ends connected by means of buckle 83.

For unpacking bag 1 according to the present invention, all the buckles and straps are undone and flaps 20, 21 and 22 and foldable sheet 2 unrolled, in exactly the
20 same way as for packing it up, but in reverse manner. For converting bag 1 into a tent 85 (Fig.5) the procedure is as follows. Sheet 2 is rolled out and two bars 65 fitted on to a centre bar 64, for forming each of the three bows, by inserting appendixes 66 inside the end cavities
25 on bar 64. The three sets of three bars so formed are then inserted respectively into centre runner 10 and the two end runners 11 on second top sheet 6. The end appendixes 66 on the two outermost bars in each set are then inserted into through holes 9 and 9' on ribbon portions
30 8 and 8' respectively (Fig.7) so that each set of three.

flexible bars is secured firmly to the edges of sheet 2 and, being greater in length, arch upwards so as to stretch the said second top sheet 6 upwards to form a tunnel. The two pegs 67 may then be driven roughly one
5 and a half metres in front of the short sides of tent 85 and both the base and outer surface of tent 85 stretched taut by tightening ropes 86 between loops 16, on the short sides of bottom sheet 5, and the opposite peg 67, and between the said peg 67 and opposite loop 12 on sec-
10 ond top sheet 6 which may thus project over the short sides of bottom sheet 5 for draining off rainwater. As shown in Fig.6, in the event of persistent heavy rainfall, additional sheet 59 may be fitted over tent 85 and secured at both ends by means of a rope (not shown) con-
15 necting centre loop 60 to opposite peg 67, by folding ribbon portions 8" underneath ribbon portions 8 and 8' on sheet 2 (Fig.7) so as to insert ends 66 of flexible bars 63 into holes 9", and by hooking hooks 61 on to the outermost bows inside runners 11 on sheet 6. As shown in
20 Fig.8, for clearing away or preventing dirt from getting on to flaps 20, 21 and 22 spread out alongside tent 85, flaps 21 and 22 may be folded up over top sheet 6 and fastened together using straps 73 and buckle straps 72, and flap 20 folded up over end sheet 13 and fastened
25 using buckle straps 70 (of appropriate length). The said flaps 20, 21 and 22 must, of course, be folded up before fitting on additional sheet 59 as shown in Fig.6. The inside ends of top sheet 6 on tent 85 are fitted with pairs of strings 87 acting as clothes-hangers.
30 As shown in Fig.9, should conditions be such as to pre-

vent tent 85 from being set up on the ground, the convertible, multipurpose bag 1 according to the present invention provides for setting up a hanging tent 88 roughly one metre off the ground. To do this, member 4
5 is first stretched taut between two trees 89 using ropes 86 threaded through loops 16. Flexible bars 63 are then assembled to form the three tensioning bows and inserted into end runners 11 and centre runner 10 (the latter optional) so as to shape second top sheet 6, after which,
10 end appendices 66 on side bars 65 are inserted into holes 9 and 9' as already described in connection with tent 85. Finally, top sheet 6 is stretched taut using ropes 90 tightened between centre loops 12 and trees 89. In the event of strong wind, ropes 91 may be threaded through
15 loops 7 on each side of first member 4 and fastened to pegs 67 driven into the ground on either side of the tent.

If the tunnel formed by arching second top sheet 6 is dispensed with, as shown in Fig.10, ropes 86 may be used
20 for forming a hammock 92 consisting essentially of first member 4 stretched taut between trees 89.

As shown in Fig.11, bag 1 according to the present invention may be converted into a rectangular raft 94 defined by first member 4, the latter having its various component parts, such as flaps 20, 21 and 22, folded up inside the surrounding edges, and other parts, such as sleeping-bag 3 and sack 62, inserted between first and second sheets 5 and 6. To strengthen the structure of raft 94, two floatable bars 95 may conveniently be inserted through loops 7, whereas, to improve buoyancy,
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provision may be made for an inflatable mattress in addition to mattress 58. As shown in Fig.12, the raft 94 configuration may be further developed to form a floating tent 96 by inserting flexible bars 63 inside top sheet 6 to form the tent tunnel, and by folding up flaps 20, 21 and 22 as already described and illustrated in Fig.8. The tunnel on floating tent 96 may be tightened further using ropes 97 fastened between centre loops 12 and ends 98 on floating bars 95. One of rigid bars 17 may also be fitted with an oar 99 for rowing and guiding floating tent 96.

The raft 94 configuration in Fig.11 may also be employed for forming a stretcher 100, as shown in Fig.13a, in which the two bars 95 (which may be substituted by essentially straight branches) have longer ends and are conveniently secured by ropes to rigid crossbars 17. The casualty may be stretched out on first member 4 or inside sleeping-bag 3 between sheets 5 and 6. Stretcher 100 may also be converted into an indian-style stretcher 101 having longer free-end sections on bars or branches 95" resting on the ground. In this case, the casualty may be stretched out inside sleeping-bag 3 and secured to first member 4 by means of straps 102. For easy drag, stretcher 101 may be conveniently fitted with sling strap 78 secured to the underside of sheet 2 as shown in Fig.3. The structure of stretcher 101 in Fig.13b may be converted into a toboggan 104 (Fig.14) by simply substituting bars 95" with bars 105 having, at one end, upward-curving sections 106 crossed and tied together at the ends by rope 107 which is also threaded through loops 16 supporting

the adjacent rigid bar 17. Sections 106 may then be fitted with further ropes 108 for pulling toboggan 104.

Alternatively, the said toboggan 104 may also be used as a makeshift sleigh.

5 Sleeping-bag 3 in Fig.1 is formed from foldable part 38 in Fig.15, by folding the long sides inwards to overlap and join adhesive strips 41 and 42, and by folding up projecting portion 40 to join adhesive strip 44 to sections 45 or 46, depending on the required length of sleep
10 ing-bag 3. Hood 39 is formed starting from notch 55 by forming a triangle as shown by the dotted diagonal lines and securing adhesive strip 57 over the matching adhesive strip 56. Strip section 56 on the long side of hood 39 may then be joined to the matching adhesive strip section 43 on part 38. As shown in Fig.16, if left open,
15 part 38 may be used as a cape, with or without the hood, by separating adhesive strips 52 and 53 and lifting up flap 51 so as to uncover opening 50 in which to insert the head. Adhesive strip 56 on hood 39 may be secured to
20 adhesive strip 54. The Fig.16 cape may also be converted into a coat, as shown in Fig.s 17, by wrapping the front edges of part 38 behind the back (Fig.17a), joining adhesive strips 41 and 42 so as to secure the front edges round the body, folding the rear of part 38 towards the
25 front (Fig.17b) and joining adhesive strips 41 and 42 to form ample sleeves.

Foldable part 38 may also be used as a heat-reflecting screen (Fig.18) by setting it up vertically at an angle and securing it by means of ties 48 to two end poles 111
30 and a middle pole 112. The heat given off by a fire in

front of the user sitting between the fire and folded part 38 is reflected by the outer surface of part 38 which is made of heat-reflecting material. The said part 38 may also be used as a sun-shade, as shown in 5 Fig.19, by securing it, by means of ties 48, to pegs 67 at one end and, at the other, to vertical poles or branches 114 held taut by ropes 115. One of the long sides on part 38 may be fitted with additional sheet 59 for closing off one side of the shade.

10 When packed up for carrying, the convertible, multipurpose bag 1 according to the present invention is compact and lightweight (about 6 kilos) and, being essentially unsinkable, may be used for boating and, as shown in Fig.20, may be stowed away easily on a canoe, dinghy, 15 windsurf board or yacht.

The advantages of the convertible, multipurpose bag 1 according to the present invention will be clear from the foregoing description. Firstly, a single, strong, relatively lightweight, buoyant, tearproof, shockproof 20 bag provides easily and quickly for a wide range of different configurations for various alternative functions. Secondly, the various loose parts supplied with the bag are all easily obtainable on the market and just as easily replaced if lost or damaged. The flexible tension 25 ing bows on the tent, for example, may easily be replaced by pliable branches or any type of plastic or metal tube, such replacement requiring very little modification. The same applies to the bars inserted through loops 7 on the sides of sheet 2, which may easily be re 30 placed by branches.

To those skilled in the art it will be clear that changes may be made to the convertible bag as described herein without, however, departing from the scope of the present invention.

- 5 For example, top sheet 6 may be replaced by sleeping-bag 3 secured to bottom sheet 5 round the edges, the said tent tunnel being formed from the said sleeping-bag 3, in parti-
cular, using part 38 into which are inserted flexible ten-
sioning bars 63.
- 10 Likewise, the said bag 1 may be used for other than the functions described. For example, it may be used as a life-
jacket, stowed under the benches or in the peak of a small sailing craft, or used for sea rescue purposes by fitting
a life line through one of through holes 9. It may be used
15 as a backrest for rear-seat passengers on motorcycles or off-round vehicles. Additional sheet 59 may be used as a makeshift square or triangular sail using ribbon portions
8", loops 60 and hooks 61. As each sleeping-bag 3 is red inside, it may conveniently be used as a rescue or warn-
20 ing flag readily visible from the air (in the case of air rescue) or at a distance, if waved. Finally, the thermal insulation properties of foldable part 38 enable it to be
used for protection against heat, whereas its flameproof and heat-reflecting properties enable its employment for
25 protection against or for extinguishing fire.

CLAIMS

- 1) - Convertible, multipurpose bag (1) characterised by the fact that it comprises a first essentially rectangular member (4) made of foldable material and designed to form a compartment for accommodating at least one person, the said first member (4) being connected to second members (20, 21, 22) also made of foldable material and designed to fit over and enclose in compact manner the said first member (4), when the latter is packed up.
- 2) - Bag according to Claim 1, characterised by the fact that the said second members (20, 21, 22) are arranged on at least two adjacent sides of the said first member (4), and that pockets (24, 25, 28, 29, 32, 33) are formed in the said second members (20, 21, 22) for holding miscellaneous items (63, 59, 67).
- 3) - Bag according to one of the foregoing Claims, characterised by the fact that at least some of the said second members (21, 22) are fitted with fast connecting and release members (36, 37).
- 4) - Bag according to one of the foregoing Claims, characterised by the fact that the short sides of the said first member (4) are fitted with rigid supporting members (17) designed to stiffen the said first member (4) crosswise, and that the long sides of the said first member (4) are fitted with loops (7) designed to receive members providing for lengthwise stiffening of the said first member (4).
- 5) - Bag according to one of the foregoing Claims, characterised by the fact that the said first member (4) com-

prises a first bottom sheet (5) rectangular in shape and to which is joined a second sheet (6), at least wider and designed to form the top part of a tent (85, 88, 96), or to which is joined a sleeping-bag (3), provision being
5 made in the said second sheet (6) or sleeping-bag (3) for inserting framing members (63) for forming the said compartment and having ends (66) designed to fit on to the sides of the said first sheet (5).

6) - Bag according to Claim 5, characterised by the fact
10 that provision is made for fitting a third sheet (59) made of waterproof material on to the said second sheet (6).

7) - Bag according to one of the foregoing Claims, characterised by the fact that the said first member (4) is fitted with means (78) enabling shoulder support when the
15 said first member (4) is packed up by means of the said second members (20, 21, 22).

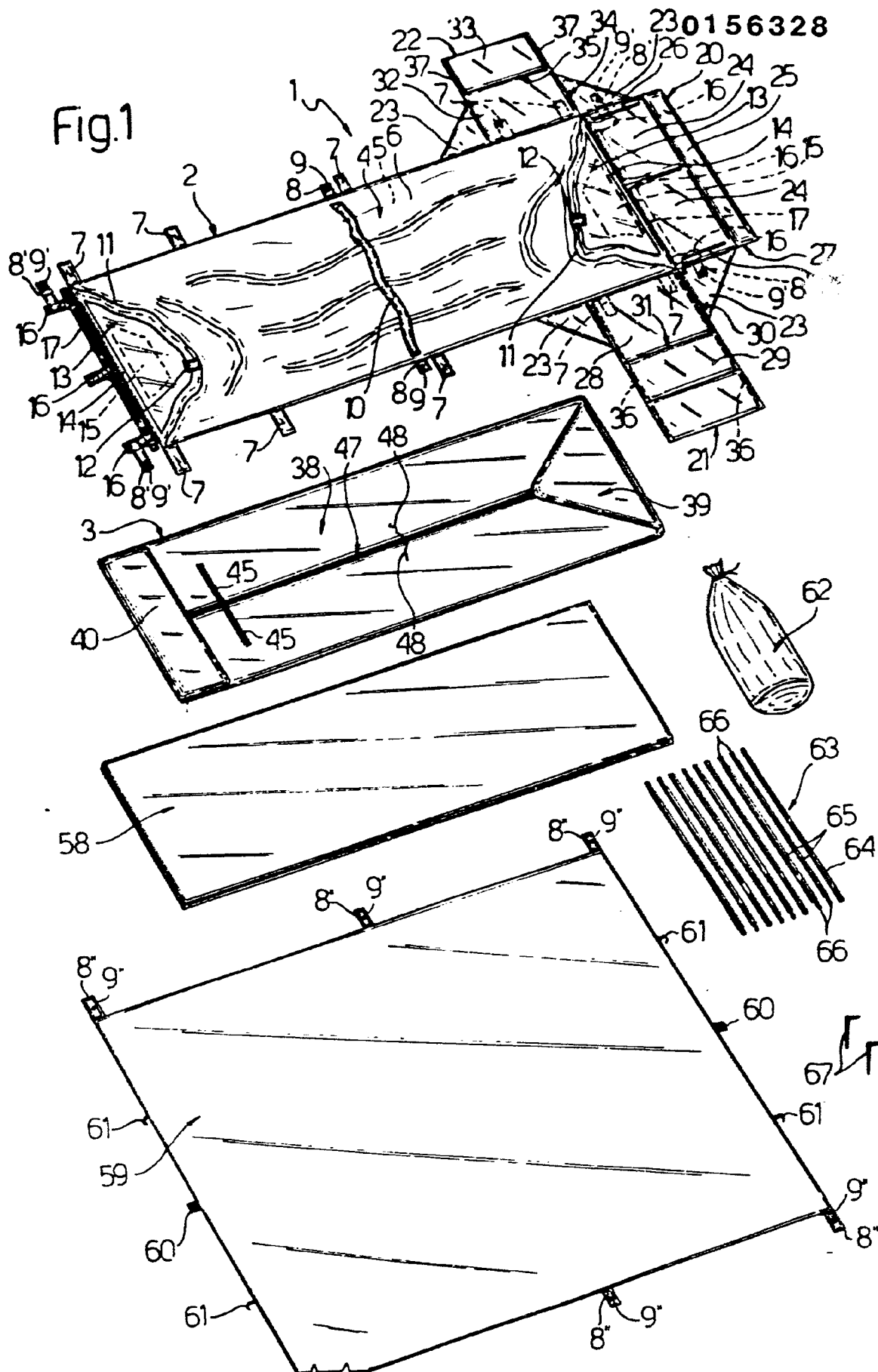
8) - Sleeping-bag (3) characterised by the fact that it comprises a member (38) made of heat-reflecting, padded material, essentially rectangular in shape and having fast
20 connecting and release means (41, 42, 44, 45, 46) for forming a bag and a centre opening (50) with fast opening and closing means (51, 52, 53) enabling the said member (38) to be placed over the head.

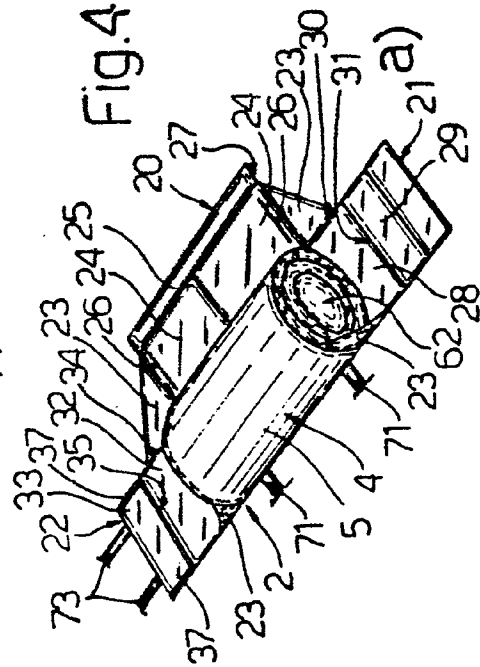
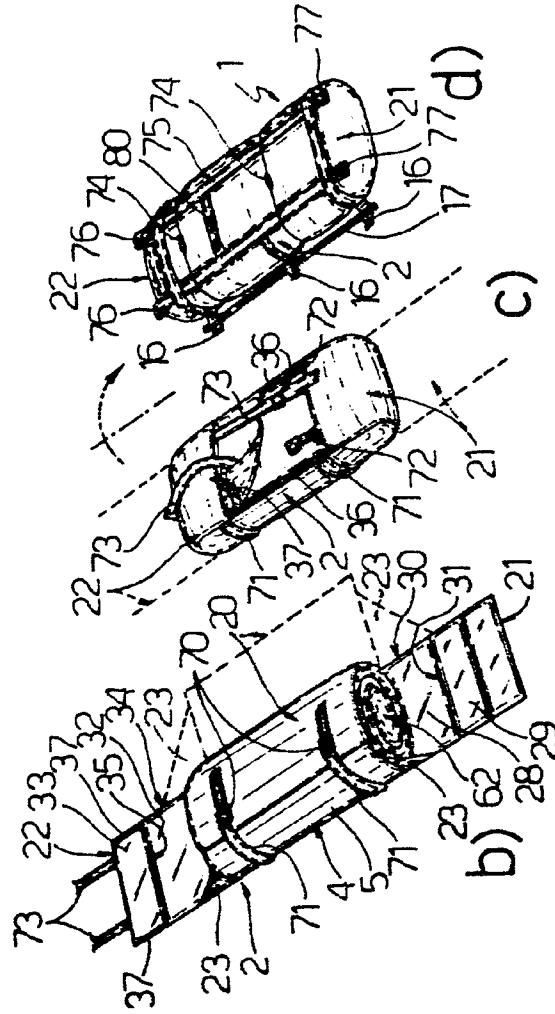
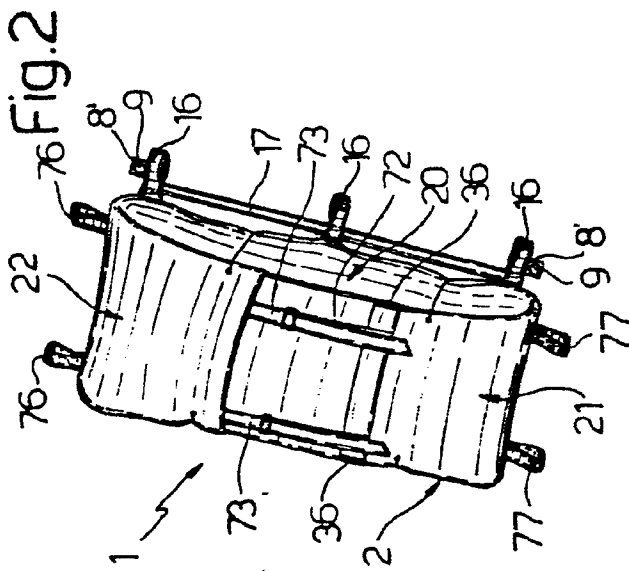
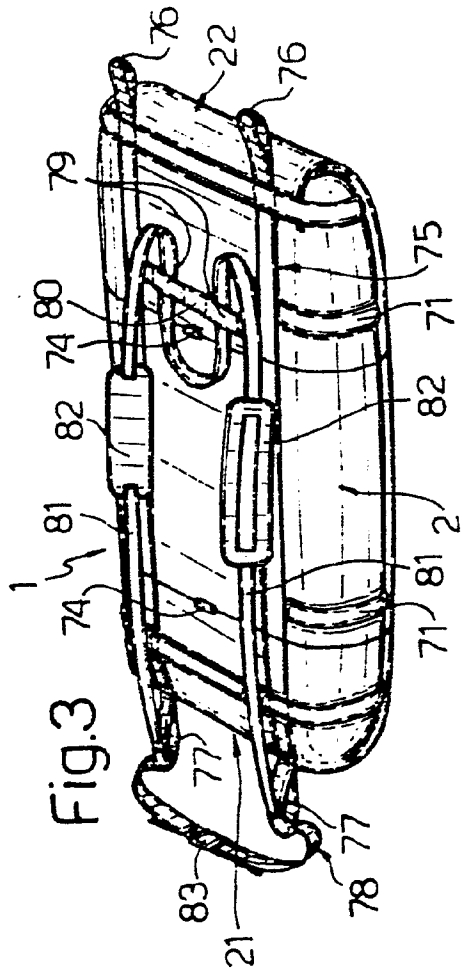
9) - Sleeping-bag according to Claim 8, characterised by
25 the fact that the said fast connecting and release means (41, 42, 44) are arranged at least round edge sections of the said member (38).

10) - Bag according to one of the foregoing Claims from 1 to 7, characterised by the fact that it comprises a
30 sleeping-bag (3) according to Claim 8 or 9 which may be

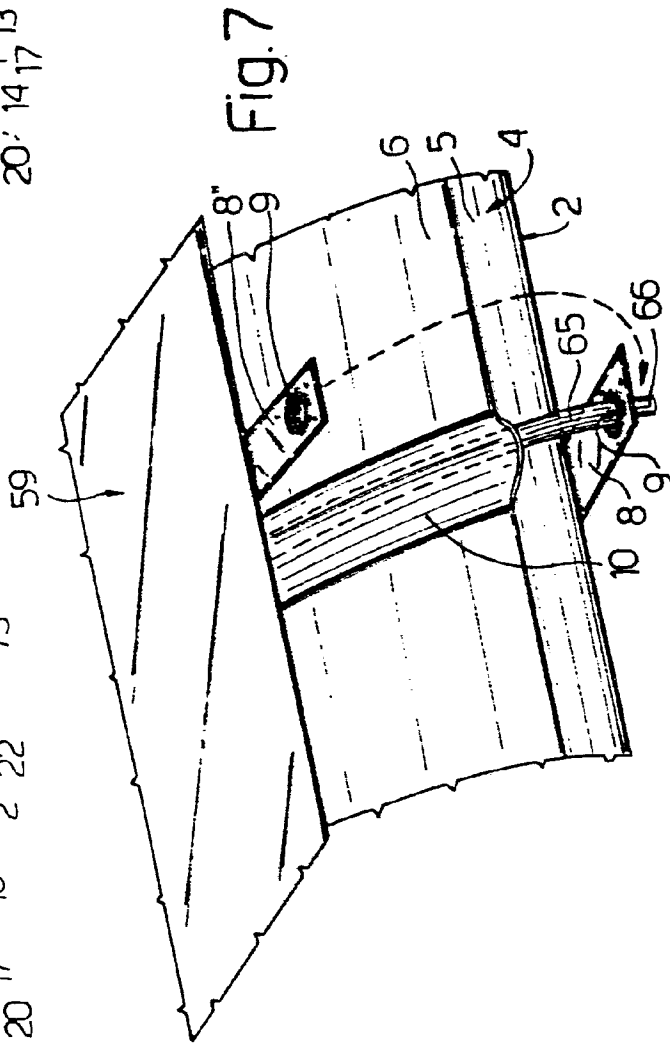
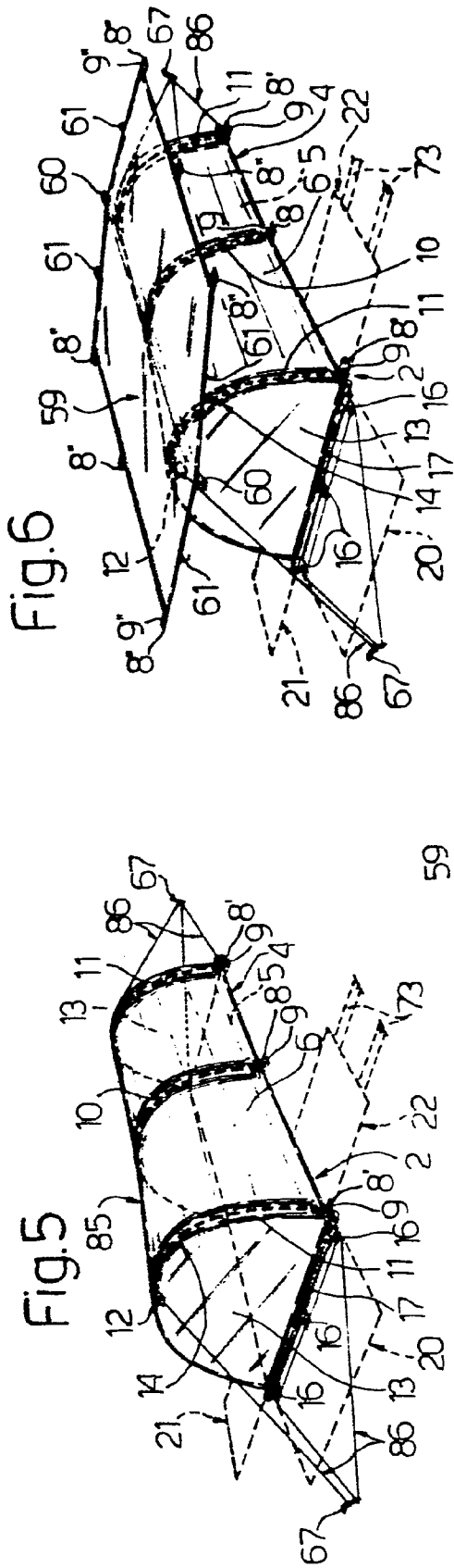
rolled up inside the said first member (4).

Fig.1





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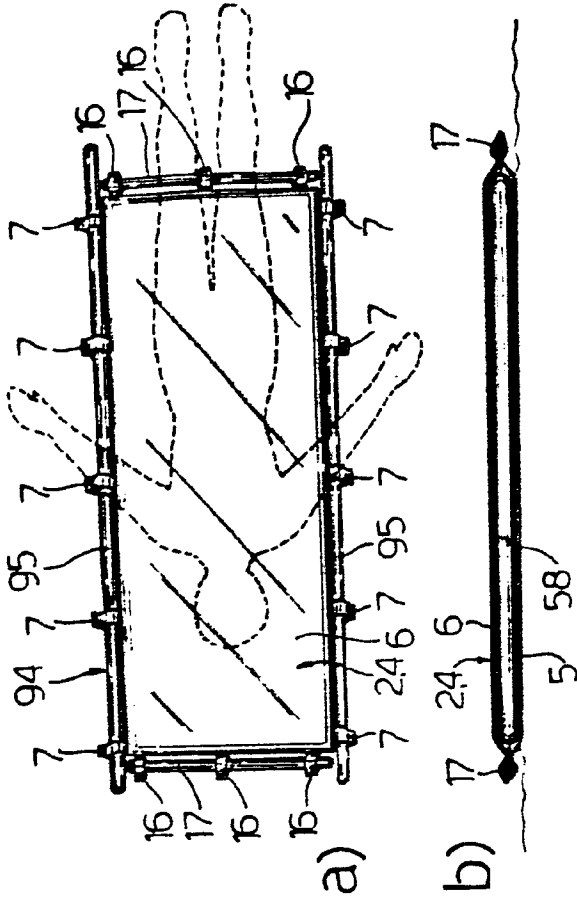


Fig. 11

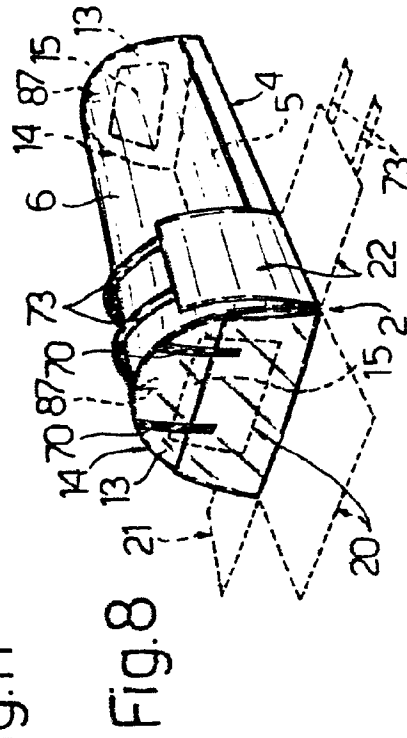


Fig. 8

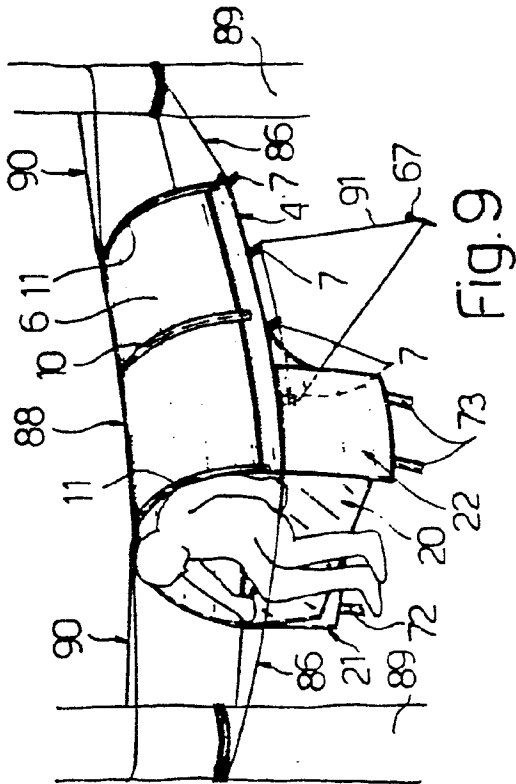


Fig. 9

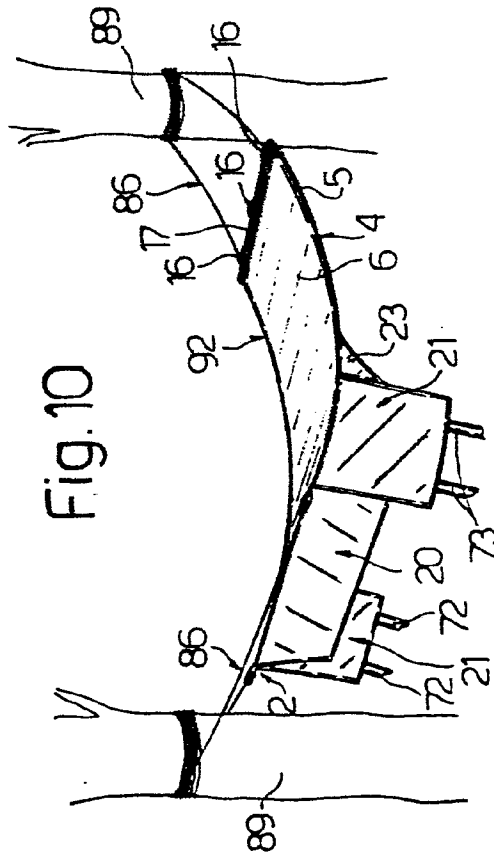


Fig. 10

