(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 487 162 A1**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **91203012.9**

(51) Int. Cl.5: **A44B 17/00**

(22) Date of filing: **19.11.91**

(30) Priority: **22.11.90 IT 2215190**

(43) Date of publication of application:
27.05.92 Bulletin 92/22

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

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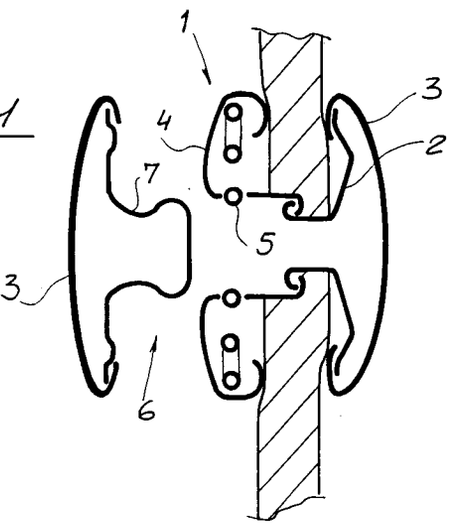
(54) Improved press-stud.

(57) Reversible press-stud allowing fastening on the left or right, inside or outside of clothing, belts, bag shoulder straps and so on, closing the fasteners with a decorative interchangeable snap element.

Fig. 1



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The present invention refers to an improved press-stud which allows the reversible fastening of any type of clothes, belt, shoulder strap, bag, and so on.

The press-stud, also commonly called snap fastener, has been known for many years now and is an indispensable element used mostly for clothing and in almost all clothing accessories such as bags, pockets, attachment of waterproof hoods, external application of decorative elements, overshoes, belts, and so on.

It is well known that every press-stud utilises the fixing of the male and female elements which have more or less decorative external studs.

After fixing however, the coupling of the male and female element is only possible in the way in which they are arranged and thus they are not reversible in order, for example, to fasten clothing on the left or right, reverse the external side of the clothing, invert the decorative side of a belt or change the length of the shoulder strap of a bag without leaving one or more male or female press-studs uncovered with obvious aesthetic impairment.

The present invention practically solves said problems in that each press-stud, whether male or female, has a corresponding stud or cap functioning as a decorative element which can be applied by pressing like the said press-studs to close those not used and at the same time allow reversibility of the coupling.

In addition elements with a double male connection allow only female elements, male-female elements and/or decorative studs to be fitted to their two connections as desired.

Giving a practical example, a shoulder strap for a bag with press-studs, according to the present invention, may be adaptable to various lengths and the user may adapt it ergonomically by removing the studs from the press-studs to be fastened in order to snap them in to those left uncovered thus retaining an attractive appearance.

It is also possible to invert the overlapping of the ends of the shoulder strap or reverse the decorative part of the same, again by making use of the reversibility of the press-stud. Naturally the press-studs of the present invention may be applied to articles with automatic machines like any other press-stud.

A further advantage of the invention is that the studs may be substituted on articles of clothing to change the colour, decoration and appearance in a co-ordinated and personalised way.

The studs or snap fastening caps may be made in any colour and/or with any decorative design desired and the user may buy a series of assorted studs together with the fasteners, or buy them separately every time a change in the external appearance of the fasteners is required.

In practice, this improved press-stud may also assume different forms which fall in the scope of the present invention, which will be described hereinafter in detail, purely as a non-limiting example of the scope of the invention, and with reference to various figures in the appended sheets of illustrative drawings, in which:

Figure 1 shows a simplified schematic view of the elements comprising a female fastener with male stud to be applied externally;

Figure 2 shows a simplified schematic view of the elements comprising the male fastener;

Figure 3 shows a simplified schematic view of the elements comprising a male fastener on which a female stud is fixed;

Figure 4 schematically shows two possible forms of embodiment of the fasteners in question, in which the various elements to be coupled are shown;

Figure 5 shows another form of embodiment in which, as an example, the overlapping of two ends of a belt, to be fastened by the press-studs in question and one of the press-studs left unused with a decorative stud are shown;

Figure 6 is a view with the parts detached of another form of embodiment of the fastener with the central element having a double male connection;

Figure 7 is a view analogous to figure 6, in which however the female element is substituted by a male and female element which allows reversible use;

Figure 8 is a view analogous to figure 6 of a fastener completely similar to that of figure 6, but designed for clothes where large buttons with strong mechanical resistance are not necessary; and

Figure 9 is a view analogous to figure 7 showing the fastener of the preceding figure 8 in its reversible version.

With reference now to figure 1 of the appended drawings, the improved female fastener 1 comprises an external element 2 with decorative stud or cap 3, which is coupled and rivetted to the true and proper fastener 4 with a retaining flat spiral spring 5, of known type, made of steel spring wire positioned to force in the internal cavity the female fastener.

In the latter, a free male stud or cap 6 formed by a connection element 7 coupled to a decorative cap 3, may be inserted.

The male fastener 8 according to the present invention shown in figure 2 comprises a passing element 9 with cap 3, which is inserted and rivetted to internal element 10 forming the true and proper coupling connection 11.

As one can see from Figure 3, a free female stud 12, formed by an internal element 13 also

having a retaining spring 5 in its internal cavity and by corresponding aesthetic cap 14, may be coupled to male fastener 8.

In practice, a series of seven elements allows the improved press-stud in question to be formed, which is reversible for various applications for clothing in general as represented schematically in Figures 4 and 5. For example belts may be fastened with right or left overlapping, hoods attached to raincoats and reversible coats by applying free studs or caps to the outside or inside of male-female fasteners 15, or the length of a belt changed by overlapping the ends and applying the aesthetic elements to the fasteners left unused.

In particular, in the upper part of figure 4 a connection can be seen between two edges of material in which the edge A may be attached in front of or behind edge B thanks to the male-female element 15 which allows the female stud 12 to be attached to one side and the male cap 6 to be attached to the other side. At the centre of figure 4 the masking of the male fastener 8 by means of the decorative stud 12 is shown, while the lower part of figure 4 shows the reversible use by means of the element 16 with a double male connection which on one side allows the attachment of the stud 12 and on the other side the attachment of a male-female element 15 that may therefore be closed on the opposite side by another decorative stud 12.

In the upper part of figure 5 one can see the masking of a female fastener 1 with the male cap 6 and in the lower part the closing of the female fastener 1 by coupling it with the male fastener 8.

The utilization of element 16 with double male connection is illustrated more clearly in the subsequent figures 6-9.

Figure 6 is a view with parts detached of another form of embodiment of the fastener, with central element 16 with a double male connection 17 and 18 on two ends. On one side the stud 12 is applied, while on the other the female element 19, comprising disc 21, having a spring 5, and counterdisc 20 for connection to the fabric, is applied.

Figure 7 is analogous to figure 6, but instead of female element 19 male-female element 22 is applied, also having an internal spring 5 and disc 21, but counterdisc 20 is replaced by a male connection 23 onto which another decorative stud (not shown in the drawing) of the same type as stud 12 is applied.

Figures 8 and 9 show a form of embodiment of the fastening which is completely analogous to that of figures 6 and 7, and in fact the various components have the same reference numbers with the addition of the letter A. This fastener in figures 8 and 9 has a lock ring spring 5A in its internal cavity with a smaller force than that of flat spiral or fork-like spring 5 shown in the preceding forms of embodiment, and thus this fastener is generally smaller in size and is particularly suitable for clothes where large fasteners with strong mechanical resistance are not necessary, such as for example women's or children's clothes, shirts, jumpers and so on.

Finally it must be emphasized that the various elements making up the press-studs of the present invention may be made in any suitable material, for example rubber, nylon, zamak, resin, various plastic materials and so on, and naturally in any colour, size and/or with any type of decorative design desired.

As can be understood from this detailed description the present invention represents the most innovative solution in the field of press-studs, also emphasising the fact that the forms of embodiment shown does not limit the scope of the invention, but on the contrary one must understand that numerous modifications, additions, variations and substitutions of elements may be brought to the present invention, without by this altering either its spirit or object nor leaving its scope of protection as is also defined by the appended claims.

Claims

1. Improved press-stud, comprising male fastening and female fastening elements, with male and female connections, and with a double male connection characterized by free studs or caps to be applied to male or female connections of the fastening elements indifferently, in order to obtain maximum flexibility and reversibility of use and allow the fastener to be used in different positions, with the facility of applying the free stud or cap to any of the elements positioned externally and/or internally on the article to which the press-stud has been fixed.

2. Fastener according to claim 1, characterized in that each male stud, when not utilised may be coupled to a free female stud.

3. Fastener according to claim 1, characterized in that each female fastener may in turn be coupled to a free male stud.

4. Fastener according to claim 1, characterized in that elements which are contemporaneously male and female can be arranged in order to couple them reversibly with other complementary male or female elements.

5. Fastener according to claim 1, characterized in that it has elements with a double male connection, which allow application of a free stud

or cap on one side and a female fastener or a male-female element on the other side to close in turn with a free stud or cap on the opposite side.

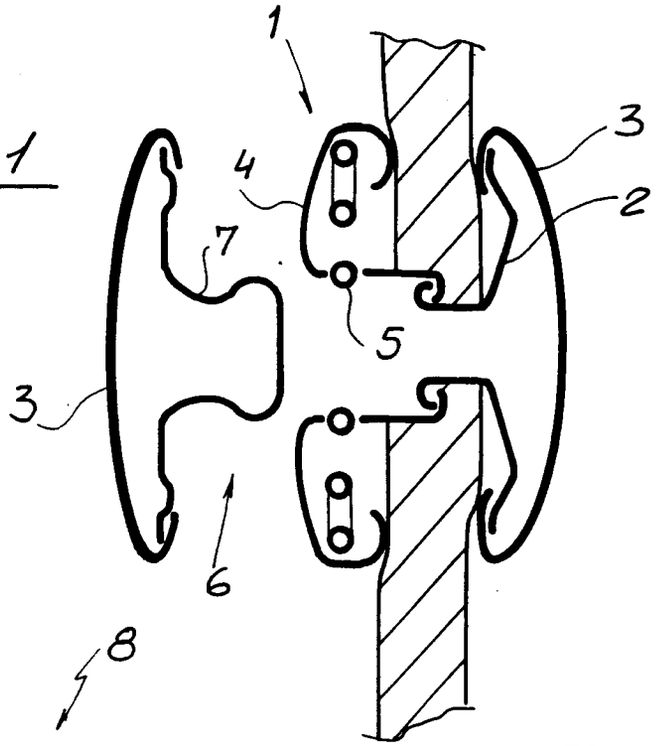
6. Fastener according to claim 1, characterized in that the elastic force of the automatic snap of the closure is produced by a spring positioned in its internal opening, which may be of a flat spiral or fork-like type or lock ring type.

7. Fastener according to claim 1, characterized in that the interchangeableness and the substitution of the decorative stud or cap elements allow colour or design co-ordination with the clothing or accessory being worn.

8. Fastener according to claim 1, characterized in that the decorative studs or caps which can be inserted in the fixing elements, in turn have a male protrusion or a female cavity, for coupling to the complementary fastening element.

9. Fastener according to any one of the preceding claims, characterized in that its component elements may be made in rubber, nylon, zamak, resin, plastic materials and so on, as well as in any colour and/or size, and also have any decorative design.

Fig. 1



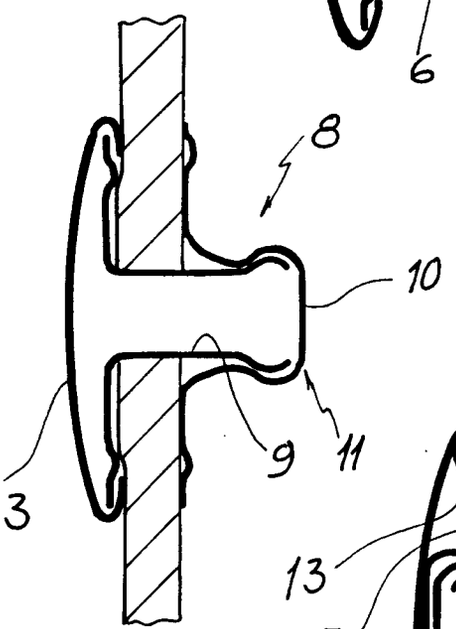
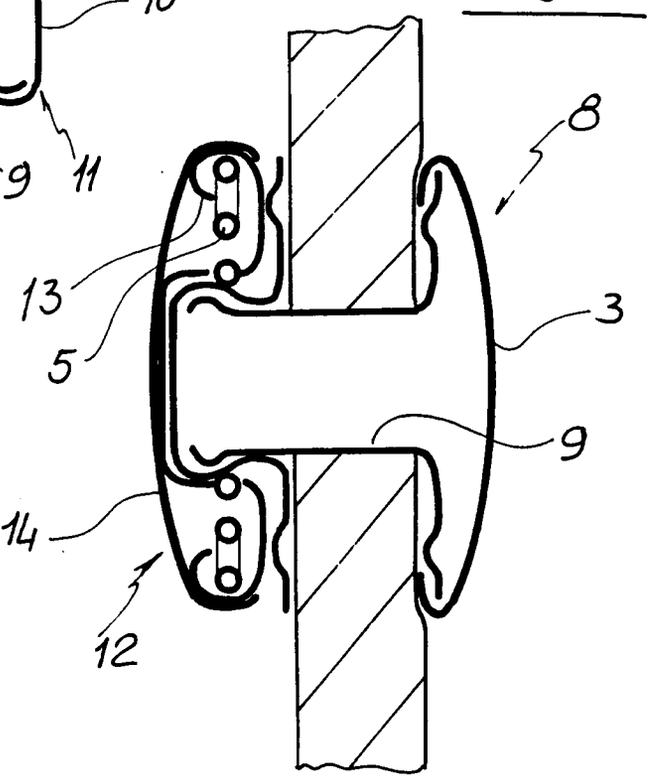


Fig. 2

Fig. 3



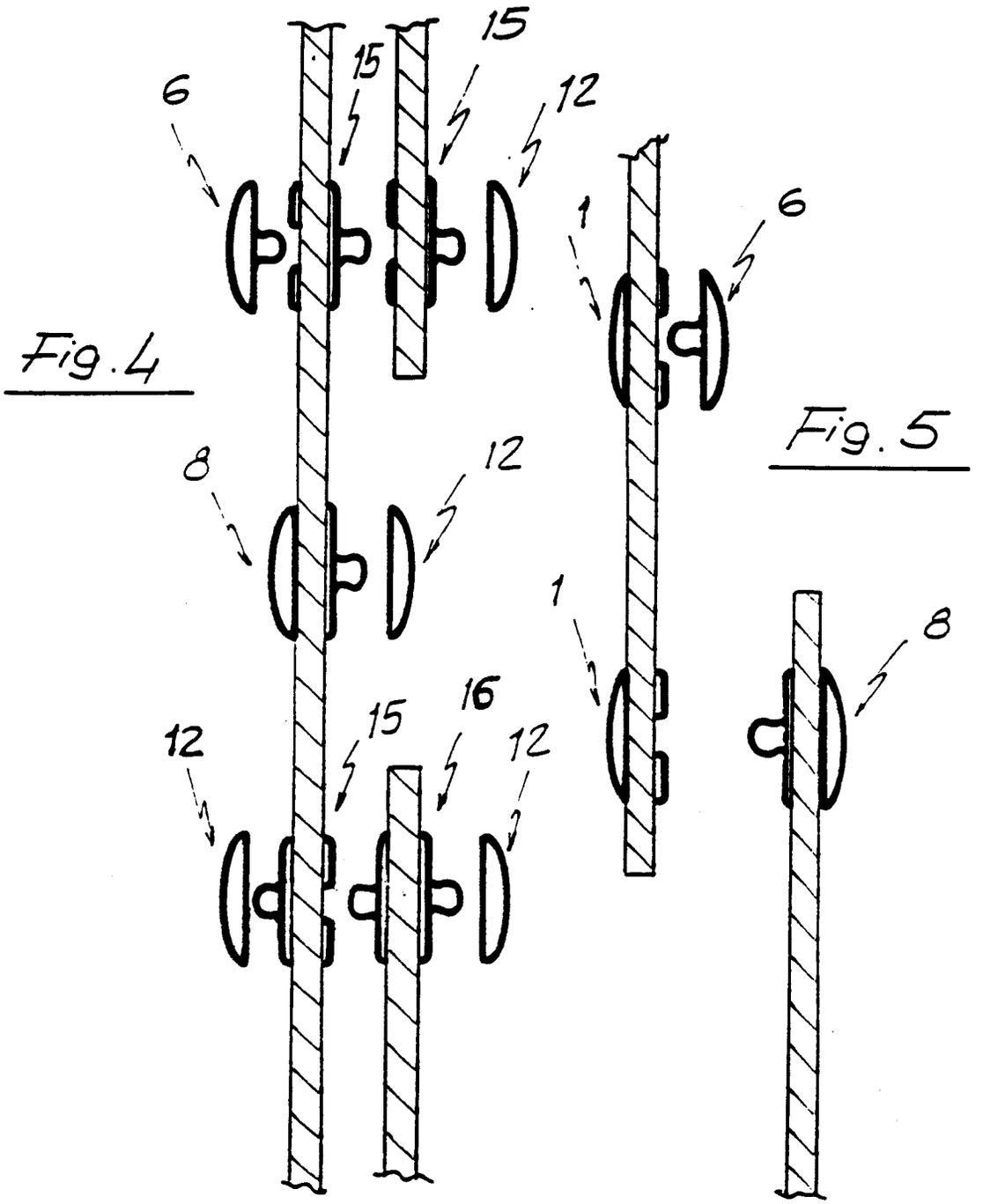


Fig. 4

Fig. 5

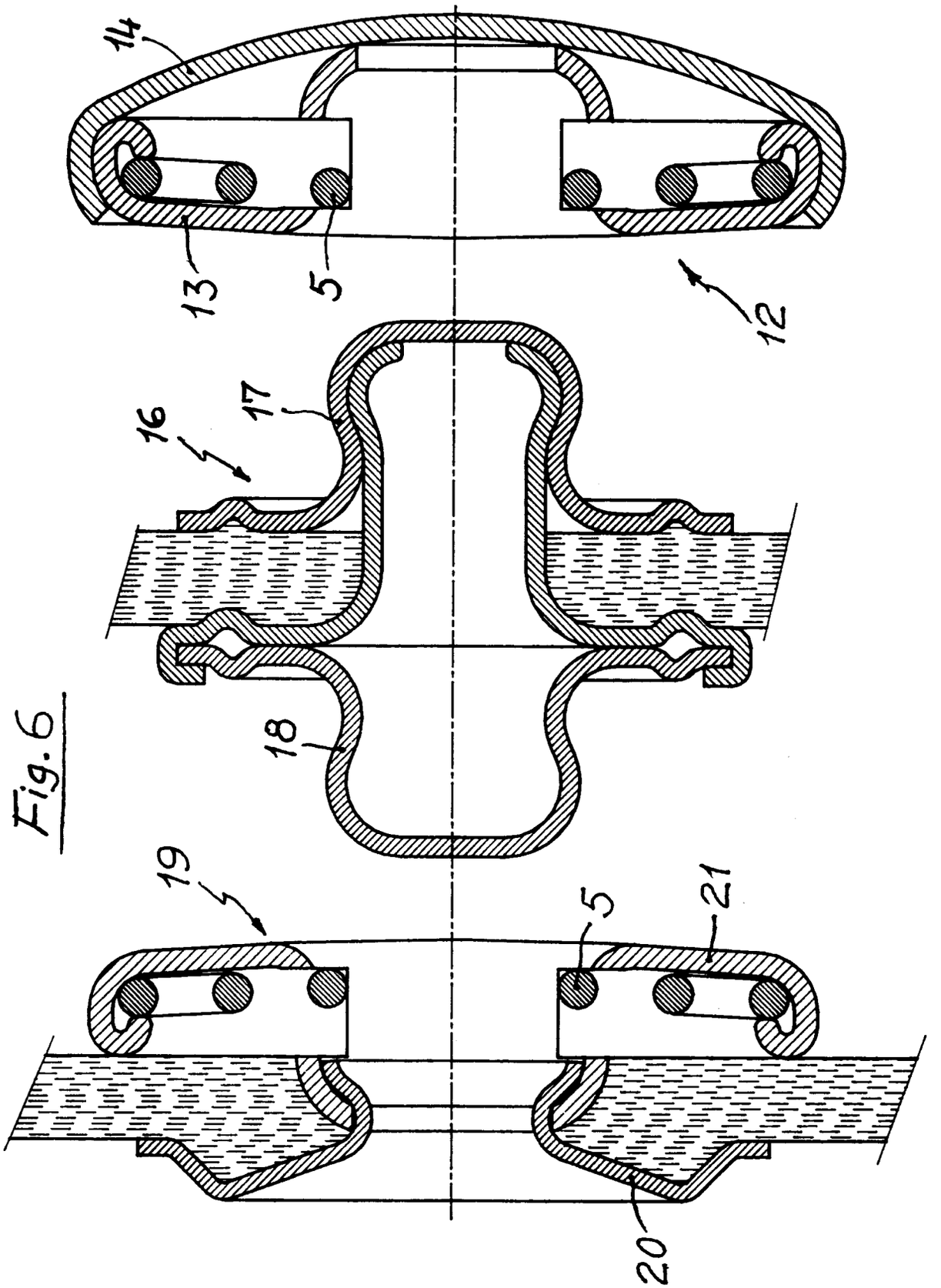


Fig. 6

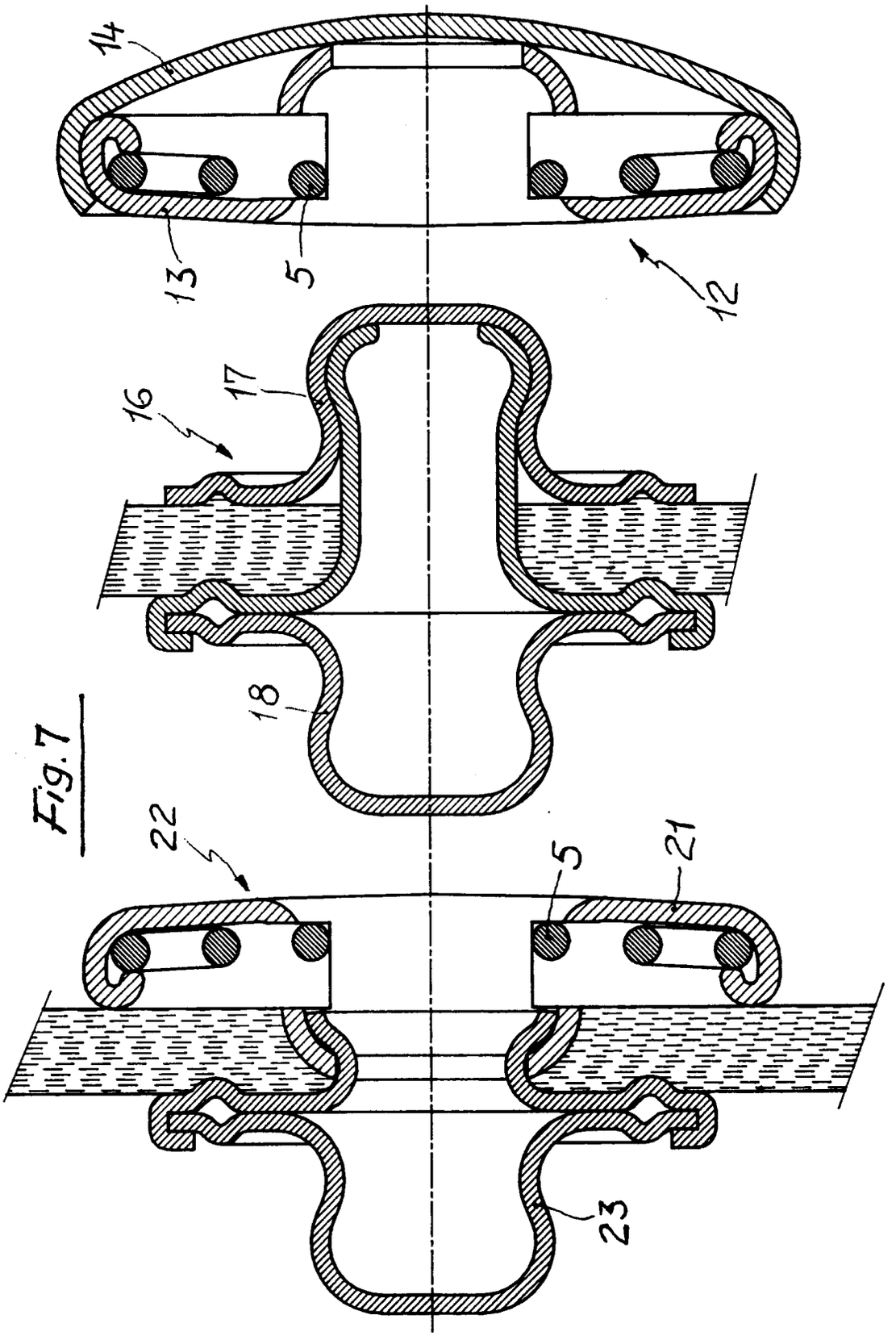


Fig.7

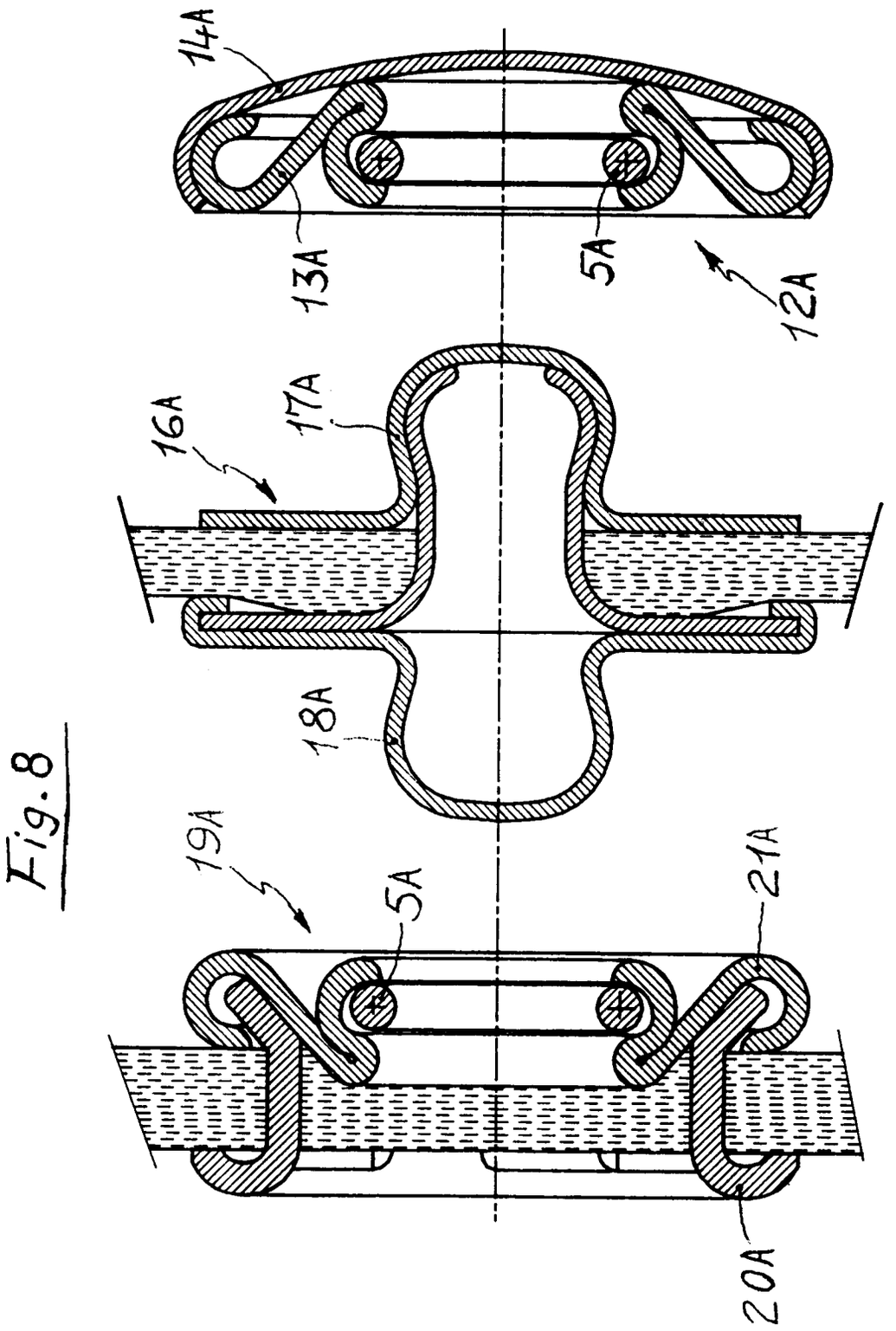


Fig.8

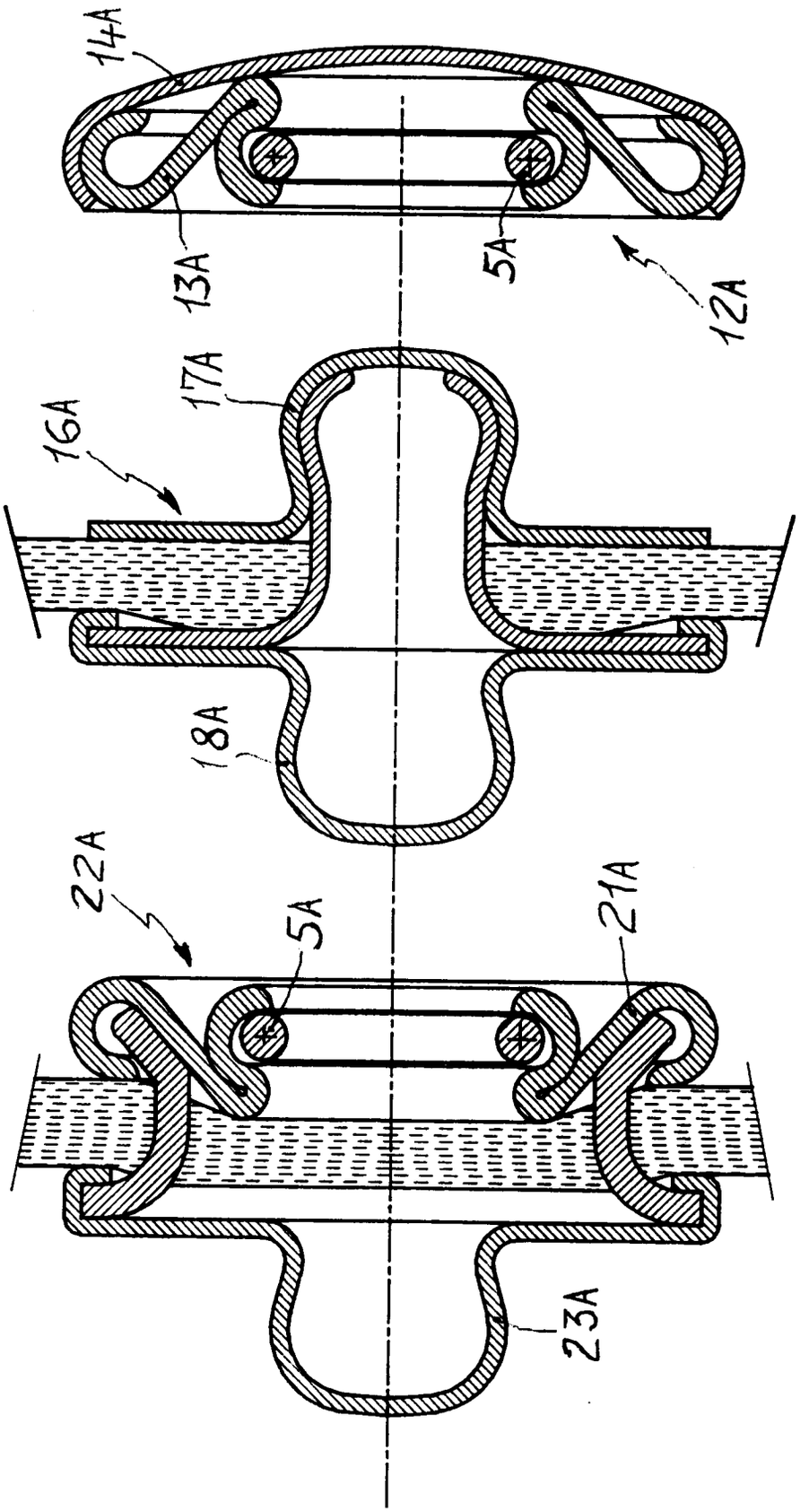


Fig.9

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EUROPEAN SEARCH REPORT

Application Number

EP 91 20 3012

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)
X	US-A-1 468 612 (E.S. JOHNSON) * the whole document * ---	1-9	A44B17/00
A	GB-A-104 459 (E. LINDE) * the whole document * ---	1-6	
A	DE-A-3 821 003 (WILLIAM PRYM-WERKE GMBH & CO) * column 3, line 29 - column 5, line 8; figure 1 * ---	1-6	
A	FR-A-374 623 (H. WAGNER) * the whole document * ---	1-5	
A	FR-A-819 745 (J. KUNA & B. SIPKOVA) * the whole document * -----	7	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5) A44B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	05 FEBRUARY 1992	M. VANMOL

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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