



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 753 271 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
15.01.1997 Bulletin 1997/03

(51) Int. Cl.⁶: **A44B 17/00**

(21) Application number: **95202820.7**

(22) Date of filing: **18.10.1995**

(84) Designated Contracting States:
BE CH DE ES FR GB GR LI MC NL PT SE
Designated Extension States:
LT

(72) Inventor: **Corti, Marco**
I-22053 Lecco (IT)

(74) Representative: **Appoloni, Romano et al**
ING. BARZANO' & ZANARDO MILANO S.p.A.
Via Borgonuovo 10
20121 Milano (IT)

(30) Priority: **14.07.1995 IT MI951528**

(71) Applicant: **FIOCCHI SNAPS S.p.A.**
22053 Lecco (IT)

(54) **Method for mounting a simplified press-stud, and the relative press-stud**

(57) A method for mounting a simplified press-stud of the type comprising a male portion (12), a male backing portion (13) and a washer (14) joinable together by riveting or clinching about fabric or the like, in which in a step preceding their positioning on the fabric, the male backing portion (13) and the washer (14) are joined together by clinching portions thereof. A simplified

press-stud comprises a male portion (12), a male backing portion (13) and a washer (14) joinable together by riveting or clinching about fabric or the like, the male backing portion (13) and the washer (14) being joined together by clinching portions thereof.

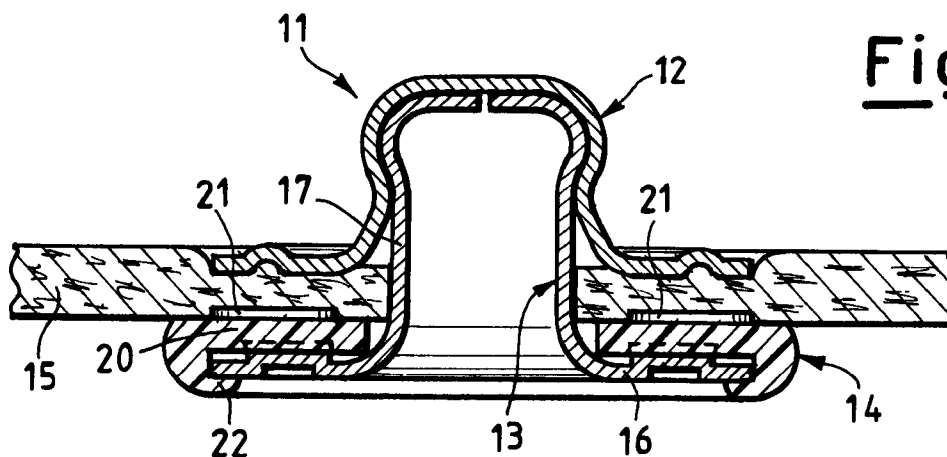


Fig.1

EP 0 753 271 A1

Description

This invention relates to a method for mounting a simplified press-stud, and to a relative simplified press-stud.

The male part of metal press-studs usually consists of a male portion and a male backing portion which are connected together and fixed onto the fabric by directly riveting them.

In those cases where the fabric is frayable and/or of small thickness, this type of fixing requires a reinforcement element to be interposed between the male portion and the male backing portion of the press-stud and the fabric onto which they are fixed in order to improve positioning, ensure their stability and prevent fraying of the fabric.

Generally this reinforcement element is a washer, normally of plastics material, which is inserted manually between the male portion and male backing portion of the press-stud before riveting.

This operation increases the time required to fix the press-stud to the fabric and is susceptible to human error as the washer is inserted completely manually.

An object of the present invention is to provide a method for mounting a simplified press-stud, and specifically a press-stud having a simplified male part, which overcomes the drawbacks deriving from the manual positioning of the washer, by if possible completely eliminating this manual operation.

A further object is to provide a press-stud which can be used in automatic or semi-automatic machines for its application to fabric or to articles of clothing.

These objects are attained according to the present invention by a method for mounting a simplified press-stud of the type comprising a male portion, a male backing portion and a washer joinable together by riveting or clinching about fabric or the like, characterised in that, in a step preceding their positioning on said fabric, said male backing portion and said washer are joined together by clinching portions thereof.

Furthermore according to the invention a simplified press-stud is provided comprising a male portion, a male backing portion and a washer joinable together by riveting or clinching about fabric or the like, characterised in that said male backing portion and said washer are joined together by clinching portions thereof.

The characteristics and advantages of a simplified press-stud according to the present invention will be more apparent from the description thereof given hereinafter by way of non-limiting example with reference to the accompanying schematic drawings, in which:

Figure 1 is a section through a simplified press-stud in accordance with the present invention mounted on a piece of fabric;

Figure 2 is a section through the holding washer separated from the male backing portion of a press-stud according to the invention, such as shown in Figure 1;

Figure 3 is a section through the washer and male backing portion of Figure 2 prior to their mounting but after they have been fixed together;

Figures 4 and 5 are plan views of the washer from above and below; and

Figure 6 is a section through the male portion of Figure 1 before being mounted on the fabric.

The figures show the male part of a simplified press-stud according to the present invention, both as a mounted assembly and in its component parts.

A press-stud, indicated overall by 11, comprises a male portion 12, a male backing portion 13 and a washer 14, these being positioned about a partially illustrated piece of fabric indicated by 15.

The male backing portion 13, of metal construction, comprises an annular base region 16, from the centre of which there extends a tubular region 17 coaxial with the hole in the annular base region. In part of the base region 16 there are provided drawn portions 18 in the shape of a circumferential arc, which in the example are facing upwards, ie in the direction in which the tubular region 17 extends. The drawn portions 18 extend through circumferential arc portions of different radii so as to be uniformly distributed over the base region 16. Alternatively the drawn portions can consist of inscriptions or designs provided they project to a certain extent from the surface of the base region.

The washer 14, constructed for example of polyethylene, is of inverted cup shape provided centrally with a hole 19 through which the tubular region 17 of the male backing portion 13 can be inserted. In a flat region 20 thereof, the washer 14 also comprises drawn portions 21 of circumferential arc shape, these also facing upwards in this example and consisting of circumferential arc portions of different radii so as to be uniformly distributed over the flat region 20. Likewise, the drawn portions can consist of inscriptions or designs provided they project to a certain extent from the surface of the flat region.

From the flat region 20 there extends a perimetral rim 22 defining a cup-shaped cavity able to receive the base region 16 of the male backing portion 13.

In the mounting method of the present invention, the washer 14 is firstly mounted directly on the male backing portion 13, the perimetral rim 22 then being deformed so that it embraces and locks the base region to form a single piece. It should be noted that by this operation, not only is a single piece obtained, but in addition the resultant male backing portion plus washer has essentially the same size as a standard male backing portion without the washer. This similarity between the two male backing portions enables both the male backing portion with the incorporated washer and the standard male backing portion to be handled by usual automatic and semi-automatic machines.

The press-stud portion comprising the washer 14 and the male backing portion 13, fixed together as in Figure 3 to form a single piece, is then locked onto the

fabric 15 with the aid of the male portion 12.

This operation is done by automatic or semi-automatic riveting to achieve the mounted arrangement shown in Figure 1.

A press-stud male member simplified in accordance with the present invention hence achieves a series of important advantages.

Firstly, only two pieces have to be handled for mounting onto the desired fabric or article of clothing by riveting.

Secondly, that manual intervention which was previously necessary for inserting the washer between the male portion and male backing portion for mounting purposes is eliminated, with time and cost saving.

Finally a three channel machine can be used for applying the press-stud, enabling normal press-studs not requiring the reinforcement washer to be positioned, and press-studs with an incorporated reinforcement washer according to the present invention to be applied. This facility is particularly useful in the application of press-studs to fabric of different thicknesses.

Claims

1. A method for mounting a simplified press-stud of the type comprising a male portion (12), a male backing portion (13) and a washer (14) joinable together by riveting or clinching about fabric or the like, characterised in that, in a step preceding their positioning on said fabric, said male backing portion (13) and said washer (14) are joined together by clinching portions thereof.
2. A method for mounting a press-stud as claimed in claim 1, characterised in that said male backing portion (13) and said washer (14) are joined together by clinching portions thereof to assume a size equal to that of a standard male backing portion without a washer.
3. A method for mounting a press-stud as claimed in claim 1, characterised in that said washer (14) is formed to comprise a flat region (20), centrally holed (at 19), and from which there extends a perimetral rim (22) defining a cup-shaped cavity able to receive said male backing portion (13).
4. A method for mounting a press-stud as claimed in claim 1, characterised in that said operations are carried out in an automatic or semi-automatic machine.
5. A method for mounting a press-stud as claimed in claim 1, characterised in that said washer (14) is of polyethylene construction.
6. A method for mounting a press-stud as claimed in claim 1, characterised in that said male backing portion (13) is of metal construction.
7. A simplified press-stud comprising a male portion (12), a male backing portion (13) and a washer (14) joinable together by riveting or clinching about fabric or the like, characterised in that said male backing portion (13) and said washer (14) are joined together by clinching portions thereof.
8. A simplified press-stud as claimed in claim 7, characterised in that said washer (14) comprises a flat region (20), centrally holed (at 19), and from which there extends a perimetral rim (22) defining a cup-shaped cavity able to receive said male backing portion (13).
9. A simplified press-stud as claimed in claim 7, characterised in that said male backing portion (13) comprises an annular base region (16), from the centre of which there extends a tubular region (17) coaxial with the hole in the annular base region.
10. A simplified press-stud as claimed in claim 9, characterised in that drawn portions (18) are provided in part of said base region (16).
11. A simplified press-stud as claimed in claim 10, characterised in that said drawn portions (18) are of circumferential arc shape.
12. A simplified press-stud as claimed in claim 8, characterised in that said washer (14) comprises drawn portions (21) in said flat region (20).
13. A simplified press-stud as claimed in claim 12, characterised in that said drawn portions (21) are of circumferential arc shape.
14. A simplified press-stud as claimed in any one of claims 10-13, characterised in that said drawn portions are inscriptions or designs projecting to a certain extent.

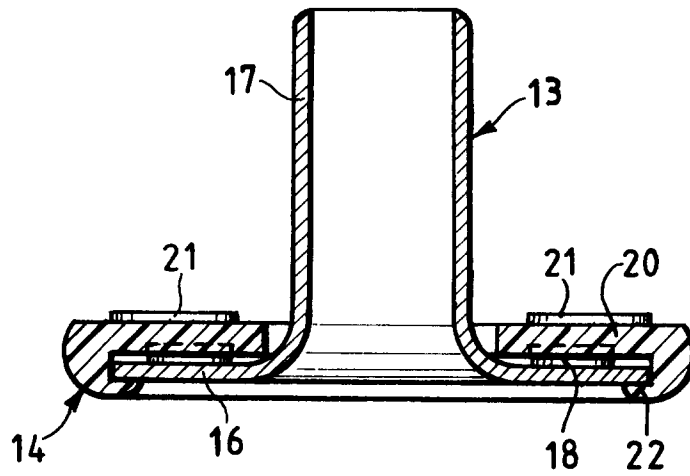


Fig.3

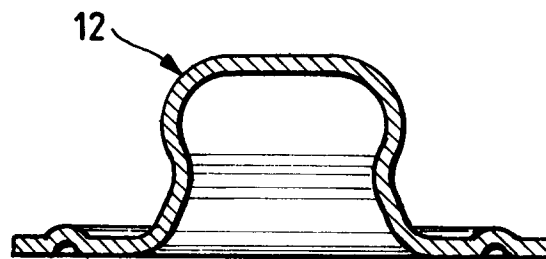


Fig.6

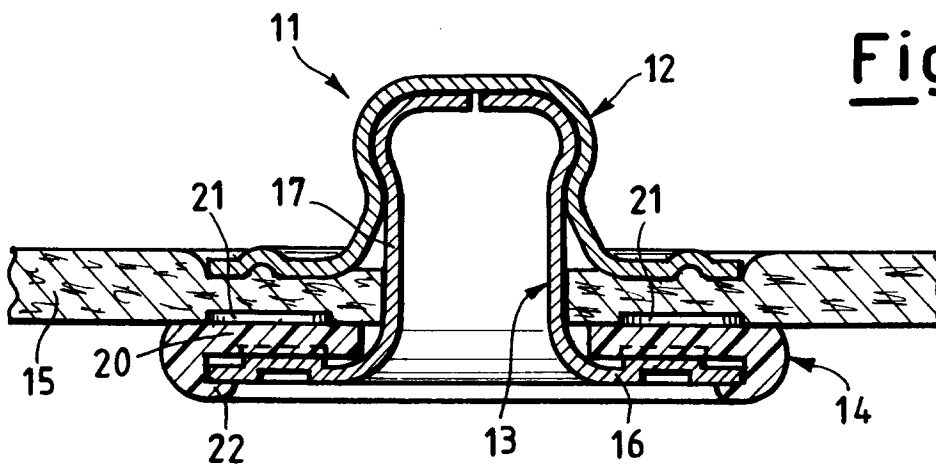


Fig.1

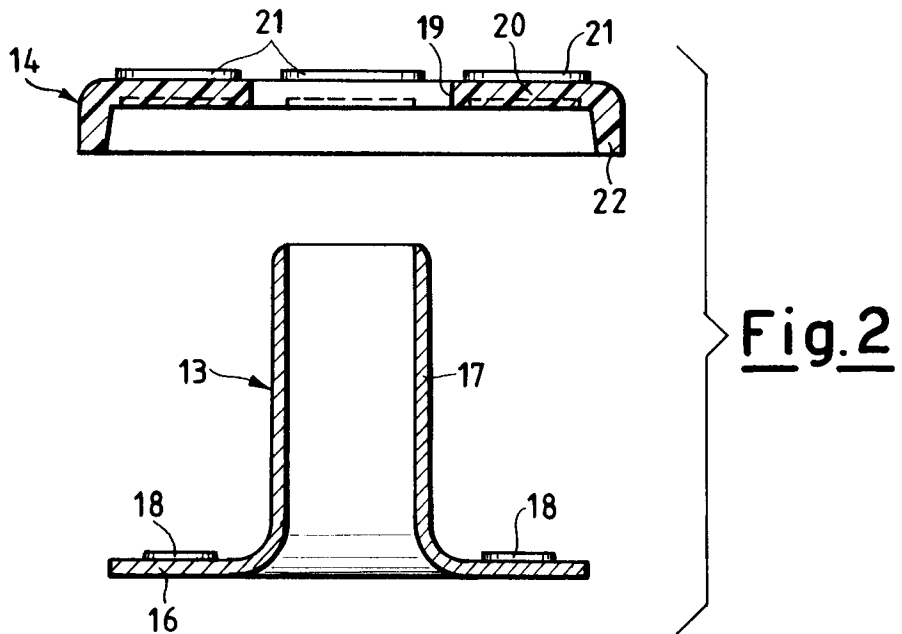


Fig.4

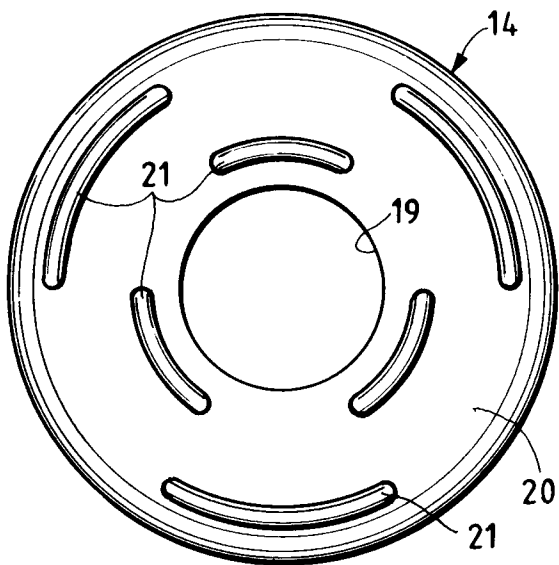
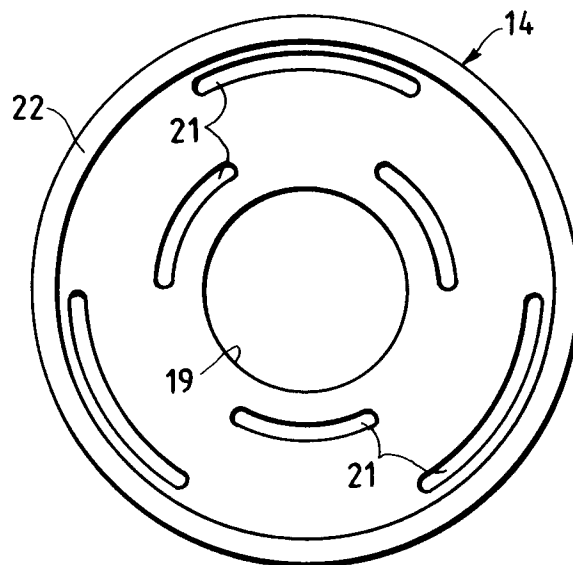


Fig.5





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 95 20 2820

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.6)
Y A	EP-A-0 600 653 (YOSHIDA KOGYO K. K.) * column 4, line 13 - line 49; figures 1,2 *	1 9,10	A44B17/00
Y	FR-A-370 167 (ALMA MANUFACTURING COMPANY OF BALTIMORE CITY) * the whole document *	1	
A	US-A-2 745 160 (UNITED-CARR FASTENER CORPORATION) * column 1, line 53 - column 2, line 6; figures 6,7 * -----	1-8	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A44B A44C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11 October 1996	Examiner Garnier, F
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			

EPO FORM 1503 03.82 (P64C01)