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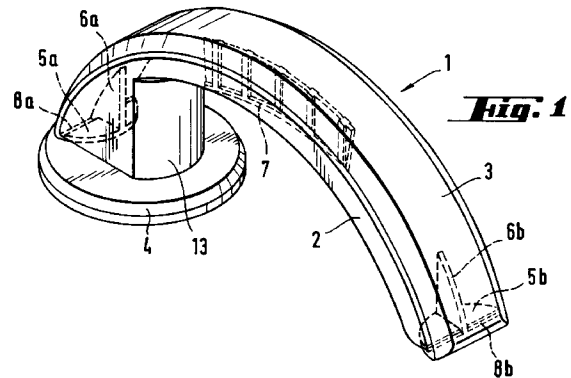
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(54) **Door handle or the like.**

(57) A door handle or the like, comprising a stiff body member (2) and a separate additional member (3) designed to be installed upon the body member (2) so as to form together with it a composite handle unit (1), said additional member (3) being of a somewhat elastic material and corresponding substantially to the length of the body member (2). The additional member (3) and the body member (2) are preferably formed to be arcuate over at least part of the longitudinal direction of the handle and are provided with attachment members to be mutually fitted together so that the attachment members of the additional member (3) comprise protrusions (5a, 5b) located at its opposite ends and extending transversely with respect to the handle, said protrusions (5a, 5b) being arranged to engage with depressions (9a, 9b) arranged to the ends of the body member (2), respectively, so that for installation of the additional member (3) it is pulled over the ends of the body member (2) to be tightly but preferably removably secured to the body (2).



The invention relates to an operating handle (e.g. for a door) according to the preamble of claim 1, comprising a stiff body member and a separate additional member adapted to be installed upon the body member to partially clad the latter so as to form together with it a composite handle unit.

Operating handles are conventionally made by casting or by bending the whole handle out of one piece. Numerous door handles are known which are made of two or more component parts. Often a wooden member is connected to a metal body or for instance a plastics member is forced from one end over a metal body.

An aim of this invention is to provide a new handle arrangement advantageous to manufacture and according to which a separate additional member to be secured to a body member is easy to install and can be changed for instance by the user when needed (e.g. to change the colour of the major exposed portion of the handle).

The aim can be met with an arrangement as defined in the following claim 1.

In accordance with this invention, installation of the additional member takes place by making use of the elasticity of the additional member. Preferably the body portion is of arcuate form over at least part of its longitudinal direction since this facilitates the retention of the additional member in its required position on the body member because detaching of the additional member from the body member presumes some resilient elongation of the additional member to secure its correct installation on the body member.

An arrangement according to the invention provides a possibility to easily change the additional member for another one, for instance of another colour, without having to change the whole handle.

At each end of the additional member and the body member, at their end surfaces to be fitted together, locking members can be provided, which, in the installed position of the additional member, are arranged to prevent displacement of the additional member in its direction of installation away from the body member. By this means, for its part, it can be ensured that the additional member retains its position in normal use of the handle removably secured to the body member.

The additional member and the body member are with advantage also provided with at least one longitudinally extending guide and support member, which are arranged to mutually cooperate for guiding the additional member into, and retaining it at, its correct position relative to the body member. At the same time the arrangement aids in keeping the two members secured together along their whole length. In practice said guide and support members can comprise rather narrow protrusions in the additional member which are arranged to be fitted in narrow slots arranged in the body member.

It is of advantage if a narrow protrusion is located at each end of the additional member and forms a stationary part with the respective transverse protrusion used for fixing the additional member. Thus, the protrusions are, despite their inherent elasticity at the same time, however, sufficiently firm. In addition a further narrow protrusion is with advantage arranged in the central region of the additional member and, simultaneously, stiffens the additional member.

One end of the body member can include a thicker part, in which a hole passing through the end surface of the body member is provided for installing the handle on a spindle (e.g. to be connected to a door lock). In this case the additional member, when installed, can be arranged to cover the end of the hole extending to the mutual boundary surface between the body member and the additional member. In addition in connection with the end of said hole extending to said boundary surface there can be provided at least one depression arranged substantially in the longitudinal direction of the handle to accommodate fixing members for the spindle, the chosen arrangement being selected depending on the fixing arrangement desired to be used.

The body member is with advantage made of a relatively hard plastics material and the additional member can for instance be of rubber or a flexible plastics material so that it is sufficiently elastic to meet the installation requirements.

The invention will now be further described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 shows a door handle according to the invention assembled with a handle rose,

Figures 2 and 3 show the additional member of the door handle of Figure 1, respectively, in perspective and side elevation, and

Figures 4, 5 and 6 show the body member of the door handle of Figure 1, in Figure 4 as a view from above and to one side together with the handle rose, in Figure 5 from below and to one side without the handle rose, and in Figure 6 from the side without the handle rose.

A door handle 1 is shown in Figure 1 which, in accordance with the invention, is assembled from a body member 2 and a separate additional member 3 attached thereto. Figures 1 and 4 also show a handle rose 4 which is known in the prior art and spaces the handle 1 from the door or the like to which it is attached.

In order to attach the additional member 3 to the body member 2 opposite ends of the member 3 are provided with transverse protrusions 5a and 5b and, fixedly attached thereto, respective longitudinal protrusions 6a and 6b, which at the same time strengthen the support of the protrusions 5a and 5b. To accommodate the integers 5a, 5b and 6a, 6b depressions 9a and 9b are provided at each end of the body

member 2 and longitudinally extending slots 10a and 10b are provided, respectively, adjacent thereto. The additional member 3 is made of a somewhat elastic material, for instance rubber, so that it can be pulled or snapped into place upon the body member 2 by virtue of a temporary degree of elastic deformation allowing the necessary elongation so that the aforementioned protrusions become located in the depressions and slots and resiliently retain the additional member 3 in its intended position upon the body member 2. The security of retention on the body member 2 can be enhanced if the additional member 3 remains slightly tensioned after installation. If, however, subsequent removal is required the residual tension should not be too high otherwise it becomes difficult to detach the additional member 3 without breaking the same. With suitable design and choice of materials the arrangement illustrated makes it possible to securely hold the member 3 on the member 2 but to change the additional member 3 easily when required.

The retaining in position, the elongation and the residual tension in the additional member 3 are also influenced by the arcuate form of the members 2 and 3. Thus, depending especially on the implementation of the attachment means (5, 6; 9 and 10) and on members possibly securing the attachment the degree of curvature as such need not necessarily be high. Naturally, the curvature can also be different at different positions of the door handle and need not exist over the entire length of the body member.

In order to heighten the securement of the additional member 3 its transverse protrusions 9a, 9b are provided with grooves 8a and 8b. Corresponding to these grooves the ends of the body member 2 include shoulders 12a and 12b, which together with said grooves 8a and 8b form locking members to ensure that the additional member 3 is retained in position during normal use of the handle.

Also in the central region of the additional member 3 there is a longitudinal protrusion 7, for reception of which a longitudinal slot 11 is provided in the body member 2. The purpose of these members is, on the one hand, to guide, during installation, the additional member 3 into the correct position on the body member 2 and, on the other hand, to retain it in the correct position transversely of the handle in the central region of the body member 2. At the same time, the protrusion 7 naturally stiffens the additional member 3.

At one end of the body member 2 there is a thicker part defining a boss 13, which is provided with a square-section hole 15 going through the end surface of the body member 2 for installing the handle on a conventional square-section spindle for turnable connection of the handle to a door lock. Neither the spindle nor the lock is shown in the drawings. The hole 15 is provided in a sleeve-like member 14 of the body member 2, the member 14 also providing a journal for

the handle in the radial direction. The hole 15 communicates with a recess 15a, for possible fixing members for the spindle. The door handle can naturally be fixed to the spindle in many different ways, for instance by making use of threaded members, but also through other means (not shown). As is clear from figures 4 to 6, when installed, the additional member 3 covers the open end of the recess 15a extending to the mutual boundary surface between the body member 2 and the additional member 3.

As can be seen from Figures 5 and 6, the underside of the body member 2 has an arcuate form in a direction normal to the length of the body member to provide a smooth finger-engaging surface which is thick enough in the vicinity of the slot 11 to fully receive the protrusion 7 and leave its outer edge sensibly flush with the body member 2 when the members 2 and 3 are correctly interengaged.

Figures 4 and 6 show the preferred extent of two depressions 16 which flank the slot 11 over part of its length closest to the boss 13. The depressions 16 are obscured by the additional member 3 when the latter is in place on the body member 2 but can be useful in accommodating means for fixing the handle to a spindle.

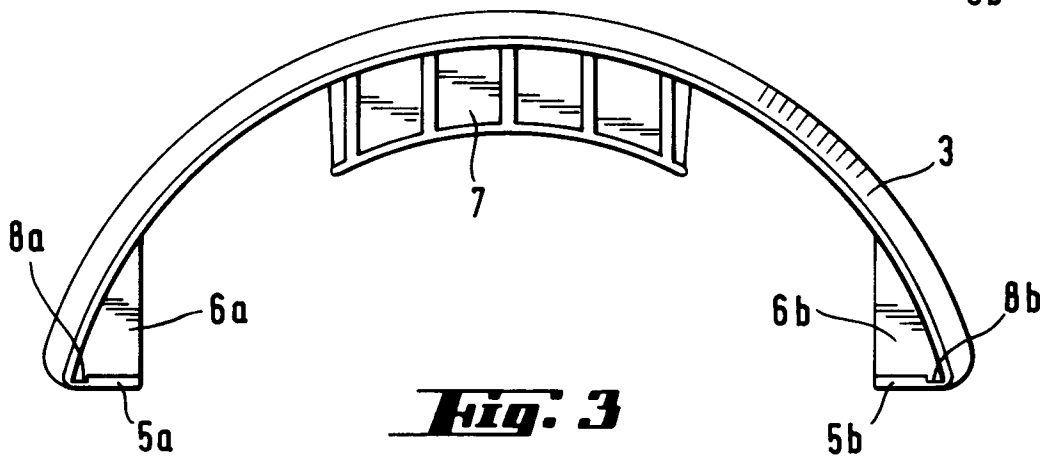
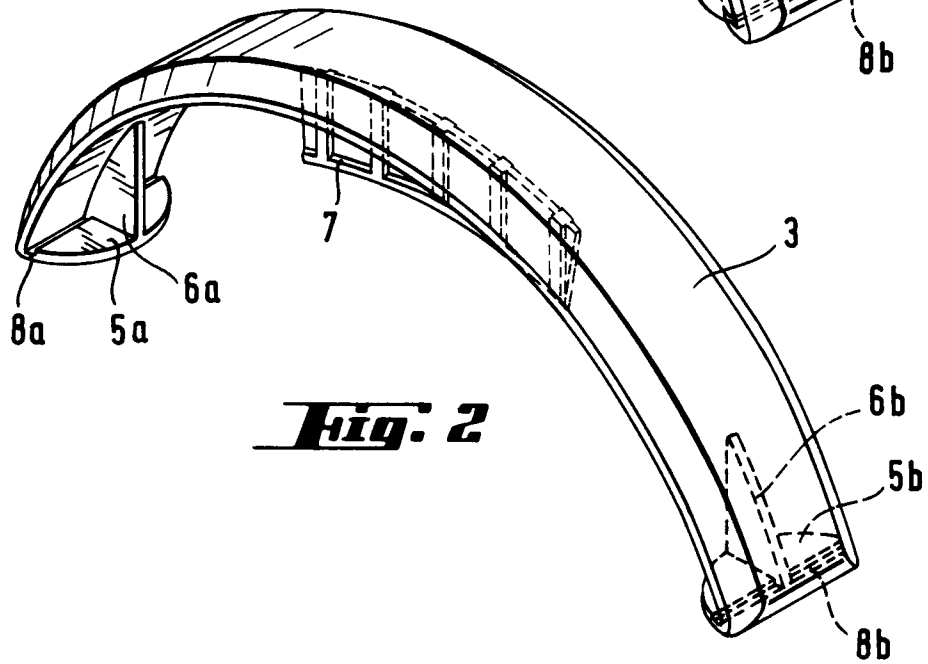
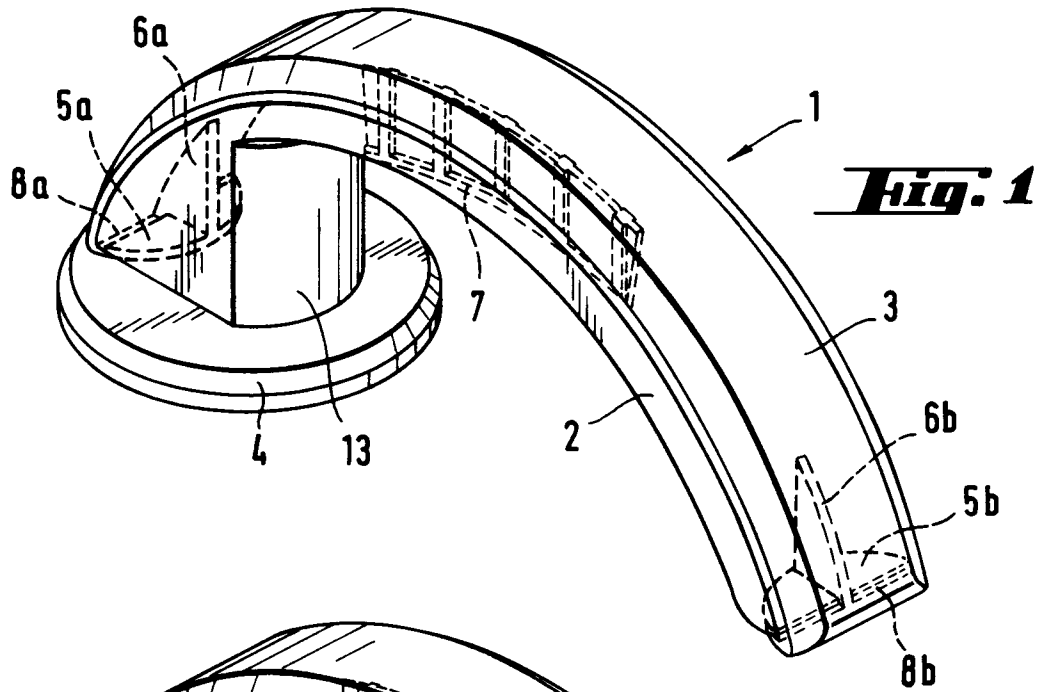
The invention is not limited to the embodiment illustrated since several modifications are feasible within the scope of the following claims.

Claims

1. A door handle or the like, comprising a stiff body member (2) and a separate additional member (3) adapted to be installed upon the body member (2) so as to form together with it a composite handle unit (1), said additional member (3) being of a somewhat elastic material and corresponding substantially to the length of the body member (2), characterised in that the additional member (3) and the body member (2) are each provided with attachment members, the attachment members of the additional member (3) comprising protrusions (5a, 5b) located at its opposite ends and extending transversely with respect to the handle, said protrusions (5a, 5b) being adapted to cooperate with respective depressions (9a, 9b) provided at the ends of the body member (2) so that for installation of the additional member (3) it is pulled over the ends of the body member (2) to become secured to the body member (2).
2. A handle according to claim 1, characterised in that at either end of the additional member (3) and the body member (2), locking members (8a, 8b; 12a, 12b) are provided which, in the installed position of the additional member (3) augment the action of the attachment members in securing

the additional member (3) on the body member (2).

3. A handle according to either of the preceding claims, characterised in that the additional member (3) and the body member (2) are provided with at least one longitudinally extending guide and support member arranged in mutual cooperation for guiding the additional member (3) into, and retaining it at, its correct position relative to the body member (2). 5
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4. A handle according to claim 3, characterised in that said guide and support members comprise protrusions (6a, 6b, 7) on the additional member (3) arranged to be fitted in respective slots (10a, 10b, 11) arranged in the body member (2). 15
5. A handle according to claim 4, characterised in that a protrusion (6a, 6b) is located at each end of the additional member (3) and serves to strengthen the respective transverse protrusion (5a, 5b) used for fixing the additional member (3) to the body member (2). 20
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6. A handle according to either of claims 4 or 5, characterised in that one protrusion (7) is located in the central region of the additional member (3) and serves for stiffening the additional member (3). 30
7. A handle according to any one of the preceding claims, characterised in that one end of the body member (2) includes a thicker part (13), in which a hole (15, 15a) is provided extending through the end surface of the body member (2) for installing the handle on a spindle, and in that the additional member (3), when installed, is arranged to cover the end of the hole (15, 15a) extending to a boundary surface between the body member (2) and the additional member (3). 35
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8. A handle according to claim 7, characterised in that in connection with the end of said hole (15, 15a) extending to said boundary surface there is provided at least one depression (16) arranged substantially in the longitudinal direction of the handle for accommodating fixing members for the spindle. 45
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9. A handle according to any one of the preceding claims, characterised in that the body member is of arcuate form over at least part of the longitudinal direction of the handle. 55
10. A handle according to any one of the preceding claims, characterised in that the body member (2) is of hard plastics material.



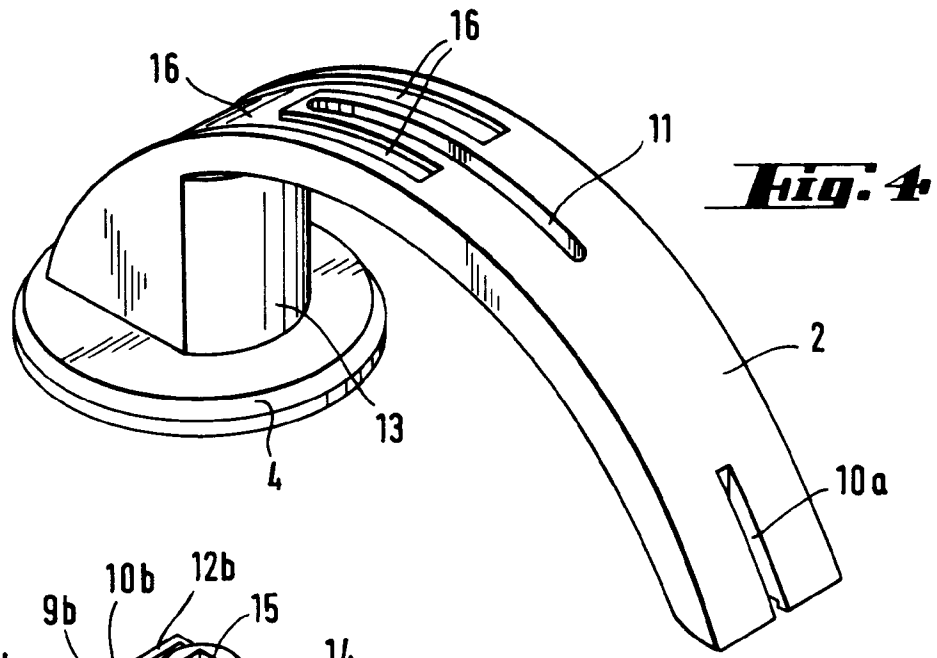


Fig. 4

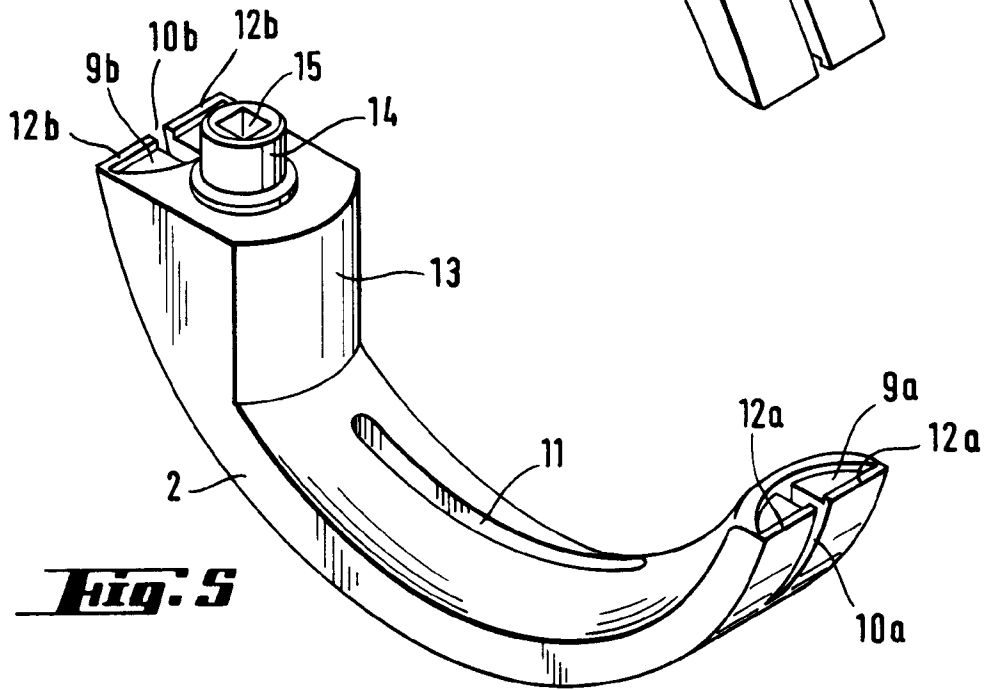


Fig. 5

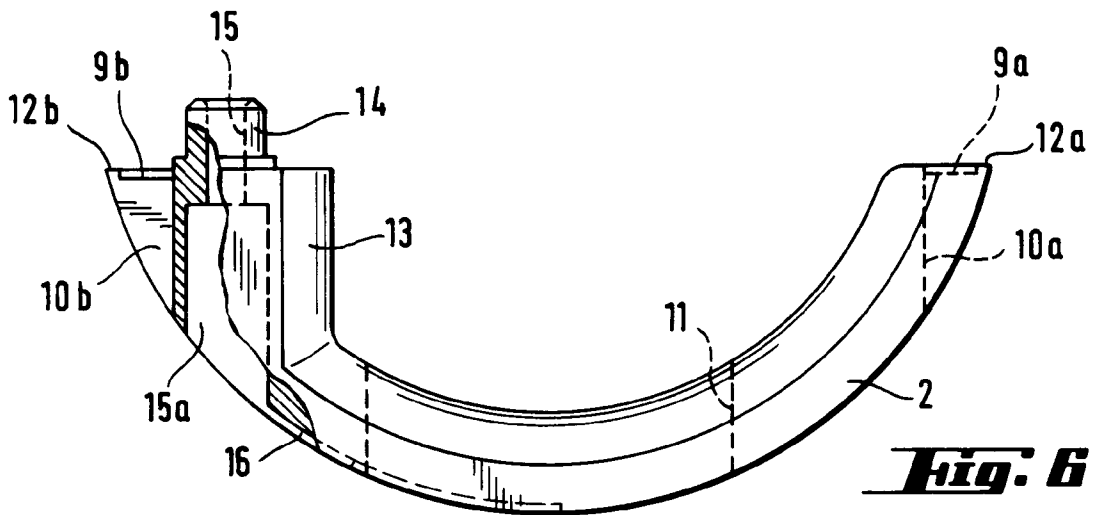


Fig. 6



European Patent
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EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 93300531.6
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	<u>EP - A2 - 0 420 823</u> (FAZZINI et al.) * Fig. 1-3; claims 1-8 *	1-7,9	E 05 B 1/00
X	<u>FR - A - 2 188 664</u> (MICHAUT) * Fig. 1A-2; claims 1-5 *	1-10	
X	<u>US - A - 3 813 729</u> (SZABO et al.) * Fig. 1-11; claims 1-3 *	1-10	
X	<u>US - A - 2 433 993</u> (JAKEWAY et al.) * Fig. 1-8; claims 1-2 *	1-10	
A	<u>US - A - 1 830 383</u> (G.H. BOS) * Fig. 1-6; claims 1-2 *	1	
X	<u>DE - C - 2 203 335</u> (VOLLMANN & SCHMELZER) * Fig. 1-6; claims 1-10 *	1-9	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
X	<u>FR - A - 2 504 583</u> (FERCO INTERNATIONAL USINE DE FERRURES DE BATIMENT) * Fig. 1-7; claims 1-13 *	1-10	E 05 B
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 21-04-1993	Examiner CZASTKA
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>..... & : member of the same patent family, corresponding document</p>			

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