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(54) **INSTALLATION ARRANGEMENT FOR A PULL, A SUPPORT ELEMENT OR THE LIKE**

BEFESTIGUNG FÜR EINEN ZUGGRIFF ODER DERGLEICHEN

DISPOSITIF D'INSTALLATION POUR POIGNEE, ELEMENT PORTEUR OU ELEMENT ANALOGUE

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GB-A- 2 185 798 **US-A- 4 499 629**

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Description

[0001] The invention relates to an installation arrangement for a pull, a support element or the like, according to the preamble of claim 1.

[0002] Pulls, handles or the like supports for doors, windows and other places for fastening are generally manufactured of a solid material and are fastened to the place of operation by means of a fastening pin, which is installed between said parts and tightened by threads, see for example US 4 499 629 A. The arrangement is simple and easy to install.

[0003] There has not been available any corresponding simple, durable and/or easily installable way of fastening so far for hollow pulls or handles made of metal. According to known arrangements i.a. inner sleeve elements have been used, which are fastened to the tube-formed pull by welding or by riveting from outside. Thus, the aim of the invention is to provide for this purpose a novel arrangement, which has an advantageous and simple construction and which can be easily installed.

[0004] The aim of the invention can be achieved as is disclosed in claim 1 and in other claims. According to the invention the fastening element comprises a plug, which is locked to the inner surface of the pull or the like by means of a locking ring or the like and the turning-of which with regard to the pull or the like is prevented. In addition an inner space of the plug is provided with means for supporting the fastening pin so that the movement of the fastening pin axially out from the plug and thus from the pull or the like is prevented. Hereby it is possible to install a fastening pin in an analogous way as provided for pulls made of solid material. The solution is simple and advantageous as to its costs and makes sure that the fastening element cannot detach from the pull. Hereby it is also secured that the fastening pin can be turned relative to the fastening element during the installation phase and thus the fastening element is not turned along, which makes an easy installation to the place for fastening.

[0005] The fastening pin comprises a control arrangement for tightening the pull or the like to its place of fastening. Hereby it is not necessary to make separate tightening arrangements to the pull itself or to its body. Then the fastening pin can additionally with advantage be supported at its either end to fastening elements installed to pulls or the like located on different sides of a door or the like.

[0006] In the following the invention is described, by way of example, with reference to the attached drawing, in which

- Fig. 1 shows as a general view a possible application for the invention, in which a pull or the like may be installed on either side of an object, for instance a door,
- Fig. 2 shows an installation arrangement for a pull according to the invention, taken in section and

aimed to be placed on the inner side of an object, and

- Fig. 3 shows the arrangement according to fig. 2, which is supplemented to correspond to the situation of fig. 1.

[0007] In the drawing reference numerals 1a and 1b indicate a pull for a door or the like. In figs. 1 and 3 two pulls 1a and 1b are fastened to each other. This embodiment is applicable in a situation, in which pulls are needed on either side of the place of installation. However, the installation and especially the arrangement according to fig. 2 can be utilized also as such. Implemented like this the invention can be adapted apart from the actual pulls also for many other purposes like different supports, handles, brackets etc. In the figures the actual place for installation is not shown.

[0008] The reference numeral 2 indicates a fastening pin, by means of which the pull 1a can be fastened either directly to its place for installation or to another pull 1b, which, thus, is installed on the other side of the place for installation. The fastening pin 2 is tightened to its place by a tightening nut 3, which includes a counter surface 3a for a tool. The arrangement includes also a fastening element 4 to be installed inside the tube-like pull 1a, 1b and which is axially or in the direction of the fastening pin 2 locked to its place by means of a locking ring 5 or the like, so that in practice it cannot be detached from the pull without breaking it.

[0009] In addition the arrangement includes an installation nut 6, which; in accordance with figs. 2 and 3, as installed is by means of threads supported to threads 4b in an inner space 4a of the fastening element 4 and is then in connection with an extended head 2c of the fastening pin 2 preventing detaching of the fastening pin 2 and the pull 1a from each other. The arrangement includes further means 7, which prevent turning of the fastening element 4 during installation phase of the fastening pin 2. The means 7 may in practice be implemented for instance by making use of gluing or in the form of separate grooves and protrusions arranged to be mutually engaged.

[0010] Installation of the fastening pin 2 to the fastening element 4 occurs in a fully analogous way in comparison with the previously known arrangement by means of which a similar fastening pin is installed to a pull made of solid material for fastening thereof to its place of operation. The installation arrangement of the pull 1a according to fig. 2, aimed for inner side of the place of installation, can be accomplished as follows. After the fastening element 4 is fastened by means of the locking ring 5 and the means 7 inside the pull 1a, the fastening pin 2 is moved together with the installation nut 6 at the position of the inner space 4a of the fastening element 4. The installation nut 6 is turned to engage the threads 4b in the fastening element by making use of protrusions or corresponding members 2a arranged in the fastening pin 2 and affecting the installation nut 6

only during the installation phase. Thus, when the installation nut 6 is turned to its place to the position of fig. 2, its force transmitting connection with the protrusions 2a and thus with the fastening pin 2 is broken off by pulling the fastening pin 2 outward from the pull 1a into a position shown in fig. 2. Thereby the extended head 2c of the fastening pin 2 hits the installation nut 6, which prevents detaching of the fastening pin 2 from the pull 1a. At the same time the protrusions 2a are located at the position of the tightening nut 3, so the fastening pin 2 is thus in force transmitting connection with the tightening nut 3 respectively.

[0011] In the position of fig. 2 a narrow part 2b in the fastening pin 2 is located at the position of the installation nut 6, whereby the fastening pin 2 can be turned with regard to the installation nut 6 and thus the entire pull 1a by means of the tightening nut 3 for fastening the fastening pin 2 by means of second threads 2d to its place of operation or for instance to some wall or to another pull 1b as shown in fig. 3. In the latter case also a second fastening element 4 is availed of, but departing from the pull 1a to be installed on the inner side in this case the installation nut 8 can be preinstalled by threads to the fastening element 4 and thereafter the fastening pin 2 can be fastened by threads to the installation nut 8 by turning the tightening nut 3. So in contrast to the installation nut 6 the installation nut 8 includes both outer and inner threads.

[0012] Thus the invention can be availed of in several different places of operation and it is not limited to the embodiments disclosed, but several modifications are feasible within the scope of the attached claims.

Claims

1. An arrangement for installation of a tubular pull (1a, 1b), a support element or the like, preferably made of metal, on a door, a wall or the like place for fastening, comprising a fastening element (4) installed inside the pull (1a, 1b) or the like at an end thereof and to which one end of a fastening pin (2) to be supported to the place for fastening is arranged to be supported, **characterized in that** the fastening element (4) comprises a plug (4), which is locked inside the pull (1a, 1b) or the like by means of a locking ring (5) or the like installed on the inner surface of the pull (1a, 1b), **in that** turning of the plug (4) with regard to the pull (1a, 1b) or the like is arranged to be prevented (7), and **in that** an inner space (4a) of the plug (4) is provided with means (4b, 6) for supporting the fastening pin (2) so that the arrangement enables turning of the fastening pin (2) to tighten fastening of the pull (1a, 1b) or the like and prevents axial movement of the fastening pin (2) relative to the plug (4) in order to prevent the movement of the fastening pin (2) axially out from the plug (4) and thus from the pull (1a, 1b) or the like.

2. An arrangement according to claim 1, **characterized in that** the fastening pin (2) comprises a control arrangement (2a, 3) for tightening the pull (1a, 1b) or the like to its place for fastening.
3. An arrangement according to claim 1 or 2, **characterized in that** the fastening pin (2) is supported at its either end to fastening elements (4) installed to pulls (1a, 1b) or the like located on different sides of a door or the like.

Patentansprüche

1. Anordnung zur Installation eines vorzugsweise aus Metall hergestellten rohrförmigen Ziehgriffs (1a, 1b), Abstützungselements oder dergleichen an einer Tür, einer Wand oder an einer ähnlichen Befestigungsstelle, wobei die Anordnung ein Befestigungselement (4) umfaßt, das innerhalb des Ziehgriffs (1a, 1b) oder dergleichen an einem Ende davon installiert ist und an dem ein Ende eines Befestigungsstifts (2), der an der Befestigungsstelle abgestützt werden soll, so vorgesehen ist, daß er abgestützt wird, **dadurch gekennzeichnet, daß** das Befestigungselement (4) einen Stopfen (4) umfaßt, der im Innern des Ziehgriffs (1a, 1b) oder dergleichen mittels eines an der inneren Oberfläche des Ziehgriffs (1a, 1b) installierten Verriegelungsrings (5) oder dergleichen verriegelt ist, daß vorgesehen ist, daß ein Drehen des Stopfens (4) im Verhältnis zum Ziehgriff (1a, 1b) oder dergleichen verhindert wird (7) und daß ein innerer Raum (4a) des Stopfens (4) mit Mitteln (4b, 6) zum Abstützen des Befestigungsstifts (2) ausgestattet ist, so daß die Anordnung ein Drehen des Befestigungsstifts (2) ermöglicht, um die Befestigung des Ziehgriffs (1a, 1b) oder dergleichen festzuziehen, und eine axiale Bewegung des Befestigungsstifts (2) im Verhältnis zum Stopfen (4) verhindert, um zu verhindern, daß sich der Befestigungsstift (2) axial aus dem Stopfen (4) und somit aus dem Ziehgriff (1a, 1b) oder dergleichen herausbewegt.
2. Anordnung nach Anspruch 1, **dadurch gekennzeichnet, daß** der Befestigungsstift (2) eine Einstellvorrichtung (2a, 3) umfaßt, um den Ziehgriff (1a, 1b) oder dergleichen an seiner Befestigungsstelle festzuziehen.
3. Anordnung nach Anspruch 1 oder 2, **dadurch gekennzeichnet, daß** der Befestigungsstift (2) an jedem seiner Enden an Befestigungselementen (4) abgestützt ist, die an auf unterschiedlichen Seiten einer Tür oder dergleichen befindlichen Ziehgriffen (1a, 1b) oder dergleichen installiert sind.

Revendications

1. Dispositif pour l'installation d'une poignée tubulaire (1a, 1b), d'un élément porteur ou d'un élément analogue, préférablement en métal, sur une porte, un mur ou un emplacement analogue pour la fixation, comprenant un élément de fixation (4) installé à l'intérieur de la poignée (1a, 1b) ou de l'élément analogue à l'extrémité de celle-ci ou de celui-ci et auquel une extrémité d'une goupille de fixation (2) devant être supportée à l'emplacement de fixation est agencée pour être supportée, **caractérisé en ce que** l'élément de fixation (4) comprend un bouchon (4), qui est verrouillé à l'intérieur de la poignée (1a, 1b) ou de l'élément analogue au moyen d'un jonc d'arrêt (5) ou d'un élément analogue installé sur la surface intérieure de la poignée (1a, 1b), **en ce que** la rotation du bouchon (4) par rapport à la poignée (1a, 1b) ou à l'élément analogue est agencée de manière à être empêchée (7), et **en ce qu'un** espace intérieur (4a) du bouchon (4) est pourvu d'un moyen (4b, 6) pour supporter la goupille de fixation (2) de telle manière que le dispositif permet la rotation de la goupille de fixation (2) pour serrer la fixation de la poignée (1a, 1b) ou de l'élément analogue et éviter le mouvement axial de la goupille de fixation (2) par rapport au bouchon (4) afin d'éviter le mouvement de la goupille de fixation (2) dans le sens axial à l'écart du bouchon (4) et par conséquent de la poignée (1a, 1b) ou de l'élément analogue.
2. Dispositif selon la revendication 1, **caractérisé en ce que** la goupille de fixation (2) comprend un dispositif de commande (2a, 3) pour serrer la poignée (1a, 1b) ou l'élément analogue à l'emplacement ou il(elle) doit être fixé(e).
3. Dispositif selon la revendication 1 ou 2, **caractérisé en ce que** la goupille de fixation (2) est supportée à l'une ou l'autre de ses extrémités dans les éléments de fixation (4) installés dans les poignées (1a, 1b) ou éléments analogues situés sur les différents côtés d'une porte ou d'un élément analogue.

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Fig. 1

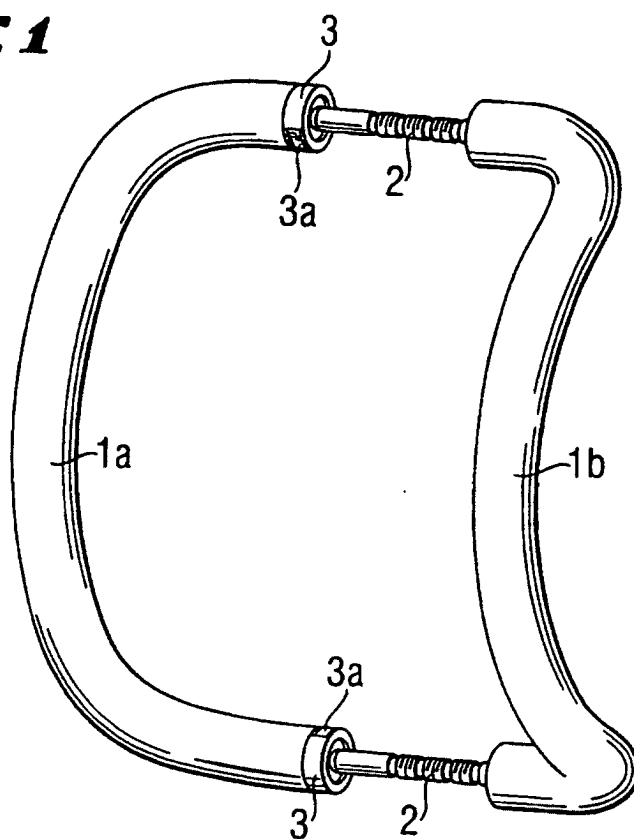
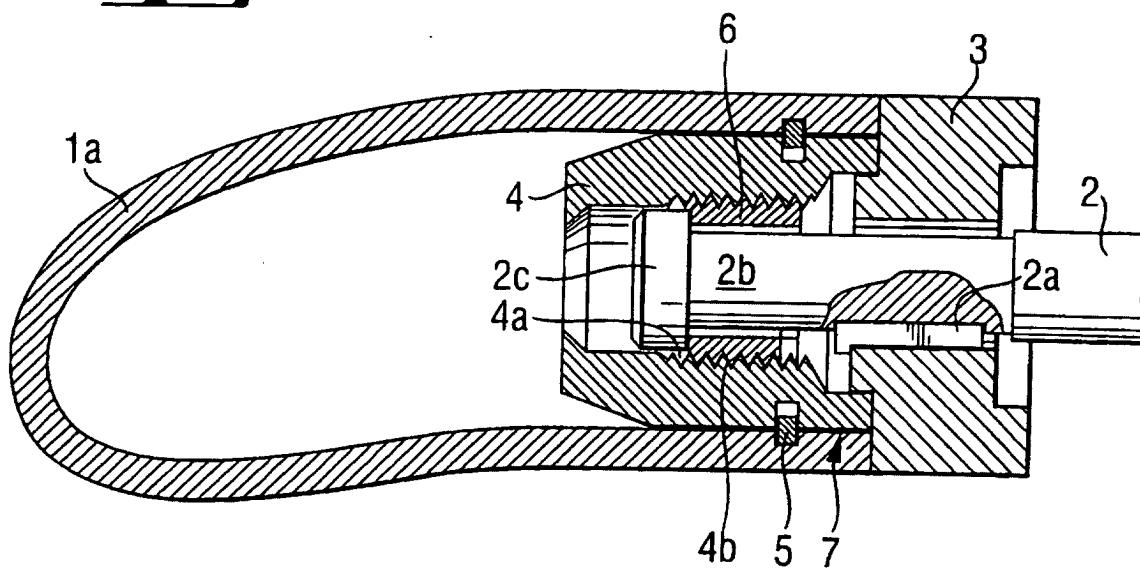


Fig. 2



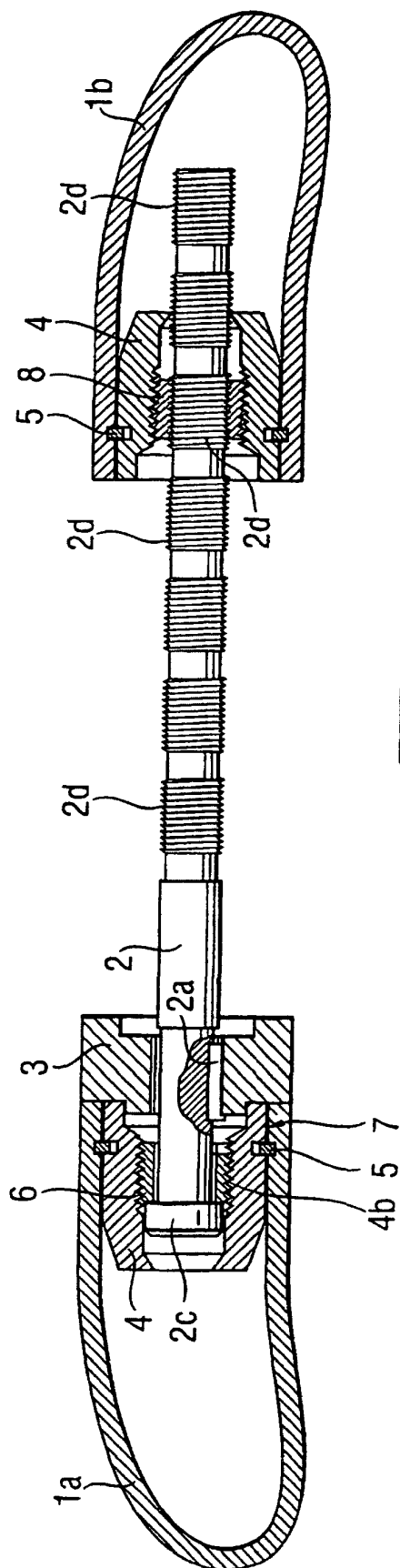


Fig. 3