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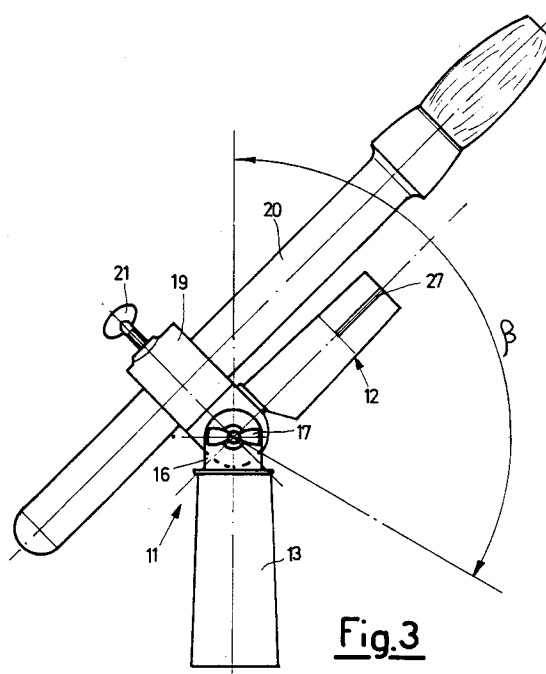
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**Universal tool holder for a painter's extension handle.**

A universal tool holder for a painters' extension handle, comprising a first element (13) and a second element (12) which are pivoted and rotatable one on the other and are provided with means for their locking in any mutual position which they are made to assume by the user, the first element (13) being arranged at one end of an extension handle and the second element being a support element for a painters' tool (12).

Advantageously the first element (13) is a fit-on element, mountable on one end of the extension handle, and the second support element (12) comprises both an annular extension in the form of a sleeve (19) and a second support element (26) of frusto-conical shape.



**Fig.3**

This invention relates to a universal tool holder for a painters' extension handle.

In the painting field, extension handles are known which by virtue of their conical end enable normal rollers to be mounted for painting walls and/or ceilings without having to use ladders or trestles.

Although these extension handles are practical, an optimum finish cannot be obtained by using only a roller or the usual large brushes for such painting, even in the various commercially available sizes. This is still more apparent at corners or where vertical surfaces intersect with horizontal surfaces, these being positions in which the finish is optimum only if executed with a small brush, given the difficulty of easy access.

An object of the present invention is to provide at the end of the extension handle, or to be positioned on it, a device able to receive without distinction a roller carrier, a large brush or any other finishing tool without a handle, so that the surface can be finished in difficultly accessible positions.

A further object is to provide a positioning device or a tool holder for a painters' extension handle which is particularly simple to use and construct, and is of relatively low cost.

These objects are attained according to the present invention by a universal tool holder for a painters' extension handle, characterised by comprising a first element and a second element which are pivoted and rotatable one on the other and are provided with means for their locking in any mutual position which they are made to assume by the user, said first element being arranged at one end of an extension handle and said second element being a support element for a painters' tool.

Advantageously the first element is a fit-on element, mountable on one end of said extension handle, and the second element is a support element for one of said painters' tools, said support element comprising both an annular extension in the form of a sleeve and a second support element of frusto-conical shape.

Characteristics and advantages of a tool holder according to the present invention will be more apparent from the description given hereinafter by way of non-limiting example with reference to the accompanying schematic drawings, in which:

Figure 1 is a partly sectional elevational view of the tool holder according to the present invention;

Figure 2 is further elevational view of the tool holder of Figure 1, rotated through 90°;

Figure 3 is a view similar to that of Figure 2 in which the tool holder is provided with a relative tool and has been rotated into a chosen position;

Figure 4 is an elevational view similar to that of Figure 2 showing a second embodiment of a

tool holder according to the present invention;

Figure 5 is an elevational view of the tool holder of Figure 4 rotated through 90°;

Figure 6 is an alternative form of a detail of Figure 4;

Figure 7 is an exploded view of a further embodiment of the tool holder according to the present invention.

With reference to the figures, a universal tool holder for a painters' extension handle according to the present invention generally comprises essentially a first element indicated overall by 11, and a second element indicated overall by 12, these being pivoted together.

Figures 1 to 3 show a first embodiment of a tool holder according to the present invention in which the first element 11 is of the fit-on type and comprises a hollow frusto-conical body 13. The body 13 can be mounted on a complementarily conical end 14 of a painters' extension handle 15, shown partially. From the top of the frusto-conical body 13 there extend, perpendicular thereto, two spaced-apart parallel lugs 16 with their free ends rounded, and provided with through transverse holes to receive a pivot in the form of the bolt of a wing nut and bolt assembly 17.

The second element 12 is a support element and consists of a lug 18 to be inserted between the two lugs 16 and also provided with a through transverse hole to receive the bolt of the wing nut and bolt assembly 17. From said lug 18 there laterally extends an annular extension 19 of sleeve form to receive the handle 20 of a tool such as a brush (Figure 3) or the support element of a roller or other painting or painters' tool. The annular sleeve extension 19 is provided with a locking screw 21 which is inserted radially into it and acts on the handle or on the support element 20 of the tool when inserted into the annular extension 19.

Above the lug 18 there is a plate 25 perpendicular thereto from which there extends a second support element 26 of frusto-conical shape. This second support element 26 is arranged to receive for example a hollow handle (not shown) of a roller or other painters' tool. To facilitate the mutual connection between the second support element 26 and the tool mounted on it, it is provided with recesses 27 extending along generators of its outer surface.

When a tool holder such as that described according to the present invention is positioned on the end 14 of the painters' extension handle 15, its angular position can be set to an angle  $\beta$ , for example as shown in Figure 3, by firstly slackening the wing nut 17. When the chosen position has been set, in which the painters' tool, for example the brush or roller placed in the annular extension 19 or on the second plug-in element 26, can

advantageously and correctly perform its action, the wing nut 17 is tightened to achieve a stable mutual positioning of the fit-on element 11 and the support element 12.

Figures 4 and 5 show a further embodiment of a tool holder according to the present invention in which equal parts are indicated by the same reference numerals.

It can be seen that on top of the fit-on element 11 there are provided three parallel spaced-apart lugs 16 arranged to receive two lugs 18 provided on the support element 12. The two elements 11 and 12 are locked together by inserting through transverse holes in the lugs 16 and 18 a screw 22 with threaded ends, shown by dashed lines in Figure 5, on the ends of the screw 22 there being tightened blind, round-headed nuts 23. A pair of cup springs 24 are interposed between said blind nuts 23 and the outer surfaces of the two most lateral lugs 16, so that on tightening the blind nuts 23 on the screw 22 the two elements 11 and 12 of the tool holder become stably fixed together.

In this further embodiment it is no longer necessary to operate the wing nut 17, not provided, to enable the parts to be mutually rotated and clamped. In this respect, the provision of the screw 22, the two blind nuts 23 and the cup screws 24 enables stable positioning to be achieved for any angle  $\beta$  between the parts ranging from 0 to 120°.

There is again provided an annular sleeve extension 19 forming part of the second support element 12, into which the handle 20 (not shown) of a tool or the like can be inserted. This handle is locked therein by the presence of two spaced-apart locking screws 21 acting radially within the sleeve extension 19, and consisting in the embodiment of Figures 4 and 5 of knobs provided with a threaded shank.

Perpendicular to the lugs 18 there is again provided a plate 25 from which a second support element 26 extends. As can be better seen in Figure 4, the plate 25 and that part of the support element 26 connected to it are partly removed in the part opposite that in which the annular sleeve extension 19 is located, to create a recessed region 34. The presence of the recessed region 34 enables the first element 11 and the second element 12 to be mutually rotated to a greater extent, up to an angle  $\beta$  of 120°. Figure 4 also shows that the second support element 26 can either receive within its hollow central portion 28 a tool handle 29, not shown, or can externally receive a hollow handle 30, shown by dashed and dotted lines.

Figure 6 shows an alternative form of a detail of the universal tool holder according to the invention in which one end of an extension handle 15 is hollow and internally threaded at 31 to receive a shank 32 externally threaded at 33. The shank 32

extends lowerly from a fit-on element 11 which at its top is also provided with lugs 16.

Figure 7 shows a further alternative embodiment of the tool holder according to the present invention in which the first element 11 is formed directly by the end portion of an extension handle 15, which is shaped at its free end as a lug 16 provided with a through transverse hole for connection to the support element 12, which as in the other embodiments comprises an annular sleeve extension 19 and a second support element 26.

A universal tool holder for a painters' extension handle according to the present invention hence provides maximum versatility in the positioning of the painters' tool, which in addition can be easily and immediately replaced.

### Claims

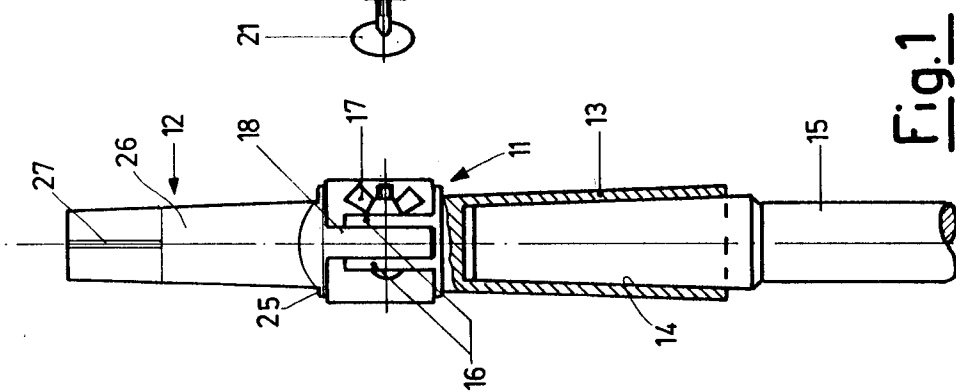
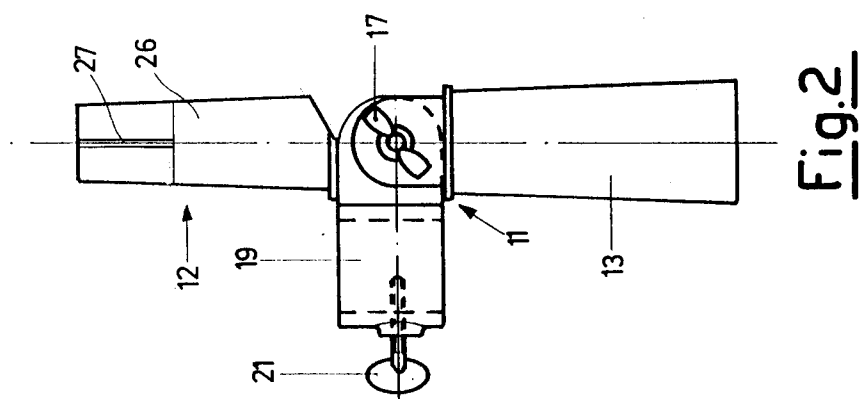
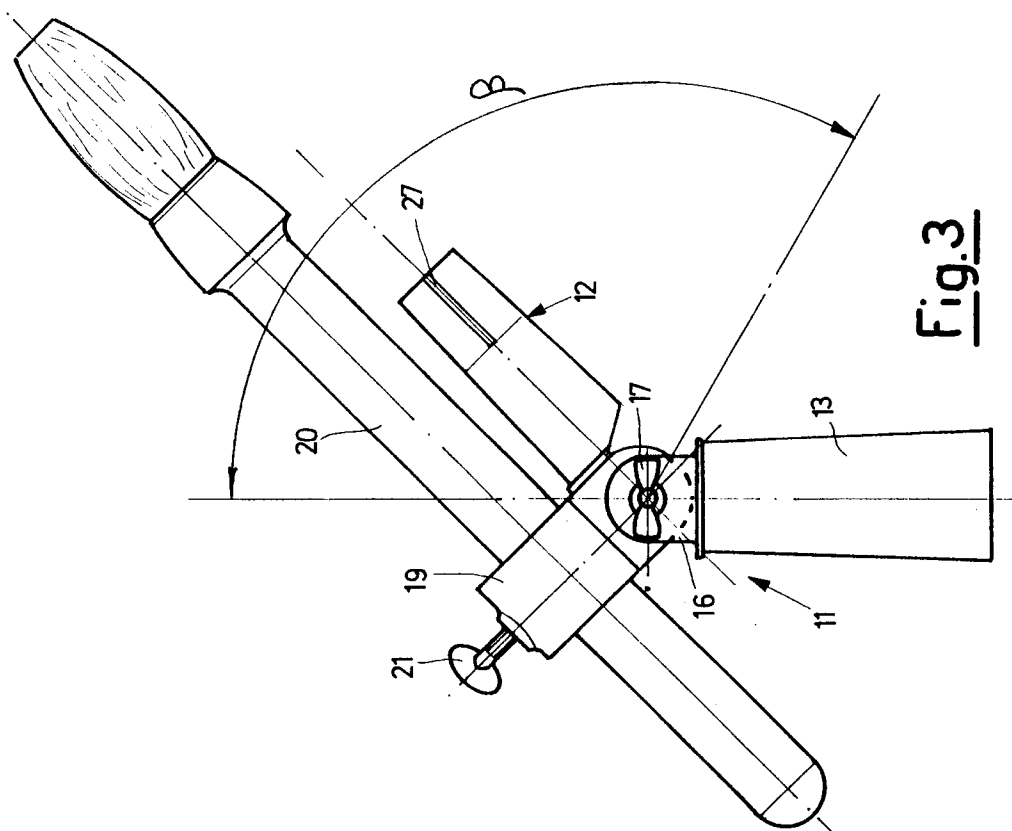
1. A universal tool holder for a painters' extension handle, characterised by comprising a first element (11) and a second element (12) which are pivoted and rotatable one on the other and are provided with means (17, 23) for their locking in any mutual position which they are made to assume by the user, said first element (11) being arranged at one end of an extension handle (15) and said second element (12) being a support element for a painters' tool.
2. A universal tool holder as claimed in claim 1, characterised in that said first element (11) is formed in one piece with a free end of said extension handle (15).
3. A universal tool holder as claimed in claim 1, characterised in that said first element (11) is a fit-on element and can be mounted onto a free end of said extension handle (15).
4. A universal tool holder as claimed in any one of the preceding claims, characterised in that said first element and second element (11, 12) are both provided with lugs (16, 18) which can be arranged side-by-side to form a pivoting (17, 22) in correspondence with said mutual locking means.
5. A universal tool holder as claimed in claim 1, characterised in that said mutual locking means consist of a wing nut and bolt assembly (17) insertable through lugs (16, 18) for pivotally connecting together said first element and said second element (11, 12).
6. A universal tool holder as claimed in claim 1, characterised in that said mutual locking means consist of a screw (22) with threaded

ends on which blind nuts (23) are mounted, said screw (22) being insertable through transverse holes provided in lugs (16, 18) for pivotally connecting together said first element and said second element (11, 12).

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support element (26) is partly removed on the side opposite that on which said annular sleeve extension (19) is provided, so creating a recessed region (34).

7. A universal tool holder as claimed in claim 1, characterised in that said second element is a support element (12) and comprises an annular sleeve extension (19) arranged to receive a tool handle (20). 10
8. A universal tool holder as claimed in claim 7, characterised in that said annular sleeve extension (19) is provided with locking means (21) for said tool handle (20). 15
9. A universal tool holder as claimed in claim 1, characterised in that on top of said first element (11) there are provided three parallel spaced-apart lugs (16) arranged to receive two lugs (18) provided on said second element (12), all said lugs (16, 18) comprising a through hole for the insertion of a pivot element (22) and relative means for their mutual locking (23). 20 25
10. A universal tool holder as claimed in claim 9, characterised in that externally to said three lugs (16) there are provided, one on each side, cup springs (24) locked onto said pivot element (22) by a pair of blind nuts (23). 30
11. A universal tool holder as claimed in claim 1, characterised in that said second element is a support element (12) and comprises a body (26) of frusto-conical. 35
12. A universal tool holder as claimed in claim 11, characterised in that said second support element (26) of frusto-conical shape is provided in its outer surface with recesses (27) extending along generators. 40
13. A universal tool holder as claimed in claim 11, characterised by comprising a hollow central portion (28) arranged to receive a tool handle (29). 45
14. A universal tool holder as claimed in claim 3, characterised in that said fit-on element (11) is hollow and is provided with an internal thread (31) for engaging an external thread (33) on said extension handle (15). 50 55
15. A universal tool holder as claimed in claims 7 and 11, characterised in that a portion of said second



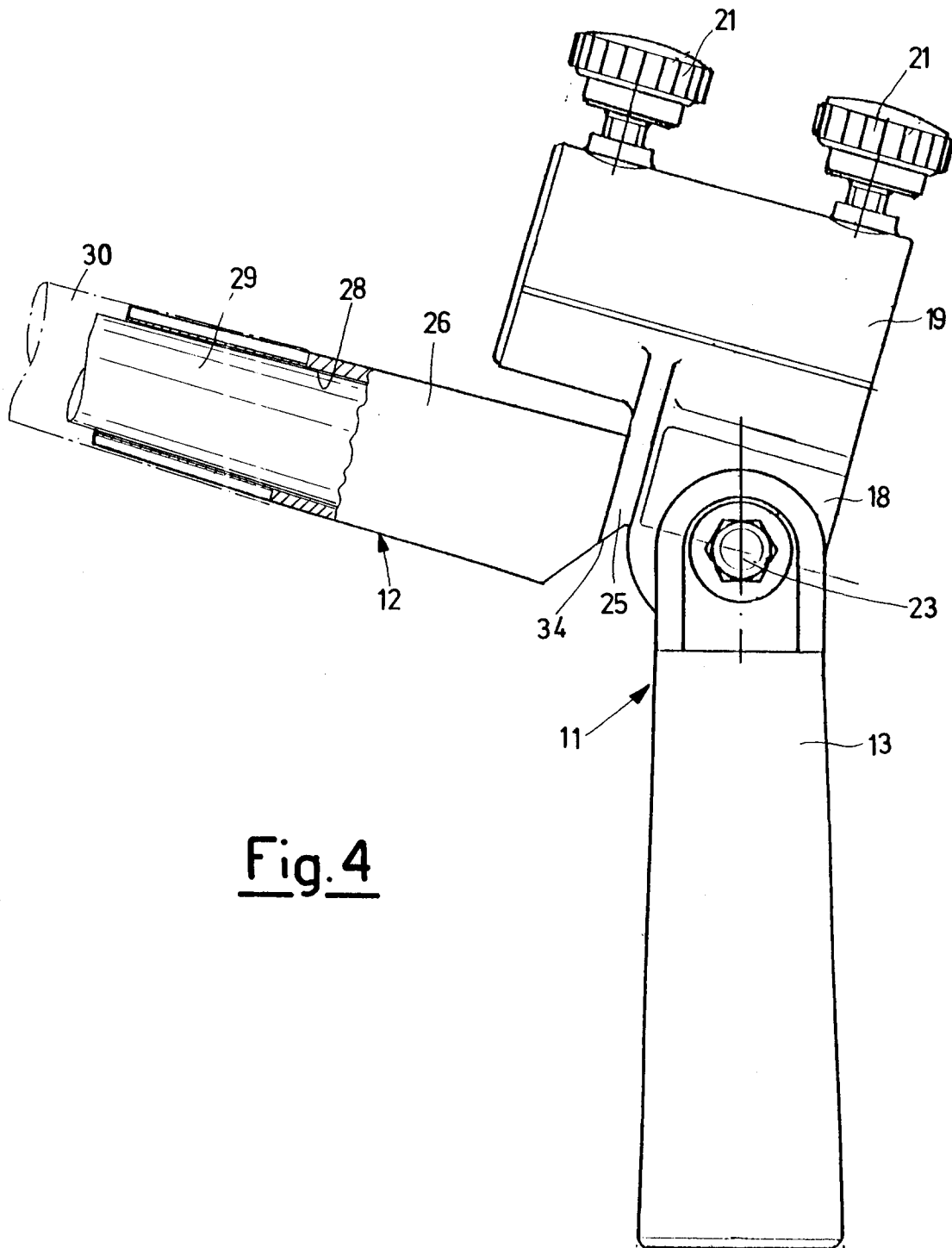


Fig.4

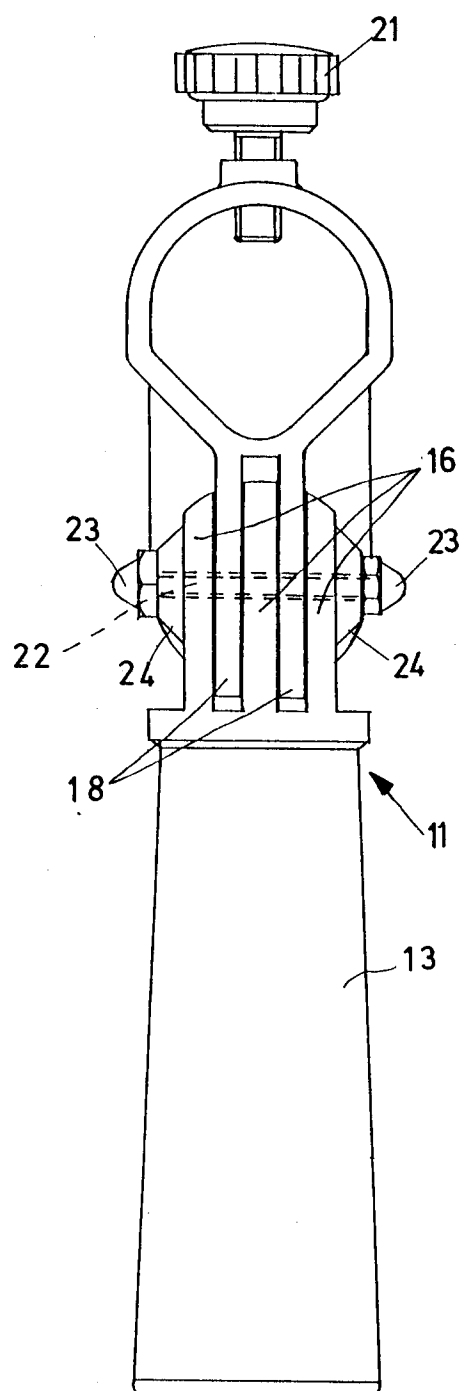
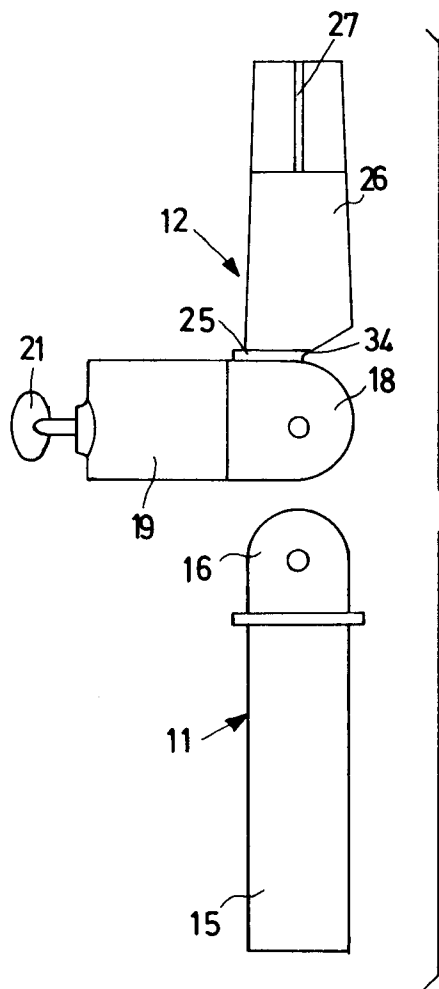
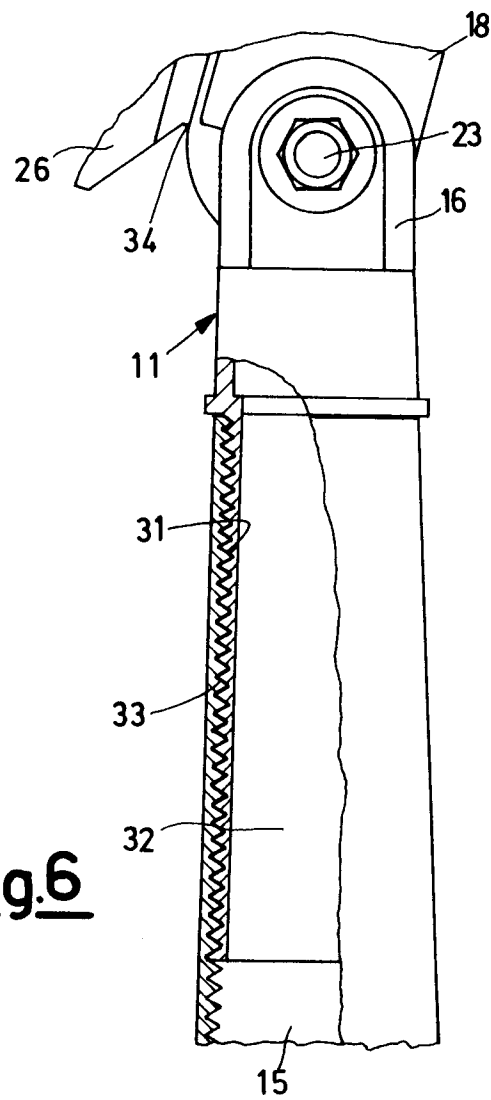


Fig.5



**Fig.7**



**Fig.6**





European Patent  
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## EUROPEAN SEARCH REPORT

Application Number

EP 92 20 1903

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	GB-A-463 981 (MOLLER) * page 2, line 7 - line 26; figures * ---	1,3	A46B17/02
X Y	GB-A-186 803 (WINN, TIMMINS & CO.) * page 2, line 32 - line 75; figures * ---	1,3,7,8 4,5,9, 11,12,14	
Y	US-A-2 581 141 (RAPTIS) * column 2, line 9 - column 3, line 26; figures * ---	4,5,9	
Y	GB-A-2 058 647 (CORONET-METALLWARENFABRIK) * figures * ---	11,12	
Y	US-A-4 715 080 (RYDZICKI) * figures * ---	14	
A	DE-C-31 053 (ECKENDÖRFFER) * figures * ---	1	
A	DE-A-3 834 301 (ROMAN DIETSCH) * figures * -----	1	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A46B B25G
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 03 FEBRUARY 1993	Examiner ERNST R.T.
<b>CATEGORY OF CITED DOCUMENTS</b>			
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 I : document cited for other reasons ----- & : member of the same patent family, corresponding document	