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(54) **A TROLLEY TO MOVE VERTICALLY ROLLED WALLPAPERS AND WALLCOVERINGS IN THE PROCESS OF GLUING THEM TO WALLS**

(57) The trolley for moving vertically rolled wallpapers and wallcoverings in the process of gluing them to the wall consists of a plate base (1) supported by wheels (2) and a spindle (3) set thereon, formed by a pipe (4) and a flange (5) on which a roll of wallpaper is placed. The base (1) has the shank (6) seated thereon, on which the lower bearing unit (7) is slipped and the pipe (4) of the spindle (3) is set on the unit, while the upper bearing unit (8) is slipped into the gap between the inner pipe surface (4) and the outer surface of the shank (6), in the upper part. The shank (6) has a thread (9) and a nut (10) screwed onto it supporting the lower bearing ring (11) and the retaining ring (12) set in a non-slidable manner in the pipe (4), which is in contact with the bearing ring (11) of the lower bearing unit (7). There is a threaded hole (11) in the nut (10) in which the locking pin (13) is pressed with the screw (14). The upper bearing unit (8) contains a sliding ring (15) with radial transverse bearing (16) seated in it, whereby this ring (15) has an integrated ear (17) with a crossbar (18) supporting itself in the recesses (19) at the top edge of the pipe (4). The trolley is equipped with an extension (20) adapted to the pipe (4) by dimensions and has a centring insert (21).

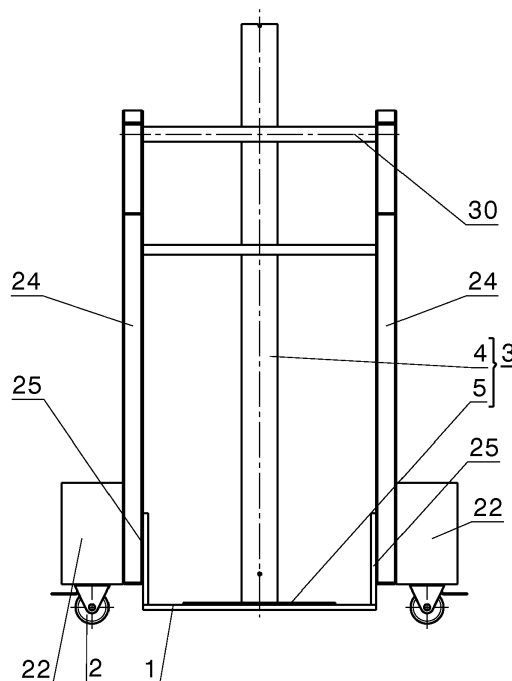


Fig.1

Description

[0001] A trolley to move vertically rolled wallpapers and wallcoverings in the process of gluing them to walls.

[0002] The object of the invention is a trolley to move vertically rolled wallpapers and wallcoverings in the process of gluing them longitudinally to the walls.

[0003] The device and method of stretching and installing the flexible character panel is known from the patent description US 5878474. The device has a frame structure preferably placed on the front wall of the building, i. e. on the wall on which the flexible panel is to be glued. The frame structure includes a trolley with a vertically positioned spindle on which a roll of flexible panel is placed. The spindle is equipped with a flange segment at the bottom and a top flange at the top. The flange of the lower section is enlarged and supports the roll of the flexible panel - wallpaper. The upper flange, with a smaller diameter, allows the roll to be placed on the spindle and rotated around the spindle, thus unwinding and stretching the flexible panel to glue it to the wall. The device is equipped with components securing the trolley in the desired position along the frame structure, while a part of the panel is stretched and glued to the wall. It also has mechanisms for a member of the grip of the roll of the panel material and to prevent the handle from turning when desired.

The device for applying the product in the form of a tape, roll, in a predetermined position along an essentially vertical surface is known from the patent description US 5865943. The device has a unit in the form of a trolley supported on four wheels on which a wallpapering head with a driving motor is mounted. The head contains a cylindrical support for the wallpaper roll and a roller arrangement on which the wallpaper to be glued moves during the process of gluing. The product with the tape can be applied consistently and for an indefinite length based on preset positions and the wallpapering head is mobile to track surface changes or waviness.

[0004] Another device that acts as an overlay tool for sheeted material is known from the patent description GB 2 394 446 A. This device is essentially designed for applying a rolled sheeted material to the surface of a structure or vehicle, such as a truck, trailer or semi-trailer of a truck. The device has a locating unit consisting of a supporting frame and wheels mounted on a shaft situated horizontally on the width of the semi-trailer. Vertical spindles which carry rolls of sheeted material are connected to the shaft. The sheet, which is unrolled, is glued to the trailer surface. The spindles may have a coupling mechanism that allows rotation with a given torque. The device can be equipped with base units on wheels that support vertical spindles with rolls placed on them.

[0005] The revealed solutions are principally designed to glue a longitudinal flexible panel or tape on the walls of objects or walls of motor vehicles and semi-trailers. For this reason, they contain an extensive structure enabling the installation and movement of trolleys equipped

with spindles with rolled panels directly on the walls on which flexible panels are to be glued or on the structures permanently connected to these walls.

[0006] The problem to be solved is the design of an easy to make and easy to use trolley to move vertically rolled wallpapers and wallcoverings in the process of gluing them to the internal surfaces of the walls of the rooms. The process of unrolling and gluing the unrolled part of the wallpaper itself is to be carried out by persons performing wallpapering with decorative wallpapers with a height of up to 320 cm. The trolley is to be easily moved along the existing or prepared substrate along the wall to be covered and the roll transported on the trolley is to be moved at the appropriate height to prevent the formation of bends and folds.

[0007] This problem is solved by the trolley for moving vertically rolled wallpapers and wallcoverings containing a plate base supported on wheels and a spindle vertically set thereon formed by a composite tube and flange on which a roll of flexible wallpaper is placed.

The trolley is characterized by the fact that the base has a shank rigidly seated in a vertical position, on which the bottom bearing unit is slipped in its lower part and on which the spindle pipe is seated, while the upper bearing unit is slipped in the ring gap, between the inner pipe surface and the outer surface of the shank.

The shank in the lower part has a thread and a nut supporting the bottom bearing ring screwed onto it, and the pipe has a locating ring seated on it in a non-slidable way, which is in contact with the upper bearing ring of the lower bearing unit.

The nut has a threaded hole in which the locking pin pressed with the screw is present. Turning the nut causes vertical displacement, along the shank, of the entire lower bearing unit and simultaneously displacement of the pipe with the flange and the wallpaper roll placed on the flange. The upper bearing unit containing a sliding ring with a radial transverse bearing seated in it is seated in the upper part of the shank. The sliding ring has a permanently installed ear with a crossbar supporting itself in the recesses on the upper edge of the pipe. Sliding fits are applied within the area of the upper bearing unit seating, between the inner surface of the pipe and the outer surface of the sliding ring, and between the inner surface of the radial radial transverse bearing and the outer surface of the shank. The trolley is equipped with a pipe extension adapted to the dimensions of the outer and inner diameter of the pipe seated on the shank. The extension has at least one centering insert permanently mounted on the inner surface from one end. The extension is used in case of high rolls of wallpaper.

[0008] The trolley according to the invention has a simple design, allowing a roll of wallpaper to be placed at the desired height, which excludes the automatic folding of the rolled up part of the wallpaper and this makes it easier to glue it to the wall. Re-adjustment of the spindle flange height is very simple, requires unscrewing the screw, which loosens the pressure of the locking pin and

turning the nut. The unwinding itself is very easy, because the wallpaper roll set on the spindle easily rotates together with the spindle.

[0009] The object of the invention is presented in the embodiment in the drawing on which:

Fig.1 shows the trolley in side view,
 Fig. 2 shows the trolley in a top view,
 Fig.3 shows the longitudinal section through the spindle and the base along the line A-A marked on Fig.2,
 Fig.4 shows a detail of the suspension of the upper bearing unit ear in the direction of arrow B marked on Fig.3,
 Fig. 5 shows the extension in the longitudinal half-section,
 Fig. 6 shows the extension in view from the side to be mounted on the spindle pipe.

Embodiment.

[0010] The trolley for moving vertically rolled wallpapers and wallcoverings in the process of gluing them to the wall, contains a plate base 1 supported on four wheels 2 self-adjusting with a block. Wheels 2 are fixed to the plate base 1 by means of brackets 22 fixed, in turn, to the vertical front posts 23 and the vertical rear posts 24. Attaching the supports 22 allows them to be moved vertically to the 23 and 24 posts and locked in that place. The 23 front and 24 rear vertical posts are fixed to the side shelves 25 of the base plate 1. This attachment also allows vertical movement and locking of the mutually attachable components in this position. The base plate 1 has the spindle 3 seated vertically thereon formed by a pipe 4 and flange 5, which are joined together, on which a roll of flexible wallpaper is placed. Vertical rear posts 24 have a clipping crosspiece 30 used for manual moving of the trolley.

[0011] The base 1 has a shank 6 rigidly seated in a vertical position, which is inserted into the hole in the base 1 with its lower end and additionally supported laterally with ribs 26, where these elements are connected to each other by welding. The lower bearing unit 7 made of the bearing 11 and the supporting nut 10 is slid onto shank 6 in the lower part with thread 9. In the nut 19 has a threaded hole in which the locking pin 13 is pressed against it with the screw 14. The upper bearing ring 11 is in contact with the retaining ring 12, which is seated in a non-sliding manner in the pipe 4 using pins 27.

[0012] The Pipe 4 of the spindle 3 is seated on the lower bearing unit 7, after which the upper bearing assembly 8 is inserted into the ring gap between the inner surface of the pipe 4 and the outer surface of the shank 6, in its upper part, consisting of a sliding ring 15 with radial transverse bearing 16 embedded in it, whereby this sliding ring 15 has a permanently installed eye 17 with a crossbar 18 supported in recesses 19 on the upper edge of the pipe 4. Within the upper bearing unit seating

area, sliding fits are applied between the inner surface of the pipe 4 and the outer surface of the sliding ring 15 and between the inner surface of the radial transverse bearing 16 and the outer surface of shank 6.

5 [0013] Adjusting the height setting of the flange 5 of the spindle 3 is based on turning the pipe 4 into the position when the face of the screw 14 appears in the hole 28 in the wall of pipe 4. By unscrewing this bolt 14 with a suitable wrench, the locking pin 13 is relieved and the lock nut 10 is released. By turning the nut 10 with the inserted wrench, the flange 5 is raised or lowered. At the set desired flange position height, after tightening the bolt 14, nut 10 is locked.

10 [0014] The trolley is equipped with an extension 20 adjusted by the dimensions of the outer and inner diameter to the pipe 4, which has two inserts 21 permanently installed on the inner surface of one end. Permanent installation consists in soldering the connected components through soldering holes 29. Extension 20 is placed on pipe 4 using a roll of wallpaper of high height. Extension 20 pushed on pipe 4 turns simultaneously with it and the wallpaper roll placed on it.

25 Claims

1. A trolley for moving vertically rolled wallpapers and wallcoverings in the process of gluing them to a wall, containing a plate base (1) supported by wheels (2) and a spindle (3) vertically seated thereon formed of interconnected pipes (4) and a flange (5) on which a roll of flexible wallpaper is placed, **characterized in that** the base (1) has the shank (6) rigidly seated, in vertical position, on which the lower bearing unit (7) is slipped in its lower part and the pipe (4) of the spindle (3) is seated **in that** bottom bearing unit (7), while the upper bearing unit (8) is slid into the ring gap between the inner pipe surface (4) and the outer surface of the shank (6), in its upper part.
2. The trolley, according to the claim 1, **characterized in that** the shank (6) in the lower part has a thread (9) and a nut (10) supporting the bottom bearing ring (11) screwed onto it, and the pipe (4) has a locating ring (12) seated on it in a non-slidable way, which is in contact with the upper bearing ring (11) of the lower bearing unit (7).
3. The trolley, according to the claim 2, **characterized in that**, the nut (10) has a threaded hole (11) in which the locking pin (13) is pressed with the screw (14).
4. The trolley, according to any of the preceding claims, **characterized in that** the upper bearing unit (8) includes a sliding ring (15) with radial transverse bearing (16) embedded in it, whereby this sliding ring (15) has a permanently installed eye (17) with a crossbar (18) supported in recesses (19) on the upper edge

of the pipe (4).

5. The trolley, according to any of the preceding claims, **characterized in that** it is equipped with an extension (20 adjusted by the dimensions of the outer and inner diameter to the pipe (4) wherein the extension has at least one centring insert (21) permanently installed on the inner surface of one end.

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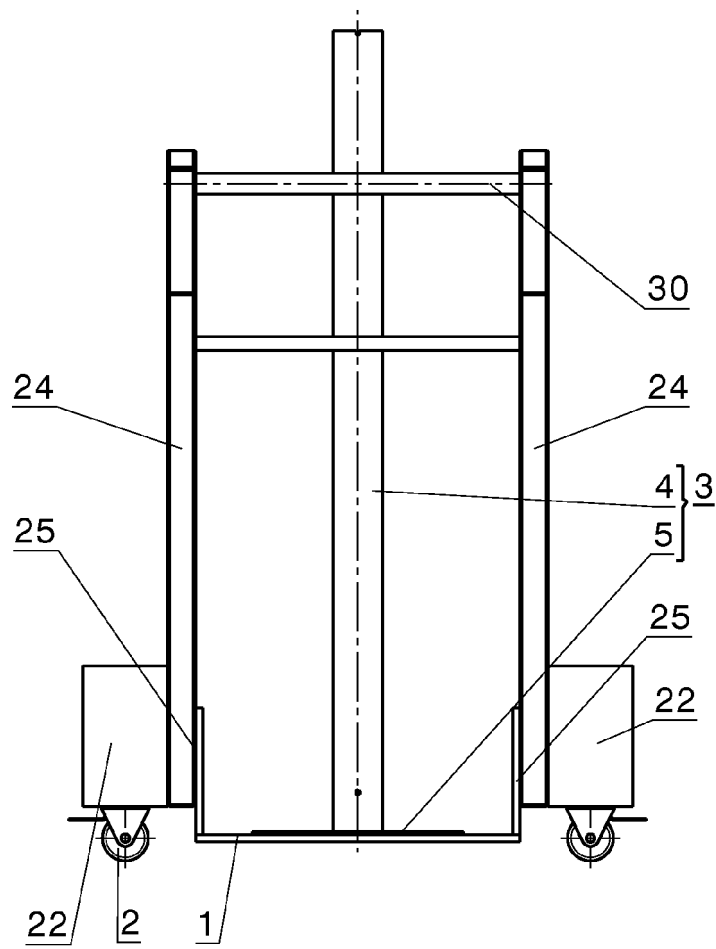


Fig. 1

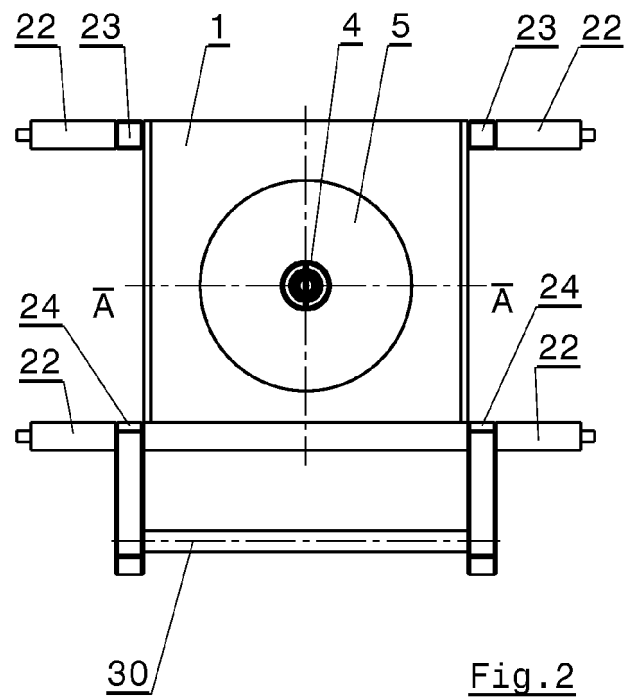
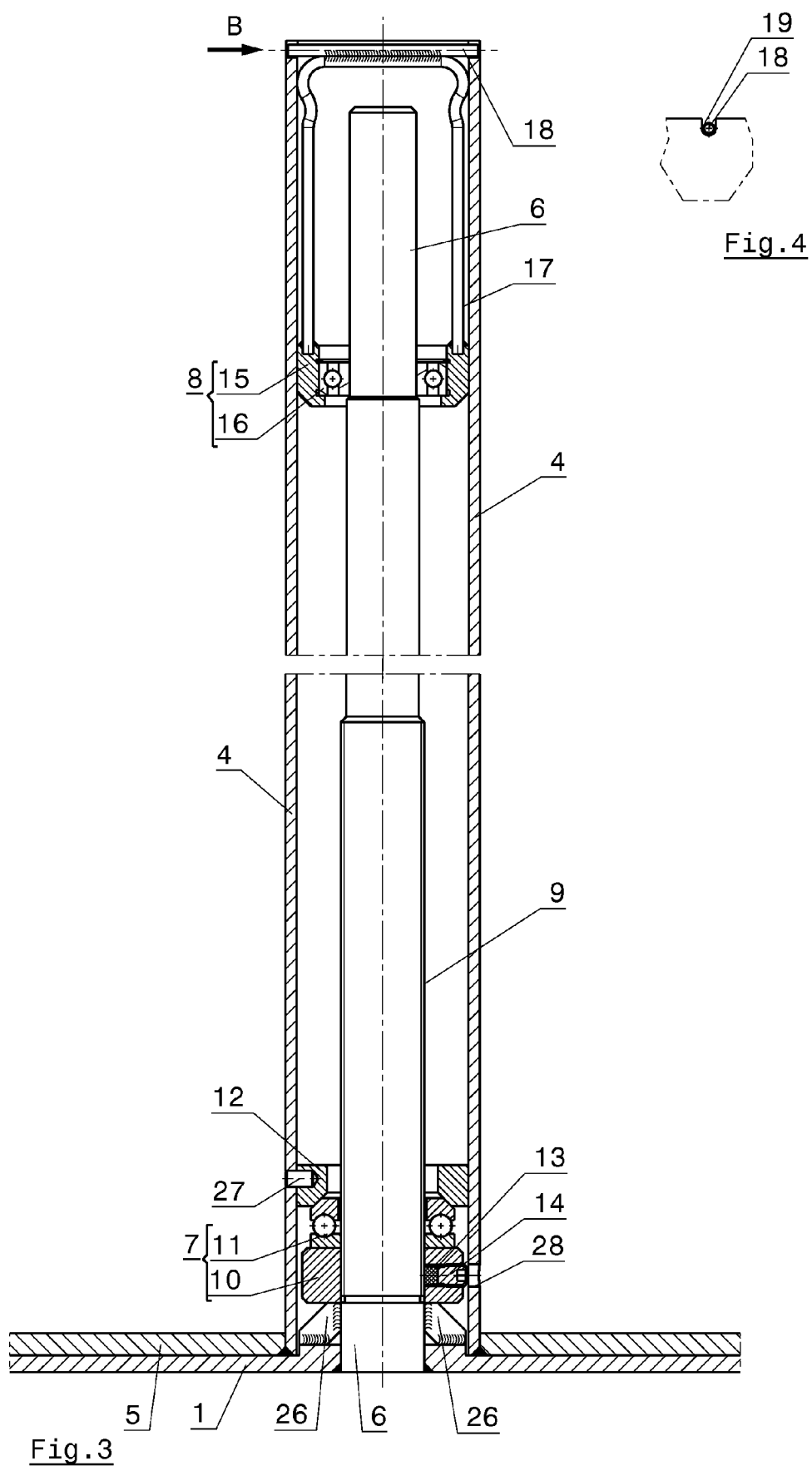


Fig. 2



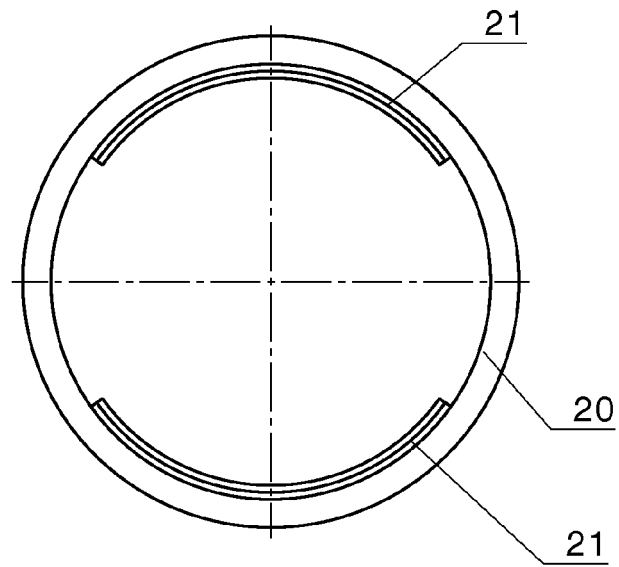


Fig. 6

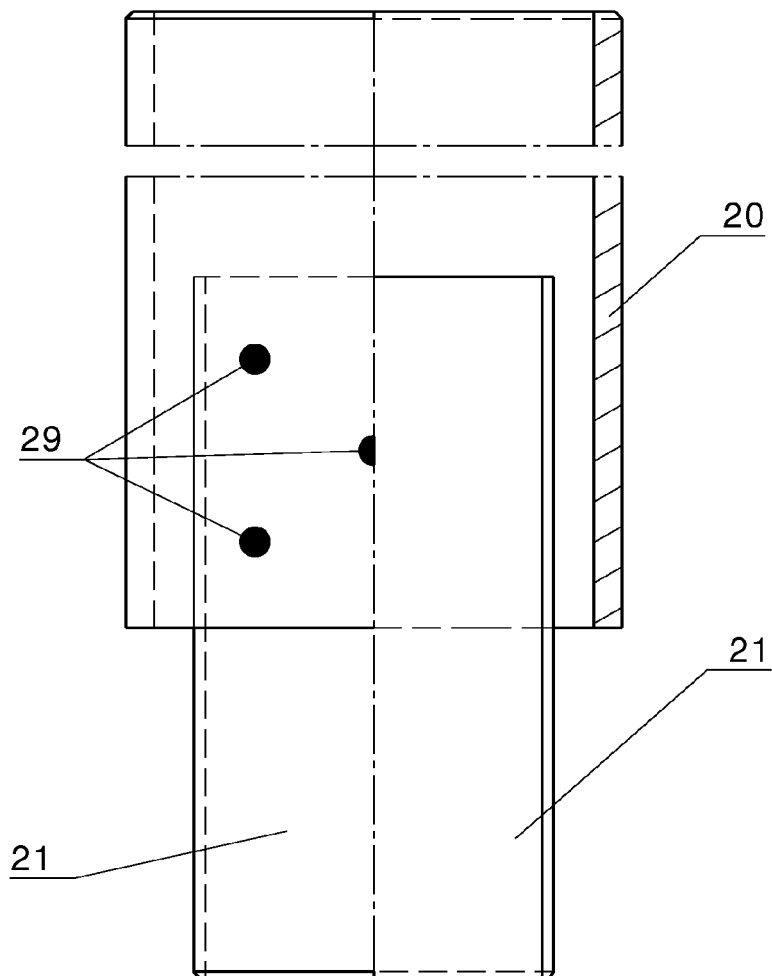


Fig. 5



EUROPEAN SEARCH REPORT

 Application Number
EP 19 18 5085

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A	US 2014/174667 A1 (ELIASON KEVIN M [US] ET AL) 26 June 2014 (2014-06-26) * the whole document *	1	
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			TECHNICAL FIELDS SEARCHED (IPC)
			B44C B44F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 February 2020	Examiner Haaken, Willy
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 19 18 5085

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