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(54) **Security device for garment rails**

(57) The invention relates to a security device for retaining garment hangers (80) on a horizontal garment rail (20;21), whereby a garment hanger (80) comprises a hook (81) for hanging the garment hanger (80) onto the garment rail (20;21), and the garment rail (20;21) is mounted between two lateral vertical poles (30;31) by means of a mounting device (10;10') at each end of the horizontal rail (20;21). According to the invention, a lever (90;90') is pivot-mounted on each of the mounting devices (10;10'), respectively, whereby the two levers (90;90') are connected by a horizontal retaining bar (100), and at least one of the pivoted levers (90;90') can be locked in a position in which the hooks (81) of the garment hangers (80) are retained by the retaining bar (100).

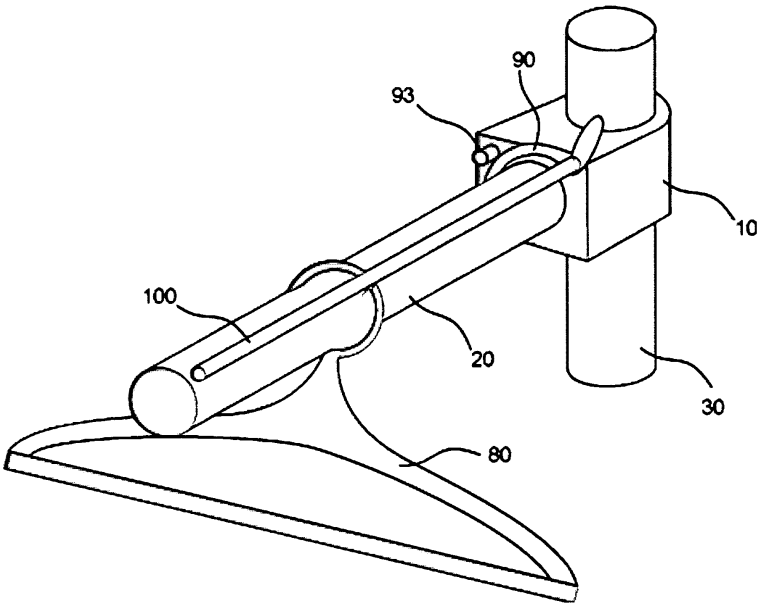

Fig. 3

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Description

[0001] The invention relates to a security device for retaining garment hangers on a horizontal garment rail, whereby a garment hanger comprises a hook for hanging the garment hanger onto the garment rail. The garment rail is mounted between two lateral vertical poles by means of a mounting device at each end of the horizontal rail.

[0002] Usually, garment rails are used for storage and transport of garments on hangers. A garment rail comprises at least one horizontal rail that is connected to two lateral vertical poles. The connection between the horizontal rail and the vertical poles can be established in different ways, whereby permanent or non-permanent connections can be used. Preferably, the horizontal rail is mounted at the upper ends of the vertical poles in order to allow long garments to hang down.

[0003] Garments are hung onto the garment rail by means of garment hangers with hooks which are linked to the garment rail. However, when these loaded garment rails are transported by pulling them from one location to the other, for example, or by transporting them in trucks over a distance, garment hangers can drop off the garment rail.

[0004] Therefore, it is an object of the invention to provide a security device for retaining garment hangers on a garment rail.

[0005] According to the invention, this objective is achieved by a security device having the features of the independent Claim 1. Advantageous refinements of the security device are set forth in the subordinate Claims 2 through 14.

[0006] According to the invention, a security device is used for retaining garment hangers on a horizontal garment rail. Thereby, a garment hanger comprises a hook for hanging the garment hanger onto the garment rail, and the garment rail is mounted between two lateral vertical poles by means of a mounting device at each end of the horizontal rail. A lever is pivot-mounted on each of the mounting devices, respectively, whereby the two levers are connected by a horizontal retaining bar, and at least one of the pivoted levers can be locked in a position in which the hooks of the garment hangers are retained by the retaining bar. Preferably, at least one lever has a knob for operating the lever.

[0007] Preferably, each lever pivots around a pivot point and at least one of the pivoted levers can be locked by arresting a locking element of the lever with a counterpart locking element of the mounting device, respectively. The locking element of the lever can be a resilient ball, for example, whereas the counterpart locking element of the mounting device is a notch.

In another embodiment of the invention, each lever pivots around a pivot point and at least one of the pivoted levers can be locked by means of a pin that is inserted into a bore of the corresponding mounting device, whereby the bore is located adjacent to the outer surface of the lever when the lever is brought in locking position.

[0008] In a preferred embodiment of the invention, mounting devices are used which allow for an easy assembly of a garment rail with a security device. Thereby, each mounting device is composed of three members, whereby two opposite members are connected to each other and form the main body of the mounting device, whereby these opposite members each comprise a channel with a semicircular cross-section embedded in a first surface of the opposite members, and these channels form a first circular passage, when both members are connected via said first surface. Furthermore, the opposite members each comprise another channel with a quadrant cross-section at the edge connecting said first surface to a second surface, whereby these channels form a semicircular channel when both opposite members are connected via said first surface. A closing member is connected to said second surfaces of the opposite members, whereby the closing member comprises a channel with semicircular cross-section embedded in a third surface of the closing member, which forms a second circular passage, when the third surface of the closing member is connected to the second surfaces of the two opposite members, respectively. Thereby, the longitudinal axis of the first circular passage lies perpendicularly to the longitudinal axis of the second circular passage, whereby the garment rail can be inserted into the first circular passage and a lateral vertical pole can be inserted into the second circular passage. Furthermore, the mounting device comprises means for fixing the lateral vertical pole within the second passage.

[0009] Preferably, the means for fixing the second bar within the second passage is an over centered lever mounted on the closing member, whereby operating said lever clamps the device to the second bar by reducing the inner diameter of the second circular passage.

[0010] In a preferred embodiment of the invention, the two opposite members are connected to each other via their first surfaces by at least one salient connection element mounted on one member engaging with a counterpart notch in the opposite member. Said salient connection element can be a pin, for example, whereas the counterpart notch is a bore.

[0011] Preferably, the salient connection element is a tongue, whereas the counterpart notch is a groove, and the tongue and the groove both run parallel to the longitudinal axis of the first circular passage. The tongue and the groove can have a hooked cross-section, and then the opposite members are connected to each other by sliding the tongue into the groove in the direction of the longitudinal axis of the first circular passage.

[0012] Furthermore, the closing member can also be connected to the second surfaces of the two opposite members by at least one salient connection element mounted on the third surface of the closing member engaging with at least one counterpart notch in the second surfaces of the opposite members. The salient connection element can be a tongue, whereas the counterpart

notch is a groove, and the tongue and the groove both run parallel to the longitudinal axis of the second circular passage.

[0013] Preferably, the lengths of the tongue and the groove are smaller than the respective length of the third surface of the closing member.

[0014] Advantages, special features and practical refinements of the invention can be gleaned from the subordinate claims and from the presentation below of preferred embodiments making reference to the figures.

[0015] The figures show the following:

Figure 1 a schematic view of one embodiment of the security device according to the invention with a garment hanger hung onto a garment rail;

Figure 2 a security device as shown in Figure 1 with open retaining bar;

Figure 3 a security device as shown in Figure 1 with locked retaining bar;

Figure 4 three members of a three-part mounting device for a security device;

Figure 5 the connection between two opposite members of the mounting device shown in Figure 4;

Figure 6 a third closing member connecting the two opposite members of the mounting device shown in Figure 4;

Figure 7 the security device shown in Figure 1 in connection with the mounting device shown in Figure 4; and

Figure 8 a garment rail using two mounting devices and a security device.

[0016] Figure 1 shows a preferred embodiment of a security device according to the invention, whereby the invention is not limited to the embodiment described in detail hereafter. The security device is used for retaining at least one garment hanger 80 on a garment rail 20. In Figure 1, one end of the garment rail 20 is mounted at the upper end of a vertical pole 30 by means of a mounting device 10. Another mounting device is used for mounting the other end of the garment rail to an opposite vertical pole (not shown).

[0017] The garment hanger 80 comprises a hook 81 for hanging the hanger onto the rail 20. It further comprises a garment holder 82 for carrying a garment like trousers, a coat, dress or shirt (not shown). A plurality of hangers can be hung onto the garment rail, whereby only one hanger 80 close to the mounting device 10 is exemplarily shown in Figure 1.

[0018] The security device comprises a pivot-mounted lever 90 (90') which is mounted on each mounting device 10 (10'). The lever pivots around a pivot point 91, whereby the bearing can easily be achieved by a pin and a bore, for example. A knob 92 can be provided for operating the lever 90. The shape of the lever 90 is curved. Thereby, when the lever 90 is pivoted around the pivot point 91 in the direction of the rail 20, it surrounds the garment rail 20 and the hook of the hanger 80, respectively, as it is shown in Figure 1.

[0019] The garment hanger 80 is retained on the rail 20 by a retaining bar 100 which is mounted between the two opposite levers 90 and 90'. Preferably, the retaining bar 100 is a slim and light bar with a rubber surface which prevents garment hangers from falling and jumping off the rail 20 in transit. In order to operate the retaining bar 100, the two levers 90 and 90' are pivoted around their pivot point 91 (91') in the direction of the rail 20. In the operating position, the retaining bar 100 clamps the garment hangers to the rail 20, or a short distance between the retaining bar 100 and the hooks 81 of the hangers 80 is left.

[0020] In order to lock a lever and the retaining bar in this position, locking elements can be provided in each lever and mounting device, respectively. For example, a resilient ball can be embedded in the outer surface of a mounting device 10. A corresponding bore is provided in the lever 90. When the lever is operated, the lever passes the resilient ball and presses it into the body of the mounting device 10. Once the bore of the lever has passed the resilient ball, the ball springs back and engages with the bore. The resilience of the ball has to be chosen accordingly. If the resilience is too low, the lever can unlock during transit. If the resilience is too high, it will be hard to lock the lever in the locking position.

[0021] In another embodiment of the invention, the lever is locked in the locking position by a pin 93 which is inserted into a bore 94 in the mounting device. The bore 94, and therefore the pin 93, are located adjacent to the outer surface of the lever 90 in locking position. This can be gleaned from Figure 1, where the lever 90 is in locking position and the pin 93 has been inserted. Since the pin 93 protrudes from the surface of the mounting device, the lever 90 is arrested by the pin and can not pivot back.

[0022] Figure 2 shows the situation when the lever 90 has opened and the retaining bar 100 is moved away from the rail 20 and the hanger 80. Unless a resilient pin is chosen which can be pressed into the mounting device by operating the lever 90, the pin has to be removed from the bore 94 first. Then, a plurality of hangers 80 can be hung onto the rail 20 and the levers can be closed by using the knob 92, for example. Thereby, the retaining bar 100 covers all hooks of the hangers and as soon as the levers are locked by inserting the pin 93 in the bore 94, the retaining bar 100 prevents the hangers from falling off the rail 20. This situation is schematically shown in Figure 3.

[0023] Figure 4 shows a preferred embodiment of a

mounting device used for mounting the security device to a vertical pole of a garment rail. This mounting device is composed of at least three members that are connected to each other in order to form a three-part mounting device. Preferably, the mounting device has kind of a rectangular (cubic) shape, but any rounded shape can also be chosen.

[0024] Two opposite members 40 and 50 form the main body of the mounting device 10. Both members 40 and 50 basically have a cubic shape with several modifications of their general shape. First of all, each of the two opposite members 40 and 50 comprises a channel 41 and 51, respectively, with a semicircular cross-section embedded in a first surface 42 and 52 of the opposite members. The channels 41 and 51 have a semicircular cross-section in order to form a circular passage 12, when both opposite members 40 and 50 are connected via said first surfaces 42 and 52. In the embodiment shown in Figure 4, a great part of the basic bodies of each of the opposite members has been cut out for forming each of the channels 41 and 51. The garment rail 20 with a circular cross-section can easily be inserted into this passage 12.

[0025] Furthermore, the opposite members 40 and 50 each comprise another channel 43 and 53, respectively, with a quadrant cross-section at the edge connecting said first surface 42 and 52 to a second surface 44 and 54 of the opposite members 40 and 50, respectively. Thereby, said second surface 44 and 54 is adjacent to the first surface 42 and 52 forming an edge. The phrase "quadrant cross-section" means that a quarter of a circle is cut out of the bodies of the opposite members 40 and 50 at the edge between said surfaces 44 and 42 (54 and 52). The second channels 43 and 53 cut off the edge between theses adjacent surfaces, and the channels 43 and 53 have a cross-section in the form of a quadrant. Thereby, when both opposite members 40 and 50 are connected via their first surfaces 42 and 52, the channels 43 and 53 of both members form another semicircular channel (no reference number is given for this resulting channel). This resulting second channel perpendicularly crosses the circular passage 12 which is formed when the opposite members are connected to each other.

[0026] The two opposite members 40 and 50 can be connected in various ways. In one embodiment of the invention, several pins and counterpart bores are provided in the first surfaces 42 and 52 of the opposite members. These pins and counterpart bores engage when they are plugged into each other. However, in another preferred embodiment of the invention, the connection is established by at least one tongue and a counterpart groove into which said tongue is inserted. Preferably, two tongues 45 and 45' are mounted on the first surface 42 of the first member 40. Since most of its surface 42 is cut off by the channel 41, the tongues 45 and 45' are mounted on the remaining area of the surface 42. Thereby, they run in the direction of the longitudinal axis 11 of the resulting circular passage 12.

[0027] In the opposite member 50, counterpart grooves 55 and 55' are embedded in its first surface 52. Naturally, the cross section of the tongues 45 and 45' corresponds to the cross section of the grooves 55 and 55' on the opposite member 40. In one further preferred embodiment of the invention, the cross sections of the tongues 45 and 45' and the grooves 55 and 55' each have a hooked shape like shown in Figure 4. Thereby, the two opposite members 40 and 50 can be connected to each other by sliding the tongues 45 and 45' into the grooves 55 and 55' in the direction of the longitudinal axis 11 of the circular passage 12, like it is shown in Figure 5. Because of the hooked shape of the connecting elements, the connection can not fall apart. The connection can only be released by sliding both members back.

[0028] As mentioned before, when the two opposite members 40 and 50 are connected to each other, their semicircular channels 41 and 51 form the circular passage 12. The end of a garment rail with circular cross-section can now be inserted into this passage12. Alternatively, the end of the rail can be placed in the semicircular channel 41 of the first member 40. Then, the second member 50 is slided onto the tongues of the first member 40 in the direction of the longitudinal axis of the rail which is also the longitudinal axis 11 of the first passage 12.

[0029] When both members 40 and 50 are connected with or without an inserted bar, they are fixed by means of a third closing member 60. This third member of the mounting device 10 is connected to the second surfaces 44 and 54 of the opposite members 40 and 50. The closing member 60 also comprises a channel 61 with semicircular cross-section embedded in a third surface 62 of the closing member 60. When the closing member 60 is connected to the two opposite members 40 and 50, a second circular passage 14 is formed, when the third surface 62 of the closing member 60 is connected to the second surfaces 44 and 54 of the two opposite members 40 and 50, respectively, because channel 61 of the closing member forms a circular passage 14 together with the channel resulting from connecting the quadrant channels of each opposite member. Thereby, the longitudinal axis 11 of the first circular passage 12 lies perpendicularly to the longitudinal axis 13 of the second circular passage 14.

[0030] Preferably, the connection of the third closing member 60 to the two opposite members 40 and 50 is also established by a tongue and groove connection. For example, two tongues 64 and 64' can be formed in the surface 62 of the closing member, which engage with two grooves 46 and 56 on the side of the opposite members 40 and 50, or vice versa. The closing member 60 can be slided onto the opposite members 40 and 50 like it is shown in Figure 6. Thereby, the lengths of the tongues 64 and 64' and the grooves 46 and 56 are smaller than the respective length of the surface 62. When the mounting device 10 is looked at with the first circular passage 12 extending horizontally, the tongues and grooves of the closing member 60 are mounted in the upper area of

the third surface 62 of the closing member 60. Thus, the closing member 60 can not slide down but is retained.

[0031] A vertical pole can be inserted into the resulting second circular passage 14 before or after the closing member 60 is fixed to the connected opposite members 40 and 50. Preferably, the mounting device 10 comprises means for fixing the mounting device to said vertical pole. The mounting device has to be fixed to the vertical pole in order to fasten the horizontal rail to the vertical pole. In one embodiment of the invention, the means for fixing the vertical pole within the second passage 14 is an over centered lever 63 attached to the closing member 60, whereby operating the lever 63 clamps the device 10 to the vertical pole 30 by reducing the inner diameter of the second circular passage 14. Thereby, the closing member 60 can comprise an open middle section 65 which provides for space for operating the over centered lever 63.

[0032] Preferably, the described mounting device is used for fixing at least one horizontal rail to two lateral vertical poles of a garment rail. Such garment rail 70 is schematically shown in Figure 8. The garment rail 70 comprises at least two vertical poles 30 and 31 and a horizontal rail 21, which is connected to the lateral poles 30 and 31 at their upper ends. Long garments like trousers, coats, etc. can be hung onto the horizontal rail by means of hangers. For stability reasons, the garment rail 70 can comprise another horizontal unit in form of a base unit 71 which is amounted at the lower ends of the vertical poles. Rolls 72 (72') can be attached to the base unit 71.

[0033] If smaller garments have to be transported/stored, at least one other second horizontal rail 20 can be connected to the vertical poles by means of two mounting devices 10 and 10'. Thereby, it is advantageous that the garment rail 70 does not have to be disassembled in order to fix the second horizontal rail. The second horizontal rail 20 can be positioned between the vertical poles 30 and 31. Then, the two opposite members of each mounting device are slided onto each other while the horizontal rail 20 is positioned in their semicircular channels. After that, the horizontal rail 20 is already fixed between the two vertical poles 30 31 and can be fixed to them in the chosen height by applying the closing members and operating the levers. Alternatively, the horizontal rail 20 can be inserted into the semicircular passages of each mounting device 10 and 10' and is then positioned and fixed between the two vertical poles 30 and 31.

[0034] Further horizontal rails can be mounted in the same way. Shorter garments can be hung onto at least two rails which increases the capacity of the garment rail significantly. The height of the additional horizontal rail (s) can always be adjusted by releasing the lever and moving the horizontal rail to the desired height.

[0035] The levers 90 and 90' can already be affixed to one of the opposite members 40, or it can retroactively be attached to the pivot point 91. A mounting device with an attached lever 90 can be seen in Figure 6, for example. When both levers 90 and 90' are attached to their mounting devices, the retaining bar 100 can be attached to the levers like shown in Figure 7. Therefore, bores can be provided in the levers and the retaining bar can be inserted in each of said bores. Once the retaining bar 100 is mounted, it can be operated like described before.

[0036] The security device according to the invention and the mounting device can be used separately for different purposes. However, the combination of both members allows for secure transport of garments on a garment rail, whereby the height of the garment rail can easily be changed. Furthermore, additional garment rails can temporarily be mounted if required.

List of reference numerals

[0037]

10,10'	mounting device
11	longitudinal axis
12	first passage
13	longitudinal axis
14	second passage
20,21	bar, horizontal rail
30,31	bar, vertical pole
40	first opposite member
41	semicircular channel
42	first surface
43	quadrant channel
44	second surface
45,45'	connecting element, pin, tongue
46	connecting element, groove
50	second opposite member
51	semicircular channel
52	first surface
53	quadrant channel
54	second surface
55,55'	notch, groove
56	connecting element, groove
60	closing member
61	semicircular channel
62	third surface
63	lever
64,64'	connecting element, tongue
65	open middle section
70	garment rail
71	base unit
72,72'	roll
80	garment hanger
81	hook
82	garment holder
90,90'	lever
91,91'	pivot point
92	knob
93	pin
94	bore
100	retaining bar

Claims

1. Security device for retaining garment hangers (80) on a horizontal garment rail (20;21), whereby a garment hanger (80) comprises a hook (81) for hanging the garment hanger (80) onto the garment rail (20; 21), and the garment rail (20;21) is mounted between two lateral vertical poles (30;31) by means of a mounting device (10;10') at each end of the horizontal rail (20;21),
characterized in that,
a lever (90;90') is pivot-mounted on each of the mounting devices (10;10'), respectively, whereby the two levers (90;90') are connected by a horizontal retaining bar (100), and at least one of the pivoted levers (90;90') can be locked in a position in which the hooks (81) of the garment hangers (80) are retained by the retaining bar (100).

2. Security device according to Claim 1,
characterized in that,
each lever (90;90') pivots around a pivot point (91; 91') and at least one of the pivoted levers (90;90') can be locked by arresting a locking element of the lever (90;90') with a counterpart locking element of the mounting device (10;10'), respectively.

3. Security device according to Claim 2,
characterized in that,
the locking element of the lever (90;90') is a resilient ball, whereas the counterpart locking element of the mounting device (10;10') is a notch.

4. Security device according to Claim 1,
characterized in that,
each lever (90;90') pivots around a pivot point (91; 91') and at least one of the pivoted levers (90;90') can be locked by means of a pin (93) that is inserted into a bore (94) of the corresponding mounting device (10;10'), whereby the bore (94) is located adjacent to the outer surface of the lever (90;90') when the lever (90;90') is brought in locking position.

5. Security device according to one of Claims 1 to 4,
characterized in that,
at least one lever (90;90') has a knob (92) for operating the lever (90;90').

6. Security device according to one of Claims 1 to 5,
characterized in that,
each mounting device (10;10') is composed of three members (40;50;60), whereby two opposite members (40;50) are connected to each other and form the main body of the mounting device (10;10'), and these opposite members (40;50) each comprise a channel (41;51) with a semicircular cross-section embedded in a first surface (42;52) of the opposite members (40;50), and these channels (41;51) form a first circular passage (12), when both members (40;50) are connected via said first surface (42;52), and whereby the opposite members (40;50) each comprise another channel (43;53) with a quadrant cross-section at the edge connecting said first surface (42;52) to a second surface (44;54), and these channels (43;53) form a semicircular channel when both opposite members (40;50) are connected via said first surface (42;52), and a closing member (60) is connected to said second surfaces (44;54) of the opposite members (40;50), whereby the closing member (60) comprises a channel (61) with semicircular cross-section embedded in a third surface (62) of the closing member (60), which forms a second circular passage (14), when the third surface (62) of the closing member (60) is connected to the second surfaces (44;54) of the two opposite members (40; 50), respectively, and the longitudinal axis (11) of the first circular passage (12) lies perpendicularly to the longitudinal axis (13) of the second circular passage (14), whereby the garment rail (20) can be inserted into the first circular passage (12) and a lateral vertical pole (30;31) can be inserted into the second circular passage (14), and the mounting device (10; 10') comprises means for fixing the lateral vertical pole (30;31) within the second passage (14).

7. Security device according to Claim 6,
characterized in that,
the means for fixing the second bar (30;31) within the second passage (14) is an over centered lever (63) mounted on the closing member (60), whereby operating said lever (63) clamps the device (10) to the second bar (30) by reducing the inner diameter of the second circular passage (14).

8. Security device according to one of Claims 6 and 7,
characterized in that,
the two opposite members (40;50) are connected to each other via their first surfaces (42;52) by at least one salient connection element (45;45') mounted on one member (40) engaging with a counterpart notch (55;55') in the opposite member (50).

9. Security device according to Claim 8,
characterized in that,
the salient connection element is a pin, whereas the counterpart notch is a bore.

10. Security device according to Claim 9,
characterized in that,
the salient connection element is a tongue (45;45'), whereas the counterpart notch is a groove (55;55'), and the tongue (45:45') and the groove (55;55') both run parallel to the longitudinal axis (11) of the first circular passage (12).

11. Security device according to Claim 10,

characterized in that,
the tongue (45;45') and the groove (55;55') have a hooked cross-section, and the opposite members (40;50) are connected to each other by sliding the tongue (45;45') into the groove (55;55') in the direction of the longitudinal axis (11) of the first circular passage (12).

12. Security device according to one of Claims 6 to 11, **characterized in that,**
the closing member (60) is connected to the second surfaces (44;54) of the two opposite members (40; 50) by at least one salient connection element (64; 64') mounted on the third surface (62) of the closing member (60) engaging with at least one counterpart notch (46;56) in the second surfaces (44;54) of the opposite members (40;50).

13. Security device according to Claim 12, **characterized in that,**
the salient connection element is a tongue (64;64), whereas the counterpart notch is a groove (46;56), and the tongue (64;64) and the groove (46;56) both run parallel to the longitudinal axis (13) of the second circular passage (14).

14. Security device according to Claim 13, **characterized in that,**
the lengths of the tongue (64;64) and the groove (46; 56) are smaller than the respective length of the third surface (62) of the closing member (60).

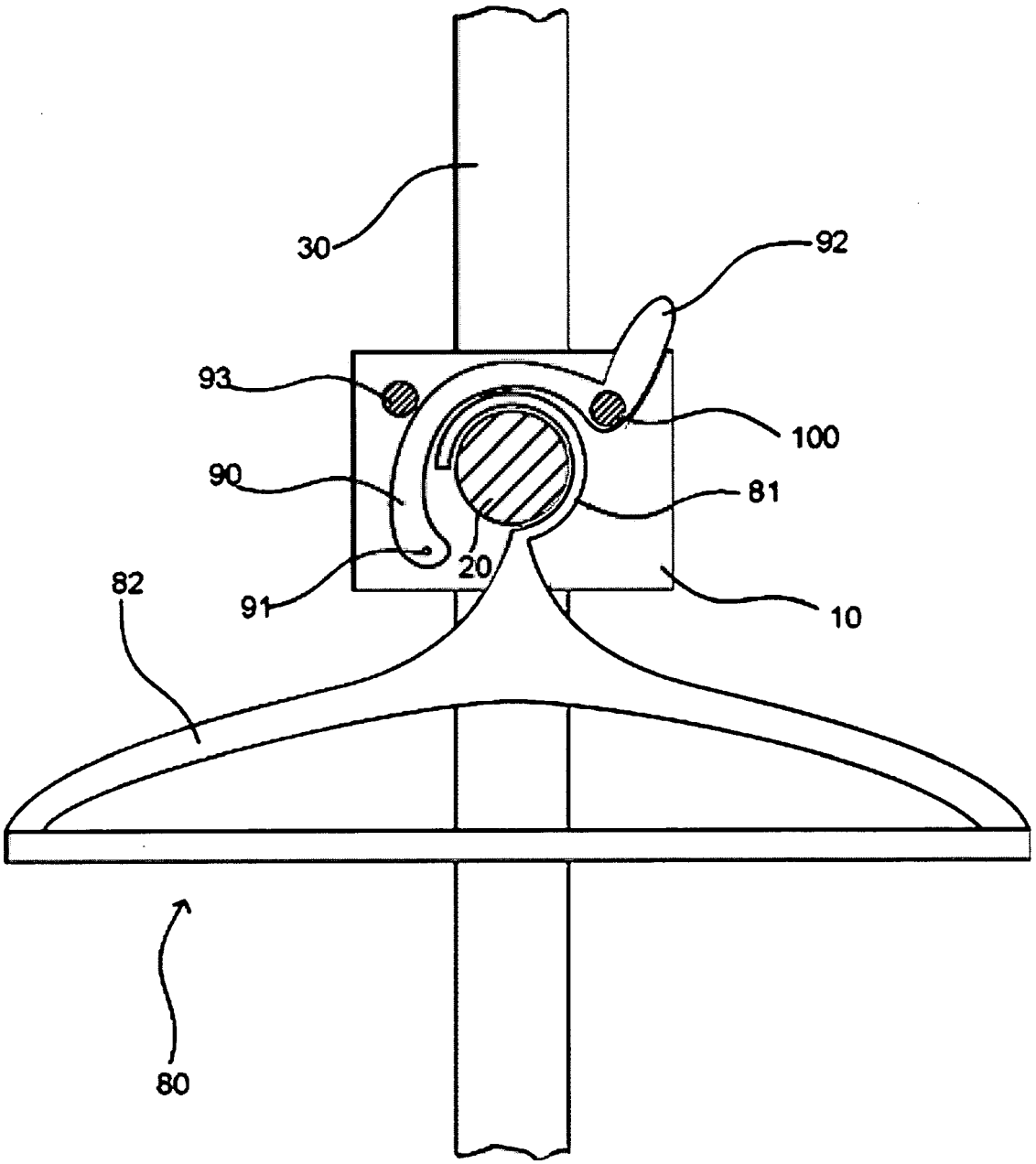

Fig. 1

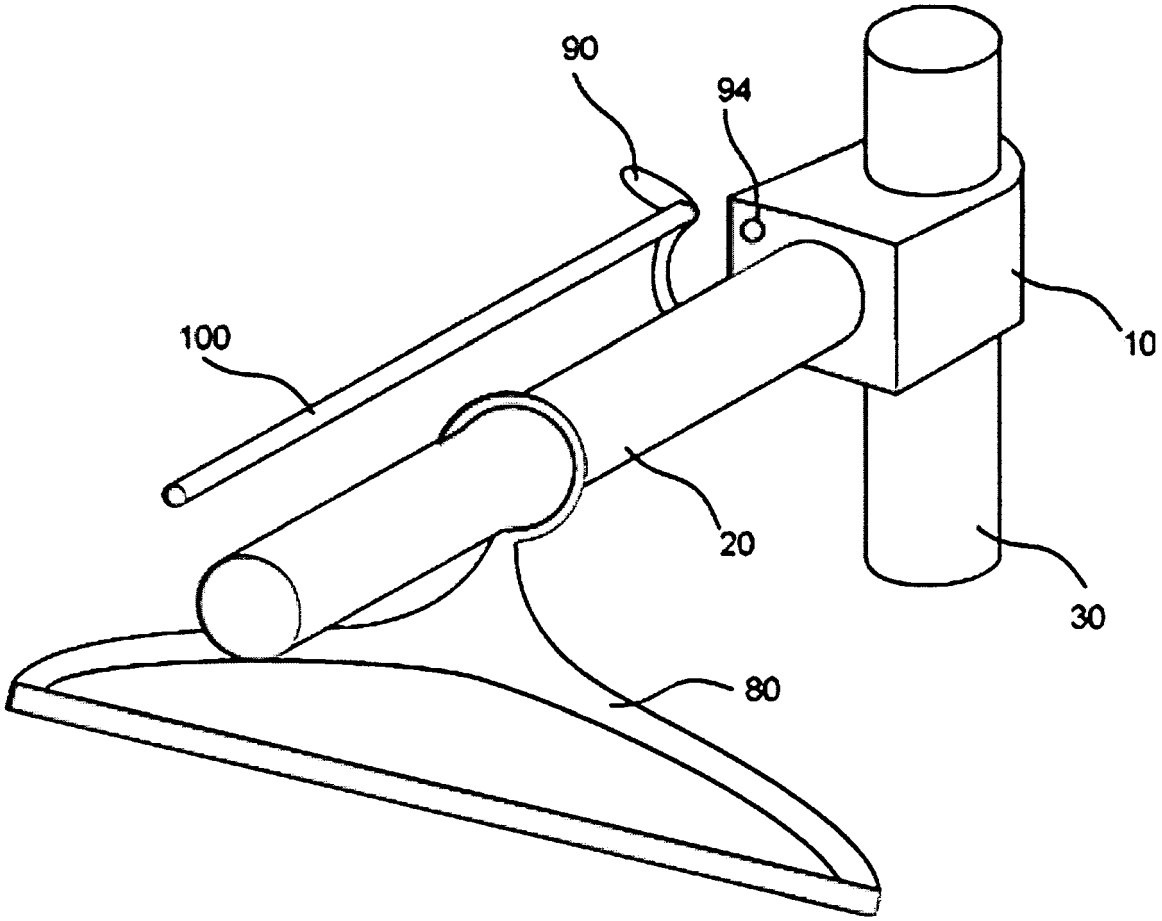

Fig. 2

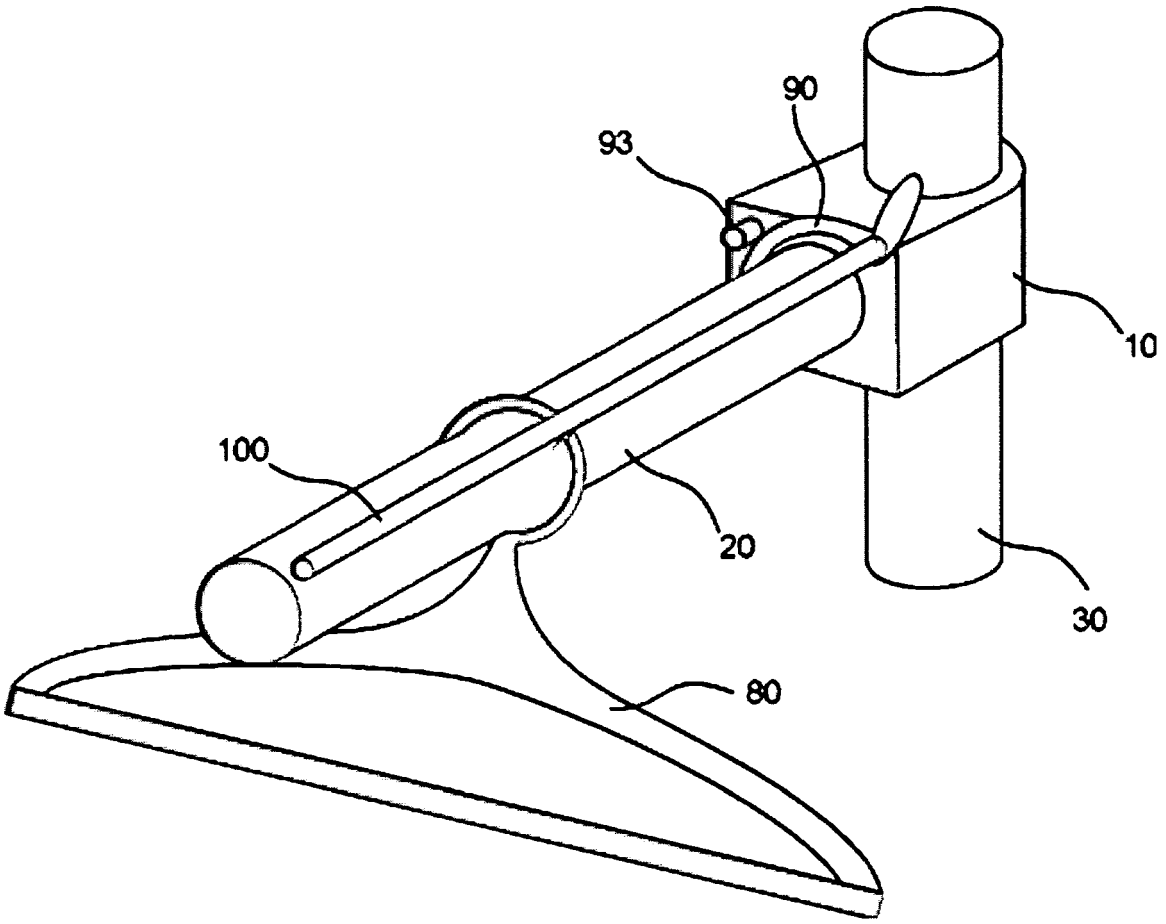

Fig. 3

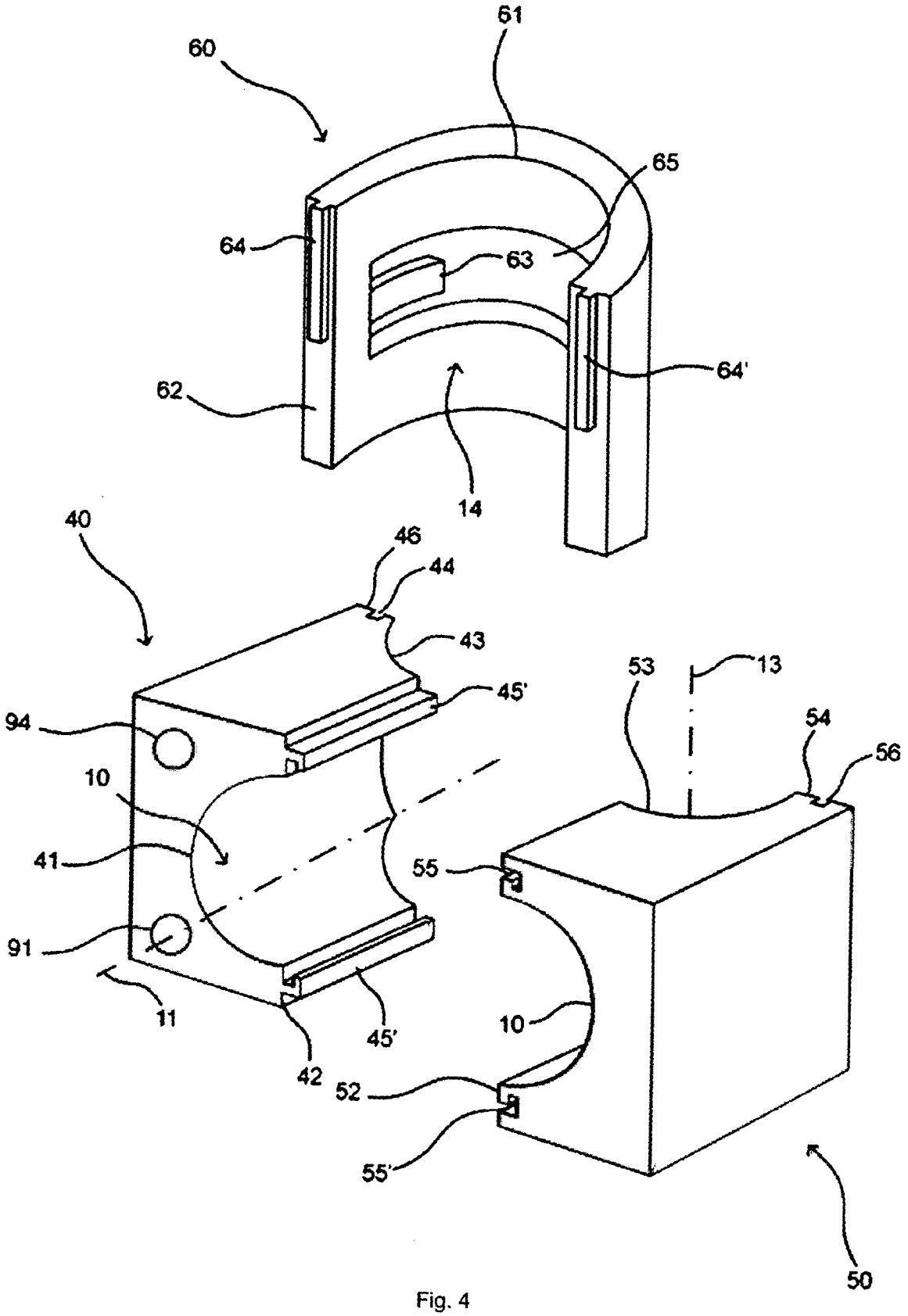
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Fig. 4

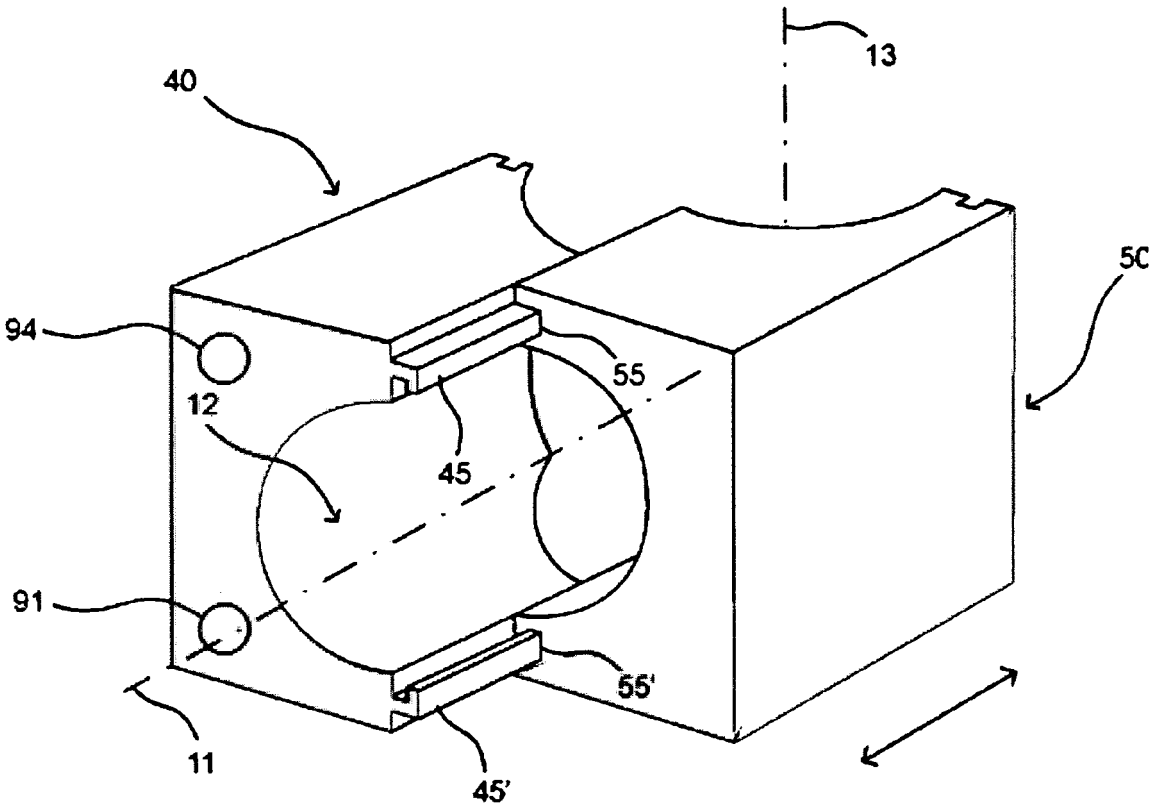

Fig. 5

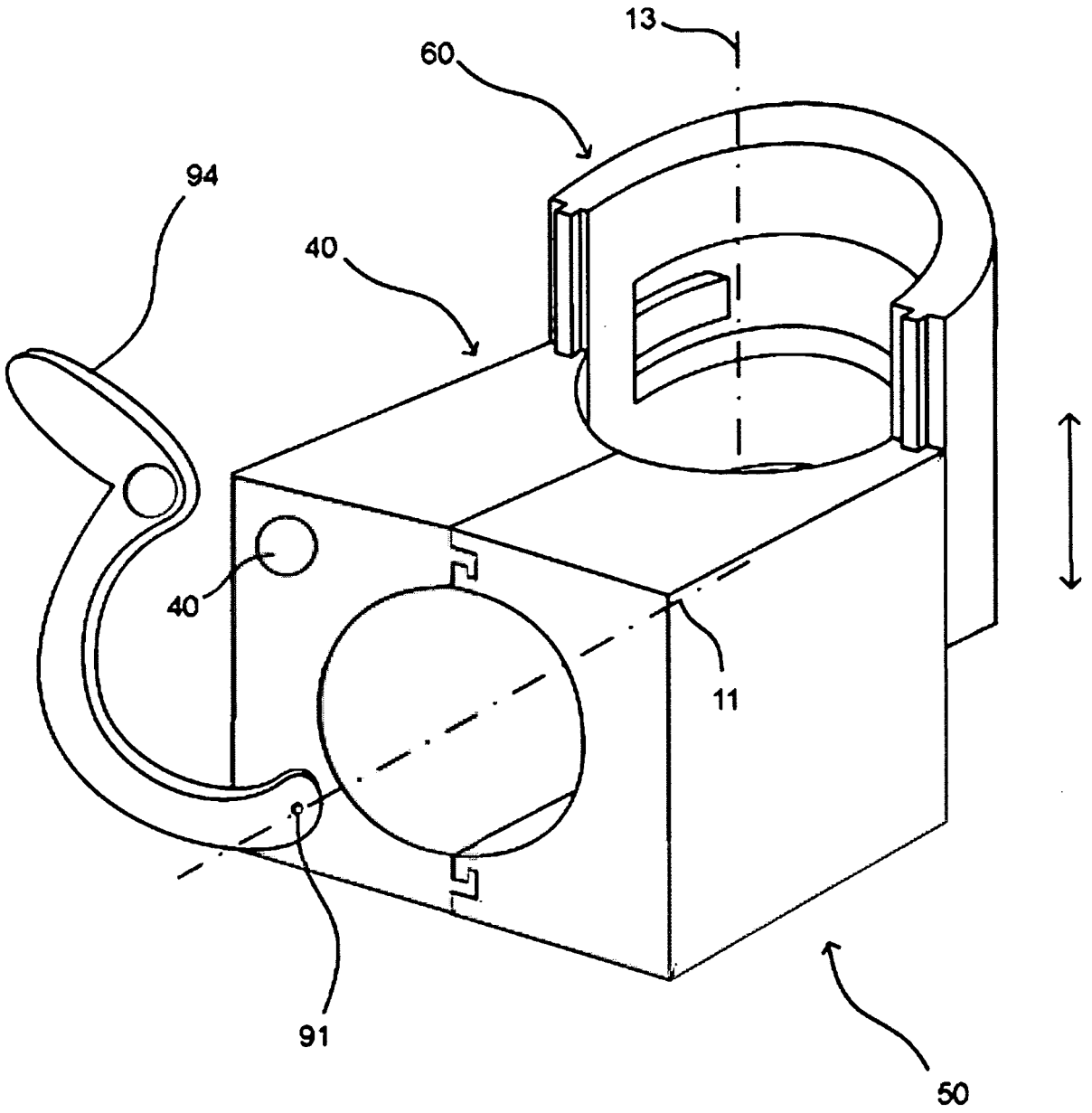

Fig. 6

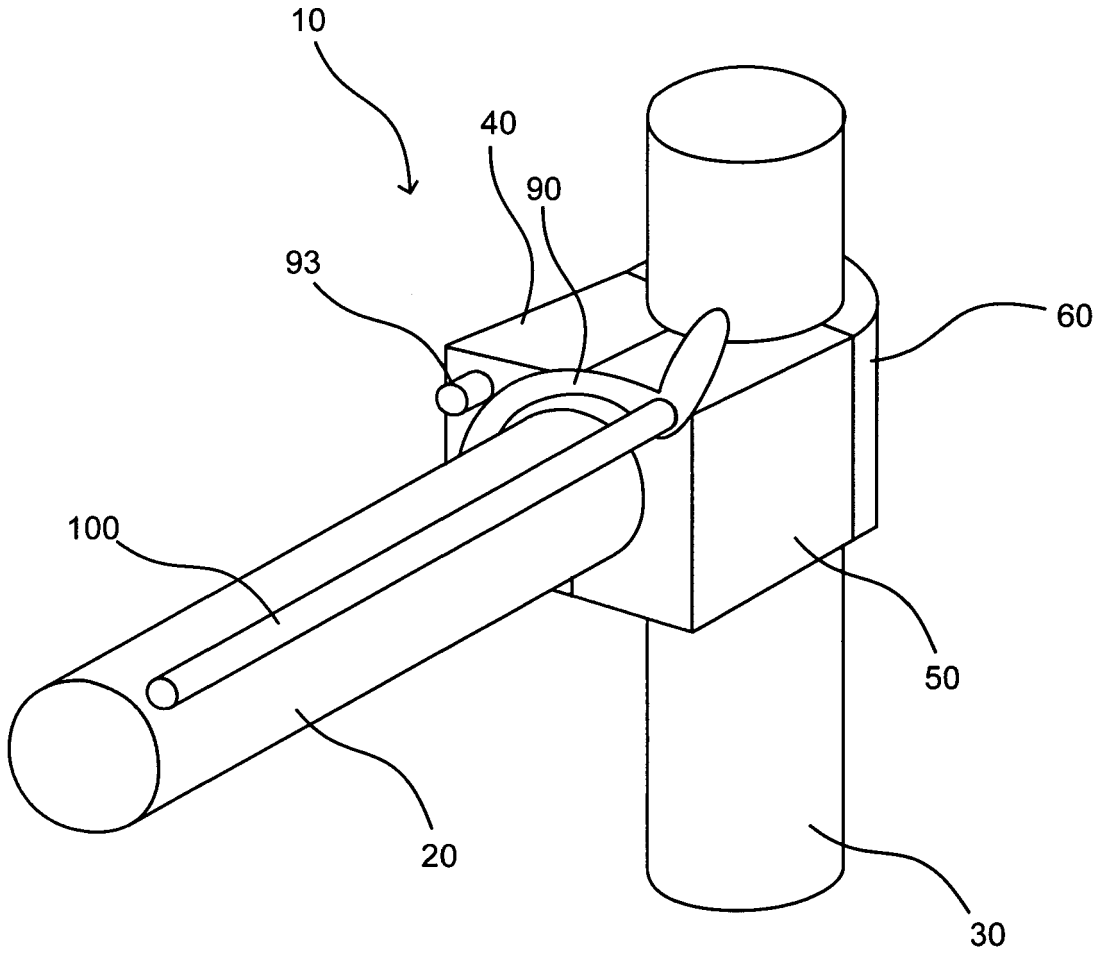

Fig. 7

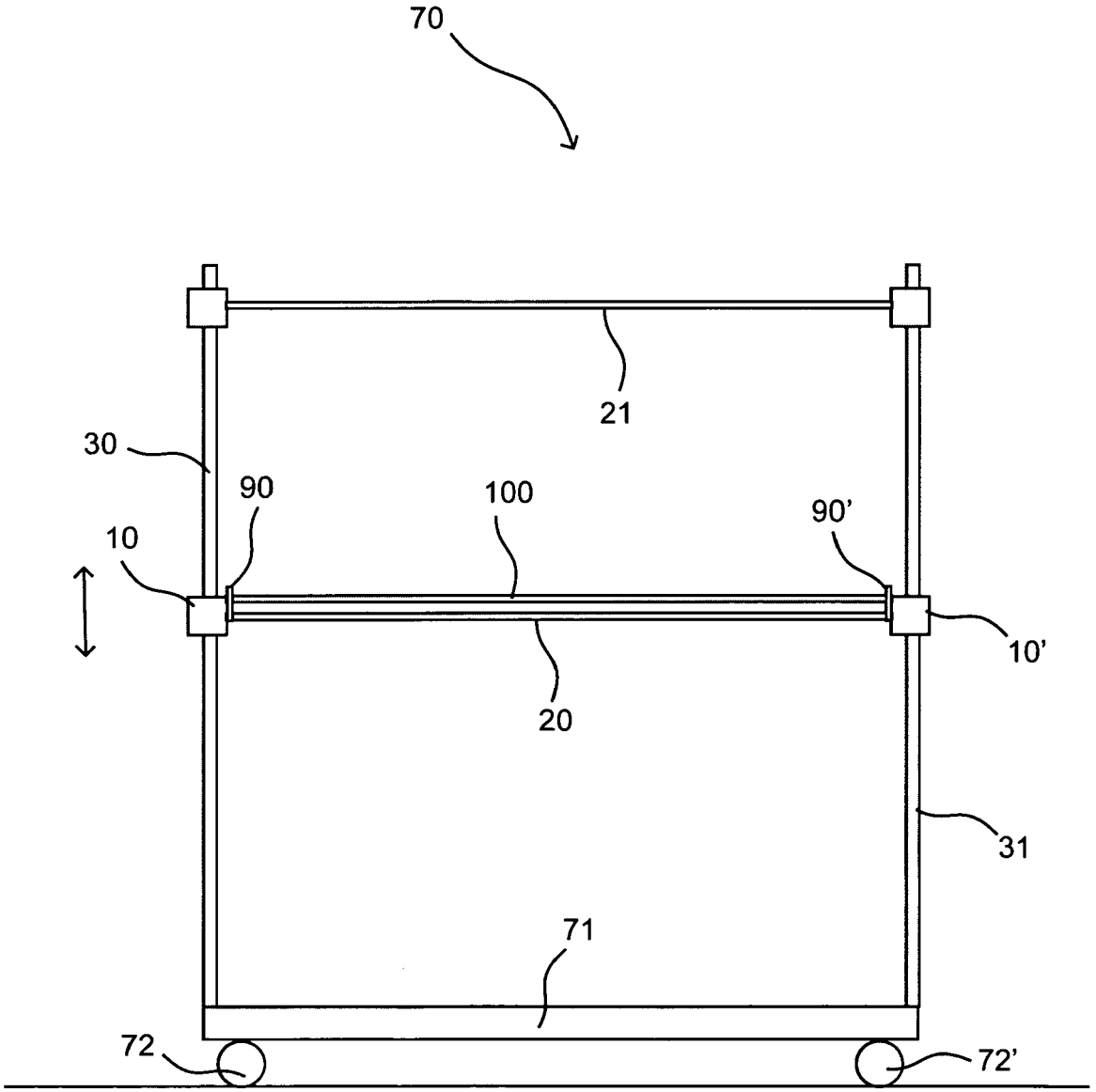

Fig. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 08 02 2539

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	AT 176 150 B (ONDRACEK FERDINAND) 25 September 1953 (1953-09-25)	1,2,5	INV. E05B69/00
A	* the whole document *	4	A47F7/24 A47G25/06
X	EP 0 035 725 A (TITGEMEYER GEB GMBH & CO KG [DE]) 16 September 1981 (1981-09-16)	1,2	ADD.
A	* the whole document *	5	E05B15/00
X	US 2 868 390 A (MCCRONE HAROLD W) 13 January 1959 (1959-01-13) * the whole document *	1,5	
X	US 1 975 543 A (GIESSLER CARL W) 2 October 1934 (1934-10-02) * the whole document *	1,2,5	
X	US 3 735 875 A (PARILLO V HIGHLAND PARK) 29 May 1973 (1973-05-29) * the whole document *	1,2,4	
X	US 5 785 184 A (METSELAAR HERBERT [DE]) 28 July 1998 (1998-07-28) * the whole document *	1,2,4	TECHNICAL FIELDS SEARCHED (IPC) E05B A47F A47G

~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
Munich	28 May 2009	Henkes, Roeland

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

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EPO FORM 1503 03.82 (P04C01)

Europäisches Patentamt
European Patent Office
Office européen des brevets

Application Number
EP 08 02 2539

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

see additional sheet(s)

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 08 02 2539

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5

Security device for retaining garment hanger rail, comprising 2 lever arms interconnected by a retaining bar, that can be moved between an open and a locked position, with a particular locktype for arresting the bar in the locked position.

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2. claims: 6-14

Security device for retaining garment hanger rail, comprising 2 lever arms interconnected by a retaining bar, that can be moved between an open and a locked position, with a particular modular construction for the mounting devices used to connect the vertical and horizontal poles of the garment rack.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 02 2539

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-05-2009

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EP 0035725 A	16-09-1981	DE 3008571 A1	10-09-1981
US 2868390 A	13-01-1959	NONE	
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US 3735875 A	29-05-1973	NONE	
US 5785184 A	28-07-1998	DE 4416464 A1	16-11-1995
		WO 9530816 A1	16-11-1995
		EP 0759113 A1	26-02-1997
		ES 2113747 T3	01-05-1998

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82