

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 634 988 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

15.03.2006 Bulletin 2006/11

(51) Int Cl.:

D06F 57/08 (2006.01)

(21) Application number: **05100191.5**

(22) Date of filing: **14.01.2005**

(84) Designated Contracting States:

**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**

Designated Extension States:

AL BA HR LV MK YU

(30) Priority: **10.09.2004 IT BS20040097**

(71) Applicant: **FOPPA PEDRETTI S.p.A.**

**24064 Grumello del Monte,
Bergamo (IT)**

(72) Inventor: **ZILIOLI, Edilio**

24064, GRUMELLO DEL MONTE (Bergamo) (IT)

(74) Representative: **Crippa, Paolo Ernesto**

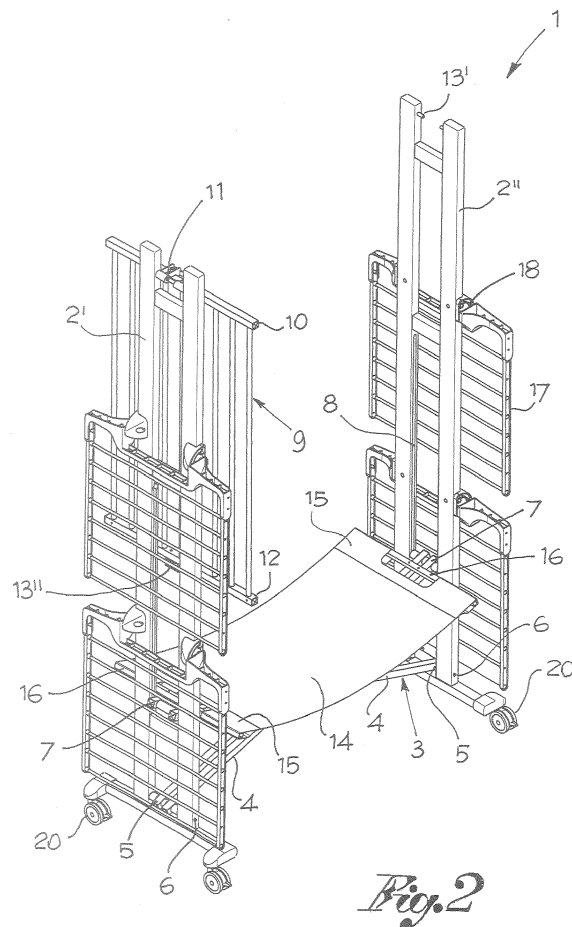
JACOBACCI & PARTNERS S.p.A.

Piazzale Arnaldo, 2

25121 Brescia (IT)

(54) **Clotheshorse**

(57) Clotheshorse openable and closable between an open use configuration, and a closed non-use configuration. The clotheshorse (1) comprises two support elements (2', 2'') relatively spaceable and/or movable close relative to one another; at least one hanging surface (9) hinged to a first support element (2'); a rest surface (14) arranged at a lower height relative to the hanging surface (9). The hanging surface (9) is removably connected to the second support element (2'').



EP 1 634 988 A1

Description

[0001] The object of the present invention is a clotheshorse for holding material placed outdoor, typically for drying. Such clotheshorse is particularly adapted for holding linen items, and even more in particular, for holding large-size linen items, such as sheets, tablecloths and the like.

[0002] In order to put clothes and linen items to dry, the use of clotheshorses is known, that allow the user to arrange a plurality of cords or strings arranged one next to the other. It is thus possible to obtain a considerable overall length of the string with limited overall dimensions.

[0003] Known clotheshorses, however, exhibit some disadvantages. In fact, its structural configuration makes it quite difficult to lay large linen items, such as sheets and tablecloths.

[0004] From the above description it is clear that the need of having a clotheshorse which should be capable of ensuring the possibility of easily laying large-size linen items is felt.

[0005] The need of having a clotheshorse which should facilitate the operation of arranging the items on the string by providing a support surface is felt as well.

[0006] Finally, the need of obtaining a clotheshorse which should be compact in closed configuration and structurally steady in open configuration is felt.

[0007] The object of the present invention is to propose a clotheshorse exhibiting such structural and functional features as to overcome the disadvantages mentioned above with reference to the prior art.

[0008] Such problems are solved with a clotheshorse in accordance with claim 1.

[0009] Further features and advantages of the clotheshorse according to the invention will appear more clearly from the following description of some preferred embodiments, described by way of non-limiting examples with reference to the annexed figures, wherein:

[0010] - figure 1 shows a perspective view of the clotheshorse according to the invention in closed configuration;

[0011] - figure 2 shows the clotheshorse of figure 1 in a first open configuration;

[0012] - figure 3 shows the clotheshorse of figure 1 in a second open configuration;

[0013] - figure 4 shows the clotheshorse of figure 1 in a third open configuration;

[0014] - figures 5a, 5b and 5c show three projections of the clotheshorse in the configuration of figure 3;

[0015] - figure 6 shows a perspective view of a peg;

[0016] - figures 7a, 7b and 7c show three projections of the peg of figure 6.

[0017] With reference to the above figures, reference numeral 1 globally denotes a clotheshorse. The clotheshorse shown comprises a support structure which in turn comprises a first support element 2' and a second support element 2".

[0018] Such support structure is adapted for taking two

different configurations. A first, non-use configuration is shown in figure 1. A second use configuration is shown in figures from 2 to 5c.

[0019] In the non-use configuration, the two support elements 2 are sided whereas in the use configuration, the two support elements are spaced.

[0020] According to a preferred embodiment, the support elements 2 comprise wheels 20 at their base that facilitate carriage of the clotheshorse and the action of opening the support structure.

[0021] According to a preferred embodiment of the clotheshorse, the support structure further comprises hinged connecting means 3 between the two support elements. Such hinged means 3 can for example comprise a St. Andrew's cross-shaped hinged structure.

[0022] The St. Andrew's cross-shaped structure comprises two rod-shaped elements 4 hinged at the centre 40. Each rod-shaped element 4 exhibits a first end 5 constrained to a support element 2 so as to freely rotate about a pin 6. The other end 7 of each rod-shaped element 4 is constrained to the other support element 2 so as to freely slide along a guide 8.

[0023] The embodiment of the support structure just described allows imparting special steadiness to the clotheshorse in the open use configuration and special compactness in the closed non-use configuration.

[0024] The clotheshorse further comprises drying means, adapted for receiving the material the user wants to lay outdoors, typically for drying.

[0025] According to an embodiment, such drying means comprise at least one hanging surface 9. Preferably, such surface 9 exhibits a stiff frame structure inside which there are arranged - in an in se known way - portions of cords or strings adapted for contacting with the linen items to be dried. The hanging surface 9 is then hinged, at a first end 10, to the first support element 2', so as to freely rotate about a pin 11. The other end 12 of the hanging surface 9 is removably connectable to the second support element 2", that is, by releasable connecting means 13.

[0026] Figure 2 shows an open configuration of the clotheshorse and a closed configuration of the hanging surface 9. In such configuration, connected only to support element 2', it is not arranged for supporting linen items.

[0027] Figures 3 and 5, on the other hand, show an open configuration of the hanging surface 9 wherein, connected to both support elements 2, it is arranged for supporting linen items.

[0028] According to a first embodiment, the releasable connecting means 13 comprise a pin 13' integral with the support element 2 and a hooking element 13" integral with the hanging surface 9 and adapted for hooking pin 13'.

[0029] According to a preferred embodiment, the hanging surface 9 is constrained at both ends 10 and 12 by releasable connecting means 13.

[0030] From the above description, a man skilled in

the art will certainly understand that the support structure of the clotheshorse according to the invention can ensure very high compactness in the closed configuration, and at the same time, high steadiness in the open configuration. In fact, the hanging surface 9, with its stiff structure and when is connected to both support elements 2, co-operates to the strengthening of the entire support structure.

[0031] The clotheshorse further comprises means for containing the material to hang to dry. Such means comprise a rest surface 14 arranged at a lower height relative to the hanging surface 9. Also the rest surface 14, like the hanging surface 9, is openable and closable so as to change from a closed configuration (shown in figure 1) to an open configuration (shown in figures 2, 3 and 4).

[0032] According to a preferred embodiment, the rest surface 14 is made of a soft structure, for example a cloth, preferably of a plastic or synthetic material or cotton, arranged so as to unfurl when the support structure of the clotheshorse is moved to the use configuration.

[0033] For example, ends 15 of the rest surface 14 can be constrained to the rod-shaped elements 4 in the proximity of the respective ends 7. In this way, the St. Andrew's cross-shaped structure also unfurls the rest surface 14 along the direction of removal/approach of the support elements 2. Small stiff bars 16 keep the rest surface 14 unfolded in the horizontal direction perpendicular to that of removal/approach of the support elements 2.

[0034] According to a preferred embodiment, the clotheshorse according to the invention further comprises at least another hanging surface 17, advantageously a plurality of other hanging surfaces 17. Preferably, such hanging surfaces 17 exhibit a stiff frame structure inside which there are arranged - in an in se known way - portions of cords or strings adapted for contacting with the linen items to be dried. Each of said hanging surfaces 17 is connected to a support element 2 by a constrainable hinge 18. Such constrainable hinge 18, in se known, allows the user to turn each hanging surface 17 so as to move it from the closed non-use configuration (shown in figures 1, 2, 3 and 5) to the open use configuration (shown in figure 4) and lock it overhanging in such position.

[0035] From the description above it can be understood that the clotheshorse according to the invention overcomes the disadvantages of the prior art.

[0036] From the description given above, the man skilled in the art will particularly understand that the drying means of the clotheshorse according to the invention are especially adapted for holding linen items, and even more in particular, for holding large-size linen items, such as sheets, tablecloths and the like.

[0037] The man skilled in the art will also understand that the presence of a rest surface allows further facilitating the arrangement of the linen items for drying.

[0038] At the same time, the man skilled in the art will understand that the special structure of the clotheshorse according to the invention is especially compact in the closed non-use configuration and particularly steady in

the open use configuration.

[0039] Along with the clotheshorse according to the invention, it is particularly advantageous to use a clothes peg of the type shown in figures from 6 to 7c. Hereinafter, a "clothes peg" denotes a device adapted for gripping and holding an item to hang, for example a linen item to lay outdoors for drying.

[0040] In order to hang or hold the clothes and the linen items placed to dry, the use of pegs is known.

[0041] Pegs are known, which comprise two elements that abut one onto the other by the effect of elastic means.

[0042] However, such known pegs exhibit some disadvantages. In fact, opening the peg causes the loss of grip of an item gripped thereby. Once a first item has been hanged on a clotheshorse with a conventional peg, if a second item or a second hem of the same item has to be hung in the same point, the peg needs to be reopened, risking losing grip of the first item.

[0043] From the above description it is clear that the need of having a peg which should be capable of hanging different items or different hems of the same item in a single point of the clotheshorse is felt.

[0044] The object of the present invention is to propose a peg exhibiting such structural and functional features as to overcome the disadvantages mentioned above with reference to the prior art.

[0045] Such problems are solved with a peg in accordance with claim 21.

[0046] Further features and advantages of the peg according to the invention will appear more clearly from the following description of some preferred embodiments, described by way of non-limiting examples with reference to figures from 6 to 7c.

[0047] The clothes peg, according to the invention, globally indicated with reference numeral 100, comprises a central abutment element 101 and two different gripping elements 102' and 102". Each gripping element 102 comprises a contact portion 104 adapted for contacting with the linen item and a control portion 106 adapted for being handled by the user for acting on the peg to open or close it.

[0048] Advantageously, each of the gripping elements 102' and 102" is constantly affected by elastic means, 103' and 103" respectively, so that its contact portion, 104' and 104", abuts against a contact wall, 105' and 105", obtained on each of the two sides of the central abutment element 101. In an in se known way, when the pressure applied by the user on the control portion 106 overcomes the strength of the elastic means 103, peg 100 opens.

[0049] Advantageously, the contact portions 104 and/or the contact walls 105 are knurled to increase the peg grip on the linen item and prevent it from falling even if wet.

[0050] Said elastic means 103, in se known to the man skilled in the art, can comprise a spiral spring, a flat spring, a portion of elastomeric material or any other equivalent that could be suitable for the specific needs.

[0051] According to an embodiment, such elastic means 103' and 103" coincide.

[0052] According to a preferred embodiment, peg 100 also comprises a hook 107 adapted for hooking peg 100 and any other items gripped therein on a special support, typically provided by a clotheshorse.

[0053] From the description above it can be understood that the peg according to the invention overcomes the disadvantages of the prior art. In fact, the peg according to the invention is very versatile, as it allows two options for gripping the material and fixing it to a single point, independent of one another.

[0054] A man skilled in the art may make several changes, adjustments and replacements of elements with other functionally equivalent ones to the preferred embodiments of the clotheshorse and of the peg, in order to meet specific and incidental needs, without departing from the scope of the following claims.

Claims

1. Clotheshorse (1) openable and closable between an open use configuration, adapted for hanging material to be dried, and a closed non-use configuration, wherein said clotheshorse comprises:

- a support structure comprising a first support element (2') and a second support element (2''), relatively spaceable and/or movable close relative to one another for changing from said open configuration to said closed configuration of the clotheshorse;

- drying means, adapted for keeping the material to be dried hung, comprising at least one hanging surface (9), said surface being hinged, at a first transversal end (10), to said first support element (2');

- means for containing the material to hand to dry, comprising a rest surface (14) arranged at a lower height relative to said hanging surface (9), said rest surface (14) being openable and closable between said open configuration and said closed configuration of the clotheshorse;

said clotheshorse being **characterised in that** said hanging surface (9) is removably connectable, at the other transversal end (12), to said second support element (2''), when said clotheshorse is in said open configuration.

2. Clotheshorse according to claim 1 wherein said support elements (2) comprise wheels (20).
3. Clotheshorse according to claim 1 or 2, wherein said support structure comprises hinged connecting means (3) between the two support elements (2).

4. Clotheshorse according to claim 3, wherein said hinged means (3) comprise a St. Andrew's cross-shaped structure comprising two rod-shaped elements (4).

5. Clotheshorse according to claim 4, wherein said St. Andrew's cross-shaped structure comprises two rod-shaped elements (4) hinged at the centre (40).

6. Clotheshorse according to claim 4, wherein said St. Andrew's cross-shaped hinged structure comprises two rod-shaped elements (4), each of said rod-shaped elements (4) having a first end (5) constrained to one of said support elements (2) so as to freely rotate about a pin (6) and a second end (7) constrained to the other of said support elements (2) so as to freely slide along a guide (8).

7. Clotheshorse according to any one of the previous claims, wherein said hanging surface (9) comprises a stiff frame structure.

8. Clotheshorse according to any one of the previous claims, wherein said hanging surface (9) comprises a stiff frame structure inside which there are arranged portions of cord.

9. Clotheshorse according to any one of the previous claims, wherein said hanging surface (9) comprises a stiff frame structure inside which there are arranged strings.

10. Clotheshorse according to any one of the previous claims, wherein both ends (10; 12) of said hanging surface (9) are constrained to said support elements (2) by releasable connecting means (13).

11. Clotheshorse according to any one of the previous claims, wherein said releasable connecting means (13) comprise a pin (13') integral with said support element (2) and a hooking element (13'') integral with said hanging surface (9) and adapted for hooking said pin (13').

12. Clotheshorse according to any one of the previous claims, wherein said rest surface (14) comprises a soft structure.

13. Clotheshorse according to the previous claim, wherein said soft structure comprises a cloth (14) and stiff bars (16) adapted for keeping said cloth (14) unfolded in the horizontal direction perpendicular to that of removal/approach of the support elements (2).

14. Clotheshorse according to claim 4, wherein the ends (15) of said rest surface (14) are constrained to said rod-shaped elements (4) in the proximity of said sup-

port elements (2).

15. Clotheshorse according to any one of the previous claims, wherein said rest surface is adapted for unfurling when said support structure is moved to the use configuration. 5
16. Clotheshorse according to claim 3, wherein said hinged connecting means (3) between the two support elements (2) unfurl said rest (14) along the direction of removal/approach of the support element (2) when said support structure is moved to the use configuration. 10
17. Clotheshorse according to any one of the previous claims, further comprising at least one hanging surface (17) connected to one of said support elements (2). 15
18. Clotheshorse according to the previous claim, wherein said at least one hanging surface (17) exhibits a stiff frame structure inside which there are arranged portions of cord or strings. 20
19. Clotheshorse according to claim 17, wherein said at least one hanging surface (17) is connected to one of said support elements (2) by a constrainable hinge (18) adapted for allowing the rotation of said hanging surface (17) between a closed non-use configuration and an open use configuration. 25 30
20. Clotheshorse according to the previous claim, wherein said constrainable hinge (18) is adapted for locking said hanging surface (17) in said open use configuration. 35
21. Clotheshorse according to any one of the previous claims, comprising at least one wheel for being moved. 40
22. Clotheshorse according to claim 21, wherein said wheel is coupled to braking means adapted for preventing said wheel from rolling.
23. Peg (100) or device adapted for holding an item to hang, for example an item to lay for drying, comprising: 45
 - a first gripping element (102') constantly influenced by first elastic means (103) adapted for abutting at least one contact portion (104) of said first gripping element (102') against a first contact wall (105'), and 50
 - a second gripping element (102'') constantly influenced by second elastic means (103) adapted for abutting at least one contact portion (104) of said second gripping element (102'') against a second contact wall (105''), 55

said device being **characterised in that** it further comprises an abutment element (101), arranged between said gripping elements (102) and comprising said contact walls (105) against which the contact portions (104) abut by the action of the elastic means (103).

24. Peg according to claim 23, wherein said contact portions (104) and/or said contact portions (105) are knurled.
25. Peg according to claim 24, wherein said elastic means (103') and said second elastic means (103'') coincide.
26. Peg according to claim 24, wherein said elastic means (103) comprise a spiral spring.
27. Peg according to claim 24, wherein said elastic means (103) comprise a flat spring.
28. Peg according to claim 24, wherein said elastic means (103) comprise a portion of elastomeric material.
29. Peg according to claim 24, comprising a hook (107).

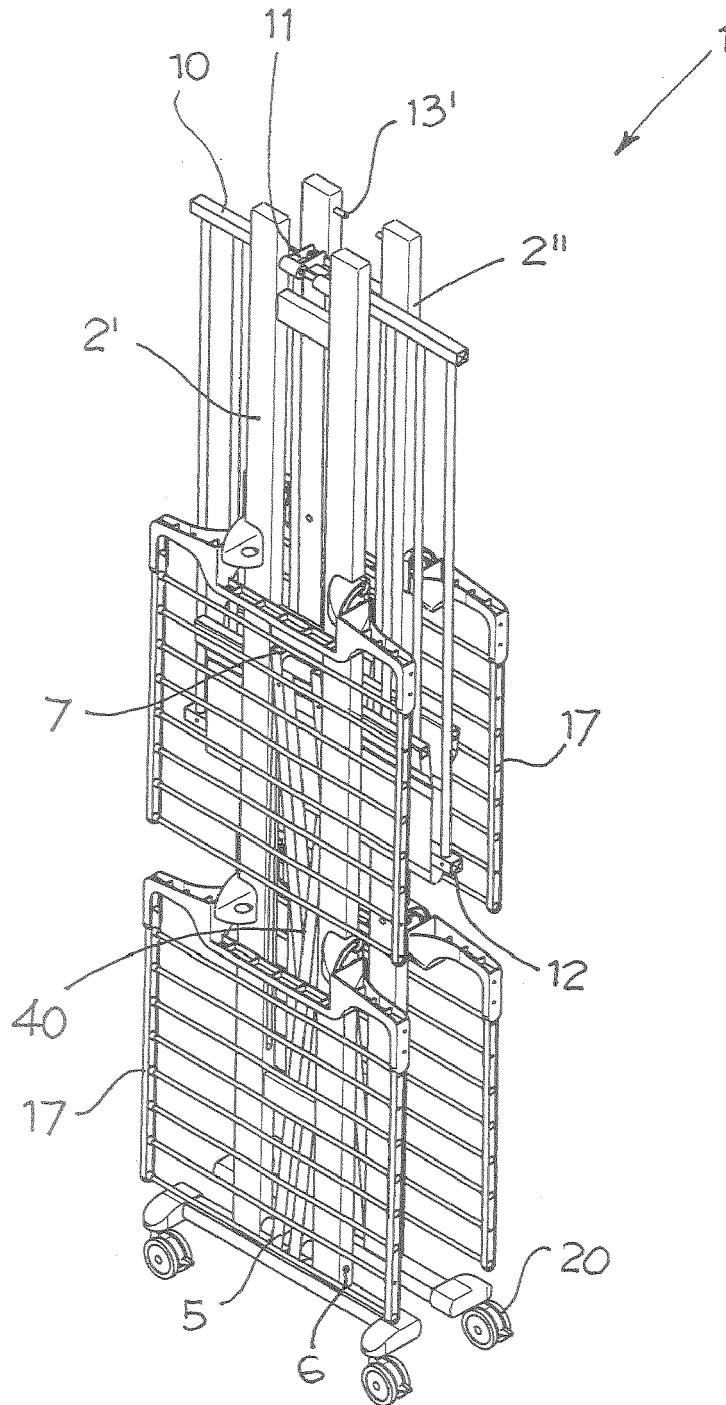


Fig. 1

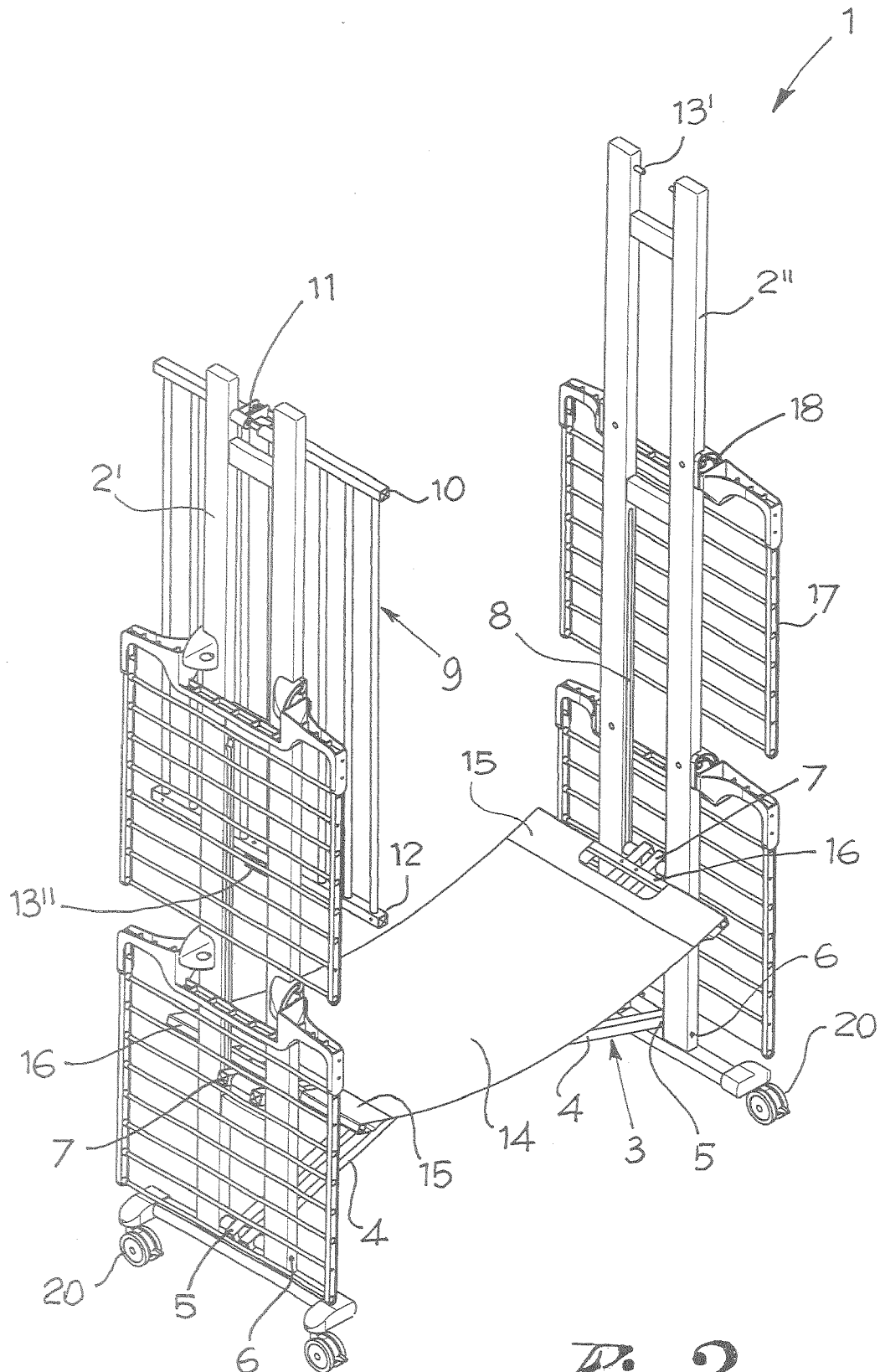
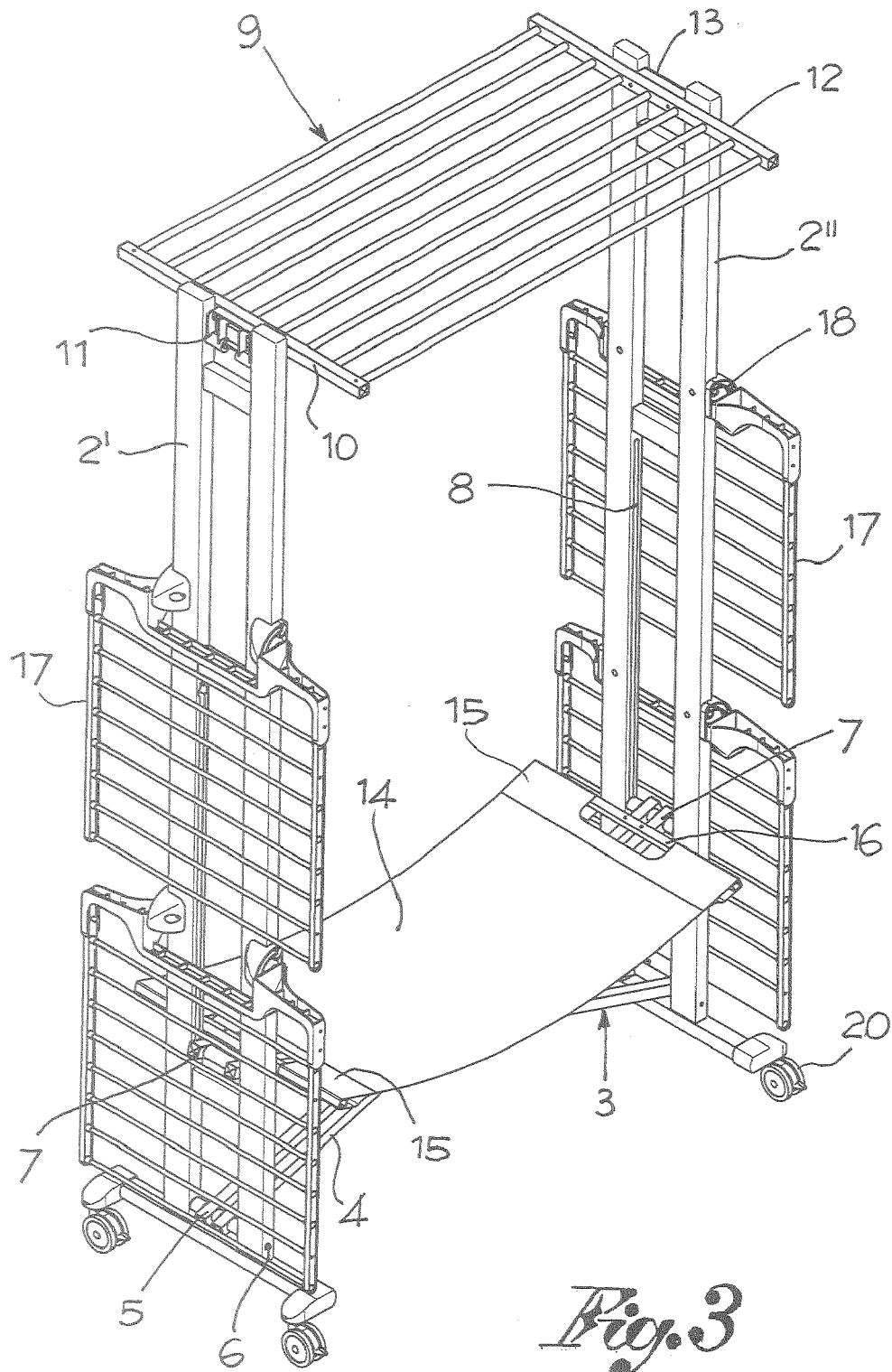


Fig. 2



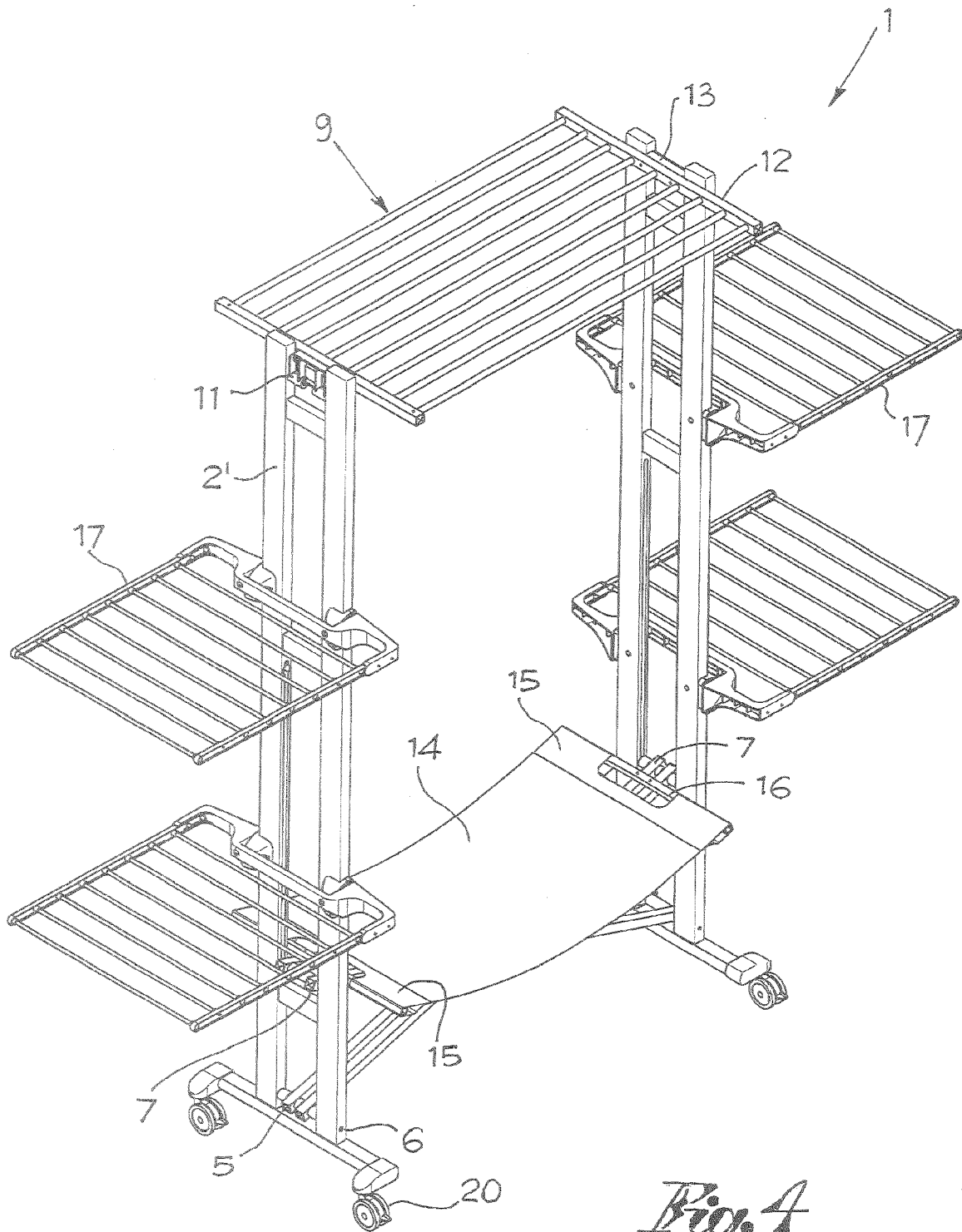
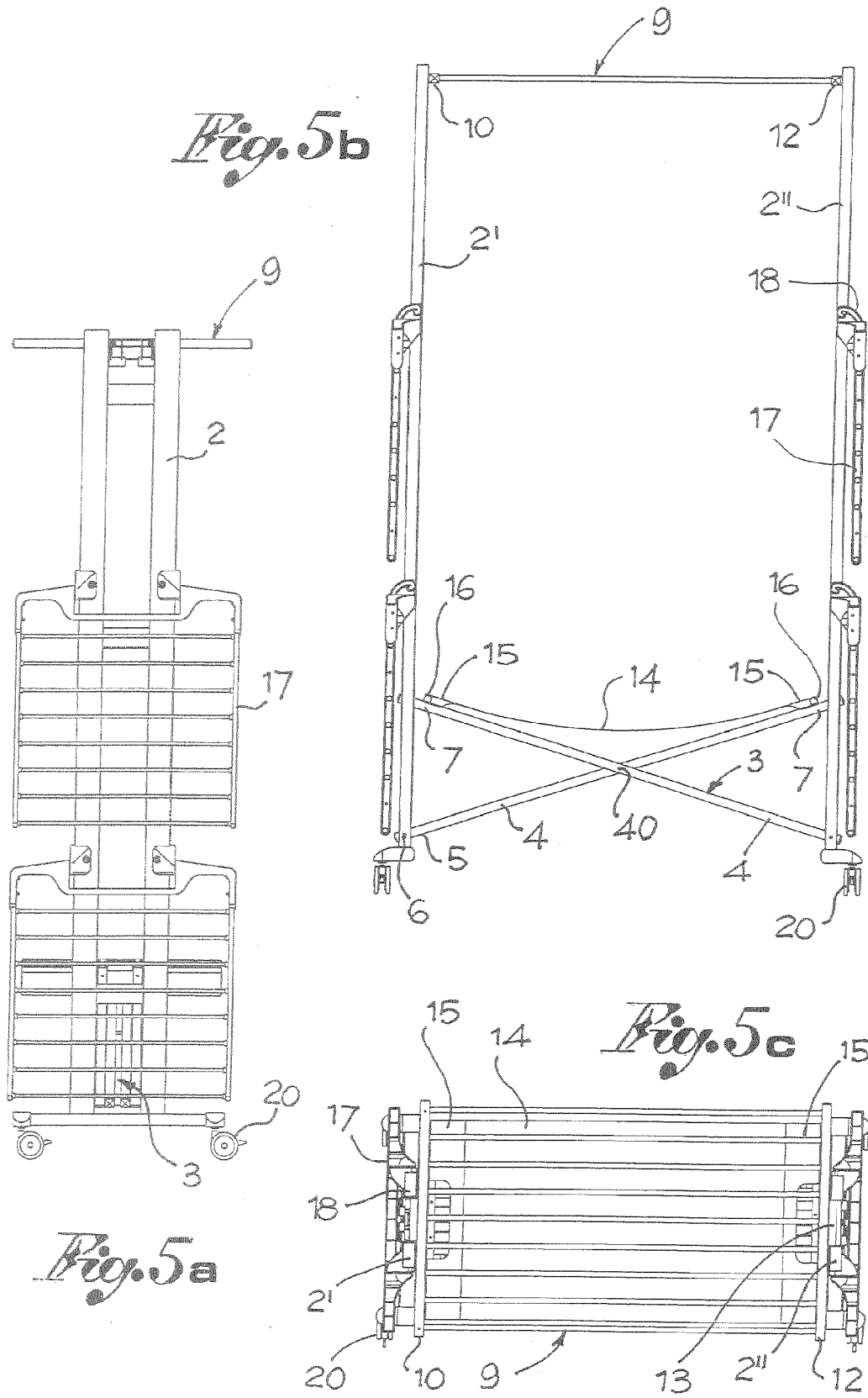
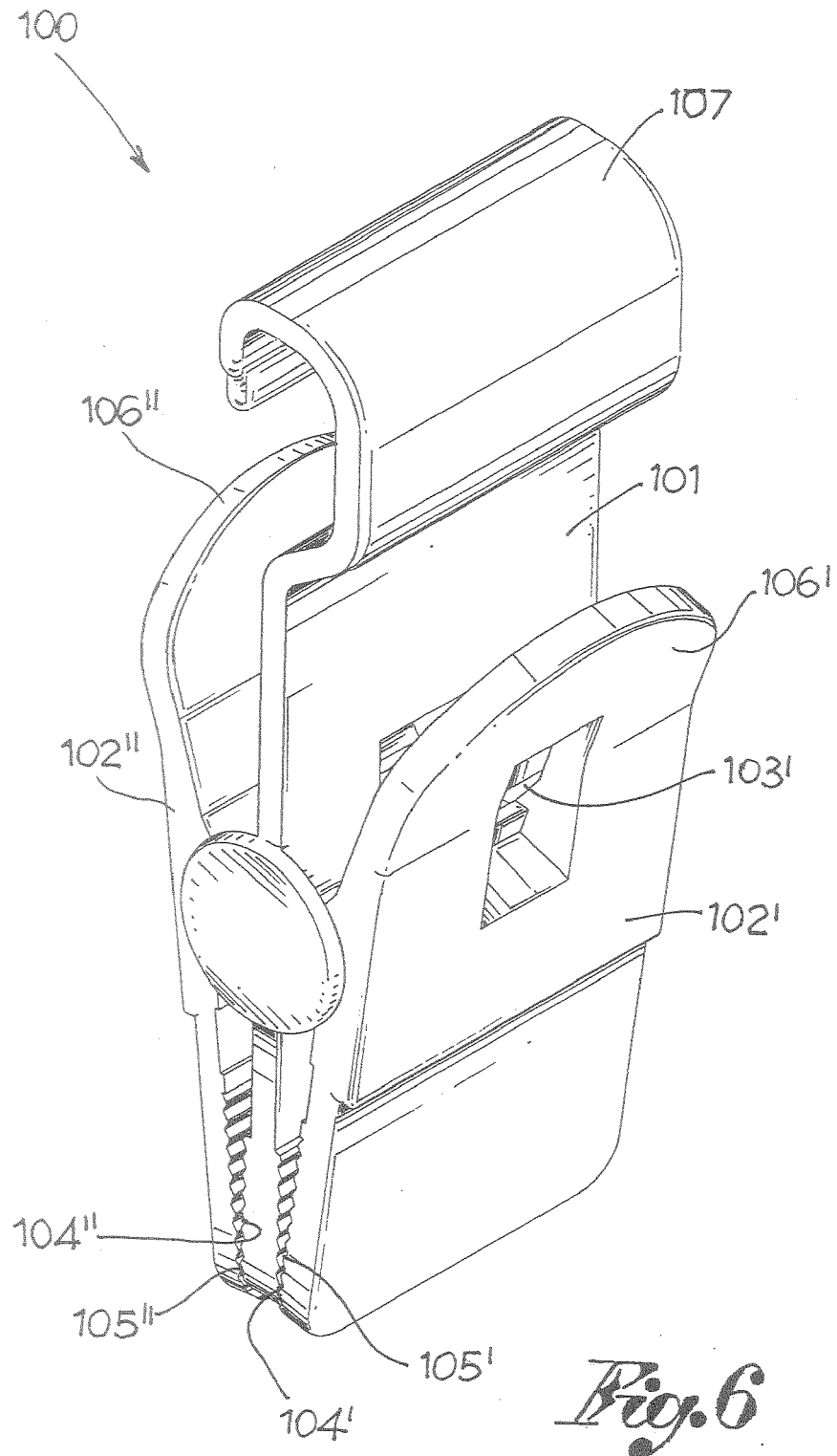


Fig. 4





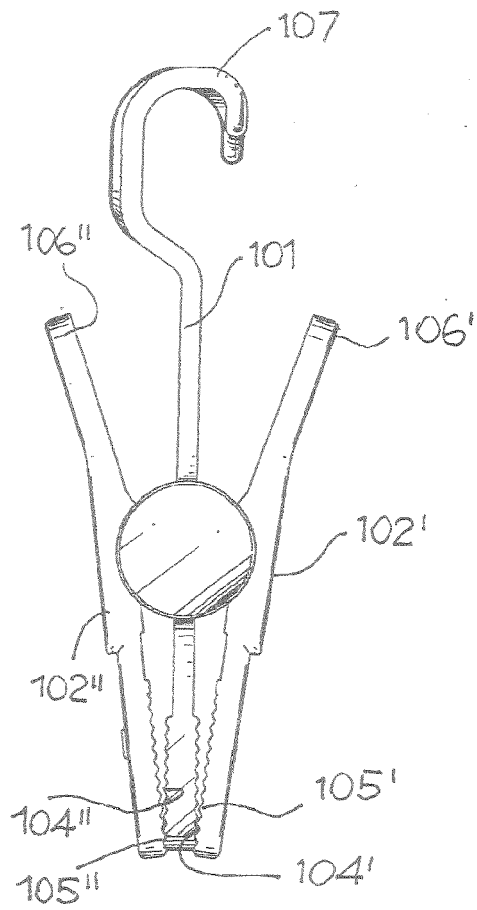


Fig. 7a

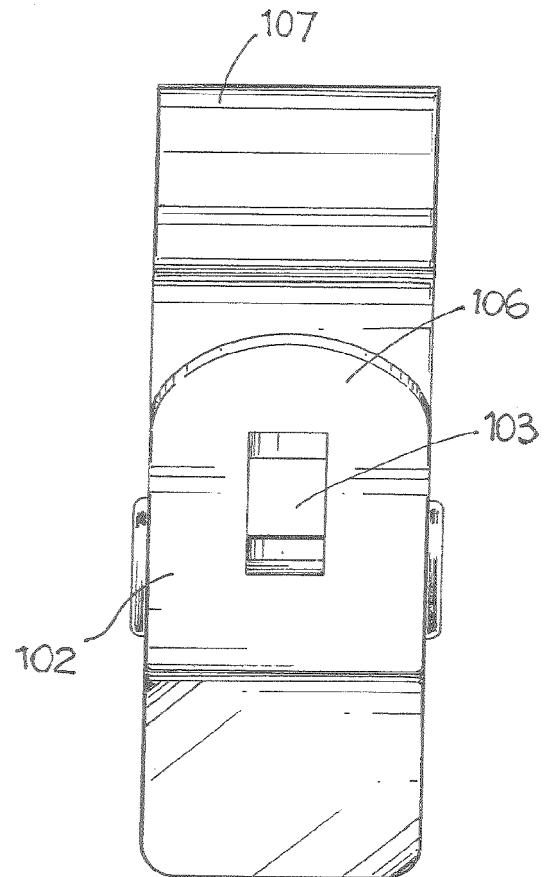


Fig. 7b

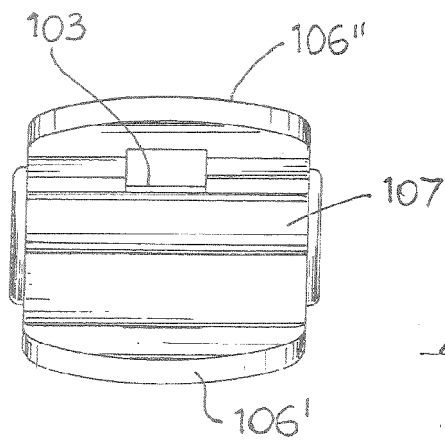


Fig. 7c



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 10 0191

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	FR 2 718 163 A (COMPAGNUCCI SPA) 6 October 1995 (1995-10-06) * the whole document *	1-3, 7-11,17, 18,21	D06F57/08	
A	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 10, 30 November 1995 (1995-11-30) -& JP 07 171297 A (FUOCHUYUN:KK), 11 July 1995 (1995-07-11) * abstract *	1,4-6		
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 12, 3 January 2001 (2001-01-03) -& JP 2000 245997 A (HONKO SEISAKUSHO:KK), 12 September 2000 (2000-09-12) * abstract *	1		
A	GB 1 210 420 A (RUCH RUDOLF) 28 October 1970 (1970-10-28) * the whole document *	1		TECHNICAL FIELDS SEARCHED (IPC)
A	US 5 372 266 A (FISHER ET AL) 13 December 1994 (1994-12-13) * the whole document *	1,12,13		D06F
A	DE 200 19 393 U1 (FEIL, MARION) 28 June 2001 (2001-06-28) * the whole document *	1,2,21, 22		
A	EP 0 280 885 A (HAILO-WERK RUDOLF LOH GMBH & CO. KG) 7 September 1988 (1988-09-07) * the whole document *	1		
The present search report has been drawn up for all claims				
Place of search		Date of completion of the search	Examiner	
The Hague		12 July 2005	Norman, P	
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				

2
EPO FORM 1503 03.82 (P04C01)



European Patent
Office

Application Number

EP 05 10 0191

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims 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 the first ten claims.

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:

1-22



European Patent
Office

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 05 10 0191

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: 1-22

Clotheshorse for drying laundry

2. claims: 23-29

Peg for holding an item to hang

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 10 0191

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.

12-07-2005

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
FR 2718163	A	06-10-1995	IT	MC940007 U1	02-10-1995
JP 07171297	A	11-07-1995	NONE		
JP 2000245997	A	12-09-2000	JP	3355359 B2	09-12-2002
GB 1210420	A	28-10-1970	CH	464136 A	31-10-1968
			DE	1808409 A1	04-09-1969
			DE	6806543 U	26-08-1971
			FR	1591983 A	04-05-1970
US 5372266	A	13-12-1994	CA	2123963 A1	03-03-1995
DE 20019393	U1	28-06-2001	NONE		
EP 0280885	A	07-09-1988	DE	3703274 A1	18-08-1988

EPO FORM P0459

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