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(54) **COLLAPSIBLE FOLDABLE EXPANDABLE DRYING RACK**

(57) A drying clothes rack (100) having first and second scissor frames (102, 104), said scissor frames having a collapsed position and an extended position. A plurality of rods (106) extending longitudinally between the first and second scissor frames and having opposite ends attached to brackets (170) mounted on the frames. Each rod being configured to include a first hollow rod segment (180) sized to slidably receive a second rod segment (182) and an O-ring (184) positioned at one end of the first rod segment to provide a frictionally fit between the two rod segments, whereby each rod is adjustable longitudinally such that the width between the first and second scissor frames is expandable.

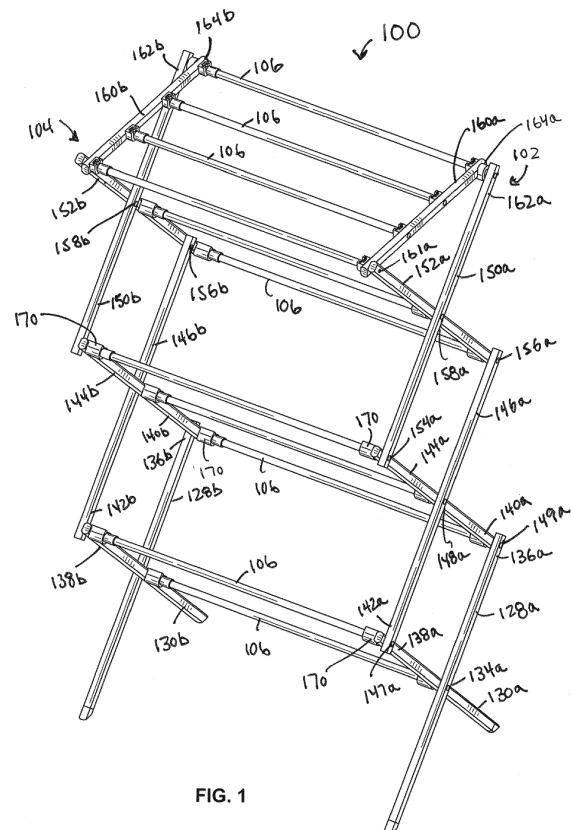


FIG. 1

Description

Field of the Invention

[0001] The present invention relates to a drying clothes rack and, more particularly, to a collapsible foldable expandable drying clothes rack.

Discussion of the Related Art

[0002] Drying clothes racks are well known and used extensively for drying laundry and other type of items. Collapsible clothes-drying racks are formed from a pair of scissors type frame members with rods extending between the frame members. These collapse into a rectangular structure, which can be stored. Even in the collapsed state. The prior art racks are also typically fixed longitudinally between the two scissor type frame members. It is a desire to provide such a rack that is collapsible and foldable but also one that is expandable such that the longitudinally length between the two scissor type frame members can be adjusted easily and without issues.

Summary of the Invention

[0003] The present invention is directed to a collapsible foldable expandable drying clothes rack. The drying clothes rack has a pair of scissor type frame members and a plurality of adjustable rods connecting the two frame members to each other, such that the drying clothes rack can expand along its longitudinally length.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] For a fuller understanding of the nature of the present invention, reference should be made to the following detailed description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of the erected clothes rack;

FIG. 2 is a perspective view of the collapsed clothes rack;

FIG. 3A is a perspective view of the erected clothes rack, with the rack partially expanded longitudinally between the two scissor frames;

FIG. 3B is a perspective view of the erected clothes rack, with the rack fully expanded longitudinally between the two scissor frames;

FIG. 4 is a perspective view of the erected clothes rack with a few of the rods exploded away from the scissor frames.;

FIG. 5 is an exploded view of one of the adjustable rods and the fastening components.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0005] Referring to the several views of the drawings, the present invention is a collapsible foldable drying clothes rack 100, which includes opposed scissor frame members 102 and 104, which are connected to each other by a plurality of adjustable and expandable rods 106.

[0006] The scissors frame members 102 and 104 are formed from a plurality of arms, which are connected at their midpoints and their distal ends. More particularly, as shown with frame member 102, first and second arms 128a and 130b are rotatably connected at a midpoint by a connector 134a, such as a nut/bolt, a rivet, or pin. The distal ends 136a and 138a of arms 128a and 130a respectively are then connected to the lower ends 140a and 142a of arms 144a and 146a by connectors 147a and 149a. Arms 144a and 146a are, in turn, rotatably connected at their midpoint by a connector 148a, and rotatably connected to frame members 150a and 152a by connectors 154a and 156a. Arms 150a and 152a are connected at their midpoint by connector 158a. Arm 152a is connected to a horizontal top arm 160a by a connector 161a. Horizontal top arm 160a releasably attaches about the upper end 162a of arm 150a by a fastener 164a.

[0007] Likewise, frame member 104 includes first and second arms 128b and 130b, which are rotatably connected by a connector 134b, such as a nut/bolt, a rivet, or pin. The upper ends 136b and 138b of arms 128b and 130b are then connected to the lower ends 140b and 142b of arms 144b and 146b. Arms 144b and 146b are, in turn, rotatably connected at their midpoint by a connector 148b and rotatably connected to arms 150b and 152b. Finally, the arms 150b and 152b are connected at their midpoint by a connector 158b. Arm 152b is connected to a horizontal top arm 160b by connector 161b. Horizontal top arm 160b releasably attaches about the upper end 162b of arm 150b by a fastener 164b.

[0008] Fastener 164a/164b may be further defined by having a hook 166a/166b that secures onto a knob 168a/168b extending inwardly from the inside surface of the upper end of the arms 162a/162b

[0009] As noted, opposite ends 106a and 106b of the plurality of rods 106 are connected to the scissors frame members 102 and 104 by brackets 170. This can be accomplished by placing a hook or u-shaped bracket 170 on the frame members 102 and having knobs 168 on each end of the rods 106 which frictionally fit into the u-shaped bracket 170.

[0010] Each of the rods 106 includes a first hollow rod segment 180 with a cavity sized to slidably receive a second rod segment 182. An O-ring 184 is positioned at one end 180b of the first rod segment 180 that is facing to receive the second rod segment 182. The O-ring 184 is preferably rubber to assist in providing a frictionally fit

between the two rod segments. This allows the user to adjust the rod segments to a particular length and helps set the lengths in place until the user re-adjusts the rod segments.

[0011] The draying rack therefore is capable of collapsing and folding as a typically drying clothes rack and also is configured to expand and adjust longitudinally between the two frame members.

[0012] As defined herein there is provided in one embodiment a collapsible foldable rack having first and second scissor frames. The scissor frames having a collapsed position and an extended position. The rack further includes a plurality of rods extending longitudinally between the first and second scissor frames and having opposite ends attached to brackets mounted on said first and second scissor frames, and wherein each rod of the plurality of rods are configured to be adjustable along the longitudinal axis. Adjusting the longitudinal axis of the rods as provided in various embodiments, can be achieved in one embodiment by providing a first hollow rod segment sized to slidably receive a second rod segment, an O-ring positioned at one end of the first rod segment that is facing to receive the second rod segment to provide a frictionally fit between the two rod segments, whereby each rod is adjustable longitudinally such that the width between the first and second scissor frames is expandable.

[0013] While the instant invention has been shown and described in accordance with a preferred and practical embodiment thereof, it is recognized that departures from the instant disclosure are contemplated within the spirit and scope of the present invention.

Claims

1. A collapsible foldable rack comprising:

first and second scissor frames, said scissor frames having a collapsed position and an extended position, each said scissor frame comprising a first and second scissor frame member; and

a plurality of rods extending longitudinally between said first and second scissor frames and having opposite ends attached to brackets mounted on said first and second scissor frames, and wherein each rod of the plurality of rods are configured to have:

a first hollow rod segment sized to slidably receive a second rod segment, an O-ring positioned at one end of the first rod segment that is facing to receive the second rod segment to provide a frictionally fit between the two rod segments, whereby each rod is adjustable longitudinally such that the width between the first and second scissor frames

is expandable.

2. A collapsible foldable rack comprising:

first and second scissor frames, said scissor frames having a collapsed position and an extended position; and
a plurality of rods extending longitudinally between said first and second scissor frames and having opposite ends attached to brackets mounted on said first and second scissor frames, and wherein each rod of the plurality of rods is adjustable along its longitudinal axis whereby the width between the first and second scissor frames is expandable.

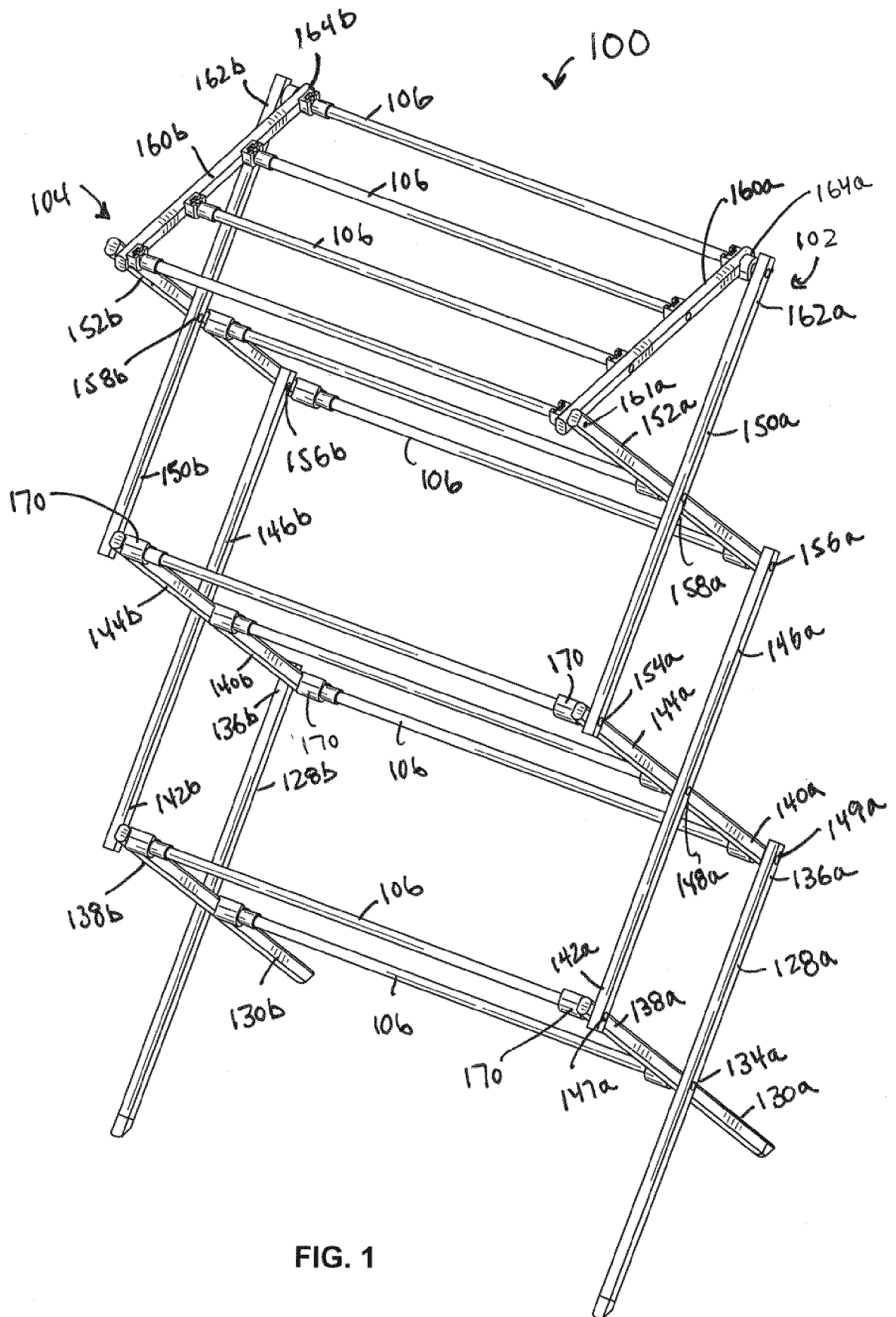
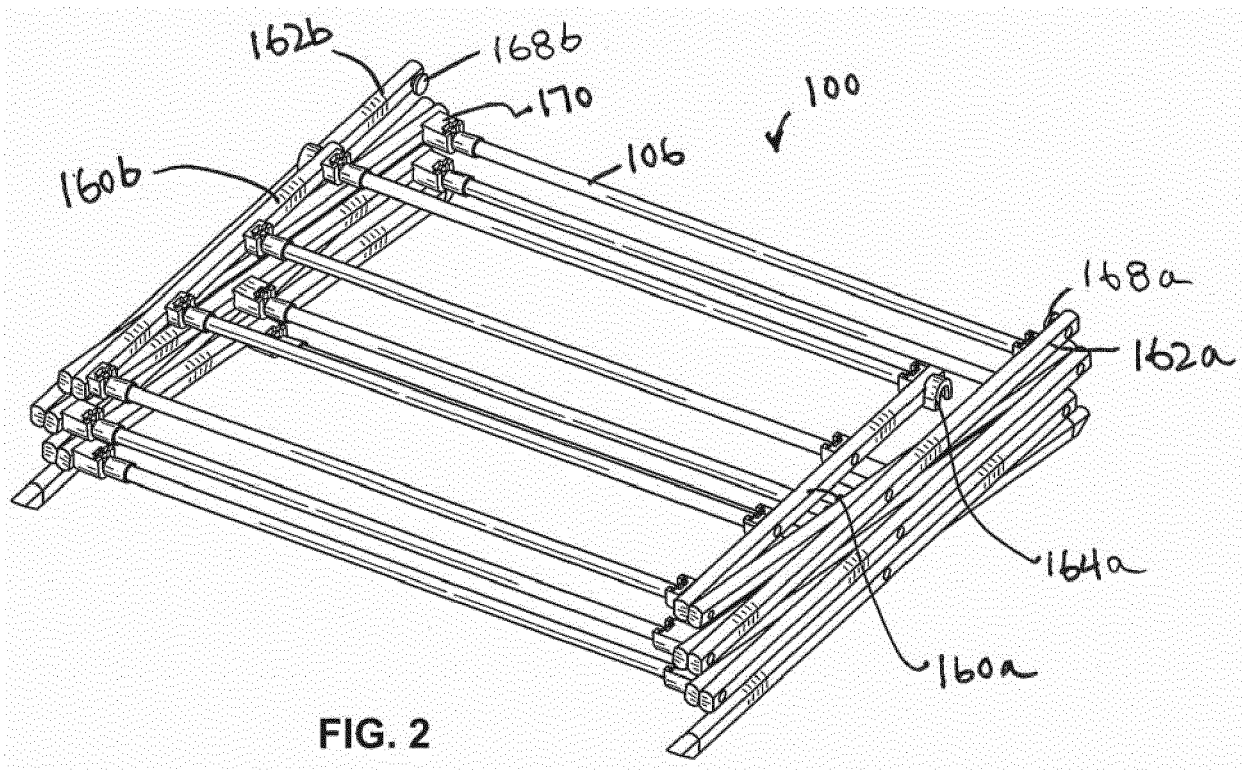
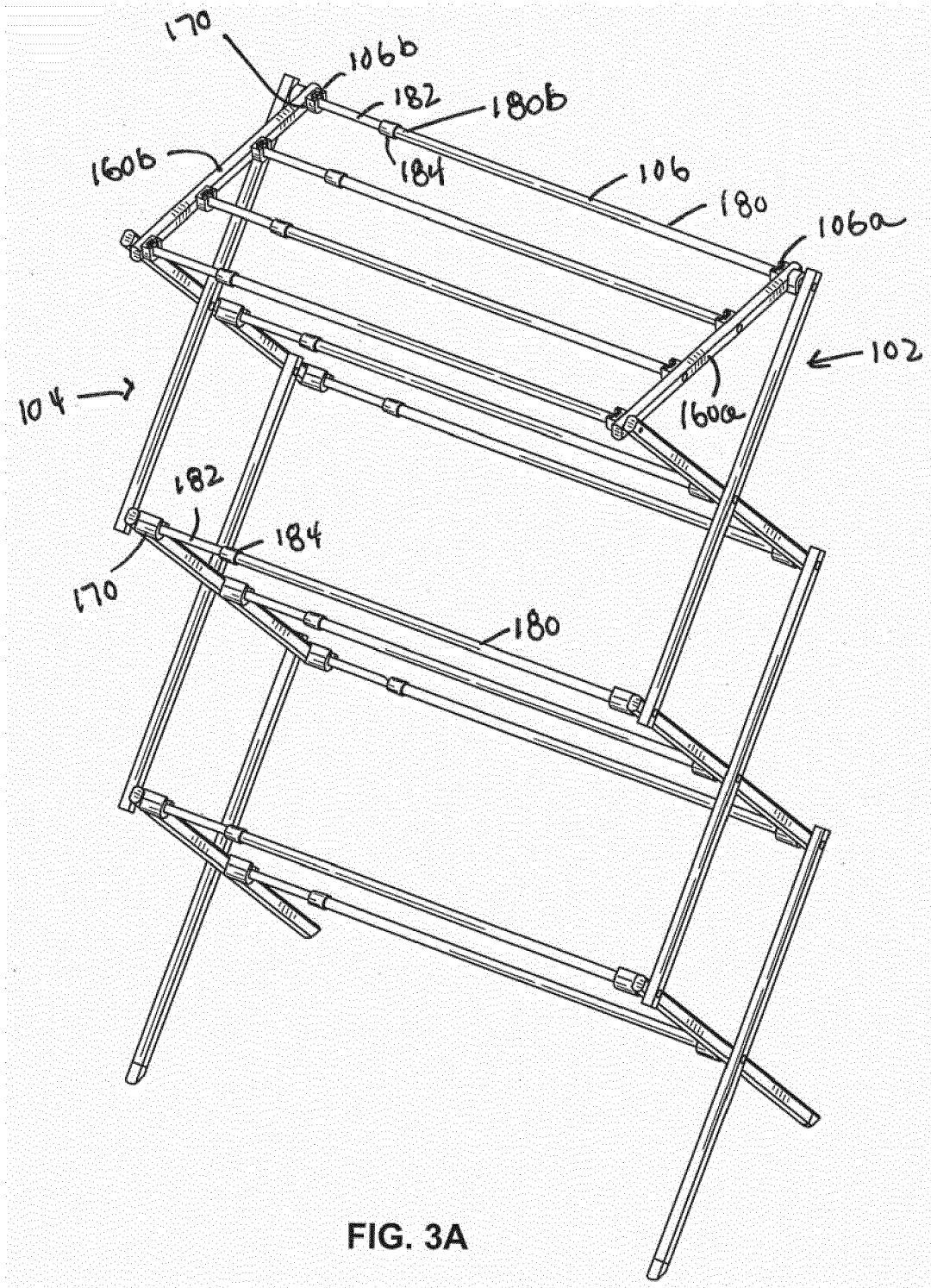


FIG. 1





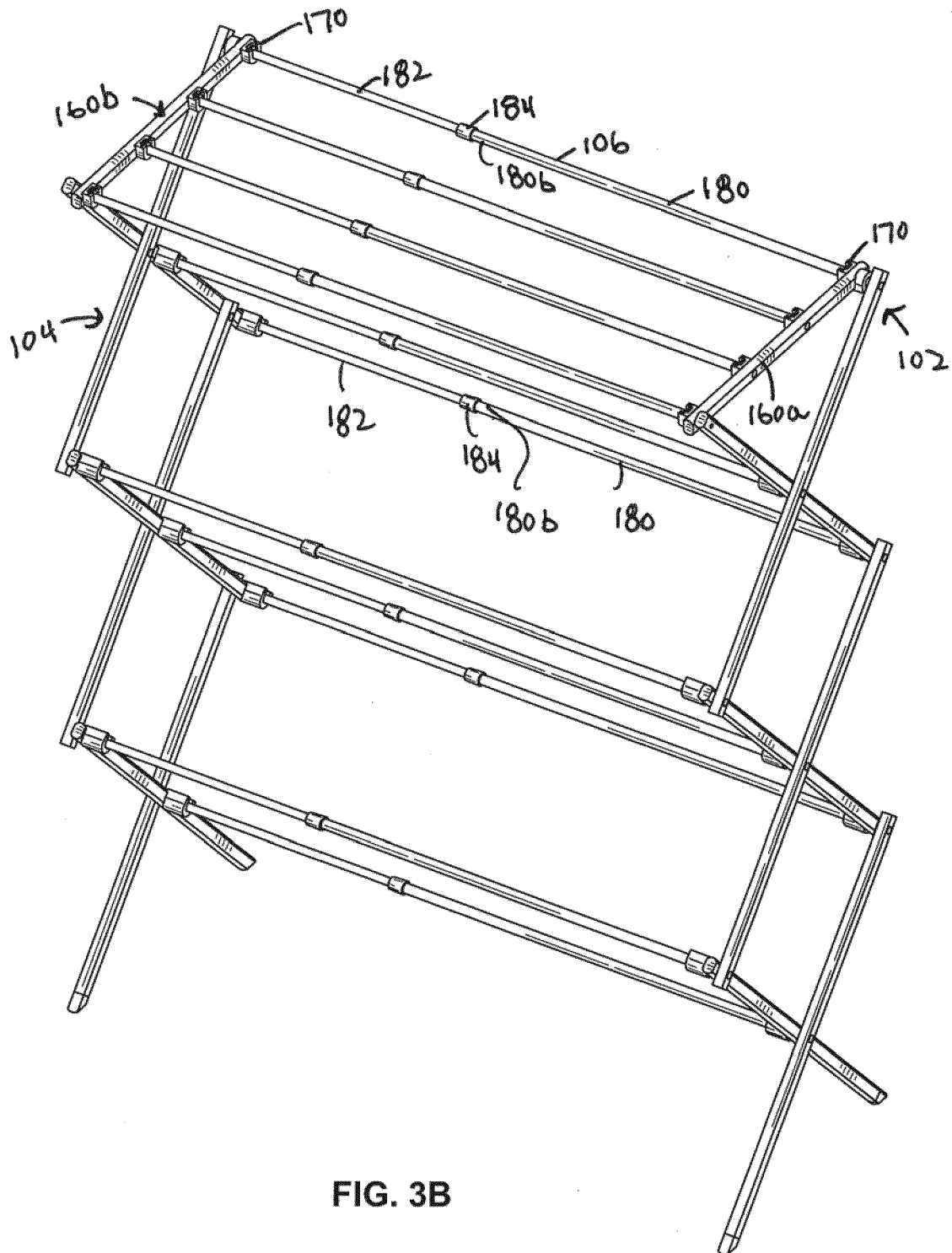


FIG. 3B

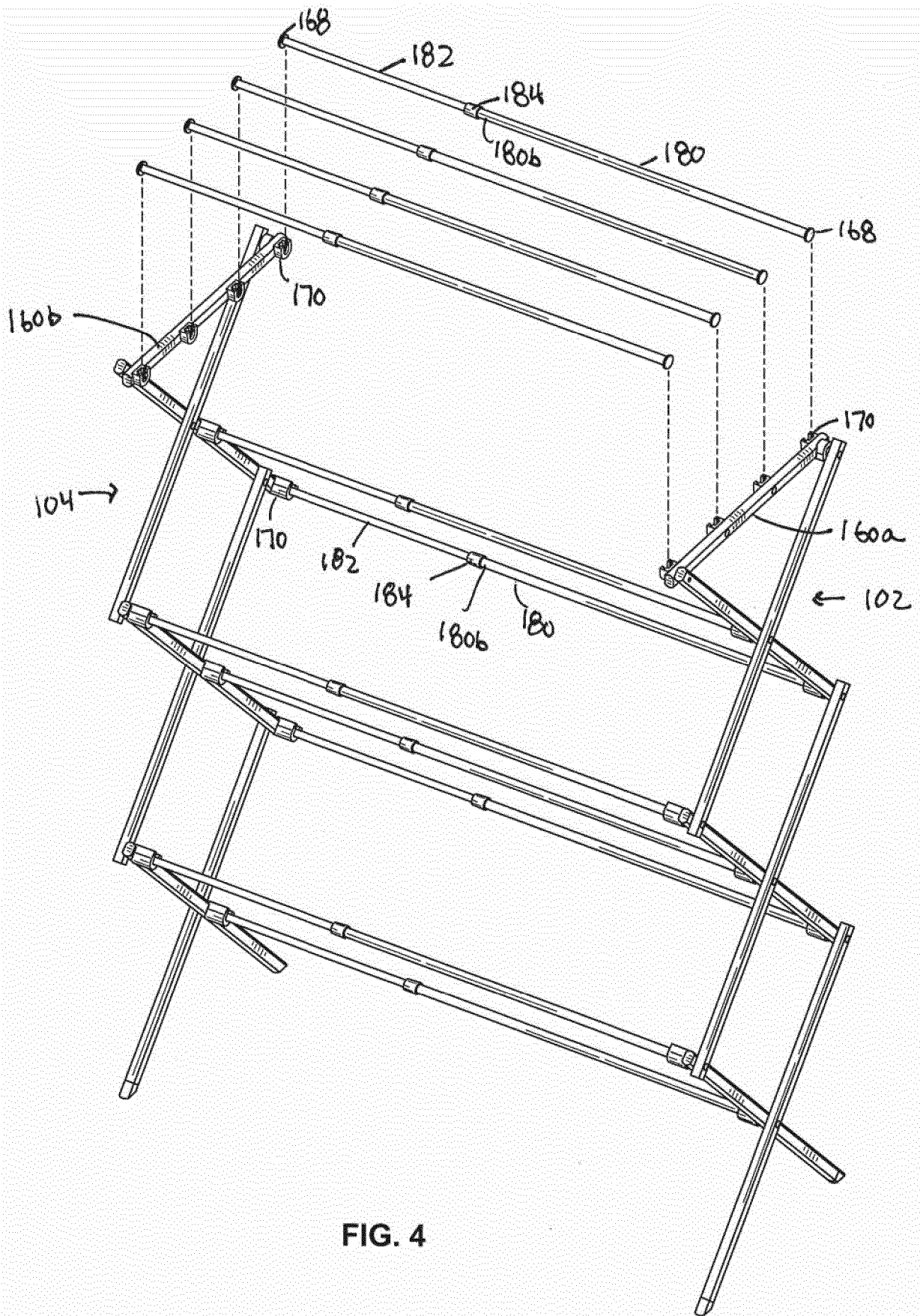
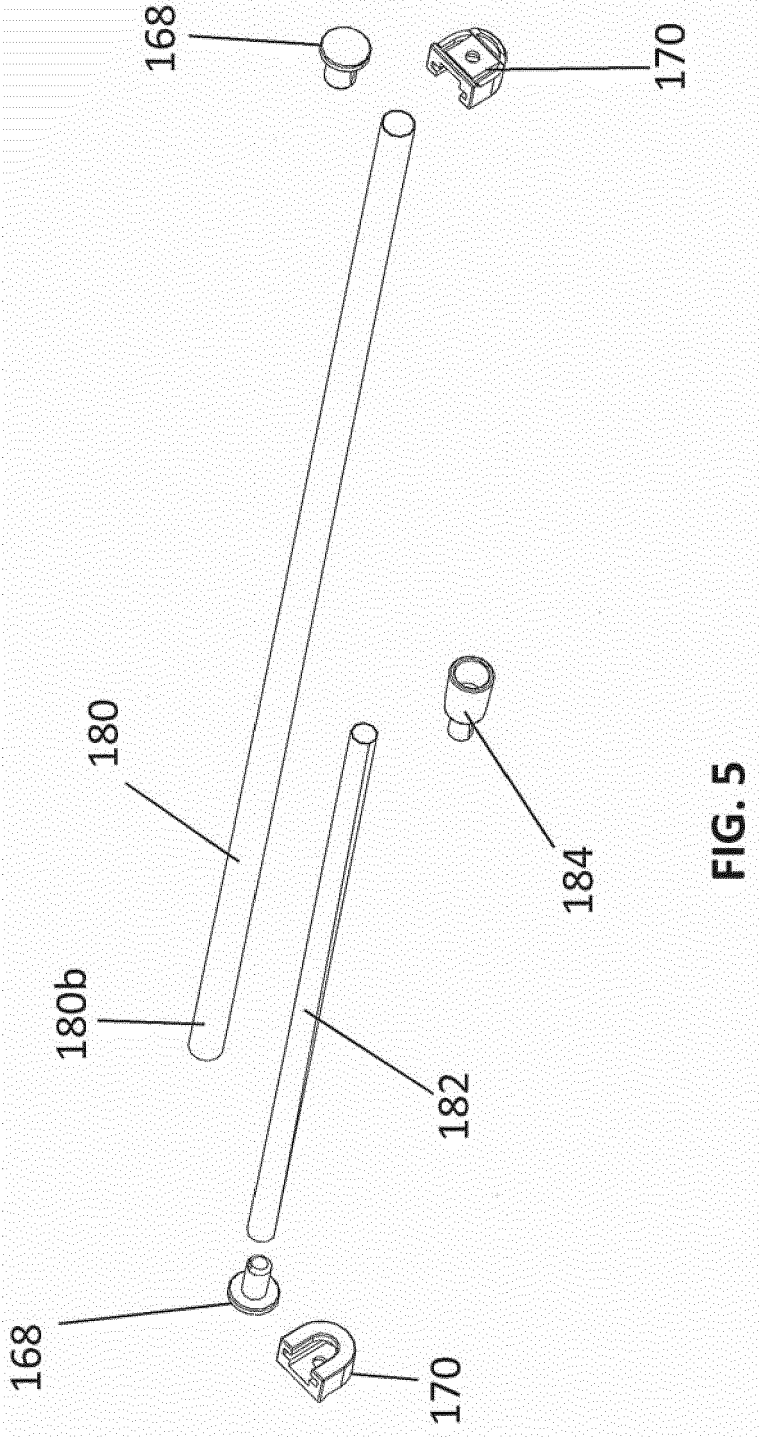


FIG. 4





EUROPEAN SEARCH REPORT

 Application Number
EP 17 20 2303

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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	CN 201 553 916 U (BETTER HOME PRODUCT LINHAI CO LTD) 18 August 2010 (2010-08-18)	2	INV. D06F57/10
Y	* figures *	1	
A	----- CN 205 275 996 U (HU WEIWEN) 1 June 2016 (2016-06-01) * figures 1-3 *	1,2	
X	----- GB 2 482 554 A (BETTER HOME PRODUCT ZHEJIANG CO LTD [CN]) 8 February 2012 (2012-02-08)	2	
Y	* the whole document *	1	
Y	----- US 2015/351572 A1 (CARR MATTHEW J [CA]) 10 December 2015 (2015-12-10) * paragraph [0036]; figures *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			D06F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 26 April 2018	Examiner Diaz y Diaz-Caneja
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 03/02 (P04C01)

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

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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
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26-04-2018

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EPO FORM P0459

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