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(71) Applicant: **Retail Equipment Limited**
London SW13 0ND (GB)

(72) Inventors:

- Newmark, John**
London, London SW13 0ND (GB)
- Finch, Keith**
Suffolk, Suffolk IP32 7LP (GB)

(74) Representative: **Arrowsmith, Peter Michael E. et al**
Cleveland
10 Fetter Lane
London EC4A 1BR (GB)

(54) Freestanding clothes rail

(57) A freestanding clothes rail kit (19; 300; 70) is disclosed which includes a first rail attachment portion (320; 81), a second rail attachment portion (330; 82), a first side member (340; 83) and a second side member (350; 84). When the clothes rail kit (19; 300; 70) is assembled and in use, the first rail attachment portion (320; 81) is attached to first side member (340; 83), the second rail attachment portion (330; 82) is attached to the second

side member (350; 84), and the first rail attachment portion (320; 81) and the second rail attachment portion (330; 82) extend towards one another for attachment with one another. The first side member (340; 83) is biased towards the second side member (350; 84) so that the first rail attachment portion (320; 81) and the second rail portion (330; 82) are held in compression between the first and second side members (340; 83, 350; 84).

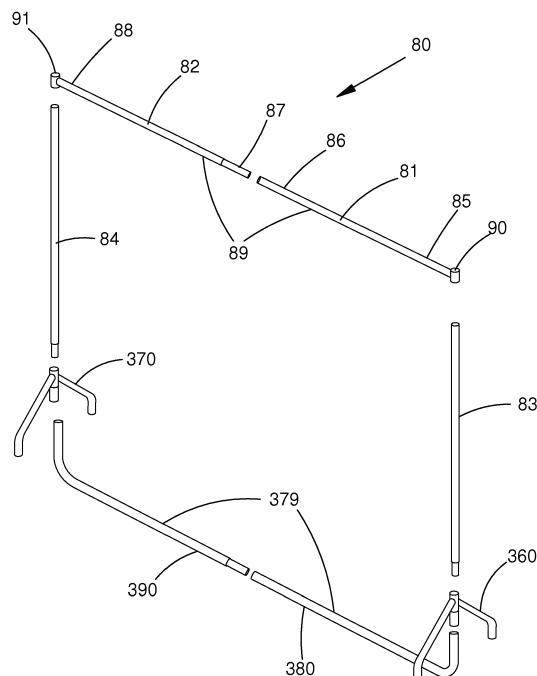


FIG.8

Description

[0001] The present invention relates to a freestanding clothes rail and a kit of parts that can be assembled to form a freestanding clothes rail.

[0002] Freestanding clothes rails are commonly used for storing and displaying clothes. Freestanding clothes rails typically include an upper rail from which clothes hangers are hung. The upper rail is often supported by a moveable supporting structure comprising two uprights attached to opposing ends of the upper rail.

[0003] Figure 1 shows a conventional freestanding clothes rail 10 including an upper rail 11, a pair of side members 13, two sets of supporting legs 15 and a base connector comprising two parts 16, 17. In order to assemble the freestanding clothes rail 10 the two parts of the base connector 16, 17 are fitted together. The base connector 16, 17 is then attached to the supporting legs 15. The side members 13 are then also attached to the supporting legs 15 and the upper rail 11 is placed on top of the upstanding side members 13.

[0004] Once assembled, each end of the upper rail 11 is supported by a side member 13. Each side member 13 is supported at its base by one of the sets of supporting legs 15. The side members 13 are held in place by the base connector 16, 17. This provides a secure structure where the upper rail 11 is held at a height above the ground. Typically the upper rail is parallel with the ground.

[0005] In the conventional freestanding clothes rail 10 shown in Figure 1 the upper rail 11 is the longest component. This arrangement provides a secure assembly at a desirable height for supporting a number of clothes hangers.

[0006] Figure 2 shows the conventional freestanding clothes rail 10 disassembled into a kit 19 and "flat-packed" into a box 18. Due to the upper rail 11 being the longest of the components that make up the freestanding clothes rail kit 19, the height of the box 18 is defined by the length of the upper rail 11. For example, if the upper rail 11 has a length of 1.83m then the length of the box 18 will be at least 1.83m in order to accommodate the upper rail 11.

[0007] It is desirable to reduce the size of the box used for storing a freestanding clothes rail kit without reducing the capacity of the assembled freestanding clothes rail for storing clothes. Reducing the size of the box is advantageous because the freestanding clothes rail kit will be easier and cheaper to transport and store. In addition, by providing a reduced sized box it may also be possible to store more kits within a given volume, for example in a shipping container.

[0008] According to an aspect of the invention there is provided a freestanding clothes rail kit comprising: a rail, a first rail attachment portion, a second rail attachment portion, a first side member arranged for attachment with the first rail attachment portion and a second side member arranged for attachment with the second rail attachment portion; wherein in use: the first rail attachment por-

tion extends from the first side member towards a first end of the rail for attachment and towards the second rail attachment portion; and the rail is held by the first and second rail attachment portions so that it extends between the first and second side members.

[0009] In this way the rail can be held in place between the first and second side members. The first rail attachment portion is arranged to extend towards an end of the rail, which means that the length of the rail can be shorter than the span between the first and second side members. This is advantageous because it means that a rail can be provided with a reduced length which allows the kit to be packaged in a smaller box.

[0010] The first rail attachment portion and the rail preferably provide respective support surfaces from which clothes hangers can be hung. Clothes hangers can therefore be hung from the rail and from the first rail attachment portion. Thus, the capacity of the clothes rail can be maintained, even though the rail is provided with a reduced length. In this configuration the rail may be considered a first rail portion and one of the rail attachment portions may be considered a second rail portion.

[0011] The respective support surfaces on the rail and the first rail attachment portion preferably provide a continuous support surface along which hangers can run. This is desirable so that clothes hangers can run easily from the rail onto the first rail attachment portion. In fact, a user may not even realise when a hanger moves from the rail onto the rail attachment portion, and *vice-versa*. This may be achieved by providing a flush connection between a top surface of the rail and a top surface of the first rail attachment portion at the position at which the rail and the first rail attachment portion are held together. In this way, it is possible to avoid a clothes hanger from catching at the interface between the rail and the first rail attachment portion.

[0012] The second rail attachment portion preferably extends from the second side member towards a second end of the rail and towards the first rail attachment portion. In this way the first and second rail attachment portions can engage with opposite ends of the rail. The first and second rail attachment portions extend towards the rail which allows the rail to be supported between the side members. This arrangement facilitates production of a kit with a reduced rail length. This may also facilitate a generally symmetrical clothes rail which may improve ease of assembly.

[0013] The first rail attachment portion, the second rail attachment portion and the rail may provide respective support surfaces from which clothes hangers can be hung, and these respective support surfaces may provide a continuous support surface along which hangers can run.

[0014] There may be a flush connection between a top surface of the rail, a top surface of the first rail attachment portion and a top surface of the second rail attachment portion at the respective positions at which these components are held together.

[0015] Preferably, the rail has a length less than or equal to the length of the longest other component in the kit. In this way, the length of the rail does not constrain the length of the box for storing the kit.

[0016] Preferably, the rail and at least one of the first and second rail attachment portions are secured together by a male/female connection. This provides an easy assembly process. The end of the rail may extend inside an interior of at least one of the rail attachment portions or the at least one rail attachment portion may extend inside an interior of the rail. The penetration depth may be greater than the width of the components. This may increase the stability of the connection between the rail and the rail attachment portion.

[0017] Preferably, the rail and at least one of the rail attachment portions are secured together by an interference fit. In this way, the rail and at least one of the rail attachment portions can be held together more securely.

[0018] In one example, the rail and the at least one rail attachment portion are secured together by interference fit only. Thus, there is no need to provide a clip to lock the rail and the rail attachment portion together. This provides a more simple connection method that is less likely to impede the free running of hangers. If a locking clip were provided to secure the two components together this could lead to a more complex structure and also may restrict the movement of clothes hangers along the rail.

[0019] Preferably, the first rail attachment portion is biased towards the second rail attachment portion so that the rail is held in compression between the first and second rail attachment portions. In this way, the rail can be held more securely between the two side members. This may prevent the freestanding clothes rail from falling apart when supporting heavy objects. This may also prevent accidental disassembly if the assembled clothes rail is pushed and/or pulled while being transported on casters.

[0020] By biasing the first rail attachment portion towards the second rail attachment portion it is also possible to improve the ease with which clothes hangers can run between the rail and the rail attachment portions. In the absence of a biasing force a notch may tend to appear between the rail and the respective rail attachment portions. These notches may snag clothes hangers and restrict their free movement. The biasing force can advantageously reduce the size of any notches to facilitate free movement of hangers on the rail.

[0021] Preferably, the first rail attachment portion is attached to the first end of the rail at a position between the first side member and the mid-point between the first side member and the second side member. In this way, when the rail and the first rail attachment portion are loaded with items, a low moment of force can be exerted on the point of attachment between the rail and the first rail attachment portion. This may improve stability and prevent the rail and the first rail attachment portion from sagging. In another example, the second rail attachment portion may be arranged for attachment with the second end

of the rail at a position between the second side member and the mid-point between the first and second side members

[0022] The freestanding clothes rail kit may comprise a base connector, wherein in use the base connector constrains the first side member and the second side member relative to one another. Thus, the base connector can fix the side members and, consequently, the rail in place between the two rail attachment portions.

[0023] In one example, the base connector may constrain the side members relative to one another whilst the rail and at least one of the attachment portions are secured together by a male/female connection. In this arrangement if the rail and the rail attachment portion are forced apart they will be prevented from moving apart in opposing linear directions because the respective side members are fixed together by the base connector. Instead, the rail attachment portion will tend to move in an arc about the fixed base of the side member. Movement of the rail attachment portion will then be restricted by a male/female connection that only allows linear movement and restricts arcuate movement. Hence, the rail cannot be detached from the rail attachment portion whilst the base connector is in place.

[0024] Preferably, the freestanding clothes rail kit can be arranged in a configuration for storage in a box with the first side member, attached to the first rail attachment portion, and the second side member, attached to the second rail attachment portion, positioned adjacent one another defining an area between the first and second side members and the first and second rail attachment portions; wherein the base connector can be nested inside the area.

[0025] This arrangement may make more efficient use of the box volume. This arrangement may also avoid the need for the base connector to be packed on top of the side members or the other way around. In this way the kit can be packed into a reduced size box.

[0026] Preferably, the rail has a major-axis in the vertical plane and a minor-axis in the horizontal plane; and the cross-sectional width of the rail along the major-axis is greater than the cross-sectional width of the rail along the minor-axis.

[0027] Thus, the rail may provide more structural support in a plane parallel with the direction of gravity. This may allow the rail to provide a stronger structure for hanging clothes. This may also prevent the rail and rail attachment portions from rotating relative to one another about the tube axis of the rail which may help to prevent accidental disassembly.

[0028] Each of the first and second rail attachment portions may also have a major-axis in the vertical plane and a minor-axis in the horizontal plane and the cross-sectional widths of the first and second rail attachment portions along their major-axes may be greater than the cross-sectional widths of the first and second rail attachment portions along their minor-axes. In one arrangement the rail and the rail attachment portions may have

respective elliptical cross sections.

[0029] Preferably the freestanding clothes rail kit further comprises a box; wherein the rail, the first rail attachment portion, the second rail attachment portion, the first side member and the second side member are packed into the box.

[0030] Preferably, the freestanding clothes rail kit can only be assembled by attaching the rail between the first rail attachment portion and the second rail attachment portion before constraining the first and second side members relative to one another using the base connector. Thus, the parts of the freestanding clothes rail kit must be assembled in a specific order and, hence, must be disassembled in the reverse of this specific order. This prevents the freestanding clothes rail from being accidentally disassembled.

[0031] According to yet another aspect of the invention there is provided a freestanding clothes rail kit comprising: a first rail portion, a second rail portion, a first side member and a second side member; wherein in use: the first rail portion is attached to first side member, the second rail portion is attached to the second side member, the first rail portion and the second rail portion extend towards one another for attachment with one another and the first side member is biased towards the second side member so that the first rail portion and the second rail portion are held in compression between the first and second side members.

[0032] In this way, the first and second rail portions can combine to form an upper rail from which clothes can be hung. The first and second rail portions are arranged to extend towards one another, which means that each of these components can have a length that is smaller than the span between the first and second side members. This allows the kit to be packaged in a smaller box.

[0033] The first rail portion and the second rail portion preferably provide respective support surfaces from which clothes hangers can be hung. Clothes hangers can therefore be hung from the first rail portion and the second rail portion. Thus, the capacity of the clothes rail can be maintained, even though the components used to assemble the clothes rail are provided with reduced lengths.

[0034] According to yet another aspect of the invention there is provided a method of packing a freestanding clothes rail kit comprising a rail, a first rail attachment portion, a second rail attachment portion, a first side member arranged for attachment with the first rail attachment portion and a second side member arranged for attachment with the second rail attachment portion into a box; wherein in use: the first rail attachment portion extends from the first side member towards a first end of the rail for attachment and towards the second rail attachment portion; and the rail is held by the first and second rail attachment portions so that it extends between the first and second side members; the method comprising: packing the rail and packing the first side member attached to the first rail attachment portion, and the sec-

ond side member attached to the second rail attachment portion adjacent one another so that an area is defined between the first and second side members and the first and second rail attachment portions.

[0035] In this way, the side members and rail attachment portions form an area into which other components used to assemble the freestanding clothes rail can be placed. Hence, the freestanding clothes rail assembly kit can be flat-packed more efficiently into the box volume.

[0036] Preferably, the first and second side members each have a first end and a second end, wherein the first end of the first side member is attached to the first rail attachment portion and the first end of the second side member is attached to the second rail attachment portion

and the method includes: packing the first side member and the second side member in a parallel configuration with respect to one another; packing the first rail attachment portion so that it extends towards the second end of the second side member; and, packing the second rail

attachment portion so that it extends towards the second end of the first side member; wherein the area is defined between the first and second side members and the first and second rail attachment portions.

[0037] In this way, the size of the area defined by the side members and rail attachment portions area can be maximised. This allows more or larger components to be nested inside the area, making more efficient use of the box volume.

[0038] According to another aspect of the invention there is provided a freestanding clothes rail comprising: a rail, a first rail attachment portion, a second rail attachment portion, a first side member arranged for attachment with the first rail attachment portion and a second side member arranged for attachment with the second rail attachment portion; wherein in use: the first rail attachment portion extends from the first side member towards a first end of the rail for attachment and towards the second rail attachment portion; and the rail is held by the first and second rail attachment portions so that it extends between the first and second side members.

[0039] Preferred features of the present invention will now be described, purely by way of example, with reference to the accompanying drawings, in which:

45 Figure 1 is an exploded view of a freestanding clothes rail;

50 Figure 2 is a plan view of a freestanding clothes rail kit packed into a box;

55 Figure 3 is an exploded view of a freestanding clothes rail in a first embodiment of the present invention;

55 Figure 4 is a perspective view of an assembled freestanding clothes rail in a first embodiment of the present invention;

Figure 5 shows an exploded view of a freestanding clothes rail in a second embodiment of the present invention;

Figure 6 shows a series of steps for assembling a freestanding clothes rail in an embodiment of the present invention;

Figure 7 shows a plan view of a freestanding clothes rail kit packed into a box in an embodiment of the present invention; and

Figure 8 shows an exploded view of a freestanding clothes rail in a third embodiment of the present invention.

[0040] Referring to Figures 3 and 4 there is provided a freestanding clothes rail 300 comprising a rail 310, a first rail attachment portion 320, a second rail attachment portion 330, a first side member 340, a second side member 350, a first pair of legs 360, a second pair of legs 370, a first part 380 of a base connector 379 and a second part 390 of a base connector 379. Wheels 301, 302, 303, 304 are attached to each pair of legs 360, 370 so that the freestanding clothes rail 300 can be moved easily.

[0041] The rail 310 is a hollow elliptical tube with a first end 311 and a second end 312. When the freestanding clothes rail 300 is upright the rail 310 has a major-axis in the vertical plane and a minor-axis in the horizontal plane. The cross-sectional width of the rail 310 along the major-axis is greater than the cross-sectional width of the rail 310 along the minor-axis. Thus, the rail 310 provides more structural support in a plane parallel with the direction of gravity. This provides a stronger structure for hanging clothes 42.

[0042] The first rail attachment portion 320 is an elliptical tube with a similar cross-section at profile to the rail 310. The first rail attachment portion 320 is welded to a top end 341 of the first side member 340. The first rail attachment portion 320 extends in a direction that is perpendicular to the main axis of the first side member 340. The first rail attachment portion 320 has an attachment end 321 with reduced cross-sectional dimensions. The cross-sectional dimensions of the outer surface of the attachment end 321 of the first rail attachment portion 320 are slightly smaller than the cross-sectional dimensions of the inner surface of the first end 311 of the rail 310.

[0043] The rail 310 is attached to the first rail attachment portion 320 by sliding the attachment end 321 inside the first end 311 of the rail 310. This provides a male/female connection between the first rail attachment portion 320 and the rail 310. The outer surface of the attachment end 321 and the inner surface of the first end 311 of the rail 310 both have an elliptical cross-section. Hence, the rail 310 and the first rail attachment portion 320 cannot rotate relative to one another about the tube axis of the rail 310.

[0044] The second rail attachment portion 330 is substantially identical to the first rail attachment portion 320 and also has a similar attachment end 331. The second rail attachment portion 330 is welded to a top end 351 of the second side member 350. The rail 310 is attached to the second rail attachment portion 330 by sliding the attachment end 331 inside the second end of the rail 312. This provides a male/female connection between the second rail attachment portion and the rail 310.

[0045] An interference fit is provided between the rail 310 and the rail attachment portions 320, 330. This allows the rail 310 and rail attachment portions 320, 330 to be fitted together easily and securely. When the attachment ends 321, 331 of the rail attachment portions 320, 330 are inserted into the first 311 and second 312 ends of the rail 310 these components provide a single rail with a continuous supporting surface. Clothes hangers 41 can be hung and slid across this continuous surface.

[0046] The first side member 340 has a bottom end 342 and the first pair of legs 360 has a top end 361. The bottom end 342 of the first side member 340 slots inside the top end 361 of the first pair of legs 360. There is a spring loaded pin 343 at the bottom end 342 of the first side member 340 which fits into a hole 363 provided in the top end 361 of the first pair of legs 360. There is a stud 344 provided on either side of the bottom end 342 of the first side member 340. These studs 344 slot into a pair of notches 364 provided on either side of the top end 361 of the first pair of legs 360. This mechanism prevents the first side member 340 and the first pair of legs 360 from rotating relative to one another. The second side member 350 is substantially identical to the first side member 340 and also has a bottom end 352. The second pair of legs 370 is substantially identical to the first pair of legs 360 and also has a top end 371. The bottom end 352 of the second side member 350 slots inside the top end 371 of the second pair of legs 370. The second side member 350 and the second pair of legs 370 are connected together using the same mechanism as is provided to connect the first side member 340 and the first pair of legs 360 together.

[0047] In another embodiment (not shown) a "reinforced rail" arrangement may be provided. In this arrangement, for each pair of legs 360, 370, a horizontal reinforcing bar (not shown) is provided which extends between each leg in the pair. This improves the rigidity of the legs 360, 370.

[0048] In another embodiment (not shown) a "fishtail rail" arrangement may be provided. In this arrangement, the legs of each pair of legs 360, 370, are bent extending away from one another. The bent portion of each leg lies along the ground and may extend in a direction that is perpendicular to the base connector. This improves the stability of the freestanding clothes rail.

[0049] The first part 380 of the base connector 379 is a tube with a first end 381 and a second end 382. The first end 381 of the first part 380 of the base connector 379 has a substantially square cross section. The second

end 382 of the first part 380 of the base connector 379 has reduced cross-sectional dimensions to facilitate assembly with the second part 390 of the base connector 379.

[0050] The second part 390 of the base connector 379 is similar to the first part 380 of the base connector 379 and also has a first end 391 and second end 392. The second part 390 of the base connector 379 is slightly shorter than the first part 380 of the base connector 379. The second end 392 of the second part of the base connector 390 is hollow and can receive the second end 382 of the first part 380 of the base connector 379.

[0051] The first pair of legs 360 has an open bottom end 362 with a square cross section. The second pair of legs 370 also has an open bottom end 372 with a square cross section. The base connector 379 attaches to the first and second pair of legs 360, 370 by inserting the first ends 381, 391 of the base connector 379 inside the open bottom ends 362, 372 of the legs 360, 370. The base connector 379 fixes the bottom end 342 of the first side member 340 relative to the bottom end 352 of the second side member 350.

[0052] The rail 310, the first rail attachment portion 320 and the second rail attachment portion 330 connect together to form a single top rail on which clothes hangers 41 and clothes 42 are hung. Clothes hangers 41 can be pushed across the first rail attachment portion 320 onto the rail 310 and then onto the second rail attachment portion 330 and also in the other direction.

[0053] The rail 310 is attached to the first rail attachment portion 320 at a first position 43, and the rail 310 is attached to the second rail attachment portion 330 at a second position 44. The first position 43 is situated between the first side member 340 and the mid-point 45 between the first 340 second 350 side members. The second position 44 is situated between the second side member 350 and the mid-point 45 between the first 340 and second 350 side members.

[0054] A small notch is formed at each of the first and second positions 43, 44 where the rail 310 and the rail attachment portions 320, 330 connect with one another. The side members 340, 350, and therefore the rail attachment portions 320, 330, are biased towards one another by the base connector 380, 390. This holds the rail 310 in compression between the rail attachment portions 320, 330. This helps to reduce the size of the notch at the first and second positions 43, 44. This is advantageous as it facilitates free running of clothes hangers 41.

[0055] The first end 381 of the first part 380 of base connector 379 is bent at slightly less than 90° to the remaining length of the first part 380 of the base connector 379. In addition, the first end 391 of the second part 390 of the base connector 379 is bent at slightly less than 90° to the remaining length of the second part 390 of the base connector 379. Hence, when the freestanding clothes rail 300 is assembled the first ends 381, 391 of the base connector 379 are bent slightly towards one another. This careful base connector design means that the side mem-

bers 340, 350 extend vertically but are biased towards one another. In other words, the natural orientation of the side members 340, 350, in the absence of the rail would be angled slightly towards one another. This allows the rail 310 to be held in compression between the rail attachment portions 320, 330.

[0056] In another embodiment (not shown), the free-standing clothes rail includes a centre rail. The centre rail is releasably connected at its respective ends to the side members 340, 350 and is positioned between the rail 310 and the base connector 379. The height of the centre rail can be adjusted by moving it up or down the length of the side members 340, 350.

[0057] Referring to Figure 5 there is provided a free-standing clothes rail 50 including the same components as described above with reference to Figure 3 and Figure 4. The freestanding clothes rail 50 also includes a first side member extension 51 and a second side member extension 52 which are substantially identical. The first side member 340 slots inside the first side member extension 51 which slots inside the top of the first pair of legs 360. The second side member 350 slots inside the second side member extension 52 which slots inside the second pair of legs 370. The side member extensions 51, 52 increase the height of the freestanding clothes rail 50. The side members 340, 350, side member extensions 51, 52 and legs 360, 370 are connected together using the same clipping mechanism as described above with reference to Figure 3. A user may be provided with multiple side member extensions 51, 52 of different lengths in order to configure the rail 310 at a particular height.

[0058] Referring to Figure 6 there is provided a series of steps for assembling the free standing clothes rail kit 300 including the same components as described above with reference to Figure 3 and Figure 4.

[0059] In STEP 1 the side members 340, 350 are connected to the legs 360, 370. The side members 340, 350 and legs 360, 370 are locked into place using the clipping mechanism.

[0060] In STEP 2 the first rail attachment portion 320 is slotted into the first end 311 of the rail 310 and the second rail attachment portion 330 is slotted into the second end 312 of the rail 310. At this point the rail 310 is held between the two rail attachment portions 320, 330 by interference fit only.

[0061] In STEP 3 the first part 380 of the base connector 379 is connected to the first pair of legs 360 and the second part 390 of the base connector 379 is connected to the second pair of legs 370.

[0062] In STEP 4 the side members 340, 350 are constrained relative to one another by fitting the first part 380 of the base connector 379 inside the second part 390 of the base connector 379.

[0063] It is possible to carry out STEP 2 before carrying out STEP 1. However, the rail 310 must be connected to the rail attachment portions 320, 330 before the base connector 379, the legs 360, 370 and the side members 340, 350 are all connected together. If the base connector

379, the legs 360, 370 and the side members 340, 350 are all connected together before the rail 310 is attached to the rail attachment portions 320, 330 it would be very difficult if not impossible to subsequently attach the rail 310 to the rail attachment portions 320, 330. Hence, the components must be assembled in a specific order which also means that the components must be disassembled in a specific order. This prevents the structure from being accidentally disassembled.

[0064] Referring to Figure 7 there is provided a free-standing clothes rail kit 70 including the rail 310, the first rail attachment portion 320 attached to the first side member 340, the second rail attachment portion 330 attached to the second side member 350, the first pair of legs 360, the second pair of legs 370, the first part 380 of the base connector 379 and the second part 390 of the base connector 379. The freestanding clothes rail kit 70 also includes four wheels 301, 302, 303, 304. The components of the freestanding clothes rail kit 70 are arranged lying next to one another, but not on top of one another, inside a box 71. A box 71 has been used in this example; however, any other type of packing material may be used, including shrink-wrapped plastic.

[0065] The rail 310 and the side members 340, 350 lie parallel with one another. The rail 310 and the first side member 340 lie next to one another. The ends of the rail 310 and the side members 340, 350 are aligned with one another. The second rail attachment portion 330 extends towards the second end 342 of the first side member 340. The first rail attachment portion 320 extends towards the second end 352 of the second side member 350.

[0066] A substantially rectangular area 72 within the box 71 is defined between the rail attachment portions 320, 330 and the side members 340, 350. The first part 380 of the base connector 379, the second part 390 of the base connector 379, the first pair of legs 360, the second pair of legs 390 and the wheels 301, 302, 303, 304 are all nested within this rectangular area 72.

[0067] The rail 310 and the side members 340, 350 are substantially the same length. Hence, the length of the box 71 is defined by the length of the rail 310 and the side members 340, 350. In another example, the rail 310 is shorter than the side members 340, 350. In this example, the length of the box is defined by the length of the side members 340, 350.

[0068] Comparing Figure 7 and the conventional arrangement in Figure 2, it can be seen that the freestanding clothes rail 300 can be packed into a smaller box than the conventional freestanding clothes rail 10. This can be achieved whilst maintaining the capacity of the clothes rail for storing clothes.

[0069] Referring to Figure 8 there is provided a free-standing clothes rail 80 comprising an upper rail 89, a first side member 83, a second side member 84, a first pair of legs 360, a second pair of legs 370, and a base connector 379. The upper rail 89 comprises a first rail portion 81 and a second rail portion 82. The base connector 379 comprises a first part 380 and a second part

390. The side members 83, 84, the legs 360, 370 and base connector parts 380, 390 connect with one another as described above with reference to Figure 3 and Figure 4.

[0070] The first rail portion 81 is an elliptical tube. The first rail portion 81 has a hollow first end 86 and a second end 85 with a cylindrical cap 90. The second rail portion 82 is also an elliptical tube. The second rail portion has a first end 87 with reduced cross-sectional dimensions and a second end 88 with a cylindrical cap 91.

[0071] The first rail portion 81 can be connected to the second rail portion 82 by sliding the first end 87 of the second rail portion 82 inside the first end 86 of the first rail portion 81. This provides a male/female connection which can be secured with an interference fit. The first rail portion 81 and the second rail portion 82 connect with one another to form the upper rail 89.

[0072] The upper rail 89 is attached to the side members 83, 84 by inserting each side member 83, 84 into one of the cylindrical caps 90, 91 provided at either end of the upper rail 89. The base connector 379 angles the side members 83, 84 slightly towards one another when the upper rail 89 is not in place. The side members 83, 84 then have to be pulled part slightly in order to fit the upper rail 89. Thus, the first rail portion 81 and the second rail portion 82 are held in compression between the two side members 83, 84 when the upper rail 89 is in place. This minimises the size of the notch that may appear between the first end 86 of the first rail portion 81 and the first end 87 of the second rail portion. In addition, holding the rail portions 81, 82 in compression between the side members 83, 84 provides a generally more secure structure.

[0073] The freestanding clothes rail 80 can be assembled by firstly attaching the side members 83, 84 to the legs 360, 370, secondly attaching the first and second parts 380, 390 of the base connector 379 together and thirdly attaching the base connector 379 to the legs 360, 370. The upper rail 89 can then be constructed by attaching the first 81 and second 82 rail portions together. One of the cylindrical caps 90 can then be fitted onto one of the side members 83. The other cylindrical cap 91 can then be fitted onto the other side member 84 by pulling the side members 83, 84 apart and fitting the other side member 84 into the cylindrical cap 91.

[0074] It is possible to assemble the components of the freestanding clothes rail 80 in a different order. For example, the upper rail 89 could be assembled first and attached to the side members 83, 84 before attaching the legs 360, 370, base connector 379 and side members 83, 84 to one another.

[0075] In another example, the rail portions 81, 82 may be held in compression between the side members 83, 84 by providing a base connector 379 with a reduced length. In this configuration the length of the base connector 379 separates the side members 83, 84 by a distance that is shorter than the length of the upper rail 89. Hence, when the upper rail 89 is placed on top of the side members 83, 84 it is necessary to pull the side mem-

bers 83, 84 apart. Thus when the upper rail 89 is in place the side members 83, 84 are biased towards one another which holds the upper rail 89 in compression.

Claims

1. A freestanding clothes rail kit comprising:

a first rail portion, a second rail portion, a first side member and a second side member;
wherein in use:

the first rail portion is attached to first side member,
the second rail portion is attached to the second side member,
the first rail portion and the second rail portion extend towards one another for attachment with one another; and
the first side member is biased towards the second side member so that the first rail portion and the second rail portion are held in compression between the first and second side members.

2. A freestanding clothes rail kit according to claim 1 wherein in use the first rail portion and the second rail portion provide respective support surfaces from which clothes hangers can be hung.

3. A freestanding clothes rail kit according to claim 2 wherein in use the respective support surfaces on the first rail portion and the second rail portion provide a continuous support surface along which hangers can run.

4. A freestanding clothes rail kit according to any of the preceding claims wherein in use each of the rail portions have a major-axis in the vertical plane and a minor-axis in the horizontal plane; and the cross-sectional width of each of the rail portions along the major-axis is greater than the cross-sectional width of each of the rail portions along the minor-axis.

5. A freestanding clothes rail kit according to any of the preceding claims wherein in use the first and second rail portions are secured together by a male/female connection.

6. A freestanding clothes rail kit according to any of the preceding claims wherein in use the rail portions are secured together by interference fit.

7. A freestanding clothes rail kit according to any of the preceding claims comprising a base connector, wherein in use the base connector constrains the first side member and the second side member rel-

ative to one another.

8. A freestanding clothes rail kit according to claim 7 arranged in a configuration for storage in a box with the first side member, attached to the first rail portion, and the second side member, attached to the second rail portion, positioned adjacent one another defining an area between the first and second side members and the first and second rail portions; wherein the base connector can be nested inside the area.

9. A freestanding clothes rail kit according to any of the preceding claims further comprising a box; wherein the first rail portion, the second rail portion, the first side member and the second side member are packed into the box.

10. A freestanding clothes rail kit according to any of the preceding claims further comprising a rail held in compression between the first and second rail portions.

11. A freestanding clothes rail kit according to claim 10 wherein the rail has a length less than or equal to the length of the longest other component in the kit.

12. A freestanding clothes rail kit according to claim 10 or 11 wherein in use the first rail portion is attached to the first end of the rail at a position between the first side member and the mid-point between the first side member and the second side member.

13. A method of packing a freestanding clothes rail kit comprising a first rail portion, a second rail portion, a first side member and a second side member into a box; wherein in use:

the first rail portion is attached to first side member, the second rail portion is attached to the second side member, the first rail portion and the second rail portion extend towards one another for attachment with one another; and the first side member is biased towards the second side member so that the first rail portion and the second rail portion are held in compression between the first and second side members; the method comprising:

packing the first side member attached to the first rail portion, and the second side member attached to the second rail portion adjacent one another so that an area is defined between the first and second side members and the first and second rail portions.

14. A freestanding clothes rail comprising:

a first rail portion, a second rail portion, a first side member and a second side member;

wherein in use:

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the first rail portion is attached to first side member, the second rail portion is attached to the second side member, the first rail portion and the second rail portion extend towards one another for attachment with one another; and the first side member is biased towards the second side member so that the first rail portion and the second rail portion are held in compression between the first and second side members.

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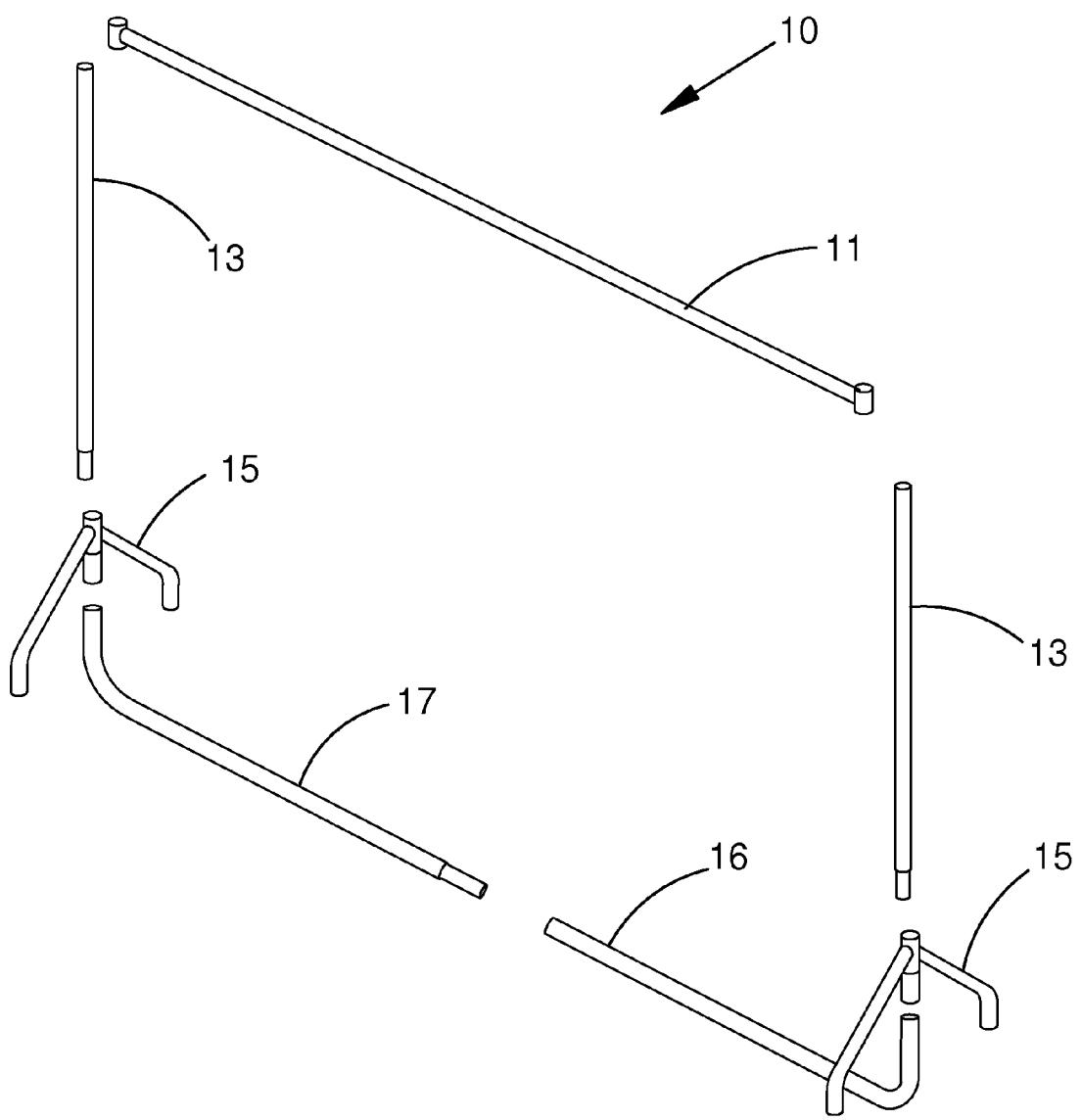


FIG.1

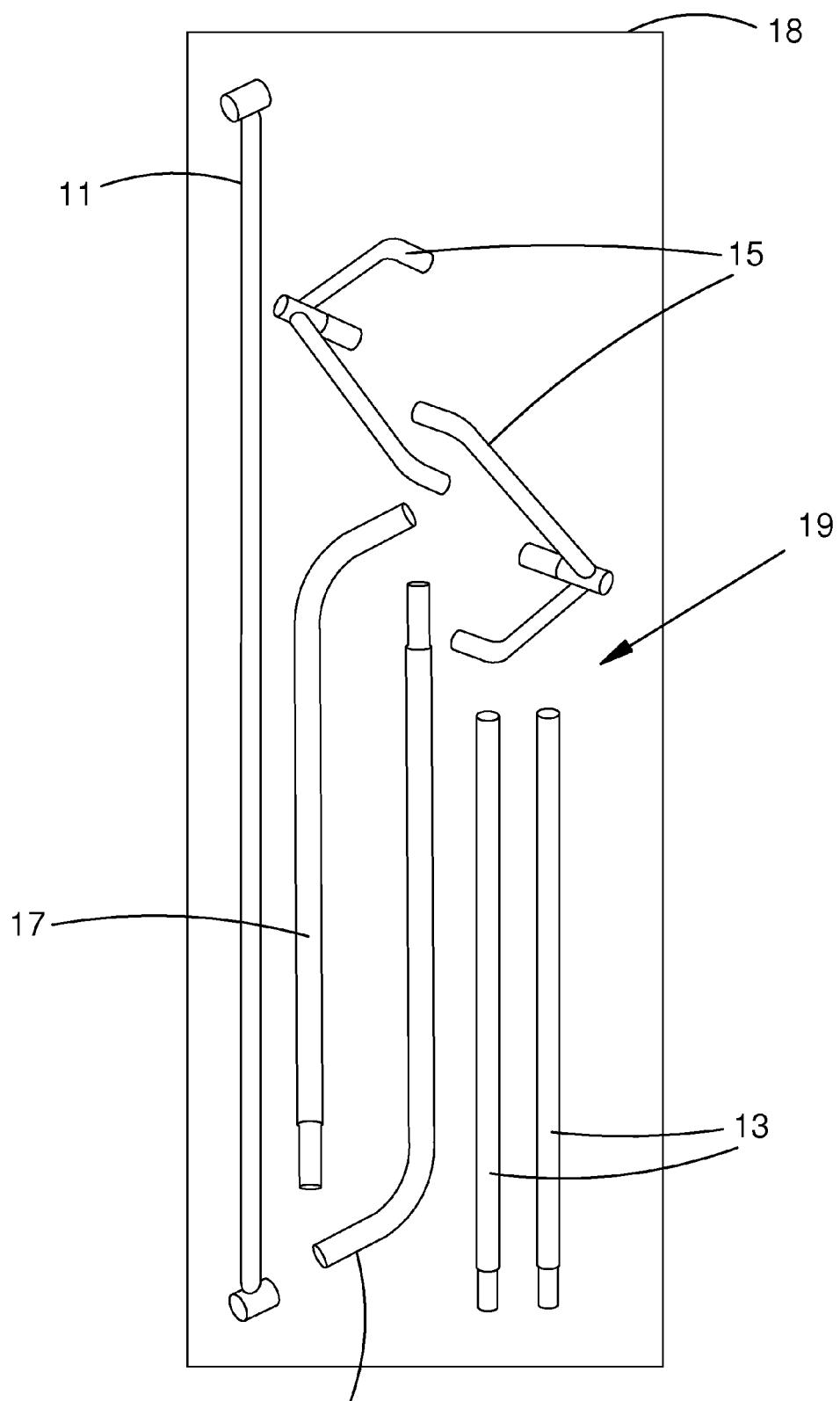


FIG.2

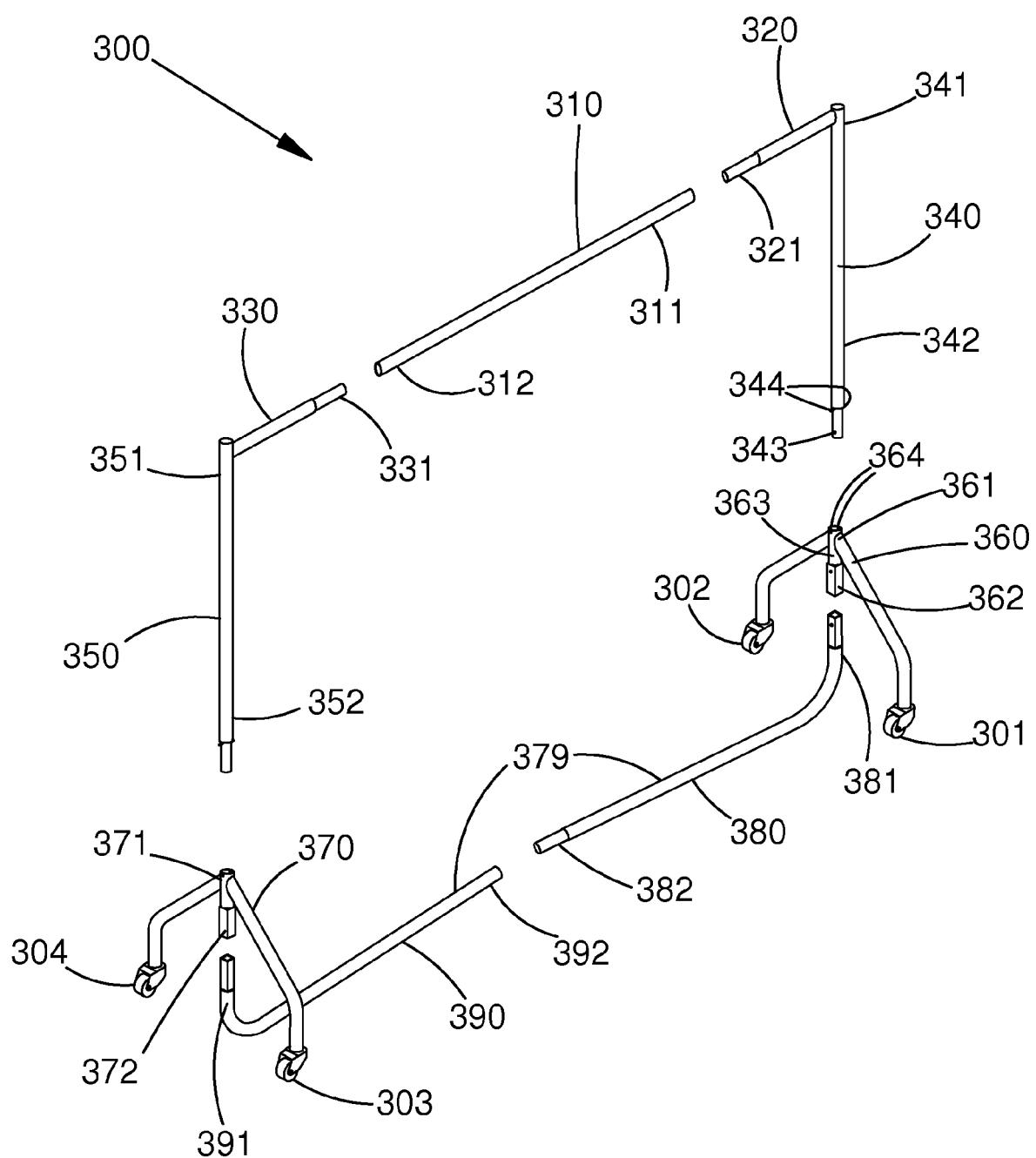


FIG.3

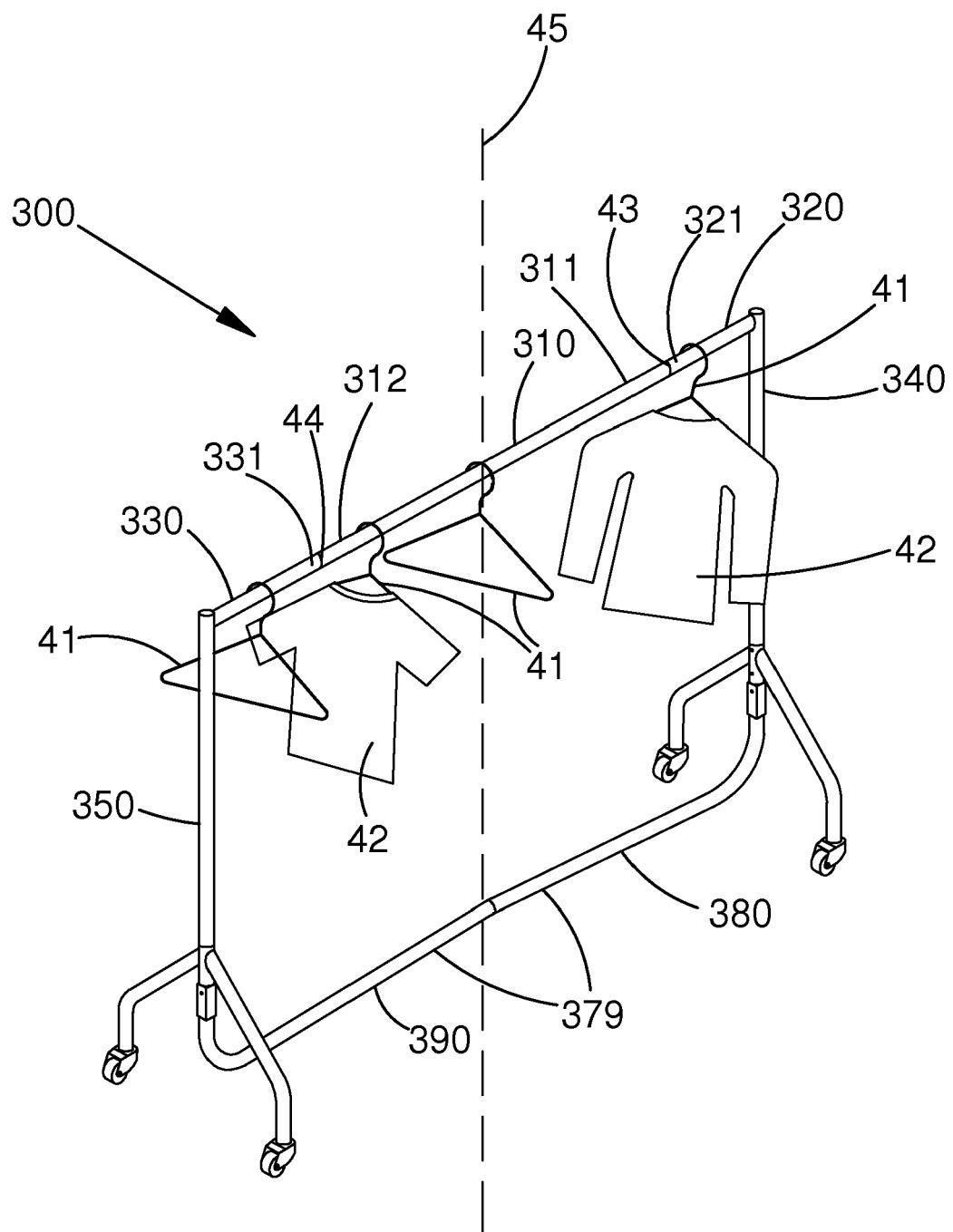


FIG.4

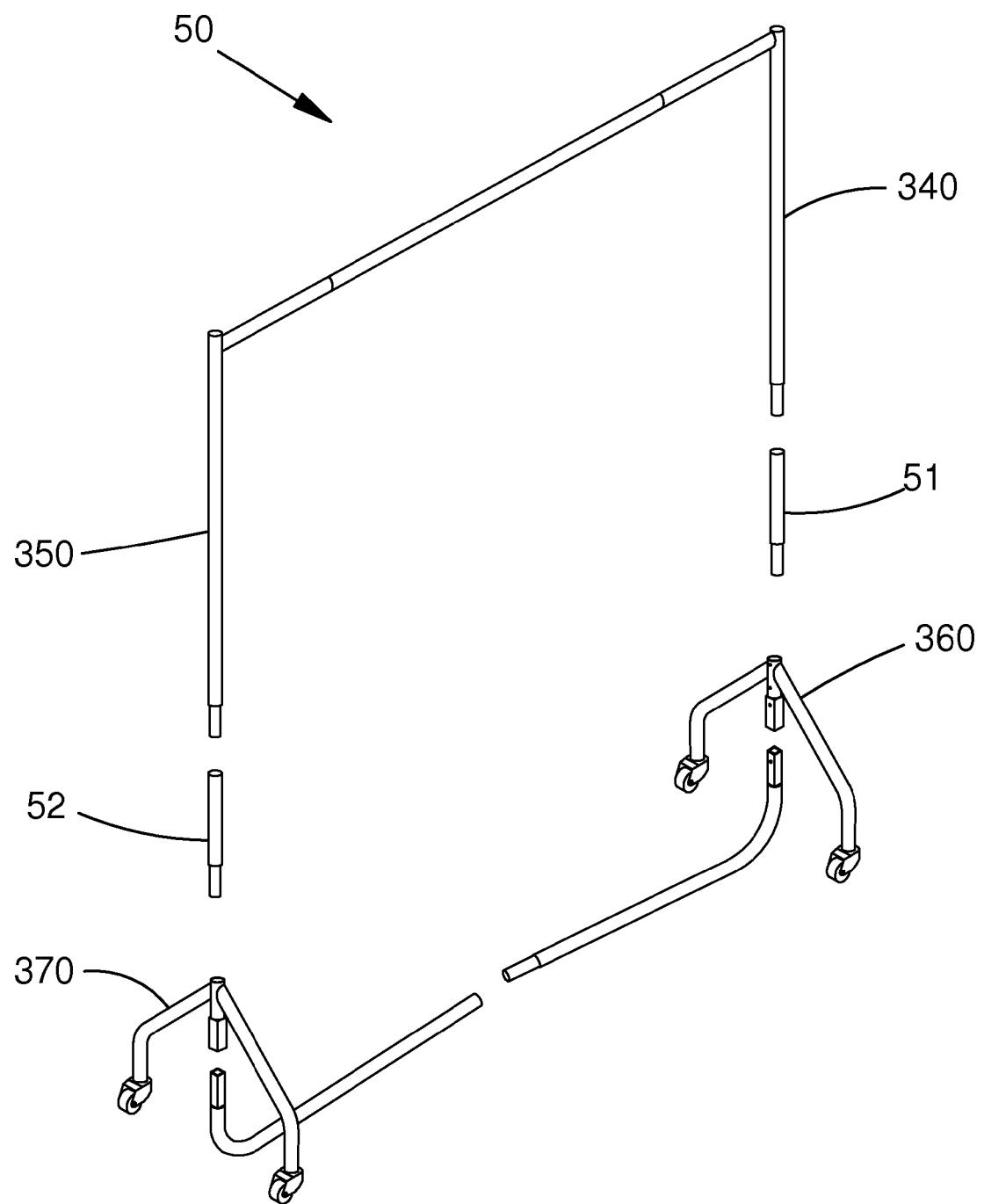


FIG.5

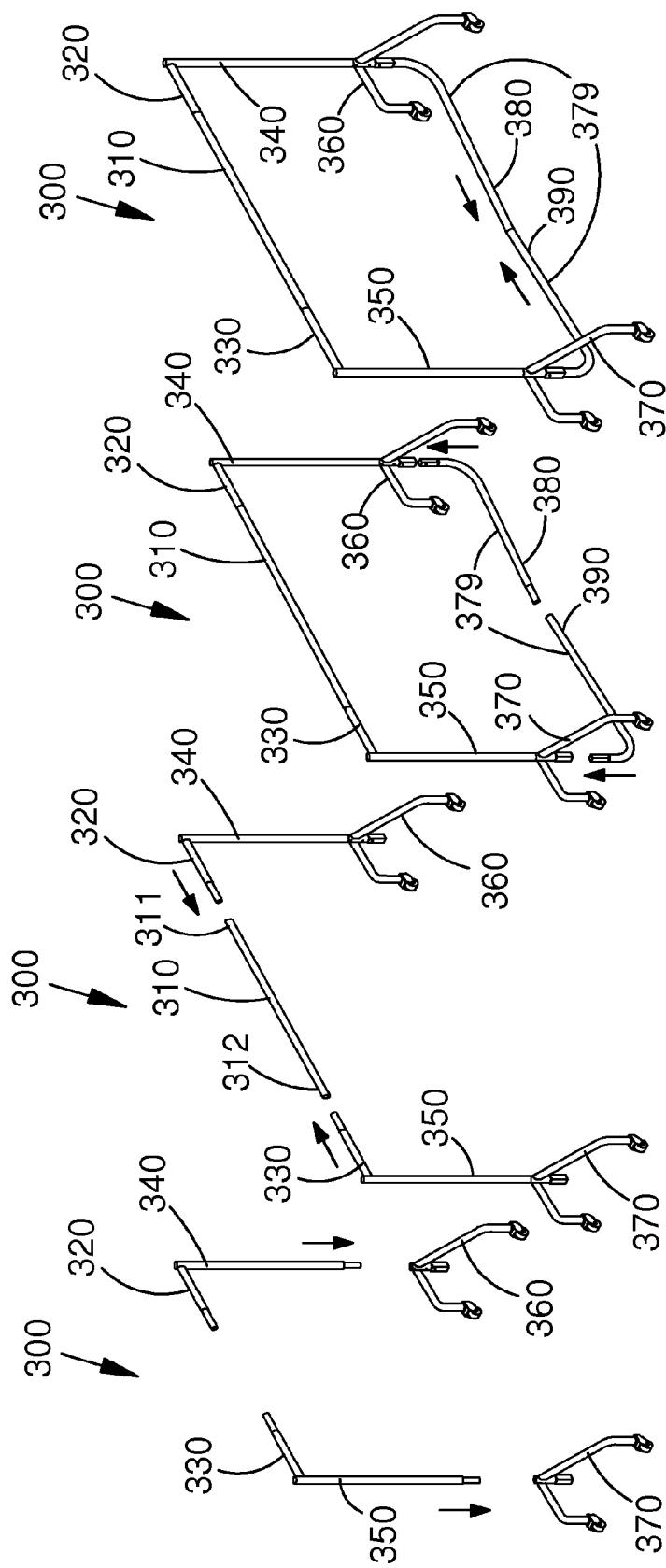


FIG.6

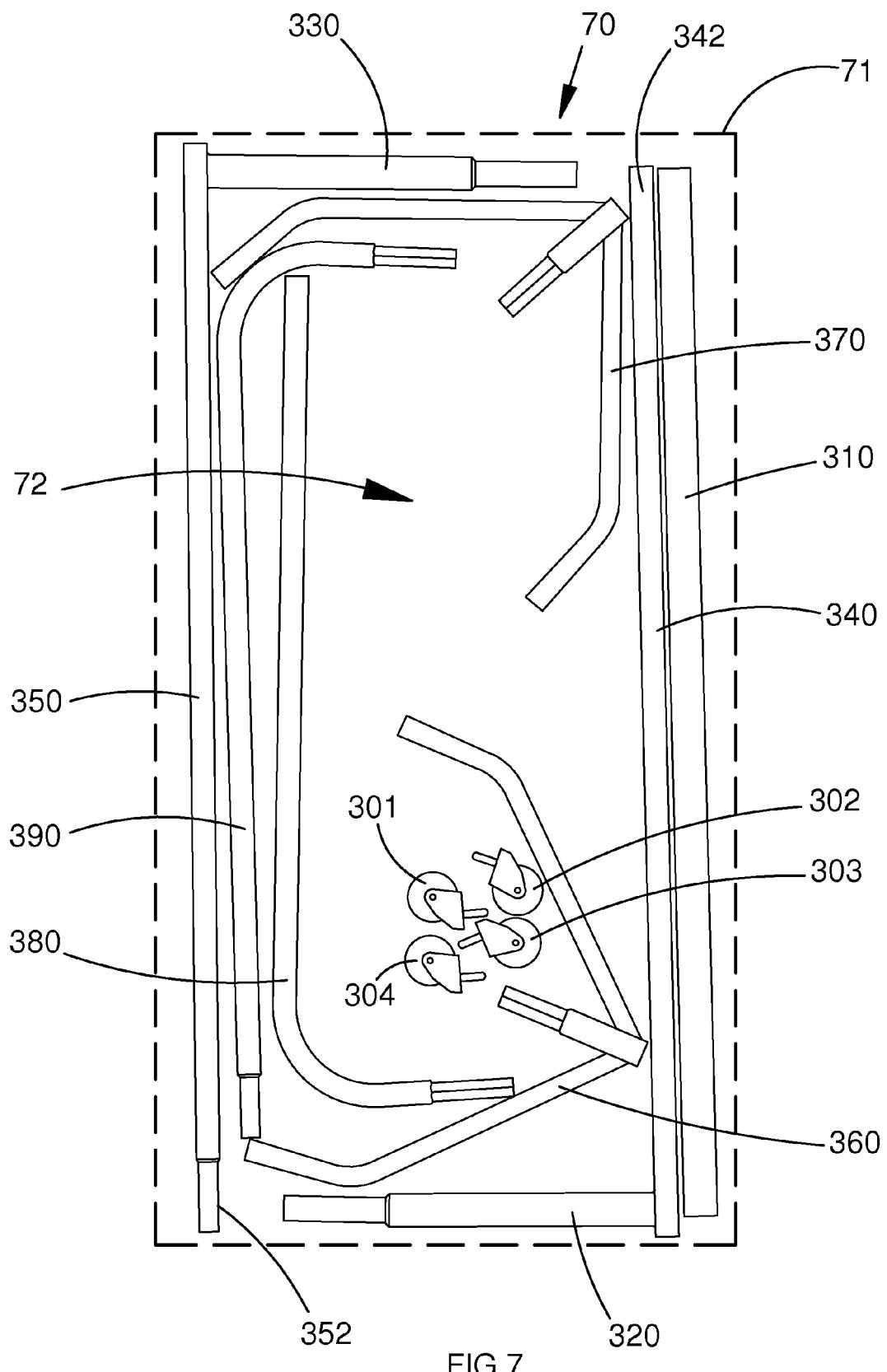


FIG.7

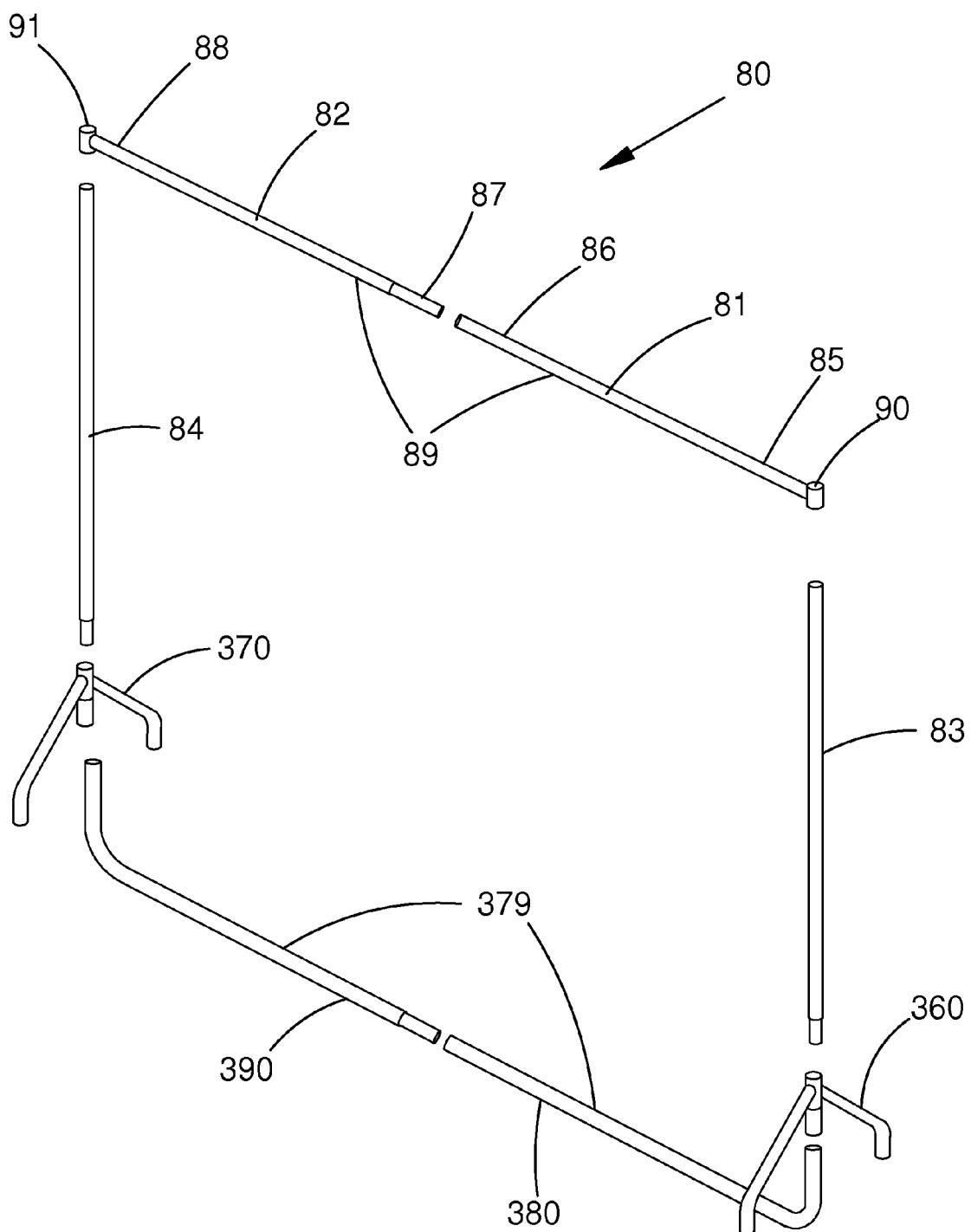


FIG.8



EUROPEAN SEARCH REPORT

Application Number
EP 14 16 7413

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			TECHNICAL FIELDS SEARCHED (IPC)
			A47F A47G
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
	The Hague	12 January 2015	Beugeling, Leo
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