

April 16, 1929.

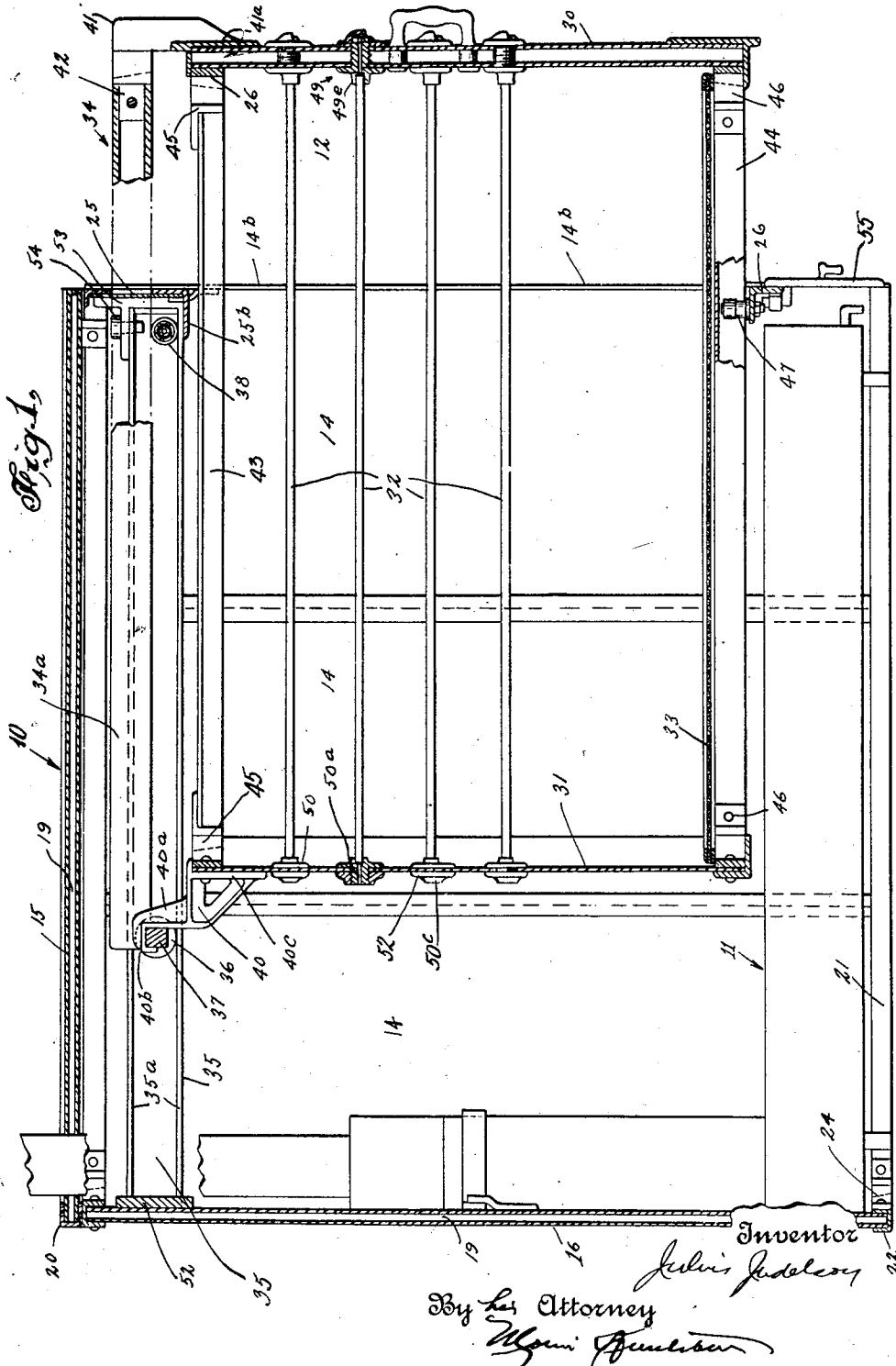
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DRIER RACK FRAME CONSTRUCTION

Filed Feb. 11, 1925

2 Sheets-Sheet 1



Inventor

By her Attorney

Yours Truly

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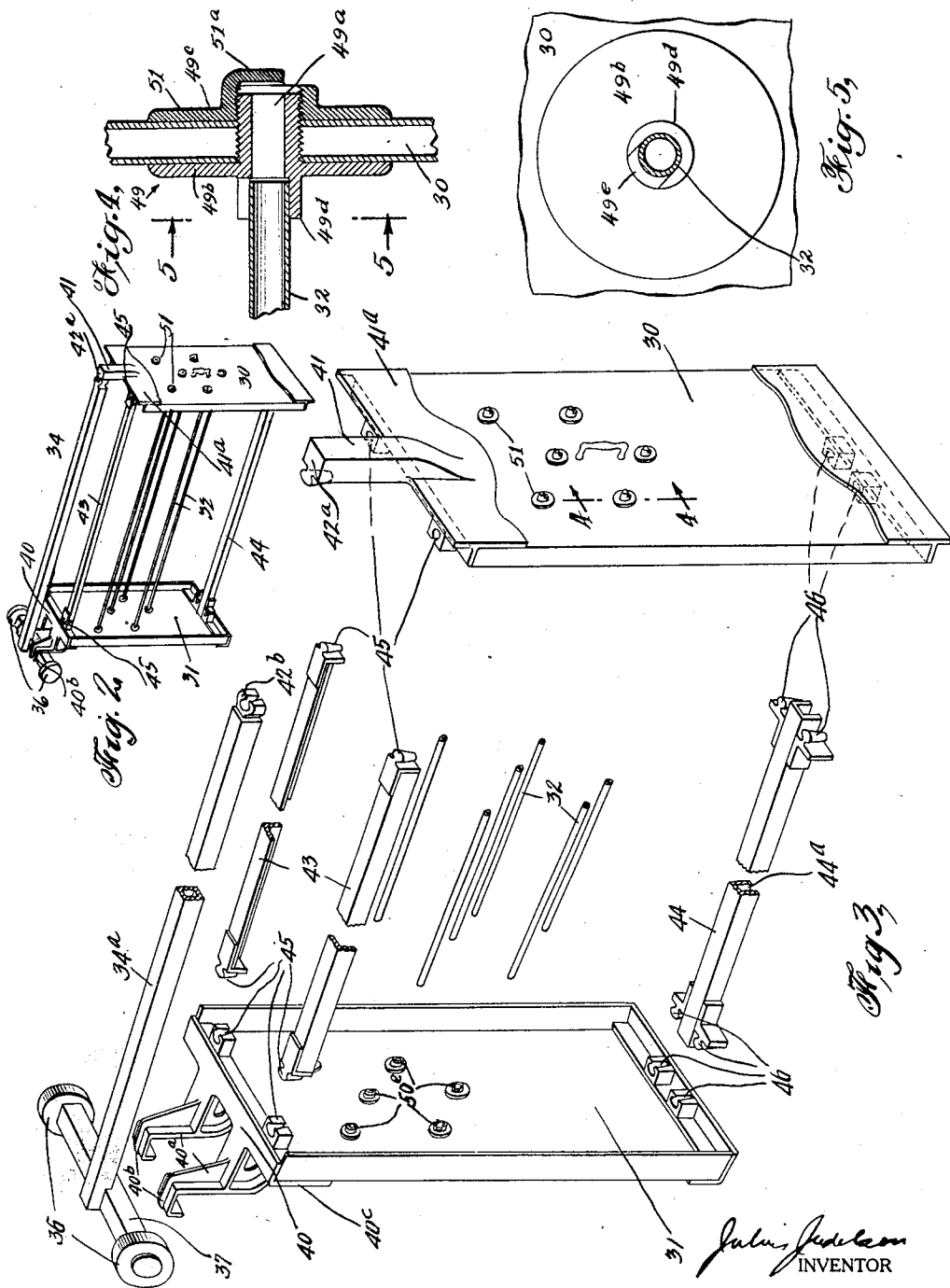
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UNITED STATES PATENT OFFICE.

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DRIER-RACK-FRAME CONSTRUCTION.

Application filed February 11, 1925. Serial No. 8,332.

This invention relates to improvements in driers. More particularly, it is directed to a load carrier and drier frame of improved construction and especially adapted for use with "knock down" types of clothes driers and the like.

An object of the invention is the provision of a load carrier and drier frame of the character and for the purpose described, constructed of detachable parts arranged for interlocking engagement to form a rigid structure, which can be shipped in "knock down" condition to save transportation charges and to facilitate handling, and which can be quickly, easily and properly assembled without the use of tools by persons unskilled mechanically.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

Certain features herein shown and described are shown, described and claimed in my co-pending application Serial No. 8,333 filed in the United States Patent Office on the 11th day of February 1925, and accordingly are not claimed herein.

With the above exception, the invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a side elevational view in cross-section of a clothes drier embodying the invention showing the interior construction thereof;

Fig. 2 is a perspective view of the assembled drier frame;

Fig. 3 is a perspective view of the carrier and drier frame showing the parts separated before being interlockingly engaged;

Fig. 4 is a cross-sectional view taken on line 4-4 in Fig. 3 of a fitting for supporting the rack rod; and

Fig. 5 is an elevational view of the fitting for supporting the rack rod shown in Fig. 4 as seen from line 5-5, showing in section a rod received therein.

Referring in detail to the drawing, an embodiment of the invention is there shown as applied to a clothes drier which may consist of one or more units, each comprising

a drying chamber or cabinet 10 provided with suitable means such as heater 11 for supplying heat thereto in the well known manner. A carrier 34 on which a rack frame 12 is suspended is adapted to reciprocate in and out of cabinet and support the frame in the manner hereinafter described.

The cabinet 10 may be of any suitable construction but is preferably in the nature of a "knock down" structure such as shown and comprises side walls 14, a top wall or roof 15, and is closed on the rear side by a wall 16. The side walls are preferably made in sections suitably joined together.

The side walls, roof and rear wall are preferably constructed of sheet metal and may each comprise a pair of parallelly disposed walls suitably reinforced in any well known manner and spaced from each other to provide a heat-insulating air space 19 for the drying chamber 10.

The sections, rear wall and top forming the chamber 10 are detachably secured together by top and bottom edge rails 20, 21. The chamber is braced on the front side by upper and lower cross pieces 25, 26, which detachably engage with suitable means mounted on supporting portions 14^b formed to extend along the upstanding edges of the foremost wall section 14^a as shown in Fig. 1.

Each rack frame 12 is constructed of quickly detachable interlocking parts that can be easily assembled without the use of tools and comprise a rear panel 31 and a front vertical panel 30 adapted to provide a closure or door on the upper front portion of the cabinet 10. Extending between the panels 30 and 31 are horizontal and parallelly spaced rack rods 32 from which the clothes or other articles are suspended, said rods being preferably of tubular construction. Close to the bottom of the frame 12, the usual wire mesh removable shelf or tray 33 is provided.

The carrier 34 is adapted to reciprocate with the drier frame 12 in and out of the chamber 10 and to support the same while in an extended overhanging position outside the cabinet. Said carrier 34 comprises a main longitudinal tubular member or bar 34^a, the rear end of which is supported to travel between flange portions 35^a of parallel, spaced channel rails 35 on a pair of rollers 36. The latter preferably have anti-

friction bearings and are mounted on the axle 37 secured to the bar 34^a by any suitable well known means.

The channel rails 35 are preferably mounted for quick detachment with rear ends thereof engaging a bar 52 fastened on the rear wall 16, and the front ends supported on an inwardly extending portion 25^b of the cross piece 25. Said rails 35 are secured against lateral displacement by means of a member 53 fastened to the rear side of cross piece 25 and a pin 54 which secures the member 53 to the rails 35, as is clearly shown in Fig. 1.

The carrier bar 34^a rides on a roller 38 mounted for rotation on the cross piece 25. Openings may be provided in said cross piece 25 to permit passage of the bar 34^a there-through.

The drier frame 12 is secured to the axle 37 of the carrier 34, by means of a yoke member 40 comprising a pair of upwardly and outwardly offset arms 40^a, which terminate in hook ends 40^b and which are adapted to detachably engage with the axle 37. The lower end of the yoke member 40 is provided with an angle connecting plate portion 40^c for securing the member 40 to the rear panel 31. (See Figs. 1 and 2.) A T-shaped member 41 is secured to the front panel 30 by means of angle connecting plate portions 41^a, and also is detachably connected with the carrier bar 34 by means of a quick detachable, socket fitting 42 comprising interlocking male portions 42^a and female portions 42^b.

The drier frame 12 may be provided with rigid bracing means comprising a pair of spaced bars 43 connecting the yoke member 40 to the T-shaped member 41, and a single bar 44 joining the lower portion of the front panel 30 with the rear panel 31. Said bars 43 and 44 are provided with quick detachable fittings 45 and 46 respectively, which may be similar in construction to the fittings 42, the fittings 45 having a single set of engaging portions, and fitting 46 having a dual set as is clearly shown in Fig. 3.

The lower brace 44 is preferably of U-shaped cross-section and is arranged normally to be in an inverted position so that its channelled recess 44^a may engage over a roller 47 mounted on the lower cross piece 26, and thus serves to guide the drier frame 12 during the reciprocating movement in and out of the cabinet.

It will be noted that the roller 47 is shielded by means of the inverted channel bar 44, thus providing proper roller and guide means free from the possibility of the clothes being caught.

To demountably secure the rack rods 32 in spaced position in the drier frame 12, in socket supporting fittings 49 and 50 are pro-

vided which are fastened to the front and rear panels 30 and 31 respectively. These fittings 49 and 50 may have central openings 49^a and 50^a respectively to permit through passage of the air and may have rack supporting members 49^b and 50^b adapted to extend through the front and rear panels 30 and 31 respectively from the interior sides thereof. Said members 49^b and 50^b are secured in place by any suitable means as for example by screw discs 51 and 52 respectively which are threaded on to the respective hub portions 49^c and 50^c so as to clamp the fittings to the panels as shown in Figs. 1, 4 and 5. The front screw disc member 51 may be formed with a hood portion 51^a to insure a better circulation of air through the opening 49^a. The rack rod receiving portions 49^d and 50^b of the fittings 49 and 50 respectively are formed to extend inwardly of the members 49^a and 50^a respectively and are recessed as at 49^e and 50^e to permit the insertion and removal of the rack rods 32. Said recesses 49^e and 50^e are preferably made to extend at an angle with the horizontal as shown in Figs. 3 and 5 to prevent the accidental displacement of the rack rods 32 when lifting the clothes from the drier frame.

A suitable hinged door 55 may be provided for closing the lower front opening under the panel 30 of the chamber as shown in Figs. 1 and 2.

It is clear from the above that the drier frame embodying the invention may be quickly and easily put together or disassembled without the use of tools and being constructed of few and simple parts, a person even though unskilled mechanically can without trouble properly erect same.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a drier of the character described having a cabinet, a carrier and drier frame mounted to reciprocate in and out of the cabinet, said carrier and frame comprising a rigid structure held in assembled position by quickly disengageable means, said means consisting of complementary portions on members of said carrier and frame in interlocking engagement with each other.

2. In an apparatus of the character described having a drying chamber, a carrier mounted to reciprocate in and out of the chamber, a drier frame connected to the carrier, said frame comprising a front panel, a rear panel and spaced brace bars between said panels, and boltless quick detachable interlocking fittings for interconnecting said panels, bars and carrier to form a rigid structure to permit quick and easy assembly without the use of tools.

3. In an apparatus of the character described having a drying chamber, a carrier mounted to reciprocate in and out of the chamber, a drier frame connected to the carrier, said frame comprising a front panel, a rear panel and spaced brace bars between said panels, rack rods demountably supported between said panels, and boltless quick detachable interlocking fittings for interconnecting said panels, bars and carrier to form a rigid structure and permit quick and easy assembly without the use of tools.

4. In a clothes drying apparatus, a drier frame comprising detachable parts, means for interlockingly engaging said parts to form a rigid structure, a plurality of spaced rack rods and means for demountably supporting the ends of each rod on the frame, said drier frame and rods having non-bolted connections arranged to permit quick and easy assembly without the use of tools.

5. In a clothes drying apparatus, a drier frame, a plurality of spaced rack rods and means for demountably supporting the ends of each of the rods on said frame, said means comprising pairs of socket fittings, each having a recessed portion extending at an angle with the normal horizontal to permit the insertion and removal of said rods and to prevent accidental displacement thereof when lifting the clothes therefrom.

6. In a clothes drying apparatus, a drier frame comprising a front panel, a rear panel, boltless quick detachable braces for interconnecting said panels to form a rigid structure, horizontally spaced rack rods demountably supported between said panels, and recessed fittings on said panels for receiving the ends of the rods, said recesses extending at an angle with the normal horizontal to prevent accidental displacement of the rods when lifting the clothes therefrom.

7. In a drier of the character described having a cabinet, a carrier and drier frame mounted to reciprocate in and out of the cabinet, said carrier and frame comprising interlockingly engaging parts other than bolted, constructed to form a rigid structure for permitting quick and easy assembly without the use of tools, said frame including a guiding member for slidably engaging with a fixed projection on the cabinet, said

member being provided with means to prevent the possibility of clothes being caught between said member and said projection.

8. In a drier of the character described having a cabinet, a carrier and drier frame mounted to reciprocate in and out of the cabinet, said carrier and frame comprising interlockingly engaging parts constructed to form a rigid structure and adapted to permit quick and easy assembly without the use of tools, said frame including an inverted channel member adapted to engage with an upstanding roller on the cabinet for providing a guiding means to prevent the possibility of clothes being caught in said means.

9. A drier frame for a drier having means to permit reciprocative movement of said frame in and out of said drier, said frame consisting of frame members, and interlocking means for maintaining said members in spaced relation, said means permitting quick assembly and disassembly of said drier frame without the use of tools.

10. A drier frame for a drier comprising frame members, interlocking means for maintaining said members in spaced relation, said means permitting quick assembly and disassembly of said members without the use of tools, and means to permit movement of said frame in and out of said drier, said frame being detachably mounted on said last named means.

11. A drier frame for a drier comprising frame members, interlocking devices for maintaining said members in spaced relation, said devices permitting quick assembly and disassembly of said members without the use of tools, and means to permit movement of said frame in and out of said drier, said frame being detachably mounted on said means, said means cooperating with a portion of said drier to provide guiding means for said frame.

12. A drier frame for a drier comprising frame members, interlocking means for maintaining said members in spaced relation and rack rods demountably supported between certain of said members, said means and the mounting of said rods permitting quick assembly and disassembly of said frame without the use of tools.

13. A drier frame for a drier comprising frame members, interlocking means for maintaining said members in spaced relation, said means permitting quick assembly and disassembly of said members without the use of tools, and means to permit movement of said frame in and out of said drier, said frame being detachably suspended from said last named means.

In testimony whereof I affix my signature.

JULIUS JUDELSON.