Aug. 6, 1968 J. BELLOCK 3,395,811

GARMENT RACKS

Filed March 13, 1967

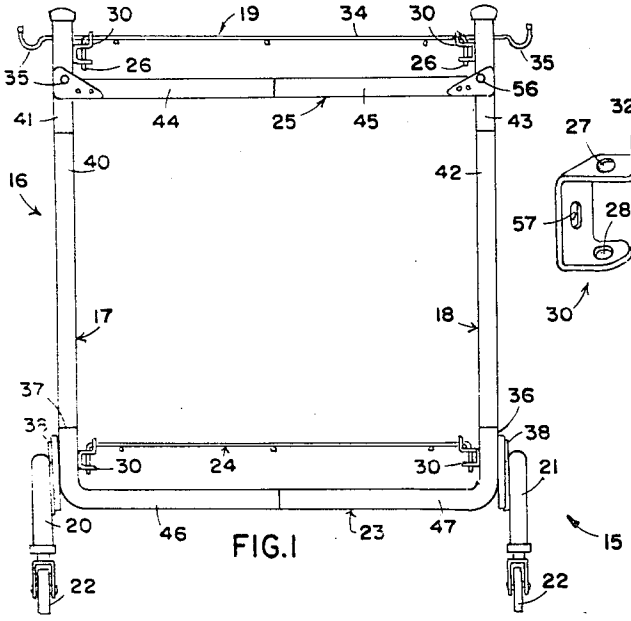


FIG. 1



FIG. 3

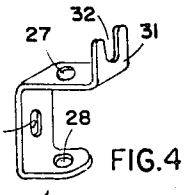


FIG. 4

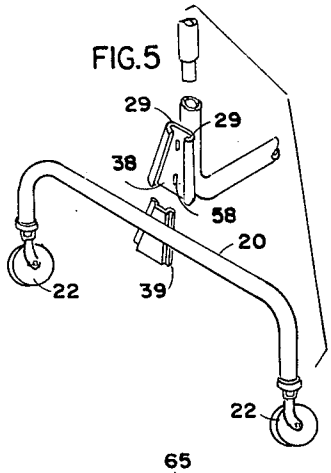


FIG. 5

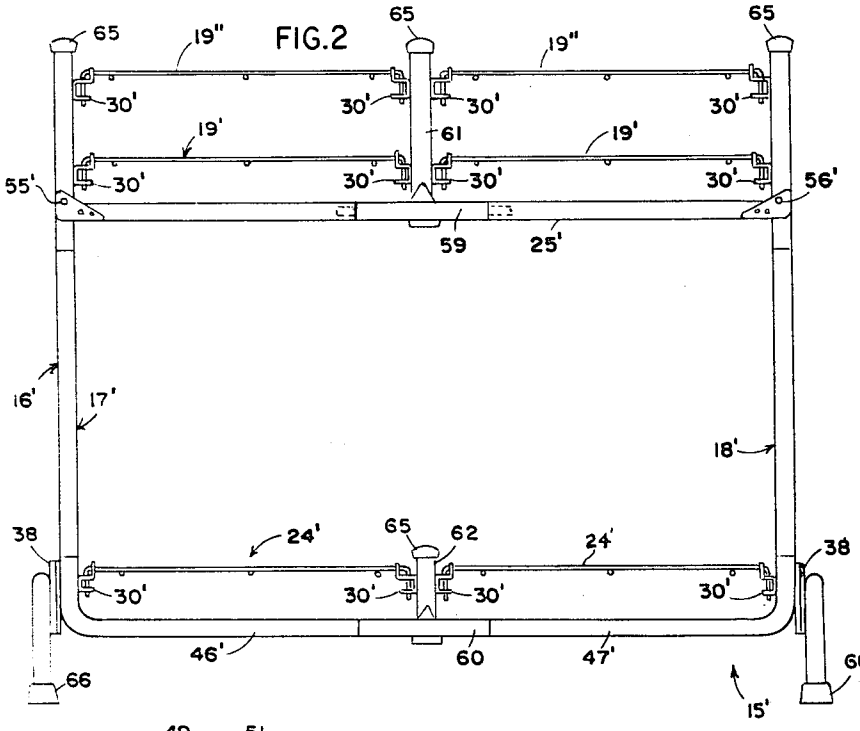


FIG. 2

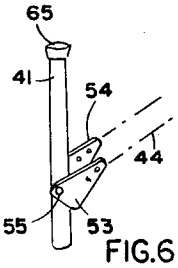


FIG. 6

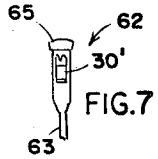


FIG. 7

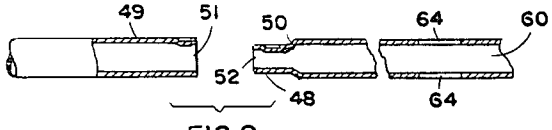


FIG. 8

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GARMENT RACKS

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ABSTRACT OF THE DISCLOSURE

A knock-down garment rack which for its assembly requires no tools, bolts, nuts, screws and the like. A rectangular frame in vertical plane, is supported on releasably engaged legs. Said frame and legs are of tubular metal stock. The frame is in sections whose successive parts are in telescopic relation. Such joints offer stop means to limit their length and they may have cooperatively engaging locking teats. The upright side posts of the frame extend above the frame's upper rail, as separate sections, each of which is permanently hinged to the end sections of the upper rail. The posts carry brackets for frictional mounting of shelf structures above the upper and lower rails. The mounting of the shelves, maintain the assembly in sturdy condition without the aid of the teat locks. For a larger rack, its upper and lower rails are of course longer and have a central section which releasably mounts short center posts. Separate shelf structures are provided between said center posts and the main posts. Assembly is effected in all instances by slide and push motions, except for two swinging motions at the hinge connections.

This invention relates to garment racks of the type preferably made of tubular metal stock, comprising a rectangular frame carried raised off the ground a bit, on side legs, each of which may be of inverted U-shape in a vertical plane at right angles to the plane of the frame which is vertical. The upper rail of the frame is for supporting garment hangers. Shelves of wirework are supported on the upper and lower rails of the frame.

The principal object of this invention is to provide a novel and improved garment rack of the knock-down type and of the character described, which is easily assembled without tools and without bolts, nuts or screws. When assembled, the structure is very sturdy. It also can be easily dismantled.

Another object thereof is to proivde a novel and improved construction for a garment rack of the kind set forth, all of whose parts are assembled by sliding movements and when in proper place in relation to each other, they lock.

A further object of this invention is to provide a novel and improved garment rack having the afore-mentioned attributes, which is simple in construction, reasonable in cost to manufacture and efficient in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

In the accompanying drawing forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

FIG. 1 is an elevational view of a garment rack embodying the teachings of this invention.

FIG. 2 is a similar view of a modified embodiment.

FIG. 3 is a perspective view of a wirework shelf which is used in these embodiments.

FIG. 4 is an enlarged perspective view of the type of bracket which I prefer to use for supporting the shelves.

FIG. 5 is a perspective "exploded" view, partly fragmentary, showing the provision for releasably assembling a foot with the rectangular frame and for the telescopic association of frame parts.

FIG. 6 is a fragmentary perspective view showing the provision for mounting the upper rail of the frame to the side posts of said frame.

FIG. 7 is a perspective view of a center post used in the garment rack of FIG. 2, for shelf suspension.

FIG. 8 is a fragmentary "exploded" view, shown partly in section, of the provision to associate and lock parts of the frame.

In the drawing, the numeral **15** designates generally a garment rack comprising a rectangular frame indicated generally as **16**, whose side posts indicated generally as **17** and **18** extend upwardly a comparatively short distance from the rectangular form to support a wirework shelf denoted generally by the numeral **19**, and side legs which are the inverted U-forms **20**, **21**, whose distal ends may be fitted with castors **22**. Above the bottom rail **23** of the frame **16**, said posts also support a similar shelf **24**. The upper rail indicated generally as **25**, is for suspending garment hangers. At each shelf end, its middle wire has downwardly bent legs **26** each of which set into the aligned holes **27**, **28** through the arms of a U-shaped bracket as **30**, which is positioned as a C on the posts, at appropriate positions. The upper distal end of each bracket, may be bent upward as at **31** and provided with a notch **32**, to receive the shelf's middle wire **33**. The front wire **34** of the shelf, may be formed with hooks **35** at its ends, for hanging an umbrella along the outsides of the posts **17**, **18**. The lower rail and the lower parts of the posts, may be furnished by a U-member having the comparatively short arms **36**, **37**, on the outside of each of which is secured a trapezoidal plate **38** having its slanted ends turned inward to form the converging channels **29** for receiving a trapezoidal plate **39** which is secured across the mid-region of the side leg **20** and another similarly placed on the side leg **21**. These are well known releasable joint constructions. The legs and frame are made of metal tubing.

The side post **17** is made up of the comparatively long section **40** and the relatively short upper section **41**. Similar parts of the post **18** are designated by the numerals **42** and **43** respectively. The upper rail **25** is comprised of the sections **44** and **45**. The lower U-shape **23**, is comprised of the L-shaped sections **46** and **47**. The horizontal length of each leg **20**, **21**, is less than the length of the sections **40** or **42**, so they are each of one piece. As mentioned, all these sections are tubular. Where the ends of tubes meet, one of them has a reduced short neck as **48** which frictionally fits into the end of the other as **49** and provides a stop shoulder at **50** for such other. There also may be provided the depressed teats **51** and **52** in the respective engaged tube ends, which engage what the tube sections are telescopically joined and securely lock them. It requires considerable force to separate the sections so joined. To receive the free end of the section **44** between them, to which it is secured, are the triangular plates **53** and **54**, one in front of and one in back of the post section **41**; said plates being swingably mounted on said post section by the axis pin **55**. This permits compactness for shipping the rack knock down, to be erected by the customer, since at the factory, the section **41** is swung to lie alongside the section **44**. The same construction is provided at the free end of the section **45** where the axis pin is indicated by the numeral **56**.

When the garment rack **15** is assembled, it is very sturdy. Even if its joints should become loose, the assembly will be maintained because of the engagement of the shelves with their supporting brackets **30**, whose fit is preferably frictional, though not mandatory. Attachment of the brackets **30**, and of the releasable juncture

plates **38** and **39**, to the tubular parts, are preferably effected by welding, for which seats may be provided by the depressed teats **57** and **58**.

The garment rack **15'** of FIG. 2 is of greater length than the garment rack **15** of FIG. 1, but all joints and corresponding parts in both of them, are substantially identical, so the numerals assigned in FIG. 2 are the same as are used to indicate corresponding parts in FIG. 1, except that in FIG. 2 they are primed. Being of greater length, the rack **15'** uses two shelves **24'** in place of the one shelf **24** in FIG. 1, and two shelves **19'** in place of the one shelf **19** in FIG. 1. If desired, another set of shelves **19''** may be provided above the shelves **19'**, as shown in FIG. 2. To give the frame **16'** its required length, the top rail has an insert section **59**, and the bottom rail has an insert section **60**, all joined as in FIG. 8. The insert section **59**, at its middle, carries a relatively short upright center post **61**, while the insert section **60** carries one shown as **62**. These center posts have brackets **30'** thereon, to support the inner ends of the shelves. Each of said center posts is made of a piece of tubing which is flattened at one end as shown by the numeral **63**; such flat being frictionally engaged in opposite slots as **64** in insert section **60**.

To decoratively trim bare tube ends, they may carry a plastic cap **65**, which is also appropriate to serve as a foot as at **66**, in place of a castor **22**.

Of importance to note is that the racks may be shipped knockdown in a very compact package, and that to assemble them requires no bolts, nuts, screws or tools. The parts are automatically locked in assembly, by the interfitting teats as **51**, **52**, and by the shelf stems **26** when mounted in the brackets **30**, **30'**.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiments shown herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific showings and description herein, to indicate the scope of this invention.

I claim:

1. A knock-down garment rack which requires no tools, bolts, nuts or screws for its secure and sturdy assembly, comprising a substantially rectangular frame made of tubular stock, positioned in a vertical plane, consisting of two spaced side posts, a lower comparatively low U-frame piece whose arms serve as the lower parts of said posts and whose horizontal part connects said arms, constituting the lower rail of the frame, and an upper rail between said side posts, positioned a predetermined distance below the upper ends of said posts, the bottom and upper rails, each being of separate parts constituting sections thereof respectively; each side post being composed of a relatively long section and a relatively short upper section; the ends of the upper rail being intermediate the ends of said upper post sections respectively, first and second means hingedly connecting the ends of the upper rail to said posts respectively; such hinge connections affording swinging movement to the end sections of the upper rail, only upwardly and back to horizontal, legs extending downwardly from regions of the lower U-member of the frame respectively, two sets of cooperative means, one set releasably interlocking and connecting each of said leg members to an arm of the lower U-member of the frame, brackets on said posts above each of said rails for supporting shelf structures; each bracket comprising a C-shaped piece, each arm of which is provided with a hole; said holes in each bracket being in alignment; each shelf structure having a downward pin at each side end thereof at substantially the mid region of each such side end; each of said pins being through the holes of one bracket respectively; all successive sections of said frame being in telescopic association, by having one of said sections present a reduced end portion whereby a shoulder is formed at the inner end of such portion; the associated section being in frictional telescopic fit on said reduced portion and stopped against the shoulder.

2. A garment rack as defined in claim **1**, wherein each downwardly extending pin member from the shelf structures, is frictionally engaged in the holes of the bracket it is associated with.

3. A garment rack as defined in claim **2**, wherein each of the two pin members of each shelf structure is a bent down end portion of a horizontal wire along the shelf; the distal end of the upper arm of each bracket, being bent upwardly and provided with a downward notch therein; said wire being positioned and engaged in said notches.

4. A garment rack as defined in claim **1**, wherein each of the first and second hinge connections comprises a pair of plates pivoted on a single axis on the upper short post section and below the shelf bracket on such section, and secured to the adjacent end section of the upper rail; said sections being between said plates.

5. A garment rack as defined in claim **1**, wherein the reduced end portion presented by one of each pair of successive frame sections respectively, is integral with the section which presents it; each such reduced portion and the frame section and telescopically on it, each having an inward teat; said teats being in engagement.

6. A garment rack as defined in claim **1**, wherein each of the upper and lower rails of the frame includes a central section having diametrically opposite vertically spaced slots in its center region, and each such central section including a short post having a reduced lower end frictionally engaged in said slots, brackets of the construction described, mounted on said center posts; said shelf structure above each rail being two separate shelves of the construction described, one end downward pin of each being mounted on the center post and the other downward pins of each pair of shelves being mounted on the other posts of the frame, respectively.

7. A garment rack as defined in claim **6**, wherein each downwardly extending pin member from the shelf structures, is frictionally engaged in the holes of the bracket it is associated with.

8. A garment rack as defined in claim **6**, wherein each of the first and second hinge means comprises a pair of plates pivoted on a single axis on the upper short outer post section and below the shelf bracket on each such section, and secured to the adjacent end section of the upper rail; said sections being between said plates.

9. A garment rack as defined in claim **6**, wherein the reduced end portion presented by one of each pair of successive frame sections respectively, is integral with the section which presents it; each such reduced portion and the frame section end telescopically on it, each having an inward teat; said teats being in engagement.

References Cited

UNITED STATES PATENTS

1,830,282	11/1931	Lorch	211—178
2,748,955	6/1956	Anselmo	211—178
2,793,764	5/1957	Stork	211—178
3,197,035	7/1965	Wolf	211—178

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