Feb. 20, 1951 S. A. HANSON 2,542,137

CLOTHES RACK

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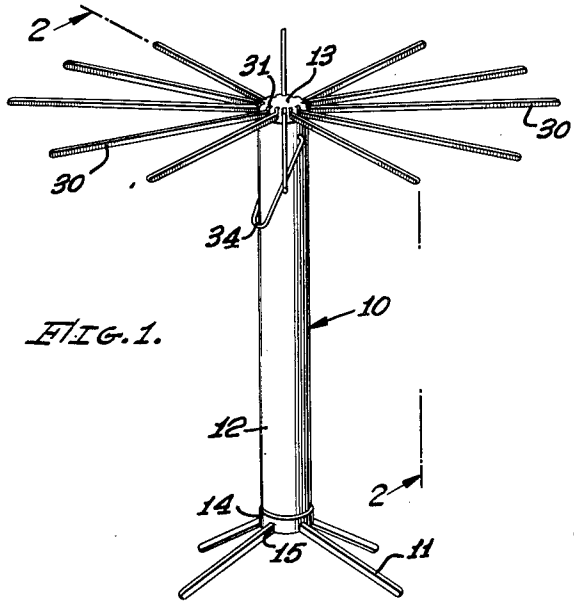


FIG. 1.

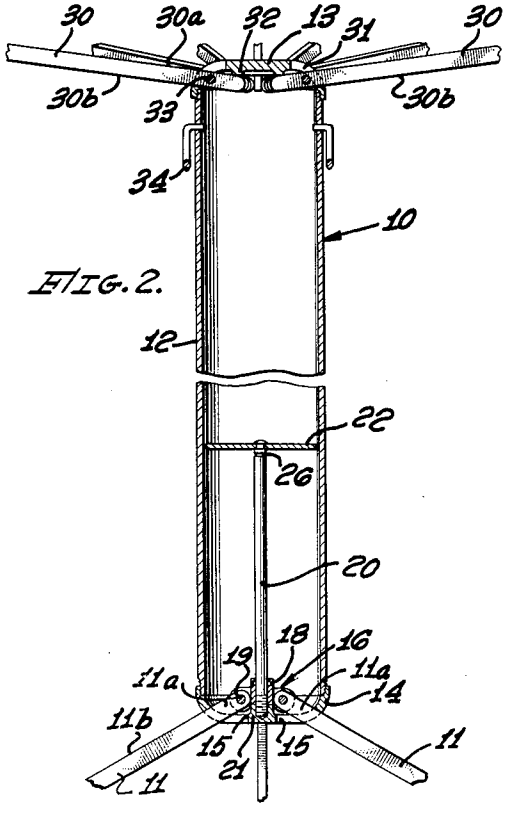


FIG. 2.

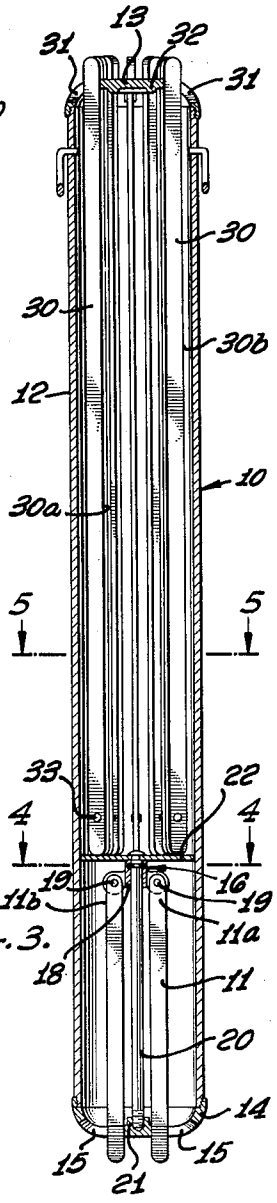


FIG. 3.

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FIG. 4.

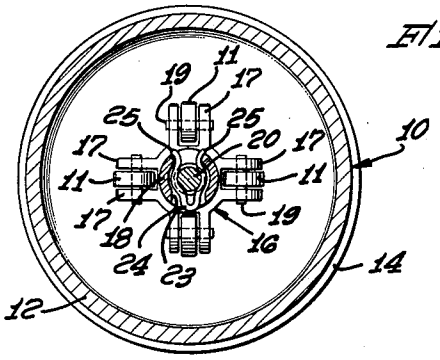


FIG. 5.

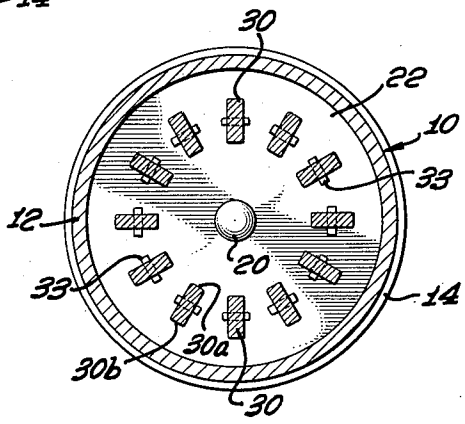
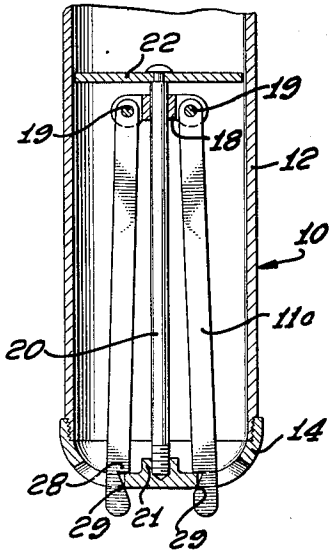


FIG. 6.



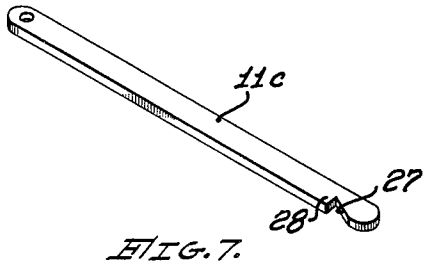


FIG. 7.

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CLOTHES RACK

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3 Claims. (Cl. 248—171)

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The present invention pertains to clothes racks, and more particularly to clothes racks which may be collapsed into a comparatively compact size and shape when not in use.

An object of the invention is generally to improve clothes racks of the character indicated.

Another object of the invention is to provide a clothes rack in which both the supporting legs and clothes supporting arms are confined in collapsed condition in better fashion.

A further object of the invention is to utilize the supporting standard of a clothes rack as an enclosure for confining both the clothes supporting arms and standard supporting legs in collapsed condition.

Yet another object of the invention is to provide an improved collapsible supporting leg structure for a standard.

Another object of the invention is to provide improved lock devices for securing the members of a supporting standard in collapsed position.

This invention possesses many other advantages, and has other objects which may be made more clearly apparent from a consideration of several of its embodiments. For this purpose, there are shown a few forms in the drawings accompanying and forming part of the present specification. These forms will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

Referring to the drawings:

Figure 1 is a pictorial isometric view of a clothes rack, with its supporting parts in extended positions;

Fig. 2 is an enlarged longitudinal section, taken as indicated by the plane 2—2 on Fig. 1;

Fig. 3 is a longitudinal section similar to Fig. 2, with the clothes rack parts confined in collapsed position within the supporting standard of the rack;

Figs. 4 and 5 are, respectively, enlarged cross-sections taken along the lines 4—4 and 5—5 on Fig. 3;

Fig. 6 is a partial longitudinal section through the supporting leg portion of a modified form of clothes rack; and

Fig. 7 is a pictorial isometric projection of one of the latch legs employed in the device shown in Fig. 6.

The clothes racks illustrated in the drawings include a tubular standard 10 adapted to be supported by a plurality of circularly spaced legs 11. The standard includes a cylindrical body 12 and upper and lower caps or closures 13, 14 threaded on its opposite ends. Equiangularly spaced slots 15 extend through the lower cap 14, there being one slot for each leg. The latter extends through the slot with its inner end connected to a central spider or collar 16. As most clearly shown in Fig. 4, the connection is provided by disposing the inner end 11a of each leg between adjacent arms 17 projecting from the central hub 18 of the spider, and extending a pin 19 through these members. The spider 16 is slidably mounted upon a central guide member or rod 20 threaded into a central boss 21 in the lower cap 14. This rod projects upwardly within the tubular standard 10 to a desired extent.

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Each leg 11 extends outwardly through its associated slot 15 in the cap, being restrained against lateral movement by engagement with the opposed walls of the cap defining the slot. The outer ends of the slots 15 engage the legs 11, and the spider 16 moves to its lowermost position into engagement with the boss 21 to locate the legs rigidly in a downwardly and outwardly inclined position, such as shown in Figs. 1 and 2. Thus, it is apparent that the tubular standard 10 is supported by the legs 11 through engagement of the lower standard cap 14 with the upper surfaces 11b of the legs, and through engagement of the spider 16 with the boss 21.

When the legs 11 are to be collapsed within the supporting standard 10, they are shifted upwardly therewithin, the spider 16 sliding freely along the guide rod 20 until the upper end of the spider engages a stop or plate 22 secured to the upper end of the rod (Fig. 3). When such engagement occurs, the lower ends of the legs depend from the lower cap 14 to a small extent to facilitate grasping of a leg and outward movement of the entire leg assembly when the standard is to be supported on the legs once again.

The legs are retained in their inwardly collapsed position adjacent the central guide rod 20 by providing a generally U-shaped or hairpin shaped spring clip 23 in opposed recesses 24 in the spider hub 18 adjacent the guide rod; the clip inherently tending to collapse to move its arms 25 toward each other. Upon disposing the spider 16 in its uppermost position along the central guide rod 20, the spring clip 23 is located opposite an external groove 26 on the guide rod, which allows the arms 25 of the clip to snap into the groove, thereby holding the spider in its upper position, with the supporting

legs 11 depending therefrom closely adjacent the guide rod 20.

An alternative manner of securing the legs in their collapsed position confined within the tubular standard 10 is illustrated in Figs. 6 and 7. The lower end of each leg 11c is provided with an inner notch 27 forming a latch dog or corner 28 adapted to engage the central portion of the lower cap 14 at the inner end of the slot 15. When the legs 11c have been collapsed within the tubular member 10, the latch elements 28 will engage the cap member (as shown in Fig. 6), each point of engagement 29 being outwardly of a vertical plane including the axis of the pin connection 19 of the upper end of the leg with the spider arms 17. The force of gravity acting on the legs when in collapsed position tends to swing them about their pin connections 19 inwardly toward the guide rod 20, which insures the maintenance of the legs in latched position upon the lower cap 14. If only one leg 11c remains in latched position, the entire leg assembly will be retained in its collapsed state within the tubular standard.

The clothes rack is provided with a plurality of circularly spaced, individual arms 30, each adapted to extend through a slot 31 in the upper cap 13. The inner end 30a of each arm is engageable with an annular rib 32 formed on the underside of the upper cap 13, and the lower surface 30b of each arm is engageable with the lower end of the cap defining the slot 31. This mode of engagement provides a two point support for the outwardly extending portion of the arm, preventing downward movement of the latter and rendering it capable of sustaining a load, such as a load of clothing hanging on the arm to dry or for display purposes.

Outward movement of each arm 30 is limited by a pin 33 fixed to and extending in opposite directions from the inner portion of each arm. This pin is adapted to engage the inner surface of the cap 13 on opposite sides of the slot 31. However, the pin does not interfere with inward sliding movement of the arm 30 through the cap slot 31 and into the tubular standard.

An inspection of Figs. 1 and 2 discloses that the arms 30 are angularly disposed with respect to each other, and that they engage the annular rib 32 and the respective lower ends of their slots 31 to cause them to assume substantially uniform positions about the axis of the tubular standard 10. Such uniformity is also due to the engagement of the pins 33 with the inner surface of the upper cap 13. When it is desired to collapse the arms, they are readily shiftable individually into the tubular standard 10 simply through elevating their outer ends toward the vertical, and allowing them to drop downwardly into the tubular standard to an extent determined by engagement of the inner ends of the arms with the support or plate 22 on the central guide member 20 (see Fig. 3). This guide member 22 is so located as to insure partial projection of the upper ends of the arms 30 from their slots 31, to enable them to be readily grasped and removed from the tubular member 10 to their outwardly extending positions.

Following collapsing of the arms 30 and legs 11 within the single tubular standard or support 10, the entire device may be moved or transported readily through grasping of a bail-shaped member 34 whose ends extend into the upper portion of the tubular standard 10.

From the foregoing description, it is apparent that a clothes rack has been provided whose arms 30 and legs 11 may be collapsed and confined within the tubular standard 10, rendering the device easily portable and less susceptible to inadvertent removal of an arm or leg from collapsed position during transportation or storage of the rack. The legs are guided in their movement between collapsed and extended positions by a device 20, 22 which also serves to limit the collapsed position of the clothes supporting arms 30. Assurance is also had that the legs will be latched in collapsed position when the device is not in use. Although described in connection with a clothes rack, the leg supporting arrangement can be used in the absence of supporting arms.

The inventor claims:

1. In a device of the character described: a tubular standard having a plurality of slots at its lower end; supporting legs extending through said slots; a member to which said legs are connected; guide means in said standard along which said member is slideable; and latch means for holding said legs and member in an upper position within said standard, said latch means comprising a latch on at least one of said legs engageable with said standard.

2. In a device of the character described: a tubular standard having a plurality of slots at its lower end; supporting legs extending through said slots; a member to which said legs are connected; guide means in said standard along which said member is slidable; and latch means for holding said legs and member in an upper position within said standard, said latch means comprising a latch on the lower portion of at least one of said legs engageable with the lower end of said standard to hold said legs in retracted position within said standard.

3. In a device of the character described: a tubular standard having a plurality of slots at its lower end; supporting legs extending through said slots and slidable through said slots to retracted position within said standard; a member to which said legs are connected; guide means in said standard secured to and extending upwardly from the lower end of said standard and along which said member is slidable, said guide means having a circumferential groove on its upper portion; and a spring latch member on said guide means receivable in said groove to hold said legs in retracted position within said standard.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
504,241	Patton	Aug. 29, 1893
564,397	Stickney	July 21, 1896
773,787	Crossman	Nov. 1, 1904
956,336	Goughenour	Apr. 26, 1910
1,199,258	Ford	Sept. 26, 1916
1,598,007	Petrick	Aug. 31, 1926
1,893,096	Michaud	Jan. 3, 1933
1,955,773	Roth	Apr. 24, 1934
2,016,313	Brown	Oct. 8, 1935
2,262,216	Vunovich	Nov. 11, 1941
2,296,043	McClary	Sept. 15, 1942