Re. 24427

Feb. 8, 1955 M. COHEN 2,701,646

GARMENT DISPLAY RACK

Filed April 11, 1952 2 Sheets-Sheet 1

Fig. 1.

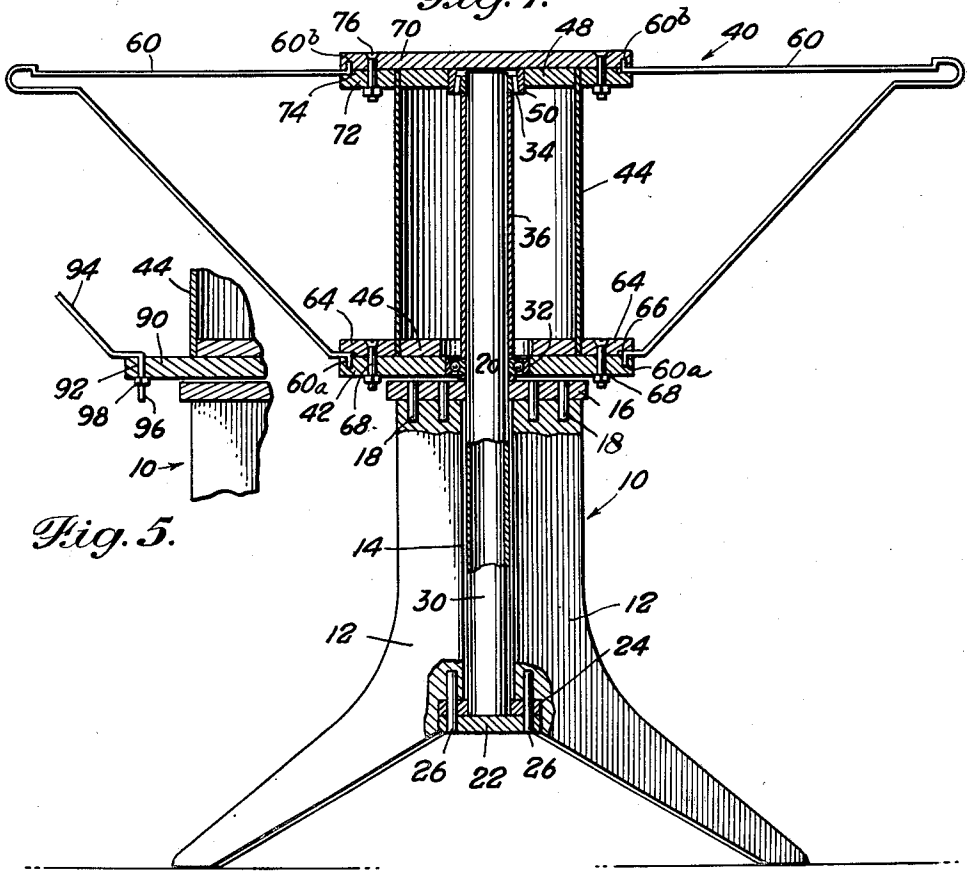


Fig. 5.

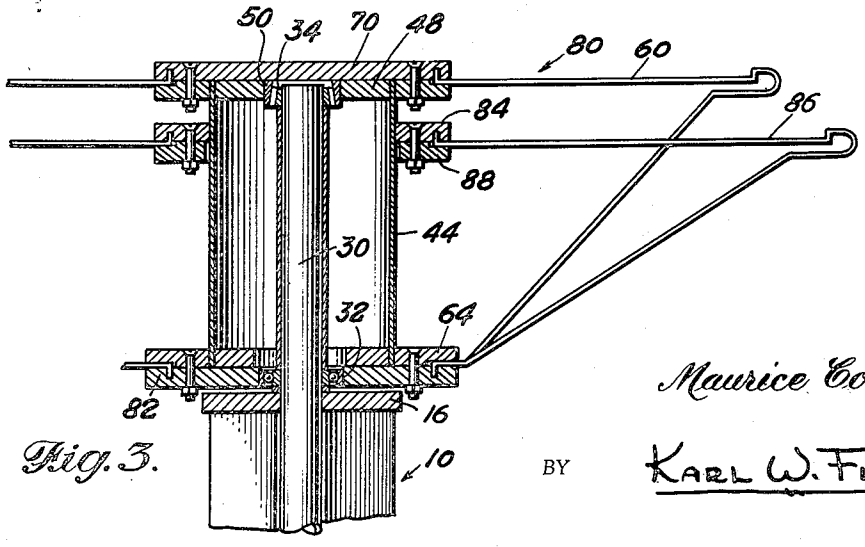


Fig. 3.

INVENTOR
Maurice Cohen,

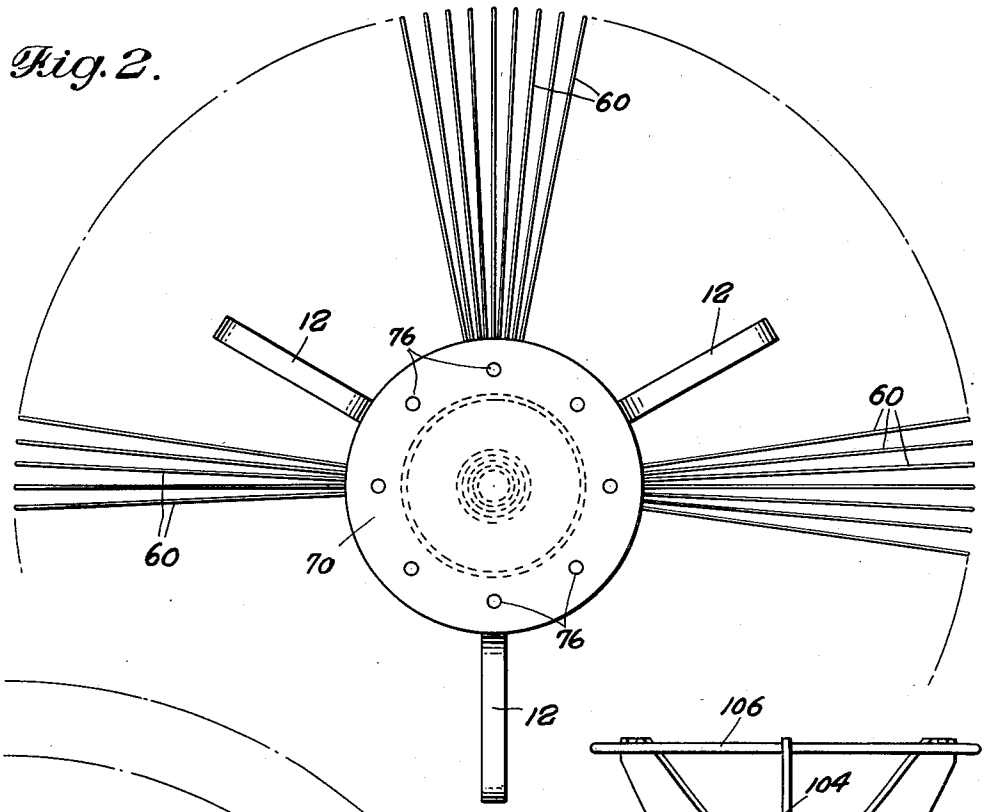
BY KARL W. FLOCKS
ATTORNEY

Feb. 8, 1955 M. COHEN 2,701,646

GARMENT DISPLAY RACK

Filed April 11, 1952 2 Sheets-Sheet 2

Fig. 2.



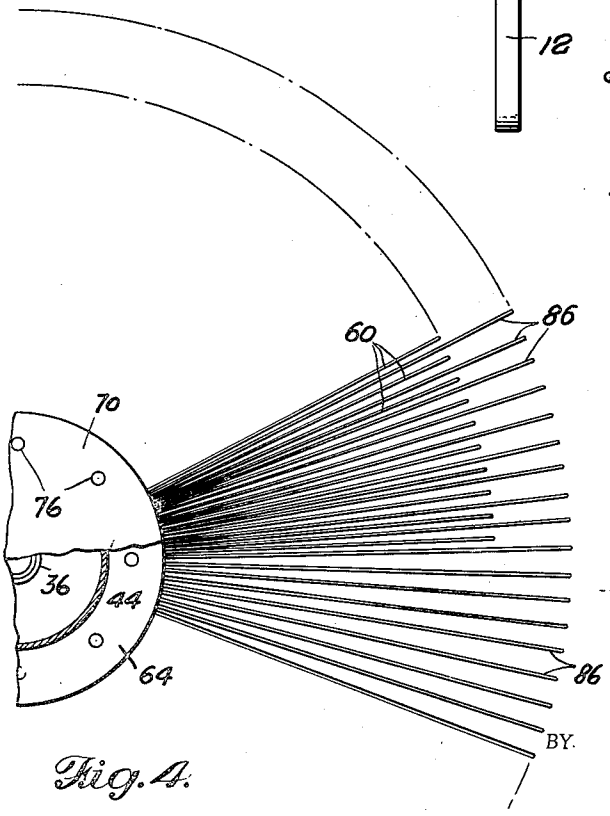


Fig. 4.

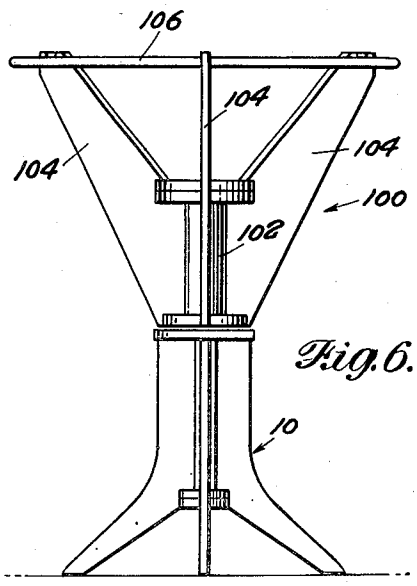


Fig. 6.

INVENTOR

Maurice Cohen,

BY.

KARL W. FLOCKS

ATTORNEY

United States Patent Office 2,701,646 Patented Feb. 8, 1955

2,701,646

GARMENT DISPLAY RACK

Maurice Cohen, Miami, Fla.

Application April 11, 1952, Serial No. 281,773

3 Claims. (Cl. 211—165)

The present invention relates to a garment display rack. More particularly, the present invention relates to a rotatable garment display rack which is adapted to display garments and the like to their best advantage.

Prior to the instant invention, the heretofore known garment display racks have generally been constructed having a rectangular configuration. However, rectangular racks have the disadvantage of materially reducing valuable floor space and, moreover, are cumbersome and usually very unattractive.

Although circular racks have been employed in the past for display purposes, none of the heretofore known circular display racks have been constructed to withstand heavy loads. Moreover, the heretofore known circular racks generally were not rotatable and, furthermore, were not constructed with the idea in mind of accenting the appearance of the surrounding furnishings.

The trend to modern furnishing, in recent years, has made it evident that the retail store of today not only requires that garment display racks be structurally suitable to carry heavy loads of merchandise but, in addition, the racks must be attractive and pleasing in appearance and adaptable to modern surroundings.

It is one of the objects of the present invention to provide a garment display rack of the rotary type that is capable of withstanding heavy loads.

Another object of the present invention is to provide a rotary garment rack that is arranged to display merchandise to its best advantage.

Still another object of the present invention is to provide a rotary garment display rack which includes a minimum number of structural elements that are easily fabricated and assembled.

Still another object of the present invention is to provide a rotary garment display rack that has great rigidity and stability and thereby adapted to withstand heavy loads.

Still another object of the present invention is to provide a rotatable garment display rack that is attractive and pleasing in appearance and thereby adapted to be utilized with modern appurtenances.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a vertical sectional view of one form of the garment display rack;

Fig. 2 is a plan view of the rack shown in Fig. 1;

Fig. 3 is a partial vertical sectional view of a modified form of the invention;

Fig. 4 is a plan view of the rack shown in Fig. 3 with sections broken away;

Fig. 5 is a detail in section of a modification of a hanger locking means; and

Fig. 6 is an elevational view of another modification of the present invention.

Referring to the drawings, and particularly Figs. 1 and 2, one form of the invention is illustrated comprising a base assembly generally indicated at **10**. The base assembly includes a triangular arrangement of legs or supporting members **12** each of which is formed with a foot and a body portion. As shown in Fig. 1, the foot portions of the members **12** extend outwardly and provide a stable and rigid base for the rack unit. The body portions of the members **12** extend vertically and define therebetween an opening **14**. The members **12** are firmly and securely locked together by an upper locking plate

16 which abuts against the top portion of each member and is secured thereto by dowels **18**. The upper locking plate **16** has formed therein an opening **20** which is adapted to be concentric with the opening **14** defined by the supporting members **12**. The supporting members **12** are further secured in place by a lower locking plate **22** and an inner lower locking washer **24**. The locking plate **22** and washer **24** are secured to the supporting members **12** by dowels which fit flush against the plate **22**, thereby providing a neat and pleasing effect. The base assembly is completed by a shaft **30** which extends through the opening **14** defined by the supporting members **12** and is firmly held in place by the locking plate **16**, the lower locking washer **24** and the lower locking plate **22**, against which the shaft abuts. Referring again to Fig. 1, the shaft **30** is shown extending upwardly and through the opening **20** in the upper locking plate **16**. The upper portion of the shaft **30** carries a ball bearing unit **32** and a thrust bearing unit **34**, the purpose of which will be hereinafter described. A spacer sleeve **36** encircles the shaft **30** and is positioned between the bearing units **32** and **34**, thereby holding the bearing units in place.

A hanger assembly generally indicated at **40** is adapted to be positioned on the shaft **30** and rotates thereon as a unit. The hanger assembly includes a bottom disc member **42** which is formed to receive the ball bearing unit **32** and thereby rotate with respect to the shaft **30**. A hollow drum **44**, which includes an apertured lower plate **46**, is secured to the disc member **42** by suitable means, such as a glue joint, and is enclosed at its topmost end by a plate **48** which includes a bearing cup **50** adapted to receive the bearing unit **34**.

The hanger assembly **40** further includes a series of hangers **60** upon which the garments to be displayed are conveniently draped. The bottom disc member **42** is provided with a plurality of small holes near the outside edge of the upper face thereof, the small holes adapted to receive the bottom-most portion or prong **60***a* of each hanger **60**. The hanger units **60** are locked into position in the bottom disc member **42** by a lower locking ring **64**, which slidably fits around the drum **44**. The lower locking ring **64** has a cutout portion **66** in the lower face thereof which provides access for the hangers **60**. A plurality of bolts **68** extend through convenient openings in the lower locking ring **64** and the bottom disc member **42**, and are secured therein by suitable nuts, thereby locking the hanger prongs **60***a* in the bottom disc member **42**.

The upper hanger portions, upon which the garments to be displayed are draped, are secured to a top disc member **70** in a manner similar to the lower hanger portion locking means. The disc member **70**, which, in effect, is the top of the rack, is secured to the drum **44** by suitable means, preferably a glue joint. A plurality of small holes is formed in the disc member **70** near the outisde of the lower face thereof and the holes are adapted to receive a series of prongs **60***b* formed as part of the upper portion of the hangers **60**. An upper locking ring **72** slidably fitting around the drum **44**, has a cut-out portion **74** which provides access to the upper portion of the hangers **60**. The locking ring **72** is firmly secured to the disc member **70** by bolts **76** which extend through openings in the disc **70** and ring **72**, thereby locking prongs **60***b* in the disc **70**. The drum **44** is constructed such that it is able to withstand the large torsional and compressive loads present when the hangers **60** are pivoted with the garments displayed thereon. Thus, when the hangers **60** are pivotally moved in the same direction so that the horizontally extending upper portions are no longer radial to the shaft axis, and define less than a right angle with a line tangent to the disc **70**, then a torsional load inversely proportional to this angle and directly proportional to the weight of the garments supported by the hangers is produced between the upper disc **70** and lower plate **42**. This torsional load is absorbed by the drum **44**, thereby preventing the rack from tipping under load and allowing complete freedom of movement of the hangers individually or collectively and, furthermore, providing for the unimpeded rotation of the hanger assembly **40**.

It is apparent that the hangers **60** are secured in the hanger assembly **40** in a manner such that they cannot be loosened, fall off, or sag, due to excessive loads or undue handling. Moreover, the hangers **60** may be pivoted on the prongs **60***a*, **60***b*, thereby providing for flexibility of movement and convenience in positioning or inspecting the garments placed on the rack. Since the hangers **60**, carried by the hanger assembly **40**, are rotatable about the stationary shaft **30**, the garments carried by the hangers **60** may be displayed to their full advantage. Furthermore, a maximum number of people may inspect the garments displayed without inconveniencing or crowding one another.

The entire hanger assembly **40**, including the drum **44**, lower and upper discs **42** and **70**, locking rings **64** and **72**, and the hangers **60**, may be lifted as a unit from engagement with the shaft **30**, if repairs need be made, or if the rack is to be stored or shipped by freight in cartons, or if another unit, an example of which will be described hereinafter, is substituted for the hanger assembly **40**.

Referring now to Figs. 3 and 4, a modified form of hanger assembly is illustrated wherein a greater number of hangers is employed. The modified hanger assembly, generally indicated at **80**, is adapted to be placed as a unit on the stationary shaft **30** which, as described above, forms part of the base assembly **10**. The hanger assembly **80** includes a bottom disc member **82** which engages the bearing unit **32** and which has secured thereto the drum **44**. The drum **44** includes the bearing cup **50** which receives the shaft bearing unit **34**. The upper disc **70** abuts against the top plate **48** of the drum **44** and serves as the top of the rack. A series of hangers **60** are pivotally secured in the disc **70** and disc **82** by locking rings **72** and **64**, respectively, in the manner described hereinabove and illustrated in Fig. 1. An intermediate disc **84** is secured to the drum **44** by suitable means and is adapted to have inserted therein a series of hangers **86**. An intermediate locking ring **88** locks the hangers **86** in place in the disc **84** but allows the hanger pivoting movement in the same manner as described hereinabove. The disc **82**, which carries the lower prong elements of the hangers **60**, is provided with additional holes to receive the lower prong elements of the hangers **86**. The locking ring **64**, which locks the hangers **60** in place in the disc **82**, also locks the hangers **86** in place in the disc **82**. Referring to Fig. 4, it is apparent that the hangers **86** are arranged so that they are spaced between the hangers **60** thereby providing adequate space for each hanger to carry a garment. The garment carrying portions of the hangers **86** are shown positioned below and extending beyond the garment carrying portions of the hangers **60**. Thus, each individual hanger in the upper and lower hanger groups can be reached simply and without interfering with an adjacent hanger. By employing the additional hangers **86** and arranging them in spaced relation with respect to the hangers **60**, twice the normal amount of garments may be displayed on the rack. The base assembly **10**, which is adapted to receive the hanger assembly **80**, as a unit, can amply carry the increased load due to the rigid construction of the triangularly arranged supporting members **12**.

Referring now to Fig. 5, a modified form of the lower hanger locking means is illustrated. A lower disc member **90** is secured to the drum **44** by suitable means and has arranged near the outside edge thereof a series of openings **92** that extend through the disc **90**. A hanger **94** is shaped in a manner such that the lower prong element **96** is adapted to extend through the opening **92**. A speed or lock nut **98** is applied to securely lock the hanger **94** in place. By this locking arrangement, the lower locking rings can be eliminated.

Due to the adaptability of the base assembly **10**, it is also possible to replace the hanger assemblies with other display units. In order to effect the replacement, it is only necessary to remove the hanger assembly from engagement with the base assembly shaft and substitute a suitable unit constructed in a manner to be received by the base assembly shaft and associated bearing units. One example of a unit that can be carried by the base assembly **10** is shown in Fig. 6 in the form of a hang rod assembly. The hang rod assembly, generally indicated at **100**, includes a cylinder **102** that is adapted to be rotatably carried by the shaft **30**, and the frame members **104**, which are secured to the cylinder **102** and extend generally upwardly. The frame members **102** carry a circular rod **106** at their top, which is secured in place by suitable means. It is apparent that a coat or suit or any garment hanging from a conventional hook hanger may be conveniently displayed by placing the hook hanger on the rod **106**. The entire hang rod assembly **100** is rotatable around the stationary shaft **30**, which provides for complete display of all the garments on the hang rod assembly. Other types of display assemblies can also be conveniently placed on the base assembly **10** and could take the form of a belt display assembly or a skirt display assembly.

It is apparent that the display racks illustrated and described are completely adaptable and can be employed for a variety of uses. Moreover, the racks are extremely rigid and capable of carrying excessive loads. Furthermore, a wide variety of garments to be displayed is possible because of the replaceable feature of the assemblies carried by the base unit.

The assemblies utilized to display the garments are rotatable which not only display the merchandise to its best advantage but allow great freedom of movement in inspecting or replacing the garments on the hanger units.

The hangers utilized with the hanger assemblies are securely held in place and are accessible for instant use. Moreover, the pivoting action of the hangers and the rotating feature of the hanger assembly enable the displayed garments to be inspected with a minimum of effort.

Furthermore, the present display rack, in addition to having outstanding structural advantages, is unusually attractive in design. The modern design employed is not only neat and pleasing, but will display the garments on the rack to their full advantage and, moreover, will accent the appearance of the surrounding furnishings.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. In a garment display rack, a hanger assembly comprising a drum secured to a lower disc, said drum and lower disc rotatably mounted on a shaft, an upper disc secured to said drum, an intermediate disc secured to said drum located between said upper and lower discs, a first set of hangers having the ends thereof disposed in said upper and lower discs, and a second set of hangers having the ends thereof disposed in the intermediate and lower discs, each of the hangers in said second set of hangers being spaced between a pair of said first set of hangers.

2. In a garment display rack as set forth in claim 1, wherein an upper locking ring engages said upper disc, thereby securing the hanger ends of said first set of hangers therein, an intermediate locking ring engages said intermediate disc securing the hanger ends of said second set of hangers therein, and a lower locking ring engages said lower disc, thereby securing the ends of said first and second set of hangers therein.

3. In a garment display rack, a hanger assembly comprising an upper disc, a lower disc spaced from said upper disc, a structural member secured to said upper and lower discs and rotatably mounted on a shaft, an intermediate disc secured to said structural member and positioned between said upper and lower discs, a first set of hangers secured to said upper and lower discs, and a second set of hangers secured to said intermediate and lower discs, each of the hangers in the second set of hangers being spaced between a pair of the first set of hangers.

References Cited in the file of this patent

UNITED STATES PATENTS

318,252	Holmes	May 19, 1885
339,678	Morlan	Apr. 13, 1886
353,435	Allen	Nov. 30, 1886
752,151	Gies	Feb. 16, 1904
824,083	Roach	June 19, 1906
999,189	Altvater	July 25, 1911
1,139,273	Griffin	May 11, 1915
1,695,322	Day	Dec. 18, 1928
1,770,227	Buckingham	July 8, 1930
2,119,946	Bancroft	June 7, 1938
2,282,836	Vanderveld	May 12, 1942
2,477,086	Riffert	May 12, 1949