March 4, 1952 R. H. HERRICK 2,588,235

GARMENT HANGER

Filed Dec. 5, 1947

2 SHEETS--SHEET 1

Fig. 1.

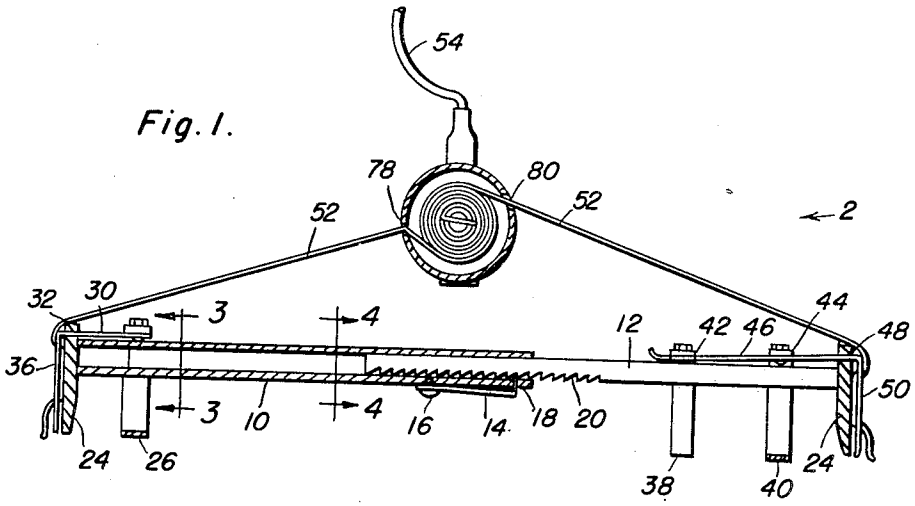


Fig. 3.

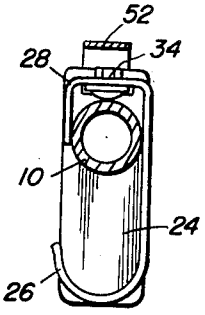


Fig. 4.

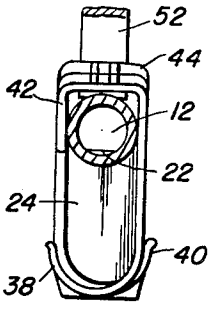


Fig. 2.

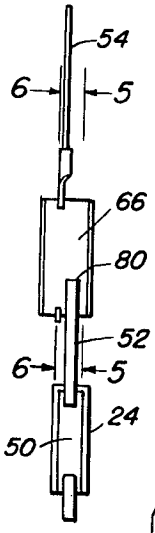


Fig. 5.

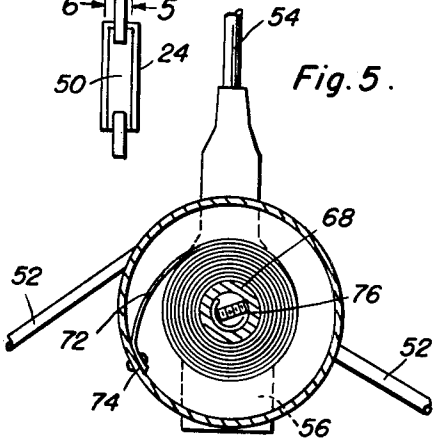
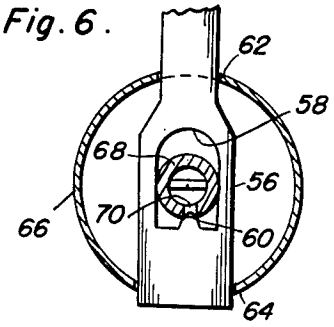


Fig. 6.



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2 SHEETS—SHEET 2



Fig. 12.

Fig. 7.

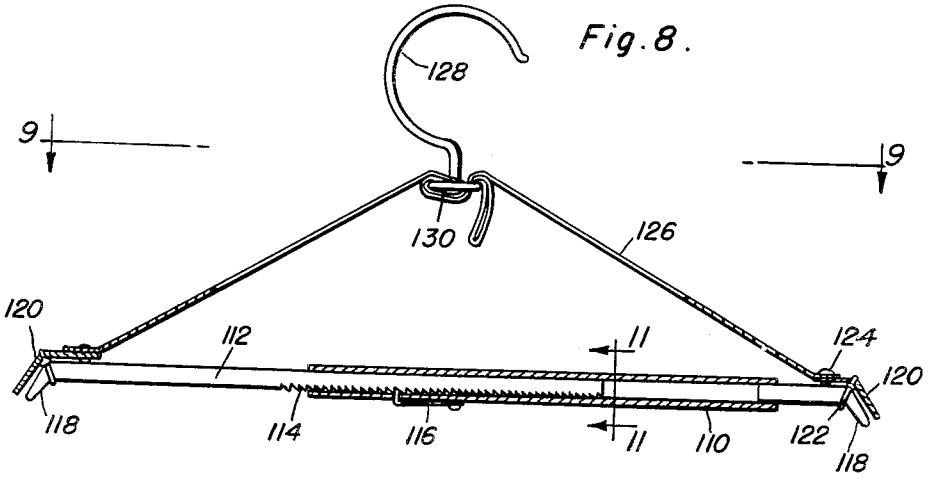


Fig. 8.

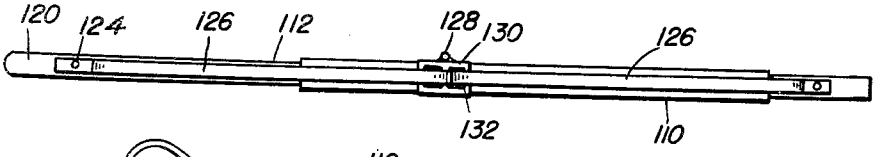


Fig. 9.

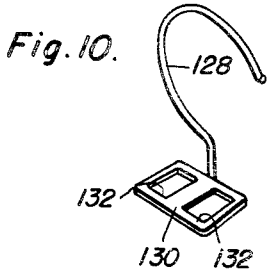


Fig. 10.

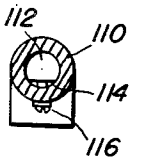


Fig. 11.

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UNITED STATES PATENT OFFICE

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GARMENT HANGER

Robert H. Herrick, New York, N. Y.

Application December 5, 1947, Serial No. 789,815

9 Claims. (Cl. 223—90)

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This invention comprises novel and useful improvements in a garment hanger and more specifically pertains to an adjustable garment hanger having an adjustable transverse bar and a flexible strip attached thereto for supporting the same while constituting the sides of the hanger, and a supporting hook secured to the flexible strip.

The primary object of this invention resides in providing an improved construction of garment hanger which may be more readily adjusted to adapt the same to different sizes and types of garments; which shall be provided with an improved and more satisfactory garment clamping means; which may be readily collapsed into a compact article for storage and transportation; and which is withal of light weight durable and highly satisfactory construction.

A prime feature of the invention resides in the provision of a garment hanger having a longitudinally extensible transverse rod thereon whereby the width of the hanger may be readily and easily adjusted to accommodate various sizes and types of garments.

A further feature of the invention comprehends the provision of a novel, simple but highly satisfactory and improved means for effecting easy adjustment of the length of the transverse bar of the hanger, and for securely retaining the same in the desired adjusted position.

Yet another feature of the invention resides in the provision of a hanger having a transverse rod to which is secured a flexible supporting strip depending from a supporting hook, together with improved means for adjusting and limiting the length of the flexible strip as required, and for taking up slack in the same.

Yet another important feature of the invention resides in the provision of a hanger as set forth in the preceding paragraph, accompanied by a novel resilient means for automatically reeling in any slack in the flexible strip; and for automatically locking the strip in its desired position relative to the reel and retain the same so locked by the weight of the hanger and garments placed thereon.

Still further important features of the invention reside in novel and improved means for retaining garments upon the hanger as desired, together with improved flexible covering means for enclosing the parts of the hanger.

These, together with various ancillary objects of the invention which will later become apparent as the following description proceeds, are attained by this device, preferred embodiments of which have been illustrated, by way of example only in the accompanying drawings, wherein:

Figure 1 is a side elevational view, parts being broken away and shown in section of one embodiment of the invention;

Figure 2 is an end elevational view taken from the right end of the embodiment of Figure 1;

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Figure 3 is a vertical transverse sectional detailed view taken substantially upon the plane of the section indicated by the section line 3—3 of Figure 1;

Figure 4 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 4—4 of Figure 1;

Figure 5 is a vertical detailed section through the automatic reel of the embodiment of Figure 1 and taken substantially upon the plane of the section line 5—5 of Figure 2;

Figure 6 is a fragmentary detailed view through the clutch mechanism of the automatic wheel and is taken substantially upon the plane of the vertical section line 6—6 of Figure 2;

Figure 7 is a side elevational view, parts being shown in section, of a second embodiment of the invention, an alternative adjustment of the device being indicated by dotted lines therein;

Figure 8 is an elevational view, parts being shown in section for depicting the interior construction thereof, of a third embodiment of the invention;

Figure 9 is a horizontal sectional view taken substantially upon the plane of the section line 9—9 of Figure 8;

Figure 10 is a perspective view of the hook construction of the embodiment of Figure 8;

Figure 11 is a fragmentary vertical transverse sectional detail view taken substantially upon the plane of the section line 11—11 of Figure 8; and,

Figure 12 is a fragmentary horizontal plan view taken substantially upon the plane of the section line 12—12 of Figure 7.

Referring now more specifically to the accompanying drawings, and first in particular to the embodiment shown in Figures 1–6 thereof, the hanger illustrated includes a transverse longitudinally extensible and adjustable rod consisting of a pair of concentric telescoping members, including a tubular member 10 and a rod-like member 12 longitudinally slidable therein.

In order to retain the sections 10 and 12 of the transverse rod in adjusted and longitudinally extended position, there is provided a latching means including a latch member 14 of wire or any other suitable construction which is detachably secured as by a screw 16 to the tubular member 10, this latch having a latching finger 18 at its extremity, which finger extends through an aperture, slot or the like in the tubular member 10 into the internal bore thereof. This latch finger is adapted to engage the toothed rack section 20 extending in a longitudinal strip or band upon one side of the rod 12, whereby the natural resilience of the latch 14 causes the finger 18 to be normally pressed against the teeth 20, which are provided with such a pitch as to prevent the telescoping collapsing movement of the sections 10 and 12.

As will be seen by reference to Figure 4, the rod section 12 is generally annular in cross section, but provided with a flat side 22 from which extend the racks or toothed sections 20. Consequently, when the sections 10 and 12 are rotated relative to each other, the spoon or untoothed portion of the rod 12 will be brought into engagement with the latch finger 18, thereby releasing it.

Welded or otherwise rigidly secured to the outer ends of the sections of the transverse rods, 10 and 12, are a pair of end plates 24, constituting handle means for rotating the sections for the purpose above set forth, and if desired constituting spreadable jaws for gripping and retaining a garment thereon.

As shown in Figure 3, the tubular section 10 slidably supports a garment receiving hook or clip having a hooked lower extremity 26, and an upper U-shaped portion 28 slidably embracing the sides of the tubular member 10 and resting thereon. Secured to the under surface of the upper portion of the bar 28, is a metallic strip 30 extending generally longitudinal to and overlying the tubular member 10, and slidably received in a guide aperture 32 of the end plate 24. A fastening means such as a nut and bolt 34 rigidly attaches the metallic strip 30 to the portion 28 of the clip or hanger. As will be seen, the strip 30 sliding in the slot 32 constitutes a guide for the clip as the same is slid longitudinally upon the tubular member 10. At its outer extremity, the strip 30 is provided with a downwardly inturned leg 36, extending generally parallel to the end plate 24.

The section 12 is similarly provided with a sliding clip arrangement, but in this instance this clip arrangement comprises a pair of clip members, spaced longitudinally of the section 12 with respect to each other, and terminating at their lower ends in oppositely directed hooks 38 and 40, each connected to U-shaped hangers 42 and 44 respectively of similar construction but reverse with respect to each other. The upper sections 42 and 44 are attached as by bolts and screws to a metallic strip 46 which is similar to the strip 30, and which likewise extends through a guiding slot or aperture 48 in the end member 24 of the section 12. The outer extremity of the strip 46 is provided with a downwardly extending leg 50 similarly constructed and positioned similarly to the leg 36.

Secured to the transverse extensible rod sections 10 and 12 of the hanger, is a flexible strip 52 which may consist of one piece or of a pair of strips as desired, and which intermediate its ends is attached to and supported by a supporting hook 54. In accordance with the spirit of this invention, the flexible strip 52 may be of any desired material, such as flexible metal, a resilient band such as elastic or the like, or a non-resilient strap or tape as desired. A reel means for automatically winding up the slack in the flexible strip 52, when the device is not in use, in order to collapse the same into as compact a package as possible for transportation or storage, is associated with the strip and with the support handle or hook 54 as set forth hereinafter.

As will be seen by reference to Figures 1, 5 and 6, the lower end of the ends of the hook 54 is provided with an extension 56 which has an elongated slot 58 therein, this slot being provided at its lower edge with an upwardly extending detent 60.

This extension is slidably received in upper and lower slots 62 and 64 formed in an annular reel

casing 66. Journaled in the two end walls of the annular casing 66, is a rotatable axle or hollow shaft 68, which also extends through and is loosely received in the slot 58. This shaft is provided with a slot or aperture 70 in proper position to be engaged by and to receive the detent 60, when the reel housing and the axle 68 are lowered relative to the slot 58 and the detent 60 thereof, for a purpose to be later set forth. A coil spring 72 of any suitable type has one end anchored to the housing 66 as at 74, and is wound about a portion of the axle 68 and has its other end extending into the interior thereof for anchoring engagement therewith as shown at 76.

The intermediate portion of the flexible strip 52 if a single one-piece strip is employed, and the two ends if two strip are employed, extend through slots 78 and 80 in the sides of the annular housing, and are wound about a suitable portion of the axle 68.

It will thus be seen that the spring 72 resiliently urges the shaft 68 in a direction to wind up any slack in the strip 52, to thereby position the reel assembly and the hook of the device in close relation to the transverse bar sections 10 and 12 thereof, whereby the device may be compactly stored. When it is desired to use the device, the hook 54 and its extension 56 are urged downwardly with respect to the housing 66 and the axle 68 therein, to disengage the brake or clutch detent 60 from the aperture 70, whereby the effective length of the strip 52 may be varied as necessary to adapt the hanger to its intended use.

When the desired amount of slack has been produced into the strip 52, to produce a triangular frame for the hanger of the desired shape, the hook 54 and extension 56 are pulled outwardly or upwardly with respect to the annular housing 66, thereby causing the detent 60 to engage the recess 70, and lock the reel against rotation. The weight of the hanger and of the garments supported thereby will insure that this lock or clutch means will effectively prevent any undesired operation of the automatic reel.

From the foregoing the manner of constructing and operating this embodiment of the invention will be readily understood. The outer ends of the strip 52 are threaded through spaced apertures or slots in the downwardly extending arms or legs 36 and 50 of the clips, to offer a means for readily adjusting the length of the strip, as well as to retain the ends of the strips securely to the clips and to the transverse rod. Coats, shirts or the like may be hung over the triangular shaped frame formed by the strips 52 and the sections 10 and 12, in the same manner as with any conventional type of garment hanger, while additional garments may be suspended from the individual garment hangers 26, 38 and 40. Furthermore, skirts, pants and the like may be secured to the hanger by their waist bands, being stretched by the spreadable jaws of the extensible transverse rods or by the clamping action of the clips 36 and 50 against their respective end plates 24. By means of the latching construction, the spacing between the clips 26 and 38 or 40 may be readily adjusted and varied.

Attention is now directed to the embodiment of Figures 7 and 12, which shows a very simplified construction of hanger which will be found desirable for some uses to which its simple construction and light weight render it particularly adapted. This embodiment consists of a transverse rod 90 of tubular or any other desired construction, to the ends of which are secured as

by screws 92, the ends of a pair of flexible strips 94. As in the preceding embodiment, a single unitary strip 94 may be provided of resilient, yielding nature extending from one end to the other of the transverse rod 90, if preferred. In any event, the strip or strips 94 intermediate their outer extremities, are connected to a transversely disposed and laterally extending pin or projection 96 carried by or secured to the lower end of the hook member 98. Preferably in this embodiment, the hook, and the flexible strips are coated by a flexible casing or cover of non-resilient, unyielding fabric, or the like, as indicated at 100. This flexible cover serves the dual functions of preventing damaging of the garments by the metallic material of the hook 98, and further limits the expansion of the strips 94 thus defining a semi-rigid frame. Alternatively, the strips 94 may be non-yielding, while the covering 100 may comprise the resilient expansible element.

In this embodiment, very few parts are employed, and a very light weight construction is produced which is ideally adapted for use as a garment hanger for travelling purposes.

Attention is now directed to the third embodiment of the invention illustrated in Figures 8–11. In this form, a longitudinal extensible transverse rod is provided, consisting of a tubular section 110 and a rod-like section of solid construction and telescopingly received therein, these two sections being formed and of the same construction as the corresponding sections in the embodiment of Figure 1. The rod section 112 is provided with a rack portion or toothed section 114 on one side thereof, which is engaged by a latch mechanism 116, these elements being of exactly the same construction as set forth in Figure 1.

Rigidly connected to or integrally formed with the outer extremities of the rod sections 110 and 112, are a pair of angularly inclined fixed jaws 118, forming parts of garment clips whose movable jaws 120 comprise levers having angularly fit extremities or arms. A fastener 122 of any desired construction, secures the movable jaws 120 to the fixed jaws 118 for pivotal movement thereon about the intermediate points of the movable jaws. The inner extremities of the movable jaws are secured as by fastening means 124 to the ends of a flexible strip 126 which is secured intermediate its ends to a supporting hook 128 of a construction to be set forth hereinafter. It will thus be seen that by reference to Figure 8 when portions of a garment are clamped between the fixed and movable jaws, and the weight thereof is supported by the strip 126, this weight causes the firm closing of the jaws upon the garment.

As will be seen by particular reference to Figure 10, the hook 128 includes at its lower end, a laterally extending plate 130 provided with a pair of slots or apertures 132. As shown in Figure 8, the bight of the intermediate portion of the strip 126, is extended over the top of the plate 130, and then in series extends through the two apertures 132, over its end portion of the plate and against one of the apertures 132 to thereby lock the strip in the desired position of adjustment in the hook.

As in the embodiment of Figure 1, the rod sections 110 and 112 may be longitudinally extended by merely pulling upon the sections, whereby the latch means 116 will slip upon the teeth 114 and allow the rod to expand. When it is desired to collapse the sections, it is merely necessary to

rotate one of the sections relative to the other, whereby the latch member is disengaged from the teeth and the rod sections may be readily contracted.

From the foregoing, the operation of the device and its advantages will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications will readily occur to those skilled in the art, after a consideration of the foregoing specification and attached drawings, it is not intended to limit the invention to the exact construction shown and described, but all suitable modifications and equivalents may be resorted to falling within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A garment hanger comprising a longitudinally extensible transverse rod, fastening means for maintaining said rod in adjustable extended position, a flexible strip having its ends secured to the opposite ends of said rod, a support hook member, and a slack take-up member rotatably supported by the hook member, said strip having an intermediate portion thereof wound about said slack take-up member.

2. The combination of claim 1 wherein said rod includes telescoping sections, said fastening means including teeth on one of said sections and a latch on the other section.

3. The combination of claim 2 wherein said sections are relatively rotatable, said teeth being disposed in a longitudinal strip extending only partially around the perimeter of said one section, whereby relative rotation of said section will selectively engage and disengage said latch from said teeth.

4. The combination of claim 1 wherein said rod includes telescoping sections, said fastening means including teeth on one of said sections and a latch on the other section, and garment engaging clips mounted on said sections adjacent the opposite ends thereof.

5. The combination of claim 4 wherein the ends of said flexible strip are secured to said clips.

6. The combination of claim 1 wherein said slack take-up member includes a reel rotatably mounted on said hook, said strip being wound upon said reel.

7. The combination of claim 6 wherein said reel is spring urged to yieldingly wind in slack in said strip.

8. The combination of claim 7 including a brake clutch carried by said hook and engageable with said reel for locking said reel in adjusted position.

9. The combination of claim 8 wherein said clutch includes an extension of said hook, said extension having a slot for rotatively and slidably supporting said reel, a locking detent in said slot rising from the bottom edge thereof, and a locking aperture in said reel for receiving said locking detent.

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