March 2, 1971 W. LONDON 3,566,456

CLOTHES HANGER CLAMP AND GARMENT BAG ASSEMBLY

Filed Feb. 12, 1970 2 Sheets-Sheet 1

Fig. 1.

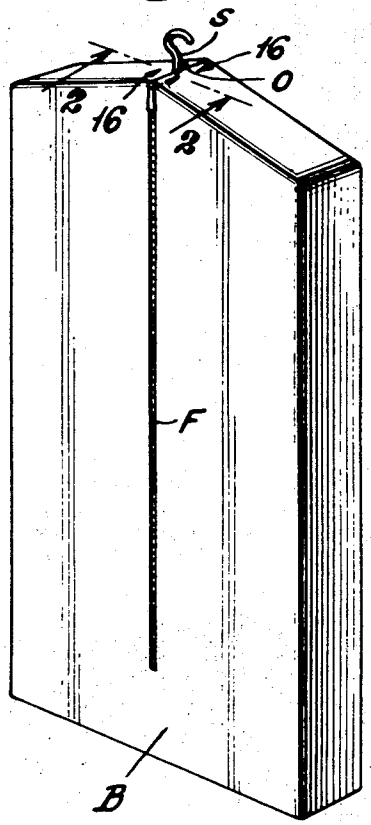


Fig. 2.

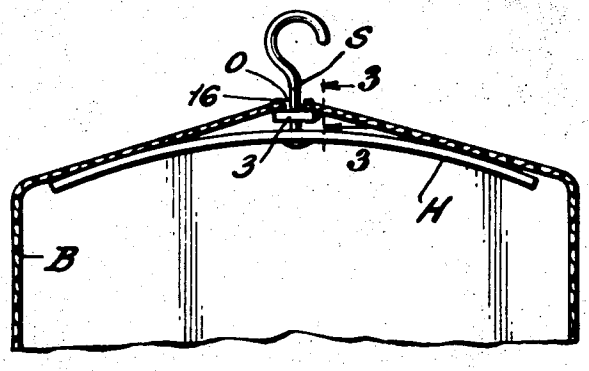


Fig. 3.

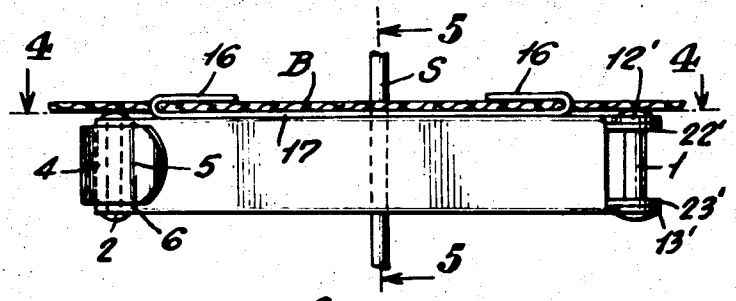


Fig. 4.

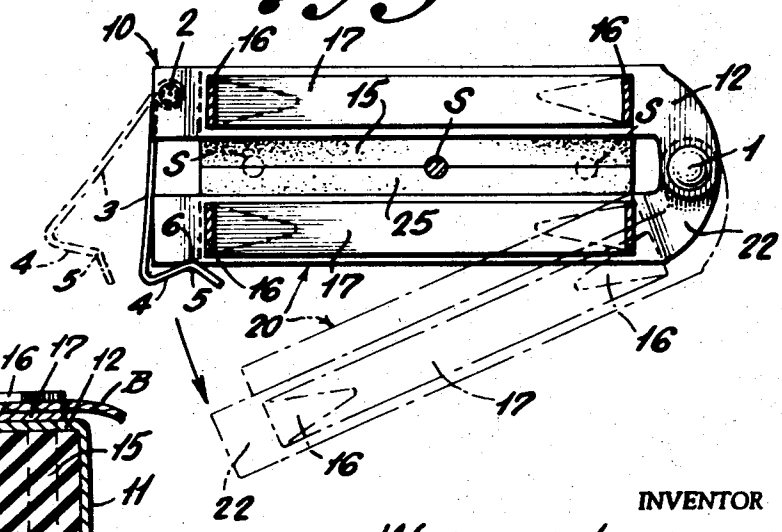
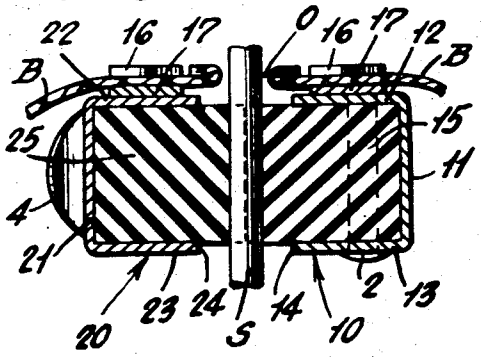


Fig. 5.



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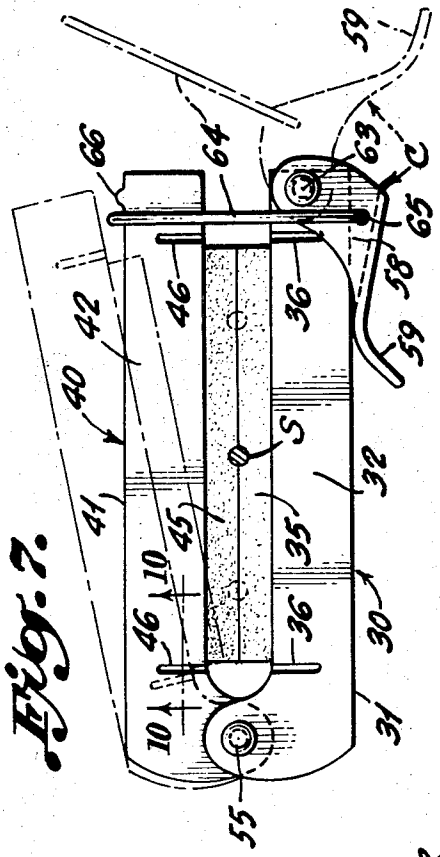


Fig. 7.

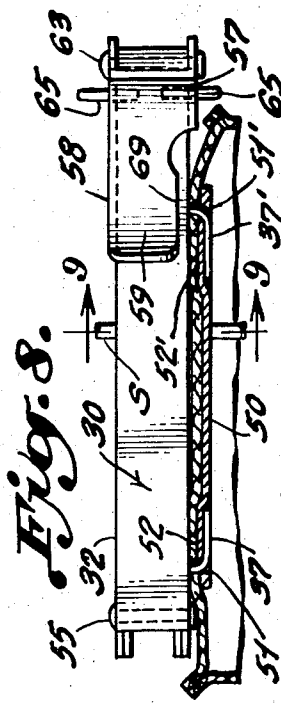


Fig. 8.

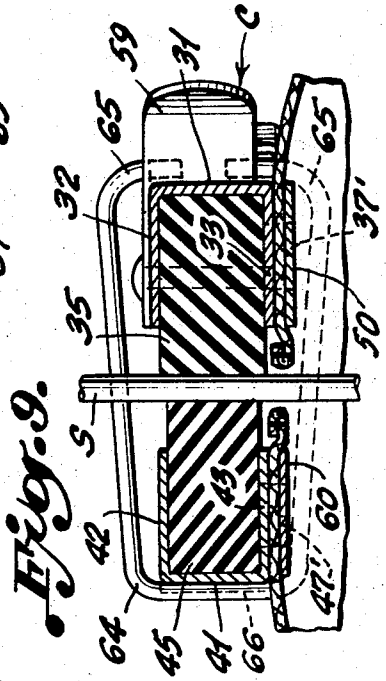


Fig. 9.

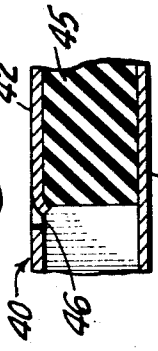


Fig. 10.

Fig. 11.

Fig. 6.

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3,566,456

CLOTHES HANGER CLAMP AND GARMENT BAG ASSEMBLY

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Continuation-in-part of application Ser. No. 744,563, July 12, 1968. This application Feb. 12, 1970, Ser. No. 10,928

Int. Cl. A44b 21/00; B65d 85/18

U.S. Cl. 24—248 10 Claims

ABSTRACT OF THE DISCLOSURE

A clamping assembly for clothes hangers constituted by a pair of clamping jaws in the form of C-shaped sheet metal channels in face-to-face relation, each channel seating a block of flexible material therein with one edge protruding beyond the open face of the channel, said channels being pivoted to each other at one end thereof to permit their spreading for the insertion of one or more garment hangers between the jaws followed by their clamping together with a clasp device disposed at the opposite end of the channels. The channels are fitted with prongs, fastening flanges or the like, to permit the ready affixation thereof to garment bags in the course of their production or thereafter, to provide a tight seal for the bags and reliable support for the gament hangers therein, making possible the facile handling and transport thereof.

This application is a continuation-in-part of my application Ser. No. 744,563, filed July 12, 1968.

It is the object of the present invention to provide a rugged and reliable clothes-hanger clamp and bag assembly, which may be fabricated at low cost, and which may be used as a clamp for a plurality of garment hangers to integrate the assembly of the latter, or which may be combined with a garment bag to assure a sealed closure of the garment bag without possibility of the garment hangers falling thereinto, with the resultant wrinkling of the garments.

The invention contemplates the combination of an improved clamping device with a garment bag in the course of fabrication of the latter, or the attachment of the clamp to a garment bay already in use.

It is the object of the present invention to provide an improved clamp over that disclosed in Pat. No. 1,948,019, Feb. 20, 1934, and one which may be adapted universally to garment bags of many different types, embodying differently designed openings therein.

Other objects and purposes will appear from the detailed description of the invention following hereinafter, taken in conjunction with accompanying drawings, wherein:

FIG. 1 is a perspective view of the garment bag incorporating the improved clamp in accordance with the present invention;

FIG. 2 is a vertical sectional view of the upper portion of the garment beg along line 2—2 of FIG. 1;

FIG. 3 is a vertical sectional view along line 3—3 of FIG. 2;

FIG. 4 is a horizontal sectional view along line 4—4 of FIG. 3 with the alternate positioning of the parts shown in dotted lines;

FIG. 5 is a vertical view along line 5—5 of FIG. 3;

FIG. 6 is a perspective view of the upper portion of another embodiment of a garment bag with a slide fastener therefor extending along the gusset of the bag and resulting in a variation of the opening at the top thereof, through which extends the stems of the garment hangers;

FIG. 7 is a plan view of another embodiment of the clamp in accordance with the invention which may be applied easily to the exterior of a garment bag;

FIG. 8 is a front elevation of the clamp applied to the top of a garment bag which is shown in section;

FIG. 9 is a vertical sectional view along line 9—9 of FIG. 8;

FIG. 10 is a vertical sectional view along line 10—10 of FIG. 7; and

FIG. 11 is a perspective bottom view of the components of the clamp shown in FIGS. 7 to 10.

It is the aim of the present invention to provide a clamping assembly which may be fabricated and assembled at low cost and which may be incorporated in waterproof garment bags of different types to enable the retention of the garment hangers within the bag with the hooks and stem protruding therefrom in a manner to secure a tight seal of the bag at said opening, while securing one or more hangers and the garments suspended therefrom, which are inserted in the bag, so that the entire assembly may be handled as an integral unit, with no possibility of any of the hangers falling into the garment bag with the consequent damage to the garments accruing from such contingency.

It is the further aim of the invention to provide a clamping assembly which may be applied to a garment bag quickly and securely without weakening any parts of the latter, and without creating any sharp or rough points which might snag the garments or injure the fingers of the user in the course of manipulating the clamp between its open and closed positions.

In the embodiment of the invention illustrated in FIGS. 1 to 5, a garment bag B, fitted with a slide fastener F at the front thereof, is adapted to be opened for the suspension therein of one or more garment hangers H which are adapted to support the garments within the bag, with the stems S and the hooks extending upwardly therefrom through the opening O in the bag.

A bifurcated clamping device, consisting of a pair of clamping jaws pivoted to each other at one end and movable relatively to each other at the opposite end, are affixed to the opposite sides of the top of the bag adjacent to the opening O, which jaws may assume the closed position shown in FIG. 4 with the alternate open position indicated in dotted lines. Each of the clamping jaws is formed of a channel of sheet metal, of C-shaped configuration, and the jaw **10** consists of the rectangular channel having a base **11**, top **12** and bottom **13** with the open face at **14** opposite the base **11**. The complemental jaw **20**, in the shape of the letter C, is disposed in reverse relationship to the channel **10**, with the base **21**, top **22** and bottom **23** presenting an open face at **24**, as clearly shown in FIG. 5.

A small block of flexible and compressible material, such as rubber, flexible plastic, or analogous material, is seated in each of the channels, preferably for the complete depth thereof, and a portion of each block **12** and **25**, respectively, protrudes beyond the open edges **14** and **24** of the channels **10** and **20**, respectively, to form resilient retaining surfaces at the juxtaposed edges of the resilient blocks. The terminal edges of the channels may be turned inwardly to a slight degree to retain more securely the flexible blocks **15** and **25** within the channels. These resilient edges are adapted to embrace the stems S of one or more garment hangers which are disposed along the length of the resilient blocks to clamp the stems therebetween and retain them securely to avoid their dropping down into the garment bag.

The channels may be connected to each side of the top of the garment bag adjacent the opening O by prongs **16** which extend upwardly from plate **17** affixed to the tops **12** and **22** of each of the channels. As shown, the free ends of the prongs are pointed so that the sheet material of the bag may be pierced thereby and turned down into

horizontal position, as shown in FIG. 3, to clamp the top of the bag between the horizontally bent prongs **16** and the underlying surface **17** which is integrally connected to the tops of the channels **10** and **20**.

The prongs **16** may be stamped directly from the upper faces **12** and **22** of the channels **10** and **20**, respectively, in the manner illustrated in FIG. 11, for subsequent penetration of the fabric sheeting of the garment bag followed by the bending thereof in overlying relation to the fabric sheeting and preferably in superposition to the upper faces adjacent to the openings wherefrom the prongs had been stamped.

As clearly shown in FIG. 4, channel **10** is provided with a pintle **2** at the free end thereof on which is rotatably mounted a clasp lever **3** having a lateral wing **4** projecting laterally therefrom at the opposite end, and fitted with a curved seat **5** for accommodation in a notch **6** in the base **21** of channel **20** to resiliently seat the clasp lever, resulting in a spring closure of the two channels from the relatively open position indicated in dotted lines in FIG. 4 to the closed position shown in solid lines. The pintle **2** extending between the faces **10** and **11**, serves as a reenforcement for the assembly, supplementing that of the pivoted joint at the opposite end. In this position of the parts, the clamping jaws are forced together to bind tightly the stems S of the hangers between the juxtaposed faces of the resilient blocks seated within the channels of the pivoted jaws **10** and **20**.

In the case of a garment bag having a depth of approximately 5", at least five hangers can be accommodated easily between the resilient blocks, to attain an assembly of clothes hangers within a garment bag which may be handled comfortably, without danger of any of the hangers falling into the interior of the bag.

As indicated in FIGS. 3 and 4, the top and bottom faces of each of the channels **10** and **20**, respectively, extend inwardly, at their pivoted ends in overlying relation to each other and are suitably offset and apertured to accommodate the common pintle **1** to obtain the pivoted joint. Separate rivets may be affixed to the juxtaposed ends **12'** and **22'**, as well as **13'** and **23'**, to attain the pivoted action, if such is desired.

FIG. 6 illustrates the attachment of the clamping assembly to a garment bag in which the slide fastener F' is disposed along the midportion of the side wall of the bag and the inclined top thereof, as clearly shown in FIG. 6. In such a construction, the front and rear of the bag are spread from the opening **0** at one side of the bag, which renders impossible the attachment of one of the clamping jaws to the last-mentioned side at which the slide fastener is connected. In this case, the clamp is connected to one side only of the opening O, namely, the side of the opening opposite the slide fastener F'. Thus, the jaw **20** may have prongs extending from the top thereof for penetration of the bag fabric overlying this jaw, while the opposite jaw **10** remains free of the bag while, of course, being connected pivotally to the jaw **20** by means of the pintle **1**. Of course, after the insertion of the hangers into the bag, the clamp may be closed and locked by means of the clasp lever **3**, as described in the embodiments above.

If desired, the bifurcated clamping assembly may be used independently of a garment bag by merely inserting a plurality of hangers between the resilient strips of material **15** and **25** to lock the same together for convenient transportation and handling. These clamps, in unattached position, may be sold independently of garment bags and may be attached by purchasers to bags of many different designs which are not fitted with the clamping assembly in accordance with the invention. The clamps may be fabricated in different lengths to adapt them to garment bags of different depths for the accommodation of different numbers of garments.

In the arrangements described above, the clamping assemblies are affixed to the interior of the bag, but their fastenings may be reversed if desired, to mount the clamping assemblies on the sides of the openings O exteriorly of the bag. An especially effective clamp unit, adapted to be connected to the exterior of a garment bag at the opening O is illustrated in FIGS. 7 to 10. This unit comprises a pair of congruous C-shaped channels similar to those described above, which are adapted to be affixed to the top of the garment bag, as shown in FIGS. 8 and 9, with the prongs, extending from the bottom of the clamp, bent and sealed in elongated metal plates which serve to confine the fabric of the garment bag between the channels and the mounting plates, to distribute the stresses on the fabric and thereby eliminating the possibility of tearing or weakening of the fabric by the fastening prongs.

As shown in FIGS. 7 to 10, the C-shaped channels **30** and **40**, respectively, are pivoted at one end thereof by means of rivet **55**, and are adapted to open at the opposite end thereof and be closed into clamped engagement with each other by means of the clasp C mounted on the free end of the channel **30** which is adapted to engage the free end of channel **40**. The channel **30** is provided with a base **31**, top **32**, and bottom **33**, with an open face **34** opposite the base **31**. The complemental channel **40** is disposed congruously to the channel **30** and consists of a base **41**, top **42** and bottom **43** to present an open face at **44**. The blocks **35** and **45**, of yieldable material, are seated in each of the respective channels for most of their length, and portions thereof protrude beyond the open faces of the channels. The tops **32** and **42** of the channels are provided with transverse slots **36** and **46**, respectively, adjacent the ends of the block, to facilitate the turning of the terminal edges of the tops to bite into the upper surfaces of the blocks **35** and **45** along the open faces, without distorting the alignment between the components of the clamp at any other part thereof. This biting retention is indicated in FIG. 9. Also, the edges of the top surfaces at the transverse slots **36** and **46** may be turned down to retain securely the blocks **35** and **45** within the respective channels, as indicated in FIG. 10.

Fastening prongs **37** and **37'** are stamped from the bottom face **33** of channel **30** adjacent to the opposite ends thereof, and similar fastening prongs **47**, **47'** are stamped from the bottom face **43** of channel **40**. These prongs are bent from the plane of the bottoms of the channels, leaving openings **38** and **48** in the respective channels.

Elongate fastening plates **50** and **60** are adapted to cooperate with each of the channels to clamp the sheet material of the bag between the fastening plates and the channels through the intermediary of the turned down fastening prongs which are seated within the depressions formed within the fastening plates to clamp and seat the prongs without leaving exposed any sharp edges which might snag either the garments or the fingers of the operator. Thus, plate **50**, which is adapted to be disposed on the interior of the bag, is provided with slots **51** and **51'** in alignment with the displaced prongs **37** and **37'**, respectively, and after the penetration of the prongs through the top of the bag, the prongs are turned transversely into depressed seats **52** and **52'** in the plate **50** which are shaped conformably to the outline of the prongs so that the inside of the bag presents a smooth finish, as shown in FIG. 8.

Similarly, the fastening plate **60** is provided with slots **61**, **61'** for permitting the passage of the prongs **47** and **47'** through the fabric sheeting of the bag, which is followed by the bending of the prongs into seats **62** and **62'** provided therefor.

The clasp C may be constituted by lateral wings **57** and **58** embracing the free end of channel **30**. The wings are pivotally mounted on the channel by means of a pintle **63**, to permit the rotation of the clasp by means of the handle **56** interconnecting the wings, wherefrom extends the finger-piece **59**. A wire loop **64**, closed at one end and provided with lateral arms **65** at the opposite end is seated within openings in the wings **57**, and upon

swinging the loop **64** into engagement with a retaining protuberance **66** on the base of channel **40**, the clasp may be closed and tightened by virtue of the eccentric mounting of the clasp on pintle **63**. The open position of the clasp is shown in dotted lines in FIG. 7, which upon rotation in a clockwise direction serves to tightly clamp together the channels **30** and **40** to compress and retain the shanks of any hangers which may be interposed between the protruding portions of the resilient blocks **35** and **45**.

In order to facilitate the manipulation of the clasp and to reduce any wear on the garment bag by virtue of such repeated operation, the lower edge **69** of the handle **56** is undercut so that no rubbing takes place between the clasp and the outer surface of the top of the garment bag, as clearly shown in FIG. 8.

In contradistinction tothe combined clamp and garment bag disclosed in the above-mentioned Pat. No. 1,948,019, the bifurcated clamp of the instant invention, embodying sheet-metal channels for seating the resilient strips therein, may be affixed to garment bags of all types by merely piercing the fabric adjacent to the openings in the latter for the passage of the prongs therethrough. No special design of garment bag is necessary to adapt thereto the clamps in accordance with the invention.

While I have described my invention as embodied in specific forms and as operating in specific manners for purposes of illustration, it should be understood that I do not limit my invention thereto, since various modifications will suggest themselves to those skilled in the art without departing from the spirit of my invention.

I claim:

1. A bifurcated clamp for embracing a plurality of garment hangers adapted to be positioned within a garment bag, each hanger having an upstanding shank between the supporting hook for the hanger and the support for the garment, and said upstanding shanks adapted to be spaced along the length of said clamp, said clamp comprising:

(a) a pair of congruous C-shaped channels pivotally mounted to each other at one end thereof, with the open edge of each channel facing the other,

(b) a strip of resilient material seated within each channel and protruding beyond the open edge thereof, and

(c) a latching device on the opposite free ends of said channels for alternately permitting the spreading of said channels or the clamping thereof together for embracing the spaced shanks of the spaced garment-hangers to attain an integrated assembly thereof, at least one of said channels having fastening means thereon to permit the ready affixation thereof to the garment bag to provide a tight seal for the bag and reliable support for the garment hangers therein.

2. A device as set forth in claim **1**, wherein said latching device comprises a pintle extending between the parallel faces of one channel adjacent to the free end thereof, a clasp lever having one end thereof pivotally mounted on said pintle, and a lateral projection extending from the opposite end of said lever adapted to resiliently engage the external base of the other channel.

3. A device as set forth in claim **1**, wherein said fastening means comprises a plurality of spaced prongs projecting from one of the parallel faces of said one channel for penetration through the fabric of the garment bag preparatory to the bending of said prongs into superposition over said one face with the fabric therebetween.

4. A bifurcated clamp for embracing a plurality of garment hangers adapted to be positioned within a garment bag, each hanger having an upstanding shank between the supporting hook for the hanger and the support for the garment, and said upstanding shanks adapted to be spaced along the length of said clamp, said clamp comprising:

(a) a pair of congruous C-shaped channels pivotally mounted to each other at one end thereof, with the epen edge of each channel facing the other,

(b) a strip of resilient material seated within each channel and protruding beyond the open edge thereof, and

(c) a latching device on the opposite free ends of said channels for alternately permitting the spreading of said channels or the clamping thereof together for embracing the spaced shanks of the spaced garment-hangers to attain an integrated assembly thereof,

(d) each of said channels having fastening means thereon to permit the ready affixation thereof to the exterior of the garment bag to provide a tight seal for the bag and reliable support for the garment hangers therein.

5. A device as set forth in claim **4**, wherein said fastening means comprises spaced pointed prongs stamped from the lower face of each channel for penetration through the top of said garment bag at the opposite edges of an opening therein, with a backing plate in adjacent relation to each of said faces having slots therein for permitting the passage of said prongs therethrough following the penetration of the garment bag, and depressed seats in the bottom faces of each backing plate adjacent to said slots for accommodating the bent prongs to dispose them substantially flush with the rest of the plate.

6. A device as set forth in claim **5**, wherein said depressed seats are of substantially identical outline as said prongs.

7. A device as set forth in claim **6**, wherein said prongs and depressed seats are of triangular outline.

8. A device as set forth in claim **7**, wherein the upper face of each channel is provided with transverse slots adjacent to the opposite ends of the channel and extending to the open edge thereof to facilitate the distortion of said edge into tighter engagement with the strip of resilient material embraced thereby.

9. A device as set forth in claim **4**, wherein said latching device comprises a bail rotatably mounted on one of said channels at the free end thereof remote from its pivotal connection to the second channel, a wire loop having one end thereof mounted eccentrically on said bail for pivotal movement, and the opposite end thereof adapted for engagement with stop means provided at the free end of said second channel, and a finger-hold at the free end of said bail for conveniently manipulating said latch between its alternate releasing and clamping positions.

10. A device as set forth in claim **9**, wherein said bail and finger-hold are notched along the edge thereof adjacent to said garment bag.

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U.S. Cl. X.R.

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