United States Patent [19]

Feinberg

[11] **3,870,206**

[45] **Mar. 11, 1975**

[54] **GARMENT HANGER FRAME HAVING A HINGED HOOK**

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[73] Assignee: **Presto Lock Company,** Garfield, N.J.

[22] Filed: **Sept. 25, 1972**

[21] Appl. No.: **291,926**

[52] **U.S. Cl.** ..... **223/88,** 24/255 SL, 248/340

[51] **Int. Cl.** **A47j 51/097**

[58] **Field of Search** ..... 223/85, 87, 88, 92, 96, 223/98; 24/235.5, 255 SL; 211/113; 248/339, 340, 308

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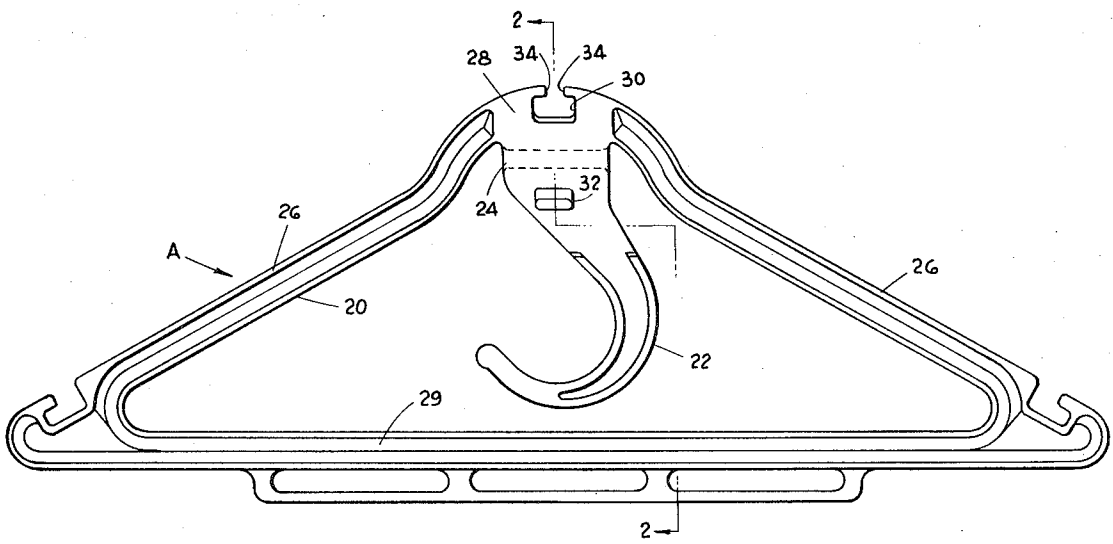
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Primary Examiner—George H. Krizmanich
Attorney, Agent, or Firm—Shapiro and Shapiro

[57] **ABSTRACT**

A garment hanger or the like is molded of plastic material to provide a substantially rigid supporting frame and a substantially rigid hook hinged to the frame by a thin, flexible section of the plastic material. The hinge has an axis of rotation which extends substantially parallel to the plane of the supporting frame. The hook is rotatable from a first position where it is entirely within the perimeter of the supporting frame to a second position where it is outside the perimeter of and substantially parallel to the plane of the supporting frame.

5 Claims, 10 Drawing Figures



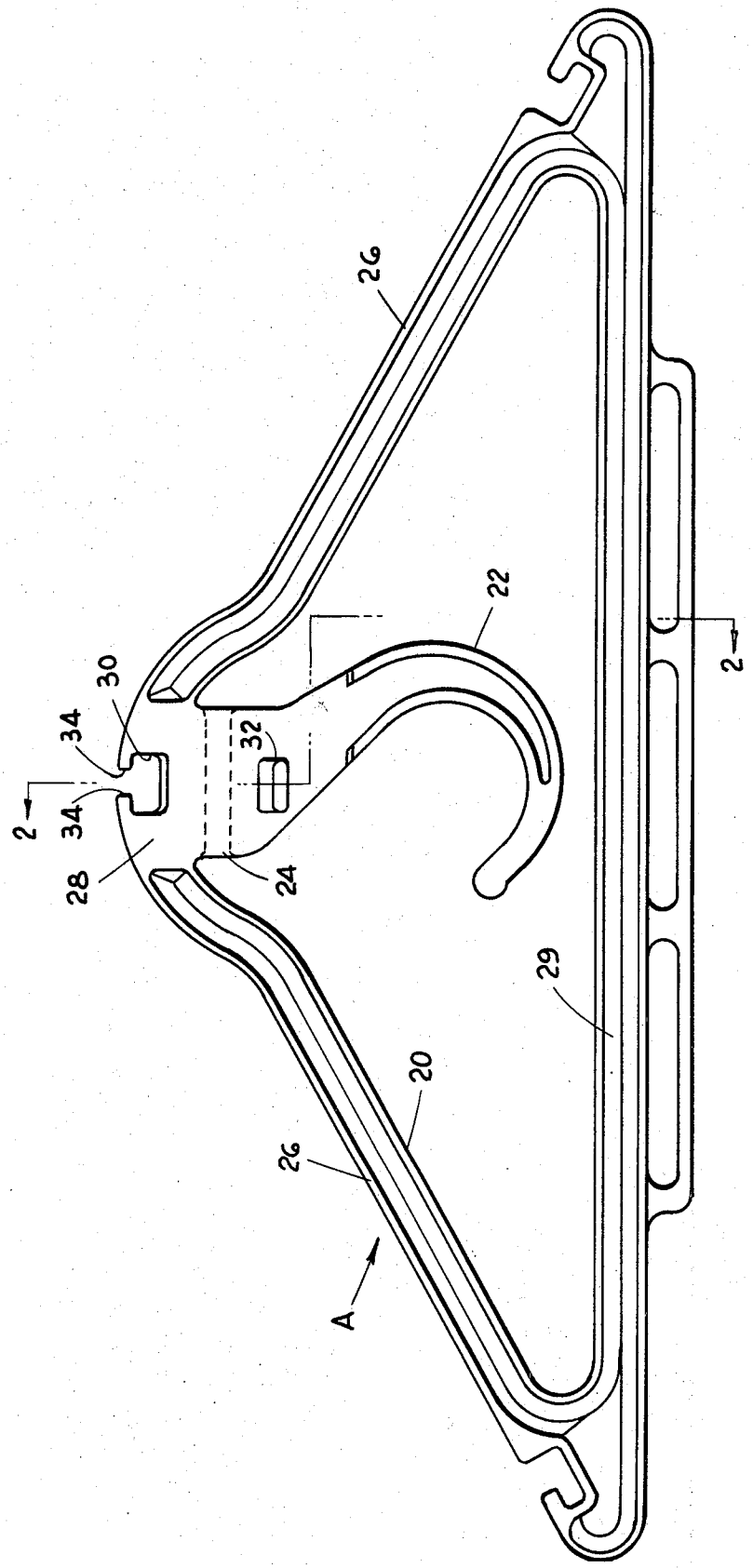


FIG. 1

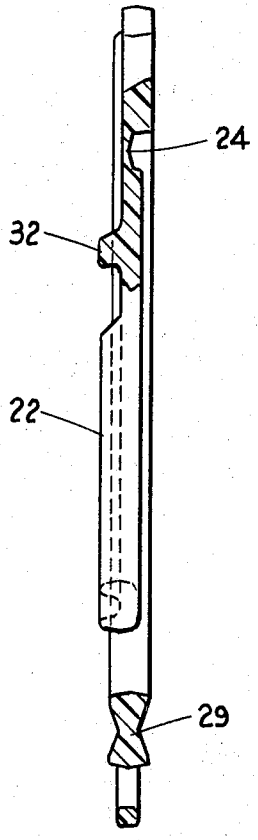


FIG. 2

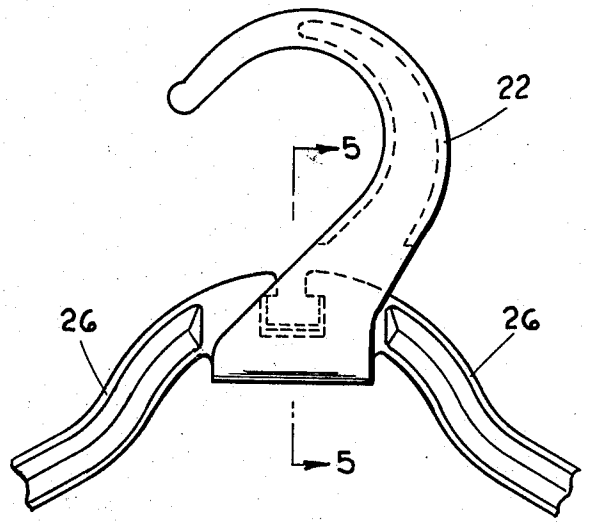


FIG. 3

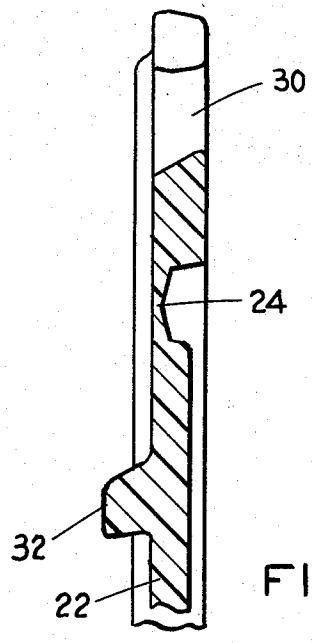


FIG. 4

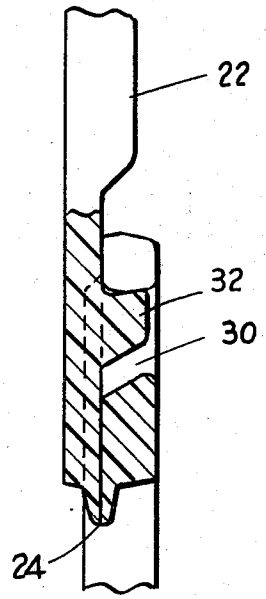


FIG. 5

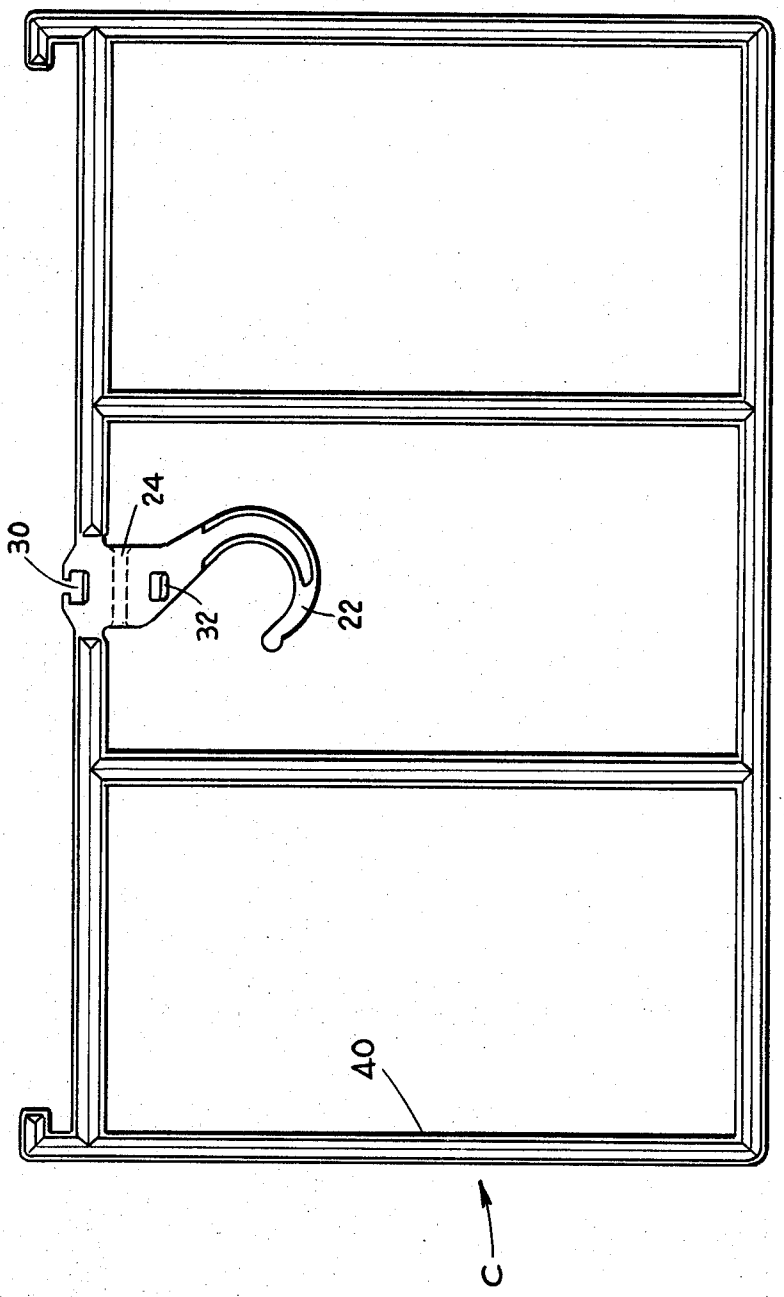


FIG. 8

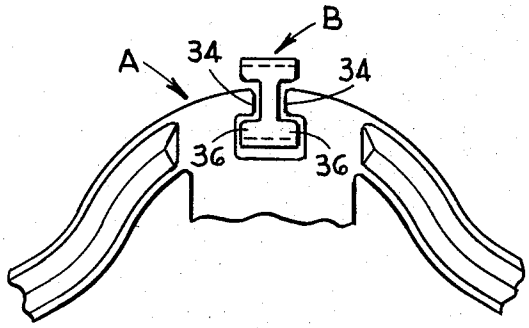


FIG. 6

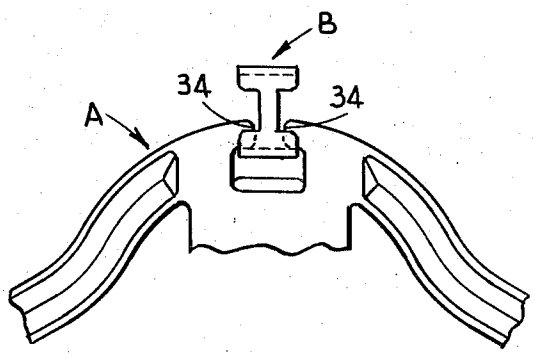


FIG. 7

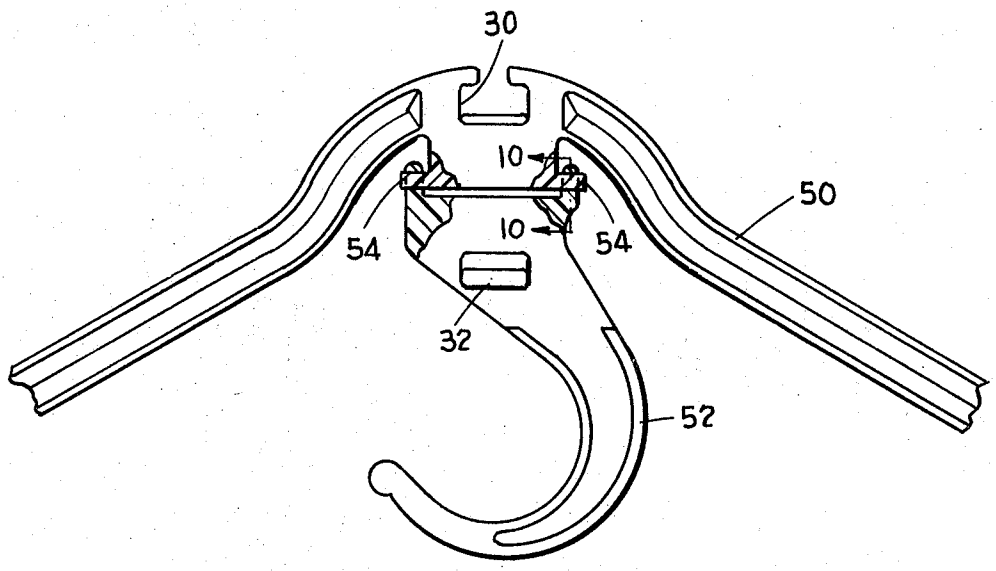


FIG. 9

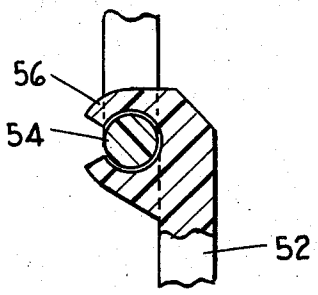


FIG. 10

GARMENT HANGER FRAME HAVING A HINGED HOOK

The invention relates to garment hangers or the like, and is more particularly directed to improvements in garment hangers or the like constructed for assembly with luggage cases and garment bags.

BACKGROUND OF THE INVENTION

It has been the practice to construct luggage cases and garment bags with a bracket for the removable connection thereto of a garment hanger. Such connection is made by a hook which is pivotally connected to the supporting frame by a rivet. The hook pivots about the face of the frame so that upon removal of the hanger from the luggage case or garment bag, the hook may be rotated to serve to mount the hanger on a closet pole or the like to hand a garment outside of the container, case or bag. The rivet provides an axis of rotation for the hook which is perpendicular to the plane of the frame member and of the hook.

In these prior art devices the supporting frame is one part made either by molding or as a wire form. The hook constitutes a second part, which is connected to the supporting frame by the third part or rivet. It is not uncommon for the hook to become loose on the rivet causing the hook to become disengaged from the bracket in the luggage case or garment bag. In addition, since the product is made of three parts, an assembly operation is required and adds to the cost of the product.

SUMMARY OF THE INVENTION

A garment hanger or the like made in accordance with the invention includes a molded, substantially rigid supporting frame and a molded, substantially rigid hook. The hook is connected to the supporting frame by hinge means having an axis of rotation which extends substantially parallel to the plane of the supporting frame. The hook is rotatable from a first position where it is entirely within the perimeter of the supporting frame to a second position where it is outside the perimeter and substantially parallel to the plane of the supporting frame. The supporting frame is provided with means cooperable with a bracket so that in the first position of the hook, the hanger is in condition for connection to a bracket in a luggage case or garment bag; the hook is down and out of the way where it may possibly interfere with such operation. In the second position of the hook, it is located to enable the hook to serve to mount the hanger on a closet pole or the like. In rotating the hook from the first to the second position and vice versa, the hook is swung out, upward and downward through an arc of 180°.

In the preferred form of the invention the garment hanger or the like is molded as a unitary product of a suitable plastic material, for example, an olefin such as polyethylene or polypropylene. The supporting frame, hook and hinge means are integrally molded. The hinge means comprises a thin, flexible section of the plastic material and the supporting frame and hook portions possess substantial rigidity because of the increased thickness or cross-section of these portions in contradistinction to the thin hinging area.

It is accordingly the primary object of the invention to provide a garment hanger or the like which overcomes the limitations of the prior art devices.

It is another object of the invention to provide a garment hanger structure or the like which is comparatively inexpensive to manufacture.

Still a further object of the invention is to provide a garment hanger structure wherein the hook portion in its normal position is entirely with the perimeter of the supporting frame to which it is hinged thereby preserving space in shipment and in the storage of hangers made in accordance with the invention.

These, and other objects and advantages of the invention will be apparent from the following detailed description, taken in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is an elevational view illustrating a garment hanger made in accordance with the invention, this view showing the hook positioned within the perimeter of the supporting frame;

FIG. **2** is a cross-sectional view taken approximately in the plane of line **2—2** of FIG. **1**;

FIG. **3** is a partial elevational view showing the hanger rotated to the position wherein the hook is used for mounting the hanger on a closet pole or the like;

FIG. **4** is an enlarged vertical cross-sectional view showing the hook in the first position of FIG. **1**;

FIG. **5** is an enlarged vertical cross-sectional view taken approximately in the plane of line **5—5** of FIG. **3**;

FIG. **6** is a partial view of the central top slotted end of the hanger as it is being mounted on a bracket of a luggage case or garment bag;

FIG. **7** is a view similar to FIG. **6** showing the hanger in position after the loading operation shown in FIG. **6**;

FIG. **8** is an elevational view of a follower frame made in accordance with the invention;

FIG. **9** illustrates another embodiment of the invention, and;

FIG. **10** is a vertical cross-sectional view taken approximately in the plane of line **10—10.**

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In accordance with the invention generally, and as shown in FIGS. **1–7,** a garment hanger A comprises a molded, substantially rigid garment supporting member or frame **20** and a molded, substantially rigid hook **22.** The hook is connected to the supporting frame by hinge means **24** having an axis of rotation which extends substantially parallel to the plane of the supporting frame. The hook is rotatable from a first position, as shown in FIG. **1,** where the hook is entirely within the perimeter of the supporting frame to a second position, as shown in FIG. **3,** where it is outside the perimeter and substantially parallel to the plane of the supporting frame.

As shown in FIG. **1,** the supporting frame **20** comprises a pair of arms **26** which diverge laterally downwardly from each side of a top central portion **28.** A cross-bar **29** extends between the lower ends of the diverging arms **26.** The upper central portion **28** is provided with a slot **30** which is shaped to mate with or to accommodate a bracket B (FIGS. **6** and **7**) secured to the wall of a luggage case or garment bag (not shown). In the form of the invention illustrated the upwardly open slot **30** is T-shaped.

More specifically, and in the form of the invention illustrated in FIGS. **1—5,** the garment hanger is molded

as a unitary structure; the supporting frame **20**, the hook **22** and the hinge means **24** are integrally connected and molded as a single integral piece from a suitable plastic, for example, an olefin such as polypropylene or polyethylene. The desired rigidity for the supporting frame and for the hook are provided by making these portions of a cross section having sufficient thickness whereas the rotation of the hook with respect to the supporting frame at the hinge **24** is provided by the thinned down section at this area. The plastic materials referred to permit flexure an almost indeterminate number of times without fracture, and each of these plastic materials is sufficiently strong to enable mounting the hanger on a closet pole or the like and to support an appreciable amount of weight when the hook has been rotated to the position shown in FIG. **3.** The unitary structure is molded so that the hook portion is normally in the position shown in FIG. **1.** The plastic material at the hinge **24** has memory and the hook tends to return to the position of FIG. **1.**

For use of the hanger outside of the luggage case or garment bag, or with the hook rotated to the position shown in FIG. **3**, it is preferred to relieve the tensile force imposed upon the relatively thin hinging section **24.** For this purpose the hook is provided with a stud **32** molded to project from one face thereof. The stud is shaped and dimensioned to enter and to be frictionally held in the aperture **30** when the hook **22** is in the position shown in FIGS. **3** and **5.**

FIG. **6** illustrates the relationship of a hanger A to a bracket B secured in a luggage case or garment bag as the hanger is being loaded in position. As shown, the bracket has a substantially I-beam shape and is dimensioned to allow the edges **34** to clear the bracket. The weight or mass of the hanger causes the edges **34** to engage the inner side of the front ends **36** of the bracket which act as block points to prevent the hanger from falling off. It will be apparent that the slot **30** may be of any suitable contour for mating engagement with a suitably contoured bracket. The stud **32** is contoured to enter and frictionally engage the walls defining the slot **30.**

It is within the scope of the invention to contour the upwardly open slot **30** to provide a snap-in action of the hanger with a suitably contoured bracket. The examples of resins hereinbefore referred to furnish, when molded, a measure of elasticity and resilience to afford the desired snap-in action.

The invention is also applicable to a follower frame C which is shown in FIG. **8.** As known in the art, a follower frame is used in a luggage case together with a bracket to prevent clothing from shifting within the case. The relationship of the hook with the supporting frame, designated **40,** is the same as hereinbefore described with relation to the supporting frame of the hanger, and like reference characters designate like parts or elements.

Although not as economical to manufacture and not as desirable as the single, one piece construction as hereinbefore described, certain of the advantages of the invention, including the disposition of the hook entirely within the perimeter of the supporting frame may be obtained by separately molding the hook and the supporting frame and pivotally connecting them to one another in the relationship hereinbefore described. As shown in FIGS. **9** and **10** the supporting frame **50** and the hook **52** are molded of a suitable plastic material, which may also include such injection molding plastic materials such as the vinyl polymers and copolymers, polystyrene and methyl methacrylate as well as the aforesaid olefins. As shown the parts are molded so that the supporting frame has outwardly extending trunnions **54** which are received in the spaced bearings **56** molded integrally with the hook.

It is believed that the advantages and improved results of the several preferred embodiments of the invention will be apparent from the foregoing detailed description. Various changes may be made without departing from the scope of the invention as will be defined from the following claims.

I claim:

1. A one-piece molded plastic garment hanger or the like comprising a substantially rigid supporting frame having a pair of garment supporting arms extending from a central portion, a substantially rigid hook, hinge means connecting the hook to the supporting frame, the hinge means being a flexible section having a thickness less than the thickness of the hook, the hinge means having an axis of rotation extending substantially parallel to the plane of the supporting frame, the hook being rotatable perpendicularly to the plane of the supporting frame from a first position where it is entirely within the perimeter of the supporting frame to a second position where it is outside the perimeter and substantially parallel to the plane of the supporting frame, the central portion having an upwardly open slot, and the hook having stud means dimensioned to enter and to be frictionally held in the slot when the hook is in said second position.

2. A one-piece molded plastic garment hanger or the like according to claim **1,** wherein the plastic material at the hinge means has memory so that the hook tends to return to said first position.

3. A one-piece molded plastic garment hanger or the like according to claim **1,** wherein the garment supporting arms diverge laterally from each side of the central portion and a crossbar extends between the lower ends of the diverging arms.

4. A one-piece molded plastic garment hanger or the like according to claim **1,** wherein the garment supporting arms diverge laterally from each side of the central portion and a crossbar extends between the lower ends of the diverging arms.

5. A garment hanger or the like according to claim **1,** wherein the slot is substantially T-shaped.

* * * * *

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,870,206 Dated March 11, 1975

Inventor(s) Irving Feinberg

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the Heading:

The first name of the inventor should read -- Irving --.

The name of the assignee should read -- Presto Lock Company, Division of Walter Kidde & Company, Inc. --.

Claim 4, line 2, change "1" to --2--.

Signed and sealed this 29th day of April 1975.

(SEAL)
Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents
and Trademarks

FORM PO-1050 (10-69)

USCOMM-DC 60376-P69
* U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334.