ADJUSTABLE ARMS FOR GARMENT HANGER

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ABSTRACT

The present invention relates to garment hanger and a garment hanger apparatus. In particular, it relates to a garment hanger apparatus of the type in which the hanger arms for supporting a garment item are adjustable in length. In one embodiment an extension arm can be added to an existing hanger support arms and is infinitely adjustable in length by sliding along the support arm. Therefore, the effective length of the hanger arm can be selected and varied as desired.
ADJUSTABLE ARMS FOR GARMENT HANGER

FIELD OF THE INVENTION

[0001] The present invention is related generally to garment or clothes hangers, and more particularly, to adjustable arms for a garment hanger.

BACKGROUND OF THE INVENTION

[0002] Garment or clothes hangers of fixed construction have the disadvantage that clothing of different styles, shapes and sizes do not all fit on the hanger equally well. As a result, garments which are misfit to the shape or size of the hanger, hang in a deformed manner which causes wrinkling and misshaping of the cloth. The following are exemplary of the prior art: U.S. Pat. Nos. 6,964,360; 5,085,358; 5,975,385; 6,164,504; 6,036,062; 923,786; 2,436,314; 2,494,711; 2,504,562; 2,679,958; 2,716,512; 2,900,117; 2,944,711; 3,039,662; 3,874,572; 7,077,300 and 4,717,053 and United Kingdom Patent 887,020.

[0003] U.S. Pat. No. 6,964,360 discloses a garment hanger of the type in which the hanger arms for supporting clothing are adjustable in length. In particular, the garment hanger includes sets of main arms, adjustable arms, and cover arms. Locator elements comprising a series of recesses are formed in the top surface extending along the length of each main arm.

[0004] One problem of such a design is that it is not easily adaptable for use on existing garment hanger designs. Accordingly, it would be an improvement to provide an apparatus that can be attached to existing garment hanger designs to prevent wrinkling of the garment.

[0005] Another problem associated with this type of garment hanger is that the adjustability is limited to predefined lengths as indicated by the locator elements. Such a restriction on adjustability may not permit a precise fit as there are numerous sizes of garments that can vary by manufacturer. Accordingly, it would be an improvement to provide an adjustable hanger that has unlimited adjustability to prevent wrinkling of garments on a wider variety of styles of clothing from many manufacturers.

[0006] U.S. Pat. No. 6,164,504 discloses a clothes hanger extender which has a front portion and a back portion. The front portion has a channel locking portion with an elliptical cross-section and an open portion defined by edges thereof.

[0007] One problem the extender of the '504 patent presents is that the shape of the extender and the channel locking portion allows, i.e., does not prevent, the extender from flipping over such that it is upside down, and cannot fulfill its intended purpose.

[0008] The extender disclosed in the '504 patent is attached to the hanger by forcing the edges of the channel locking portion over the hanger. Utilizing the design of the extended in the '504 patent attaching the extender to the hanger may become difficult as the force used to put the extender on the hanger acts on the edges and may cause the channel locking portion to collapse or partially collapse, making it difficult or impossible to attach the extender to the hanger.

SUMMARY OF THE INVENTION

[0009] The present invention is aimed at one or more of the problems identified above.

[0010] The present invention provides an adjustable garment hanger apparatus consisting of one or two arms attached to a hanger which permits adjustment of the length of the hanger arms in order to accommodate different styles and sizes of clothing and to thereby permit smooth hanging of clothing. In one embodiment, the present invention can be an apparatus that attaches to an existing garment hanger to allow the conversion into an adjustable length garment hanger which is inexpensive to make, easy to adjust, of rugged construction, and which provides a wider range of adjustment for variations in garment size.

[0011] In one aspect of the present invention, an adjustable arm for use with a garment hanger, having a plurality of arms extending from a neck, is provided. The adjustable arm includes a top portion and an insertion mechanism. The top portion has a first end and a second end. The first end forms an engaging portion. The engaging portion has an open, round cross section with first and second edges. The first and second edges form a gap. The engaging portion receives one of the arms of the hanger and frictionally engages the hanger arm in a slidable manner. The second end has a cavity for receiving at least a portion of the arm of the hanger. The insertion mechanism is coupled to, and extending from, the first and second edges of the engaging portion.

[0012] In another aspect of the present invention, an adjustable arm for use with a garment hanger, having a plurality of arms extending from a neck, is provided. The adjustable arm includes a top portion and a bottom portion. The top portion has a first end and a second end, forming a locking portion. The engaging portion has an open, round cross section with first and second edges, forming a gap. The engaging portion receives one of the arms of the hanger and frictionally engages the hanger arm in a slidable manner. The second end has first and second sides forming a cavity for receiving at least a portion of the arm of the hanger. The bottom portion extends below a bottom edge of the hanger arm when received in the cavity formed by the top portion of the second end.

[0013] In still another aspect of the present invention, an adjustable arm for use with a garment hanger having a plurality of arms extending from a neck, is provided. The arm includes a top portion, a bottom portion, and an insertion mechanism. The top portion has a first end and a second end, forming a locking portion. The engaging portion has an open, round cross section with first and second edges, forming a gap. The engaging portion receives one of the arms of the hanger and frictionally engages the hanger arm in a slidable manner. The second end has first and second sides forming a cavity for receiving at least a portion of the arm of the hanger. The insertion mechanism is coupled to, and extends from, the first and second edges of the engaging portion. The bottom portion extends below a bottom edge of the hanger arm when received in the cavity formed by the top portion of the second end.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] Other advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:
FIG. 1 is a side view of an adjustable arm attached to a clothes hanger, in accordance with an embodiment of the present invention;

FIG. 2 is a side view of the adjustable arm of FIG. 1;

FIG. 3 is a bottom view of the adjustable arm shown of FIG. 1;

FIG. 4 is a top view of a portion of an adjustable arm, according to an embodiment of the present invention;

FIG. 5 is a top view of an adjustable arm, according to another embodiment of the present invention;

FIG. 6 is a side view of the adjustable arm fitted with a flared attachment to the outermost end, in accordance with one embodiment.

FIG. 7 is an expanded side view of the adjustable apparatus with a chamfered transition from the main hanger arm, in accordance with one embodiment.

FIG. 8 is a side view of an adjustable arm for use with a clothes hanger, according to an embodiment of the present invention;

FIG. 9 is a top view of the adjustable arm of FIG. 8;

FIG. 10 is an isometric view of the adjustable arm of FIG. 8;

FIG. 11 is a front view of the adjustable arm of FIG. 8.

It should be appreciated that for simplicity and clarity of illustration, elements shown in the Figures have not necessarily been drawn to scale. For example, the dimensions of some of the elements are exaggerated relative to each other for clarity. Further, where considered appropriate, reference numerals have been repeated among the Figures to indicate corresponding elements.

DETAILED DESCRIPTION OF INVENTION

With reference to the drawings, wherein like numerals indicate like or corresponding parts throughout the several views, and in operation, the present invention provides a hanger extension apparatus 10 which includes two adjustable arms (only one of which is shown) 10A for use with a garment hanger 50. The garment hanger 50, may be any type of garment hanger, the illustrated garment hanger 50 having first and second arms 52A attached to a neck 54. A hook 56 extends from the neck 54. A cross beam 58 connects between lower ends of the arms 52A, 52B provides structural support.

In one embodiment, each arm 10A has a top portion 12. The top portion 12 includes a first end 12A and a second end 12B. The first end 12A forms an engaging portion 12C. In the illustrated embodiments (as shown in FIGS. 7 and 11), the engaging portion 12C having an open, round cross section with first and second edges 14A, 14B which form a gap 14. The engaging portion 12C receives one of the arms 52A of the hanger 50 and frictionally engages the hanger arm 52A in a slidable manner. In other words, the engaging portion 12C allows the position of the adjustable arm 10A relative to the hanger arm 52A to be adjusted, while preventing or resisting inadvertent movement thereof.

The adjustable arms 10A, 10B maybe composed, at least partially, of wood and/or metal and/or plastic and/or foam and/or rubber and/or other suitable material.

As shown in FIGS. 3, the second end 12B of the top portion 12 forms a cavity 16 for receiving at least a portion of the hanger arm 52A.

In one embodiment, each arm 10A includes an insertion mechanism 20 coupled to, and extending from, the first and second edges 14A, 14B of the engaging portion 12. The insertion mechanism 20, as explained below, assists putting the arm 10A on the hanger 50, i.e., inserting the hanger arm 52A into the engaging portion 20.

With specific reference to FIGS. 3, 7, 10, and 11, in one embodiment, the insertion mechanism 20 includes first and second insertion flanges 20A, 20B which extend in outward directions from the first and second edges 14A, 14B. To place the adjustable arm 10B on the hanger arm 52A, the hanger arm 52A is placed within the insertion mechanism 20, e.g., between the first and second insertion flanges 20A, 20B, and pressure is applied. The pressure acts against the first and second insertion flanges 20A, 20B, acting to separate the edges 14A, 14B and correspondingly enlarging the gap 14, thereby making it easier to insert the hanger arm 52A into the engaging portion 12C.

It should be noted that while in the Figures, the insertion flanges 20A, 20B are shown as being flat or planar, the present invention is not limited to such shape. Any suitable shape may be used.

Returning to FIG. 2, in the illustrated embodiment, the top portion 12 has a centrally disposed longitudinal axis 22 and is defined by substantially tubular outer wall portions 24. For the purposes of illustration only, the top portion 12 is delineated from a bottom or lower portion 30 by dotted line 24.

With specific reference to FIG. 10, in one embodiment the adjustable arm 10A includes a flared attachment 26 coupled, and extending from the second end 12B. In the illustrated embodiment, the flared attachment 26 includes first and second flexible extensions 26A, 26B which extend in directions generally perpendicular to the arm 10A. The flared attachment 26 may be composed from a flexible material, such as cardboard or plastic or other suitable material.

With specific reference to FIGS. 7 and 8, the first and second edges 14A, 14B of the top portion 12 may include a chamfered portion 28 to reduce wrinkling.

With specific reference to FIGS. 4, 5, 8 and 9, the adjustable arm 10A may include a non-slippage mechanism 32 located on a top surface 12D of at least a portion of the top portion 12. In one embodiment, the non-slippage mechanism 32 include one or more recesses 32A on the top surface 12D (FIG. 4).

With specific reference to FIGS. 8-11, in an alternative embodiment, where like parts are numbered the same or similarly, an adjustable arm 100, according to another embodiment of the present invention is shown. In the embodiment of FIGS. 8-11, the non-slippage mechanism 32 include one or more areas of rubberized material, in the shape of ribs 32C, molded into or affixed to the top 12D.

In one aspect of the present invention, the engaging portion 12C and the insertion mechanism 20 form a reinforced stop 36.

Returning to FIG. 2, the bottom or lower portion 30 extend below a bottom edge of the hanger arm 52A when received in the cavity 16 formed by the top portion 12 of the second end 12B. Thus, in the illustrated embodiment, the majority of the hanger arm 52A would be located above dotted line 24. The lower portion 30 act to keep the arm 103 upright. In one embodiment, the bottom portion 30 includes first and second extensions 34 extending from the respective first and second sides 18 of the second end 12B.
With particular reference to FIG. 10, in the alternative embodiment, the bottom portion 30 includes first and second flat or planar extensions 134A, 134B, as shown.

INDUSTRIAL APPLICABILITY

With reference to the drawings, and in operation, the present invention provides an adjustable arm 10A which may be used to extend the hanger arm 52A of a hanger 50. The adjustable arm 10A is infinitely adjustable between first and second positions.

When moved to the desired location along the hanger arm 52A, the adjustable arm 10A can be held in place with friction created by a cavity of the engaging portion 12C of which at least a portion of whose interior circumference is generally smaller than the outer perimeter of the hanger to which the arm 10A is being applied. The cavity of the second end 12B of the top portion 12 has a perimeter greater than that of the hanger arm 52A, allowing free movement of the arm 12A and maintains the vertical orientation thereof. The reinforced stop 36 limits the inadvertent removal of the extendible arm during adjustment.

The adjustable arm 10A is held in place by friction allowing unlimited adjustability. Such unlimited adjustability provides a more precise fit of the accessory with the garment and thus prevents wrinkling on a wide variety of styles of clothing from many manufacturers.

The adjustable arm 10A may be made in a wide variety of colors to advantageously accommodate an individual’s coloring scheme in their home and increase the appeal of the apparatus.

As discussed above, the adjustable arm 10A may include a non-slippage portion to prevent slippage of clothing hung on the hanger 50.

As is apparent from the foregoing specification, the invention is susceptible of being embodied with various alterations and modifications which may differ particularly from those that have been described in the preceding specification and description. It should be understood that we wish to embody within the scope of the patent warranted hereon all such modifications as reasonably and properly come within the scope of our contribution to the art. Obviously, many modifications and variations of the present invention are possible in light of the above teachings. The invention may be practiced otherwise than as specifically described within the scope of the appended claims.

What is claimed is:

1. An adjustable arm for use with a garment hanger, the garment hanger having a plurality of arms extending from a neck, comprising:
   a top portion having a first end and a second end, the first end forming an engaging portion, the engaging portion having an open, round cross section with first and second edges, the first and second edges forming a gap, the engaging portion for receiving one of the arms of the hanger and frictionally engaging the hanger arm in a slidable manner, the second end having a cavity for receiving at least a portion of the arm of the hanger; and an insertion mechanism coupled to, and extending from, the first and second edges of the engaging portion with the insertion mechanism presenting a pair of flanges integral with the first and second edges and diverging therefrom to respective distal ends with each of the flanges presenting a planar surface extending from the first and second edges to the distal ends to enlarge the gap between the first and second edges for receiving the at least one arm of the garment hanger between the flanges and snappingly locking the at least one arm of the garment hanger in the engaging portion.
   2. (canceled)
   3. An adjustable arm, as set forth in claim 1, the top portion having a centrally disposed longitudinal axis and substantially tubular outer wall portions.
   4. An adjustable arm, as set forth in claim 1, including a flared attachment coupled to an end of the second end.
   5. An adjustable arm, as set forth in claim 4, wherein the flared attachment includes first and second flexible extensions which extend in directions generally perpendicular to the arm.
   6. An adjustable arm, as set forth in claim 1, wherein the first end of the top portion includes a chamfered portion.
   7. An adjustable arm, as set forth in claim 1, wherein the arm is composed at least one of wood and metal and plastic and foam and rubber and other suitable material.
   8. An adjustable arm, as set forth in claim 1, including a non-slippage mechanism located on a top surface of at least a portion of the top portion.
   9. An adjustable arm, as set forth in claim 8, wherein the non-slippage mechanism includes recesses on the top surface.
   10. An adjustable arm, as set forth in claim 8, wherein the non-slippage mechanism includes rubberized material molded into or affixed to the top surface.
   11. An adjustable arm, as set forth in claim 1, wherein the edges of the engaging portion and the insertion mechanism form a stop.
   12. An adjustable arm for use with a garment hanger, the garment hanger having a plurality of arms extending from a neck, comprising:
      a top portion having a first end and a second end, the first end forming an engaging portion, the engaging portion having an open, round cross section with first and second edges, the first and second edges forming a gap with a pair of flanges extending from the first and second edges and diverging therefrom to respective distal ends with each of the flanges presenting a planar surface extending from the first and second edges to the distal ends to enlarge the gap for receiving one of the arms of the hanger and frictionally engaging the hanger arm in a slidable manner, the second end having first and second sides forming a cavity for receiving at least a portion of the arm of the hanger; and,
      a bottom portion extending below a bottom edge of the hanger arm when received in the cavity formed by the top portion of the second end.
   13. An adjustable arm, as set forth in claim 12, wherein the bottom portion includes first and second extensions extending from the respective first and second sides of the second end.
   14. An adjustable arm, as set forth in claim 12, the top portion having a centrally disposed longitudinal axis and substantially tubular outer wall portions.
   15. An adjustable arm, as set forth in claim 12 including a flared attachment coupled to an end of the second end.
   16. An adjustable arm, as set forth in claim 15, wherein the flared attachment includes first and second flexible extensions which extend in directions generally perpendicular to the arm.
   17. An adjustable arm, as set forth in claim 12, wherein the first end of the top portion includes a chamfered portion.
18. An adjustable arm, as set forth in claim 12, wherein the arm is composed at least partially of wood and/or metal and/or plastic and/or foam and/or rubber and/or other suitable material.

19. An adjustable arm, as set forth in claim 12, including a non-slippage mechanism located on a top surface of at least a portion of the top portion.

20. An adjustable arm, as set forth in claim 19, wherein the non-slippage mechanism includes recesses on the top surface.

21. An adjustable arm, as set forth in claim 19, wherein the non-slippage mechanism includes rubberized material molded into or affixed to the top surface.

22. An adjustable arm, as set forth in claim 12, wherein the edges of the engaging portion and the insertion mechanism form a stop.

23. An adjustable arm for use with a garment hanger, the garment hanger having a plurality of arms extending from a neck, comprising:
   a top portion having a first end and a second end, the first end forming a locking portion, an engaging portion having an open, round cross section with first and second edges, the first and second edges forming a gap, the engaging portion for receiving one of the arms of the hanger and frictionally engaging the hanger arm in a slidable manner, the second end having first and second sides forming a cavity for receiving at least a portion of the arm of the hanger; and
   an insertion mechanism coupled to, and extending from, the first and second edges of the engaging portion and presenting a pair of flanges integral with the first and second edges and diverging therefrom to respective distal ends with each of the flanges presenting a planar surface extending from the first and second edges to the distal ends to enlarge the gap between the first and second edges for receiving the at least one arm of the garment hanger between the flanges and snapping the at least one arm of the garment hanger in the engaging portion; and
   a bottom portion extending below a bottom edge of the hanger arm when received in the cavity formed by the top portion of the second end.

24. An adjustable arm, as set forth in claim 23, wherein the bottom portion includes first and second extensions extending from the respective first and second sides of the second end.

25. An adjustable arm, as set forth in claim 23, wherein the insertion mechanism includes first and second insertion flanges extending in outward directions from the first and second edges, respectively.

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