

(12) **UK Patent Application** (19) **GB** (11) **2 349 078** (13) **A**

(43) Date of A Publication 25.10.2000

(21) Application No **0009868.1**

(22) Date of Filing **25.04.2000**

(30) Priority Data

(31) **9909435** (32) **24.04.1999** (33) **GB**

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(51) INT CL<sup>7</sup>

**A47G 25/48**

(52) UK CL (Edition R )

**A4L LBET L121**

(56) Documents Cited

**GB 2044096 A US 5361948 A US 3137027 A**

(58) Field of Search

**UK CL (Edition R ) A4L , E2A AGKFE**

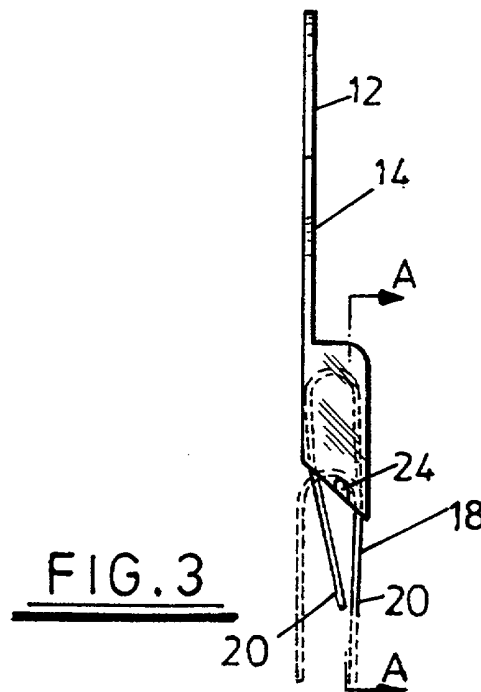
**INT CL<sup>7</sup> A47G 25/48 25/50 25/52**

**ONLINE: WPI, EPODOC, JAPIO**

(54) Abstract Title

**Clip hanger**

(57) A clip hanger (10, Fig. 1) comprises a hollow housing (16, Fig. 1) slidably retaining a clamping member 18 which provides a pair of jaws 20, wherein the jaws are closed by sliding the clamping member into the housing. The housing may be open at one or both ends and is typically provided with a support hook 12. The housing may also comprise at least one abutment (64, Fig. 8) which prevents the clamping member from being completely pulled from the housing in the opening direction. The gripping surfaces of the jaws may be profiled or may be provided with a rubber or synthetic elastomeric material. A garment hanger (100, Fig. 13) having at least two clip hangers (50, Fig. 13) fixedly or slidably mounted on the ends of opposing arms (106, Fig. 13) is also described, wherein the arms may be expandable.



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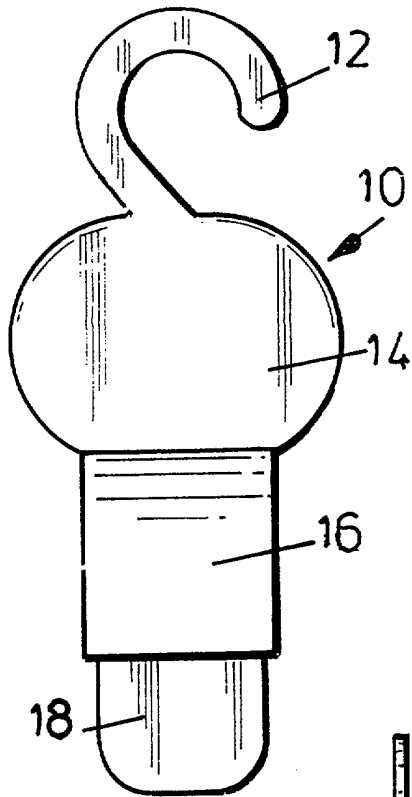


FIG. 1

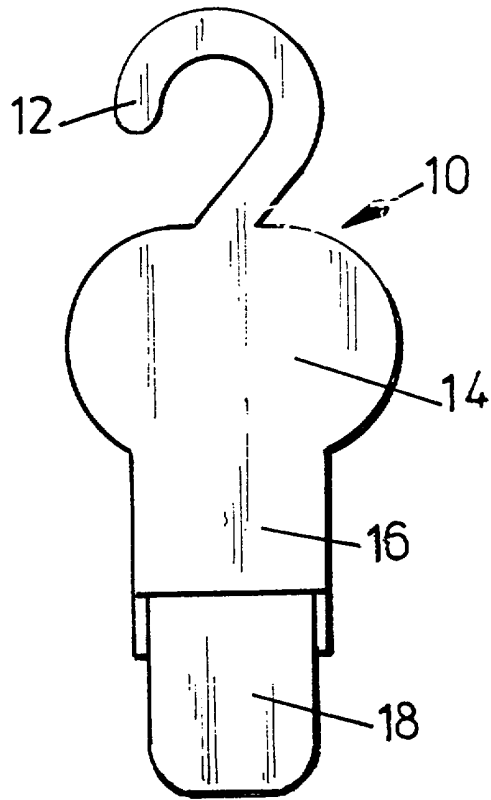


FIG. 2

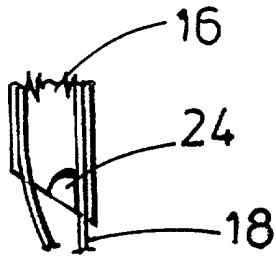


FIG. 5

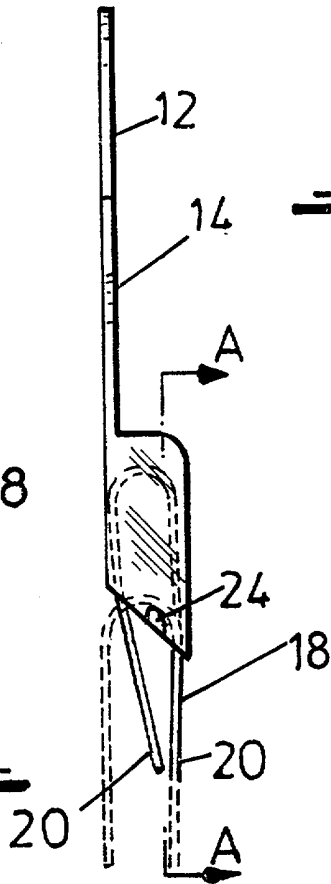


FIG. 3

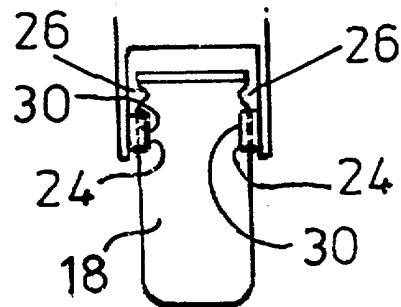


FIG. 4

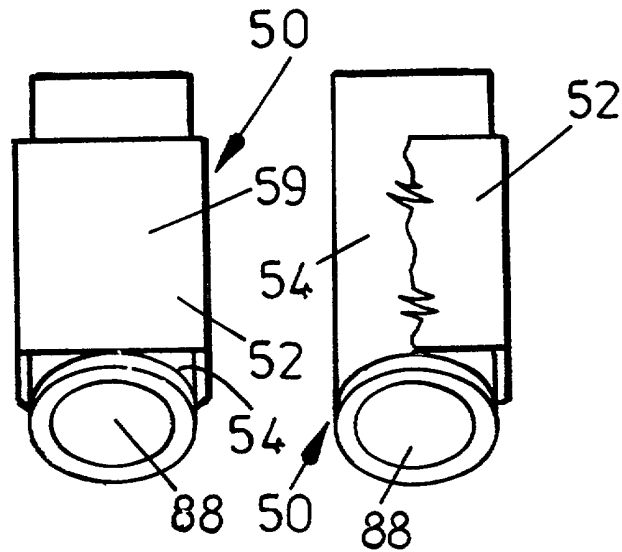


FIG. 6

FIG. 7

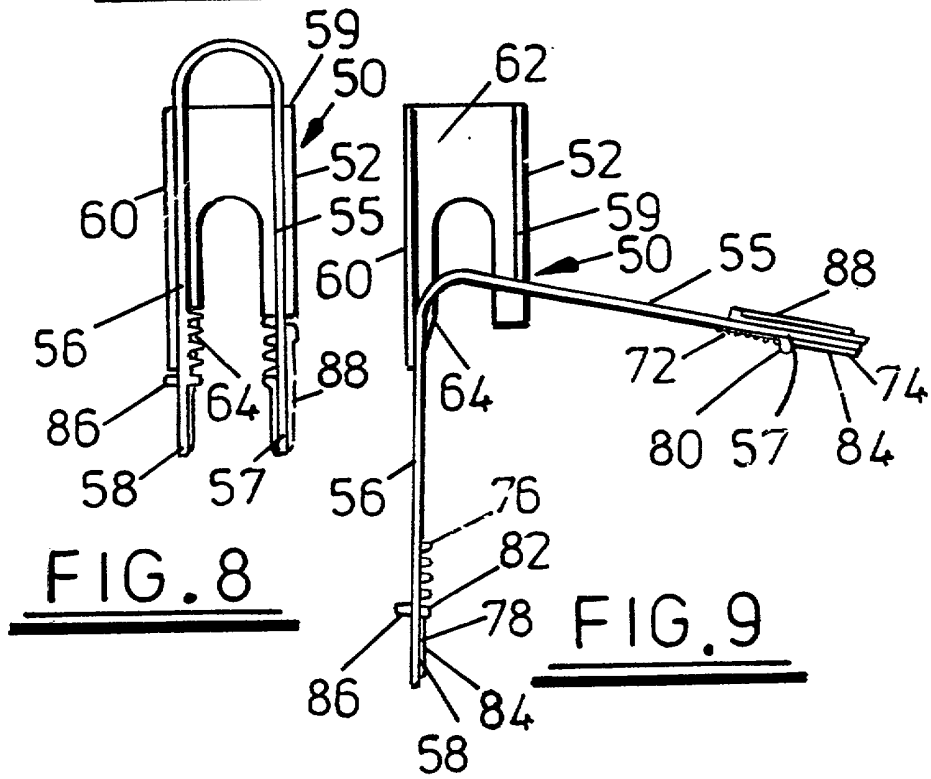


FIG. 8

FIG. 9

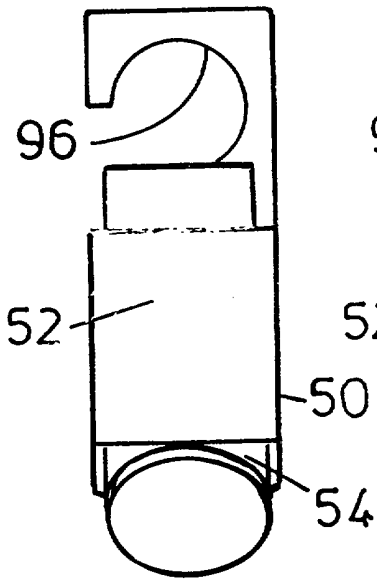


FIG. 10

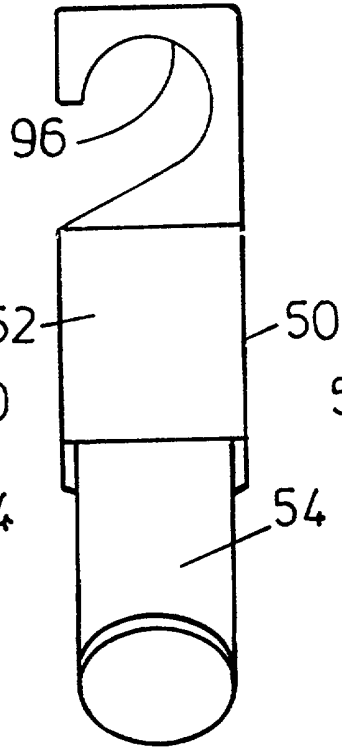


FIG. 11

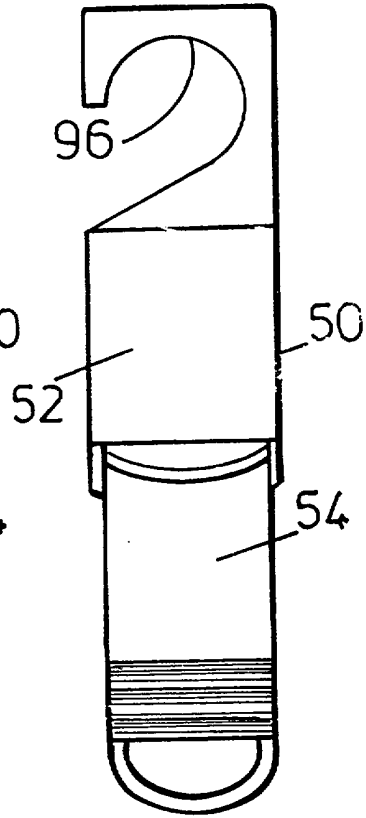
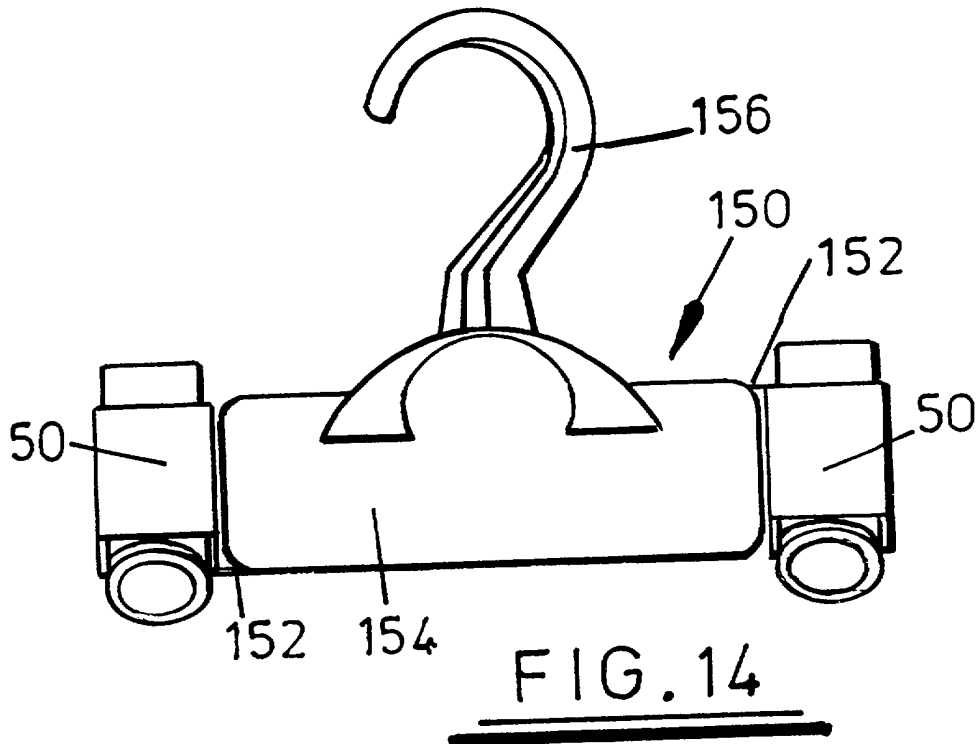
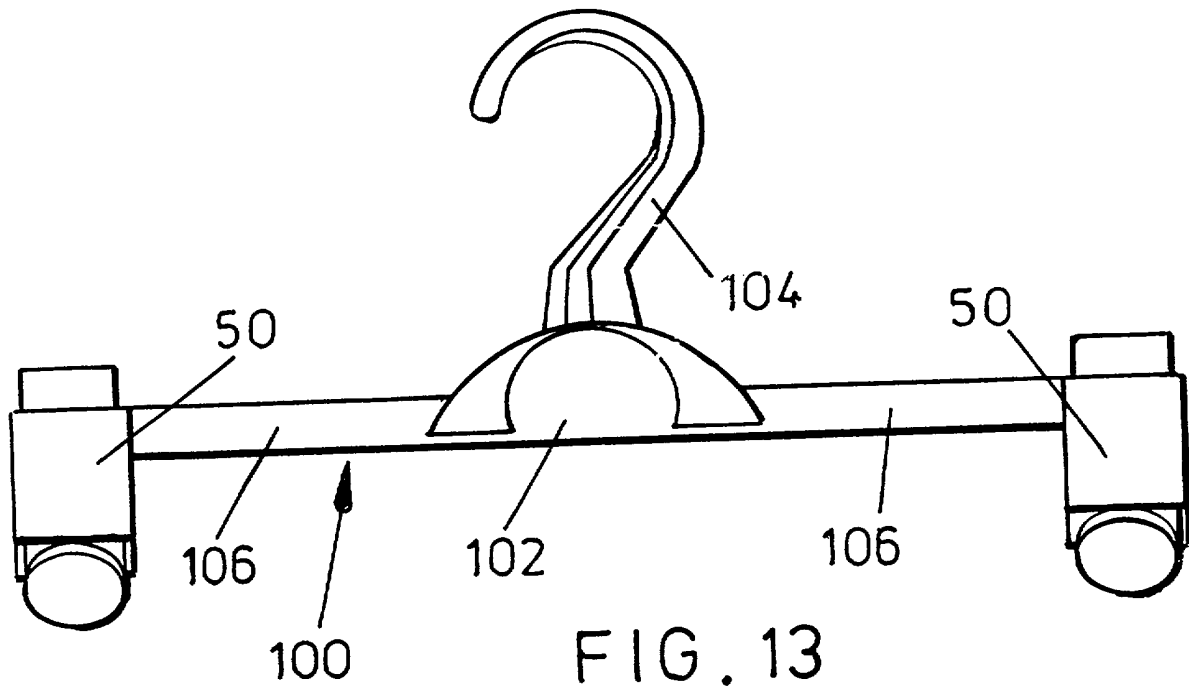


FIG. 12



TITLE: Hanger for clothing items.

DESCRIPTION

This invention concerns a hanger suitable for use in displaying clothing items.

There are various types of clip hanger for clothing items. One type has a pair of jaws connected by a U-shaped metal spring member, so that the jaws are normally urged closed to grip an item of clothing. Extensions of the jaws above the spring can be squeezed together to open the jaws and release the item of clothing. These clips may be provided individually or as a pair mounted on opposite ends of a cross bar having a supporting hook. The clips may be slidable along the cross bar.

The pressure required to open the jaws can, however, be quite excessive for children and the elderly making it difficult for them to remove and replace items of clothing.

Another type of clip hanger has a pair of hingedly connected jaws and a U-shaped metal member having a longer limb slidably retained on one of the jaws with its shorter limb arranged to slide over the other jaw to urge it towards the first jaw to close them when the U-shaped member is pushed towards the open end of the jaws. To open the jaws, the U-shaped member is slid in the opposite direction.

This type of clip may be provided singly with a hook for suspending the clip from a rail or the like but is more commonly provided in pairs on a hanger cross

bar.

Both of the above prior art clips are made of plastics and metal components rendering them difficult to recycle.

An object of this invention is to provide a clip hanger that may be made of one material rendering it easier to recycle.

Another aspect of this invention is to provide a clip hanger that does not require excessive force to open and close.

According to this invention there is provided a clip hanger comprising a hollow body slidably retaining a clamping member providing a pair of jaws, the clamping member being slidable into the body to close the jaws.

The clamping member is preferably a resilient member and especially a U-shaped member and is preferably sized so that the action of pushing the clamping member into the body squeezes the jaws towards each other. When the clamping member is pulled outwards of the body, the jaws are free to open out. Thus, any item of clothing may be attached to the hanger by inserting part of the clothing items between the jaws when at their outermost extent and pushing the clamp member into the body, whereupon the jaws close to grip that part of the clothing item between them.

It is to be understood that sliding of the jaws into the body may be achieved by movement of one of the body or of the jaws relative to other other.

Opposing faces of the jaws may be provided with gripping surfaces thereon such as by profiling of the faces of the jaws, by forming the jaws with textured faces or by addition of gripping material thereon, such as of rubber or synthetic

elastomeric material, which itself may be profiled or textured.

The gripping surfaces of the jaws may have two gripping sections providing differential gripping forces.

Preferably the clamp is provided with a first gripping section at the free end of the jaws. The first gripping section may comprise pads, such as of rubber or foamed material, on the opposing inner surfaces of the jaws. Preferably, a stop member in the form of a projection extends from one of the jaws to provide a boundary for the first gripping section.

The second or further gripping section is preferably provided from the projection to an inner extremity of the inner surface of the jaws whereby the projection may act as a gripping element. The second gripping section may be profiled or ribbed for grip.

In this manner, the first gripping section furthest from the hinge of the jaws may be used to provide a relatively weak gripping force for gripping delicate lightweight garments, the garment being inserted into the clamp up to the stop member. Alternatively, a heavy garment may be inserted up to the hinge of the garment thereby being held by both the teeth of the first gripping section and the projection of the second gripping section.

It is to be appreciated that more than two gripping sections may be provided to provide a clamp having multiple gripping forces, for example by providing a series of spaced apart stop members/projections.

The clamping member may be provided with one or more stops thereon to limit the extent to which it can be pushed into the body. For a U-shaped clamping



member a stop may be provided on an outer face of one or both limbs thereof to abut an edge or edges of the body.

At least one outer face of the clamping member may be provided with a thumb or finger receiving recess to facilitate operation of the clip hanger.

A preferred clip hanger according to the invention has both its body and clamp member made of plastics material. Thereby, the clip hanger is more easily recyclable than the prior art clip hangers made of metal and plastics components.

The body may be closed at one end or may be open at both ends. The latter option provides a possibility for the clamp member to be pushed outwardly of the body from the opposite open end of the body rather than relying on pulling the clamp member out by gripping the jaws or an item of clothing held in the jaws.

The clip hanger of the invention may be provided as a single item, say with a hook or the like on the body for supporting the hanger on a rail, rack or the like. Alternatively two clip hangers of the invention may be provided either fixed or slidably mounted on opposite ends of arms of a garment hanger, the hanger having a supporting hook generally centrally thereof.

The arms may be fixed or may be of an expandable hanger, such as of the type disclosed in my earlier patent application WO99/17644.

This invention will now be further described, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 is a front view of a first clip hanger of the invention;

Figure 2 is a rear view of the clip hanger of Figure 1;

Figure 3 is a side view of the clip hanger of Figure 1;

Figure 4 is a partial internal side view of the clip hanger of Figure 1;

Figure 5 is a partial section on line AA of Figure 3;

Figure 6 is a front view of a second clip hanger;

Figure 7 is a partially cut away front view of the clip hanger of Figure 6;

Figure 8 is a section through the clip hanger of Figure 6 closed;

Figure 9 is a section through the clip hanger of Figure 6 open;

Figure 10 is a front view of another embodiment of the invention closed;

Figure 11 is a front view of the embodiment of Figure 10 partially open;

Figure 12 is a front view of the embodiment of Figure 10 fully open;

Figure 13 shows a first garment hanger using clip hangers of the type shown in Figures 6 to 9; and

Figure 14 shows a second garment hanger using clip hangers of the type shown in Figures 6 to 9.

Referring to Figures 1 to 5 of the accompanying drawings a clip hanger 10 for clothing items has a hook 12, for supporting the hanger from a rail, rack or the like, extending from a shield 14, on which product information can be provided, typically in the form of an adhesive label.

Below the shield 14 is a rectangular section hollow body 16 which slidably retains a gripping member 18 of resilient plastics material.

The gripping member 18 is in the form of a U-shaped clamp providing a pair of clamping jaws 20. The opposing surfaces of the jaws 20 may be profiled for extra grip. The gripping member 18 is sized, so that when it is pushed into the body, the jaws are urged towards each other by opposing sides of the body. On

the other hand, when the gripping member is pulled outwardly from the body, the jaws open.

The gripping member is retained in the body by means of stops 24 on opposing sides of the body, the base of the gripping member abutting against the stops when pulled outwardly to its fullest extent. To insert the gripping member into the body initially, the gripping member has notches 26 on opposed edges which allow it to be pushed past the stops which are themselves chamfered at 30 to ease passage of the gripping member into the body. Once the U-bend of the gripping member is past the stops 24, the gripping member is prevented thereby from being pulled completely out of the body.

The clip hanger is used by pulled outwardly the gripping member to open the jaws, in between which part of a clothing item can be inserted. The gripping member is then pushed back into the body to close the jaws and grip the items of clothing. The item of clothing can be removed from the hanger simply by pulling on the item of clothing. That action will pull the gripping member out of the body to open the jaws and release the clothing item.

The hook, shield, body and gripping member may all be made from plastics material, whereby recycling of the clip hanger is facilitated as different materials do not have to separate out.

Turning to Figures 6 to 9 of the accompanying drawings, a clip hanger 50 has a rectangular section hollow body 52 open at opposite ends. Slidably retained in the body is a resilient U-shaped clamping member 54 having limbs 55, 56 providing jaws 57 and 58 at its open end. The body has a front wall 59, rear wall

60 and side walls 62. On opposed sides 62, within the body 52 are lugs 64 spaced slightly from rear wall 60. One limb of the clamping member is slidably retained between those lugs and the rear wall of the body. The lugs 64 also act as stops to prevent the clamping member 54 from being pulled out of the body.

The jaws 56 and 57 have opposed gripping faces each having two gripping sections 72, 74 and 76, 78 respectively separated by transverse ribs 80 and 82 respectively. Upper gripping sections 72 and 76 are intended for gripping heavier clothing items and are ribbed to improve grip. Lower gripping sections 74, 78 are for lighter clothing or more delicate fabrics and have rubber or foam pads 84 thereon.

On the rear face of the limb 56 is an abutment 86, which limits the extent of movement of the gripping member into the body by contact with bottom edge of the rear wall 60 of the body. On the front face of the limb 55 is a finger or thumb plate 88, which also acts as an abutment, this time against the bottom edge of the front wall 59 of the body.

The clip hanger of Figures 6 to 9 operates more or less in the same manner as the embodiment of Figures 1 to 5 except that the jaws may be opened by pulling the clamping member out of the body from the top i.e. by pushing on the U-bend of the clamping member. Furthermore all of the components of the clip hanger 50 may be made from plastics material.

Figures 10, 11 and 12 show the same clip hanger as in Figures 6 to 9 but with a hook 96 provided as a continuation of rear wall 60 of the body.

In Figure 13, a garment hanger 100 has a shield area 102 with a supporting

hook 104 extending therefrom. Arms 106 extend from opposite sides of the shield and on the outer end of each arm are clip hangers 50 of the type shown in Figures 6 to 9. The clip hangers 50 are fixed, although it is possible to arrange for them to be slidable along their respective arms to adjust the distance between them to accommodate different sizes of garment.

An alternative stop for the jaws may be provided by an arm of a hanger through the body, i.e., the body 52 may be mounted on an arm 106 either fixedly or slidably with the jaws 56, 57 either side of the arm 106, so that it acts as a stop for the jaws. The stop may of course be a bar or the like within the body between the sides thereof and over which the jaws sit.

It may be possible in the hanger of Figure 13, for example, to arrange for the jaws to be fixed to the arms and for the body to be movable to open and close the jaws.

Figure 14 shows an expandable garment hanger 150 having a pair of arms 152 arranged to move in opposite directions to increase or decrease the overall length of the hanger arms. The arms are slidably mounted in a body 154 for that purpose. The body has a supporting hook 156. At the outermost end of each arm 152 is a clip hanger 50 of the type shown in Figures 6 to 9 of the drawings.

Both of the hangers of Figures 13 and 14 may be made entirely from plastics material to facilitate recycling.

## Claims

1. A clip hanger comprising a hollow body slidably retaining a clamping member providing a pair of jaws, the clamping member being slidable into the body to close the jaws.
2. A clip hanger as claimed in claim 1, wherein the clamping member is a resilient member.
3. A clip hanger as claimed in claim 1 or 2, wherein the clamping member is a U-shaped member.
4. A clip hanger as claimed in claim 1, 2 or 3, wherein the clamping member is sized so that the action of pushing the clamping member into the body squeezes the jaws towards each other.
5. A clip hanger as claimed in any one of claims 1 to 4, wherein opposing faces of the jaws are provided with gripping surfaces thereon.
6. A clip hanger as claimed in claim 5, wherein the faces of the jaws are profiled.

7. A clip hanger as claimed in claim 5, wherein the jaws are formed with textured faces or by addition of gripping material thereon.
8. A clip hanger as claimed in claim 7, wherein the additional gripping material is of rubber or synthetic elastomeric material.
9. A clip hanger as claimed in claim 8, wherein said additional gripping material is itself profiled or textured.
10. A clip hanger as claimed in any one of claims 1 to 9, wherein the gripping surfaces of the jaws have two gripping sections providing differential gripping forces.
11. A clip hanger as claimed in claim 10, wherein the clamp is provided with a first gripping section at the free end of the jaws.
12. A clip hanger as claimed in claim 11, wherein the first gripping section comprise pads on the opposing inner surfaces of the jaws.
13. A clip hanger as claimed in claim 12, wherein the pads are of rubber or foamed material.
14. A clip hanger as claimed in any one of claims 10 to 13, wherein a stop

member in the form of a projection extends from one of the jaws to provide a boundary for the first gripping section.

15. A clip hanger as claimed in claim 14, wherein the second or further gripping section is provided from the projection to an inner extremity of the inner surface of the jaws whereby the projection acts as a gripping element.
16. A clip hanger as claimed in any one of claims 10 to 15, wherein the second gripping section is profiled or ribbed for grip.
17. A clip hanger as claimed in any one of claims 1 to 16, wherein the clamping member is provided with one or more stops thereon to limit the extent to which it can be pushed into the body.
18. A clip hanger as claimed in claim 17, wherein, for a U-shaped clamping member, a stop is provided on an outer face of one or both limbs thereof to abut an edge or edges of the body.
19. A clip hanger as claimed in any one of claims 1 to 18, wherein at least one outer face of the clamping member is provided with a thumb or finger receiving recess to facilitate operation of the clip hanger.
20. A clip hanger as claimed in any one of claims 1 to 19, wherein the body



includes one or more abutments to stop the clamping member being pulled from the body completely in the opening direction.

21. A clip hanger as claimed in any one of claims 1 to 20, wherein both its body and clamp member are made of plastics material.
22. A clip hanger as claimed in any one of claims 1 to 21, wherein the body is closed at one end.
23. A clip hanger as claimed in any one of claims 1 to 21, wherein the body is open at both ends.
24. A clip hanger as claimed in any one of claims 1 to 23, wherein the body is provided with a hook or the like for supporting the hanger on a rail, rack or the like.
25. A garment hanger having two clip hangers as claimed in any one of claims 1 to 24 provided either fixed or slidably mounted on opposite ends of arms of the garment hanger, the hanger having a supporting hook generally centrally thereof.
26. A garment hanger as claimed in claim 24, wherein the arms thereof are expandable.

27. A clip hanger substantially as hereinbefore described with reference to and as illustrated in any one of the accompanying drawings.
  
28. A garment hanger substantially as hereinbefore described with reference to and as illustrated in Figure 13 or 14 of the accompanying drawings.



INVESTOR IN PEOPLE

Application No: GB 0009868.1  
Claims searched: 1-28

14

Examiner: Dr Paul R Minton  
Date of search: 28 July 2000

### Patents Act 1977 Search Report under Section 17

#### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:  
UK CI (Ed.R): A4L; E2A (AGKFE).  
Int CI (Ed.7): A47G 25/48, 25/50, 25/52.  
Other: ONLINE: WPI, EPODOC, JAPIO

#### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X, Y	GB 2044096 A (GEOFFREY). See particularly Figure 1.	X:1-7,17,18, 20,21,23-25 Y:8-13
Y	US 5361948 A (BATTS). See particularly line 59, column 3 to line 10, column 4 and Figure 2.	8-13
X	US 3137027 A (BIRKLE). See particularly lines 31-38, column 1, lines 12-14, column 2, and Figures 2 & 3.	1-7,17,18, 20-22,24

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.