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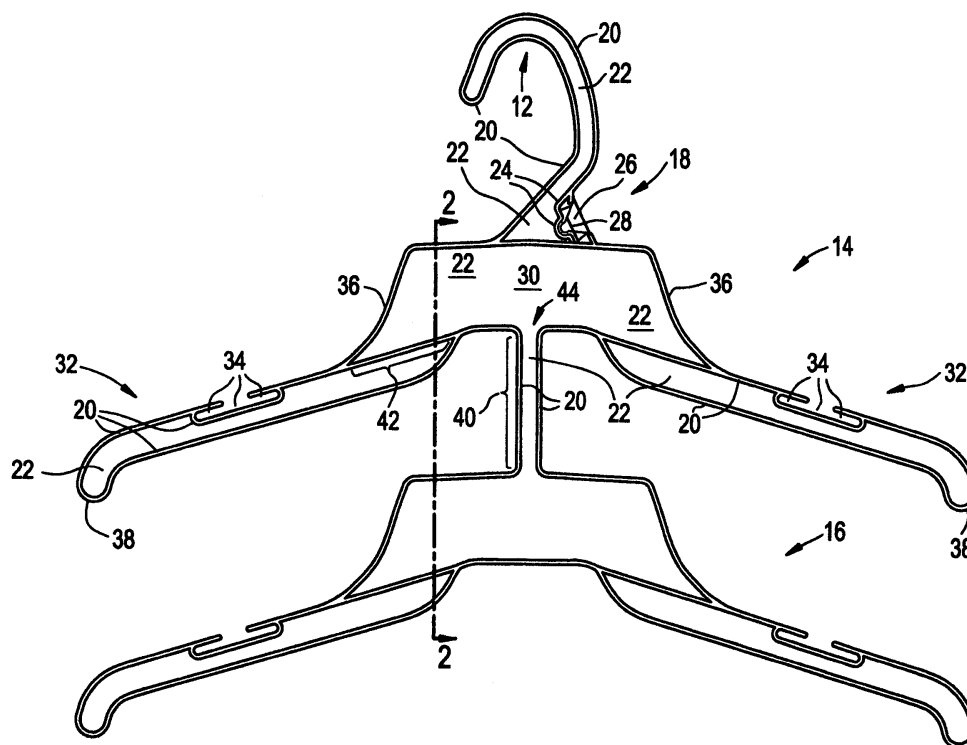
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(54) **Garment set double hanger and method of hanging**

(57) A garment set double hanger and method are disclosed which are suitable for hanging and displaying a set of matched or coordinated top garments together, such as a matched set of mens or ladies top garments, which does not obscure from display either of the individual garments that make up the coordinate garment set, and which is designed to make it easy to mount the

coordinate garment matched set on the hanger. The garment set double hanger includes a top hanger which is designed to support a first garment of the matched set of garments and a bottom hanger, supported below the top hanger by a depending vertical frame member, which is designed to support and display a second garment of the matched set of garments.

FIG. 1



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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates generally to a garment set double hanger and method of hanging which are suitable for hanging and displaying together a set of matched or coordinated top garments such as a matched or coordinate set of sport or dress shirts. For instance, a promotional sale might offer a matched set of striped shirts, a first sport or dress shirt having red and white stripes and a second sport or dress shirt having blue and white stripes. The garment set double hanger is designed to display the set of matched or coordinate garments together and to convey to a consumer the impression that the garments are designed to be purchased together as a matched or coordinate set.

2. Discussion of the Prior Art

[0002] It can be appreciated that many garments are designed to be sold as coordinated matched sets. For example, a promotional sale might offer a matching set of top garments, such as dress shirts, sports shirts, blouses or sweaters of an identical style and cut but of different colors, or other garment set combinations as are frequently specifically manufactured to be sold as matched sets. In the sale of such garment matched sets, it is desirable to display the garments together to convey to the consumer the impression that the garments are indeed a set to be purchased together. To that end the separate garments may be hung on separate hangers and displayed alongside or next to each other, or the garments may be hung on a single hanger. The drawbacks in such display methods are that in the first example of separate hangers, some frame or support is required to display the separately hung garments together, and in the second example of a single hanger, sharing a single hanger may obscure from display one of the individual garments that make up the garment matched set, or make it difficult to mount the garment matched set on the single hanger.

[0003] It can also be appreciated that a further benefit in displaying such garment matched sets together, or in displaying garments of a similar style and color together, is that the amount of required display space can be reduced significantly. A still further benefit of displaying such coordinate garment matched sets together is to make it easier for the consumer to find and purchase such coordinate garment matched sets. This economy of space and ease of organization may also extend to the transportation and storage of such coordinate garment matched sets.

[0004] Moreover, in many cases it has long been a practice to utilize hanger structures in which two hangers are ganged together, with a lower hanger being sus-

pended from a top hanger. In other cases, attachments have been designed with the attachment constructed to be temporarily or permanently connected to a supporting hanger.

[0005] These arrangements have often not been satisfactory because they have normally required the hangers to be of such a design that they do not have utility other than as ganged hangers for simultaneous multiple garment display and transport. Moreover, when hangers of conventional construction have been modified to permit ganging, they have involved either a difficult and complex structure for attaching one garment hanger to the other, or they have not been satisfactory in transportation because the vibration and jostling incident to transportation has frequently caused the hangers to become disconnected, allowing one of the garments to fall to the floor or bottom of the transport container. This same lack of security of attachment has also been a problem at the point of display unless the hangers are handled carefully.

[0006] It is also an important requirement that the cost of manufacturing and selling the hangers be maintained as low as possible to meet the necessities of the garment manufacturing and merchandising field.

SUMMARY OF THE INVENTION

[0007] The present invention provides a garment set double hanger and method of hanging which are suitable for hanging and displaying a set of matched or coordinated garments together, such as a matched set of mens or ladies top garments, which does not obscure from display either of the individual garments that make up the coordinate garment set, and which is designed to make it easy to mount the coordinate garment matched set on the single hanger. The garment set double hanger includes a top hanger which is designed to support a first garment of the matched set of garments and a bottom hanger which is designed to support and display a second garment of the matched set of garments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The foregoing objects and advantages of the present invention for a garment set double hanger may be more readily understood by one skilled in the art with reference being had to the following detailed description of several embodiments thereof, taken in conjunction with the accompanying drawings wherein like elements are designated by identical reference numerals throughout the several views, and in which:

Figure 1 is a front elevational view of one embodiment of a garment set double hanger pursuant to the present invention which includes a top hanger hook, a top garment hanger depending from the top hanger hook, and a bottom garment hanger de-

pending from the top garment hanger.

Figure 2 is a sectional view through the top and bottom garment hangers of Figure 1, taken along sectional arrows 2-2 in Figure 1, and particularly illustrates details of the construction of the frame members of the top and bottom garment hangers of the garment set hanger.

Figure 3 illustrates a preferred method of hanging and displaying a pair of garments such as sports shirts on a front facing garment set double hanger of the present invention wherein the pair of front facing garments are tiered from front to rear with the bottom front garment being hung and displayed on the bottom hanger in front of the top rear garment which is hung and displayed on the top hanger.

DETAILED DESCRIPTION OF THE INVENTION

[0009] The garment set double hanger of the present invention provides a rather large garment hanger designed to display a matched or coordinated set of top garments, as might be offered in a promotional sale, while displaying the garments without unduly obstructing the view of either garment. In that regard, one designed embodiment of the garment set double hanger had a width of 41 centimeters, a total height of 31.5 centimeters, and a vertically extending and elongated rectangular frame member of 6.2 by 1.2 centimeters, with the lower hanger being mounted approximately 10.2 centimeters below the top hanger. The above defined dimensions are of one designed embodiment, and other embodiments with different dimensions are equally within the scope of the present invention.

[0010] With such a large garment set hanger structure, designed to provide full support and visibility for the matched set of garments, the garment set hanger must be designed with a sturdy structural design, as described hereinbelow.

[0011] Figure 1 is a front elevational view of one embodiment of a garment set double hanger pursuant to the present invention which includes a top hanger hook 12, a top garment hanger 14 depending from the top hanger hook, and a bottom garment hanger 16 depending from the top garment hanger.

[0012] The garment set double hanger includes a top centrally located hanger means, such as an inverted U shaped hanger hook 12 or an enlarged knob or a cross member structure designed to engage a slot, by which the garment hanger is suspended when the hanger means engages and hangs from a support such as a clothes rack. The top centrally located inverted U shaped hanger hook might or might not incorporate a releasable indicator tag to indicate to a consumer a size or other descriptive detail of a garment attached to a neck portion by an attachment means 18 or to a top portion of the top hanger hook, or to both the neck and top

portions.

[0013] The hanger hook has a general I-beam construction wherein the hanger hook is provided with an enlarged thickness peripheral flange 20 extending entirely around the outermost edge of the hanger hook, with opposite peripheral side flanges 20 being connected by a reduced thickness central web 22. The peripheral flange also extends around the inner peripheral edge of the attachment means 18 for a releasable size indicator. The flange has an enlarged thickness which is substantially greater than the reduced thickness of the central vertical web of the hanger hook and reinforces the construction strength of the garment hanger hook.

[0014] The embodiment shown in Figures 1 and 2 is designed with an attachment means 18 to receive a releasable indicator at a neck portion between the top hanger hook 12 and the top garment hanger 14 of the garment set hanger. The releasable indicator is attached to a rounded triangular, reduced thickness, indicator receiving portion which terminates near a curved edge flange 24 formed where it joins the peripheral flange 20 around the hanger hook and also around the top hanger 14. A small triangular locking tab 26 is centrally located in the reduced thickness portion, and has a wedge shaped side profile, increasing in thickness in the direction of insertion of a releasable indicator thereon and terminating at edge 28, to secure a releasable indicator in place on the reduced thickness portion, the structure and details of which are described in greater detail in U.S. Patent 6,264,075.

[0015] Figure 2 is a sectional view through the top and bottom garment hangers of Figure 1, taken along sectional arrows 2-2 in Figure 1, and particularly illustrates details of the construction of the frame members of the top and bottom hangers of the garment set double hanger.

[0016] The enlarged thickness flange 20 around the inverted U shaped hanger hook 12 extends integrally into an enlarged thickness flange 20 around the top hanger 14, which is formed centrally below the inverted U shaped hanger hook. The top hanger is designed to support and display a first top garment of the matched set of garments and has a central body portion 30 and coplanar left and right downwardly sloping arms 32, which are symmetrically identical, extending from the central body member in left and right lateral directions. A garment/strap receiving opening and slot 34 is defined in the top of each of the left and right arms as is generally known in the art.

[0017] The central body portion defines an enlarged width neck portion 36, such that a collar of the first garment is designed to fit around the enlarged width neck portion, with the shoulder portions of the first garment being supported on the left and right downwardly sloping arms. The left and right downwardly sloping arms terminate in downturned distal rounded ends 38 to facilitate mounting of the first garment on the top hanger.

[0018] A vertically extending and elongated rectangu-

lar frame member 40 extends vertically downwardly from the central body portion of the top hanger to the bottom hanger 16 which is centrally suspended below the top hanger and is designed to support a second garment of the matched set of garments.

[0019] The top hanger 14 and the vertical rectangular frame member 40 have a general I beam construction similar to the hanger hook 12 wherein the top hanger body and the rectangular frame member are provided with an enlarged thickness peripheral flange 20 extending around their peripheral edges with opposite peripheral side flanges being connected by a reduced thickness central web 22. The flange has an enlarged thickness which is substantially greater than the reduced thickness of the central vertical web which reinforces the construction strengths of the top hanger and the vertical rectangular frame member.

[0020] The enlarged thickness flange 20 extends entirely around the left and right downwardly sloping arms 32, including the garment/strap receiving opening and slot 34. The enlarged thickness flange 20 extends along a common boundary 42 with the central body portion, and at the location where the enlarged width neck portion 36 of the central body curves into the left and right downwardly sloping arms, the enlarged thickness flange continues straight across the common boundary 42 and joins the enlarged thickness flange beneath the central body portion and the enlarged flange beneath the downwardly sloped arm.

[0021] The enlarged thickness flange 20 extends substantially entirely around the central body portion 30 of the top hanger including the common boundary 32, with the exception of an opening 44 into the vertical rectangular frame member 40.

[0022] The bottom hanger 16 is a substantial duplicate of the top hanger, and is designed to support and display a second garment of the matched set of garments. The enlarged thickness flange 20 around the elongated rectangular frame member 40 extends integrally into an enlarged thickness flange around the bottom hanger 16 formed centrally below the top hanger 14. The bottom hanger has a central body portion 50 and coplanar left and right downwardly sloping arms 52, which are symmetrically identical, extending from the central body member in left and right lateral directions. A garment/strap receiving opening and slot 54 is defined in the top of each of the left and right arms as is generally known in the art.

[0023] The central body portion defines an enlarged width neck portion 56, such that a collar of the second garment is designed to fit around the enlarged width neck portion, with the shoulder portions of the second garment being supported on the left and right downwardly sloping arms. The left and right downwardly sloping arms terminate in downturned distal rounded ends 58 to facilitate mounting of the second garment on the bottom hanger.

[0024] The bottom hanger 16 has a general I beam

construction similar to the top hanger 14 and is provided with an enlarged thickness peripheral flange 20 extending around its peripheral edges with opposite peripheral side flanges being connected by a reduced thickness central web 22. The flange has an enlarged thickness, which is substantially greater than the reduced thickness of the central vertical web, which reinforces the construction strength of the bottom hanger.

[0025] The enlarged thickness flange 20 extends entirely around the left and right downwardly sloping arms 52, including the garment/strap receiving opening and slot 54. The enlarged thickness flange extends along a common boundary 62 with the central body portion, and at the location where the enlarged width neck portion 56 of the central body curves into the left and right downwardly sloping arms, the enlarged thickness flange continues straight across the common boundary 62 and joins the enlarged thickness flange beneath the central body portion and the enlarged flange beneath the downwardly sloped arm.

[0026] The enlarged thickness flange extends substantially entirely around the central body portion 50 of the top hanger including the common boundary 62, with the exception of an opening 64 into the vertical rectangular frame member 40.

[0027] As illustrated in Figures 1 and 2, to maximize strength while using a minimum amount of plastic material, the central hanger hook, the top garment hanger, the elongated vertically extending frame member connecting the top and bottom garment hangers, and the bottom garment hanger are constructed with an I shaped cross section having a first peripheral flange connected by a central vertically extending web to a second opposed peripheral flange.

[0028] However, in alternative embodiments the different components of the garment set double hanger may be constructed with a curved M-shaped cross-section, an E-shaped cross-section, a C-shaped cross-section, or any suitable cross-section which may improve the strength to weight ratio for particular applications to resist flexing due to the weight of the garments hanging from the garment set double hanger of the present invention and to assist in maintaining the hanger upright when in use.

[0029] The garment hanger hook, top hanger, rectangular frame member and bottom hanger are preferably formed as one integrally molded plastic piece from a suitable plastic material as is known in the art.

[0030] Figure 3 illustrates a preferred method of hanging and displaying a pair of garments such as sports shirts on a front facing garment set double hanger of the present invention wherein the pair of front facing garments are tiered from front to rear with the bottom front garment being hung and displayed on the bottom hanger in front of the top rear garment which is hung and displayed on the top hanger.

[0031] The method of hanging the garments tiered from front to rear as shown in Figure 3 preferably in-

cludes inserting a first arm of the top hanger of the front facing double hanger into a first arm of the front facing top garment until the neck of the top garment abuts against the neck of the top hanger, with the bottom hanger being positioned in front of the top garment, and then displacing, and if necessary stretching, the neck of the top garment to enable a second arm of the top hanger to be inserted into a second arm of the top garment, such that the top garment is hung on the top hanger, with the bottom hanger being positioned in front of the top garment, and then inserting a first arm of the bottom hanger into a first arm of a front facing bottom garment until the neck of the bottom garment abuts against the neck of the bottom hanger, with the bottom hanger being positioned in front of the top garment, and then displacing, and if necessary stretching, the neck of the bottom garment to enable a second arm of the bottom hanger to be inserted into a second arm of the bottom garment, such that the bottom garment is hung on the bottom hanger. The method results in the front facing bottom garment being hung and displayed in front of and beneath the front facing top garment on the front facing double hanger.

[0032] A pair of garments could also be hung on a front facing double hanger of the present invention wherein the pair of front facing garments are tiered from front to rear with the top front garment being hung and displayed on the top hanger in front of the bottom rear garment which is hung and displayed on the bottom hanger.

[0033] The method of hanging the front facing garments on the front facing double hanger tiered from front to rear with the top front garment being hung and displayed on the top hanger in front of the bottom rear garment which is hung and displayed on the bottom hanger preferably includes inserting a first arm of the top hanger of a rear facing double hanger into a first arm of a rear facing top garment until the neck of the top garment abuts against the neck of the top hanger, with the bottom hanger being positioned in front of the top garment, and then displacing, and if necessary stretching, the neck of the top garment to enable a second arm of the top hanger to be inserted into a second arm of the top garment, such that the rear facing top garment is hung on the top hanger of the rear facing double hanger, with the bottom hanger being positioned in front of the top garment, and then inserting a first arm of the bottom hanger into a first arm of a rear facing bottom garment until the neck of the bottom garment abuts against the neck of the bottom hanger, with the bottom hanger being positioned in front of the top garment, and then displacing, and if necessary stretching, the neck of the bottom garment to enable a second arm of the bottom hanger to be inserted into a second arm of the bottom garment, such that the bottom garment is hung on the bottom hanger, with the bottom garment being hung in front of and beneath the top garment, and then turning around the double garment hanger and hung garments, such that the front facing

top garment is hung and displayed above the front facing bottom garment on the front facing double hanger.

[0034] While several embodiments and variations of the present invention for a garment set double hanger and method of hanging are described in detail herein, it should be apparent that the disclosure and teachings of the present invention will suggest many alternative designs to those skilled in the art.

Claims

1. A garment set double hanger for hanging and displaying a matched set of garments comprising:

a top hanger means from which the garment hanger is suspended when the hanger means engages and hangs from a support;

a top hanger suspended below the hanger means and designed to support and display a top garment of the matched set of garments and having a central body portion and left and right downwardly sloping arms extending in left and right opposite lateral directions from the central body portion to left and right distal ends; a vertical rectangular frame member extending vertically downwardly from the central body portion of the top hanger,

a bottom hanger suspended by the vertical frame member centrally below the top hanger and designed to support and display a bottom garment of the matched set of garments and having a central body portion and left and right downwardly sloping arms extending in left and right opposite lateral directions from the central body portion to left and right distal ends.

2. The garment set double hanger of claim 1, wherein the top hanger means comprises a hanger hook which has an I-beam construction wherein the hanger hook is provided with an enlarged thickness peripheral flange extending around the peripheral edge of the hanger hook, with opposite peripheral flanges being connected by a reduced thickness central web.
3. The garment set double hanger of claim 2, wherein the central body portion of the top hanger defines an enlarged width neck portion, such that a collar of the top garment is designed to fit around the enlarged width neck portion, with shoulder portions of the top garment being supported on the left and right downwardly sloping arms of the top hanger.
4. The garment set double hanger of claim 3, wherein the enlarged thickness peripheral flange around the hanger hook extends integrally into an enlarged thickness peripheral flange around the top hanger.

5. The garment set double hanger of claim 4, wherein the enlarged thickness peripheral flange extends entirely around the left and right downwardly sloping arms of the top hanger, and at a location in the top hanger where the enlarged width neck portion of the central body portion curves into the left and right downwardly sloping arms, the enlarged thickness flange continues across a common boundary of the left and right downwardly sloping arms with the central body portion and joins the enlarged thickness peripheral flange beneath the central body portion and the enlarged thickness peripheral flange beneath the downwardly sloping arms. 5 10
6. The garment set double hanger of claim 5, wherein the enlarged thickness flange extends substantially entirely around the central body portion of the top hanger including the common boundaries, with the exception of an opening of the enlarged thickness peripheral flange into the vertical rectangular frame member, and extends along opposite vertical peripheral sides of the vertical rectangular frame member. 15 20
7. The garment set double hanger of claim 6, wherein the central body portion of the bottom hanger defines an enlarged width neck portion, such that a collar of the bottom garment is designed to fit around the enlarged width neck portion, with shoulder portions of the bottom garment being supported on the left and right downwardly sloping arms of the bottom hanger. 25 30
8. The garment set double hanger of claim 7, wherein the enlarged thickness peripheral flange on opposite vertical peripheral sides of the vertical frame member extends integrally into an enlarged thickness peripheral flange around the bottom hanger. 35
9. The garment set double hanger of claim 8, wherein the enlarged thickness peripheral flange extends entirely around the left and right downwardly sloping arms of the bottom hanger, and at a location in the bottom hanger where the enlarged width neck portion of the central body portion curves into the left and right downwardly sloping arms, the enlarged thickness flange continues across a common boundary of the left and right downwardly sloping arms with the central body portion and joins the enlarged thickness peripheral flange beneath the central body portion and the enlarged thickness peripheral flange beneath the downwardly sloping arms. 40 45 50
10. The garment set double hanger of claim 9, wherein the enlarged thickness flange extends substantially entirely around the central body portion of the bottom hanger including the common boundaries, with the exception of an opening of the enlarged thickness peripheral flange into the vertical rectangular frame member, and extends into the enlarged thickness flange on opposite vertical peripheral sides of the vertical rectangular frame member. 55
11. The garment set double hanger of claim 10, wherein the top hanger means top hanger, vertical frame member, and bottom hanger are formed as one integrally molded plastic piece.
12. A method for hanging and displaying a pair of garments on a double hanger comprising a top hanger means from which the garment hanger is suspended when the hanger means engages and hangs from a support, a top hanger suspended below the hanger means and designed to support and display a top garment of the matched set of garments and having a top neck, a central body portion and left and right downwardly sloping arms extending in left and right opposite lateral directions from the central body portion to left and right distal ends, a vertical rectangular frame member extending vertically downwardly from the central body portion of the top hanger, and a bottom hanger suspended by the vertical frame member centrally below the top hanger and designed to support and display a bottom garment of the matched set of garments and having a top neck, a central body portion and left and right downwardly sloping arms extending in left and right opposite lateral directions from the central body portion to left and right distal ends, the method hanging a pair of front facing garments tiered from front to rear with the bottom front garment being hung and displayed on the bottom hanger in front of the top rear garment which is hung and displayed on the top hanger and comprising:
 - inserting a first arm of the top hanger of the front facing double hanger into a first arm of the front facing top garment until the neck of the top garment abuts against the neck of the top hanger, with the bottom hanger being positioned in front of the top garment;
 - displacing the neck of the top garment to enable a second arm of the top hanger to be inserted into a second arm of the top garment, such that the top garment is hung on the top hanger, with the bottom hanger being positioned in front of the top garment;
 - inserting a first arm of the bottom hanger into a first arm of a front facing bottom garment until the neck of the bottom garment abuts against the neck of the bottom hanger, with the bottom hanger being positioned in front of the top garment;
 - displacing the neck of the bottom garment to enable a second arm of the bottom hanger to be inserted into a second arm of the bottom garment;

ment, such that the bottom garment is hung on the bottom hanger;

whereby the front facing bottom garment is hung and displayed in front of and beneath the front facing top garment on the front facing double hanger.

13. The method of claim 12, wherein the step of displacing includes stretching the neck of the top garment to enable a second arm of the top hanger to be inserted into a second arm of the top garment, and the step of displacing includes stretching the neck of the bottom garment to enable a second arm of the bottom hanger to be inserted into a second arm of the bottom garment.
14. The method of claim 13, for mounting a matched set of top garments.
15. The method of claim 13, for mounting a coordinated set of top garments.
16. A method for hanging and displaying a pair of garments on a double hanger comprising a top hanger means from which the garment hanger is suspended when the hanger means engages and hangs from a support, a top hanger suspended below the hanger means and designed to support and display a top garment of the matched set of garments and having a top neck, a central body portion and left and right downwardly sloping arms extending in left and right opposite lateral directions from the central body portion to left and right distal ends, a vertical rectangular frame member extending vertically downwardly from the central body portion of the top hanger, and a bottom hanger suspended by the vertical frame member centrally below the top hanger and designed to support and display a bottom garment of the matched set of garments and having a top neck, a central body portion and left and right downwardly sloping arms extending in left and right opposite lateral directions from the central body portion to left and right distal ends, the method hanging a pair of front facing garments tiered from front to rear with the top front garment being hung and displayed on the top hanger in front of the bottom rear garment which is hung and displayed on the bottom hanger and comprising:

inserting a first arm of the top hanger of a rear facing double hanger into a first arm of a rear facing top garment until the neck of the top garment abuts against the neck of the top hanger, with the bottom hanger being positioned in front of the top garment; a displacing the neck of the top garment to enable a second arm of the top hanger to be inserted

into a second arm of the top garment, such that the rear facing top garment is hung on the top hanger of the rear facing double hanger, with the bottom hanger being positioned in front of the top garment;

inserting a first arm of the bottom hanger into a first arm of a rear facing bottom garment until the neck of the bottom garment abuts against the neck of the bottom hanger, with the bottom hanger being positioned in front of the top garment;

displacing the neck of the bottom garment to enable a second arm of the bottom hanger to be inserted into a second arm of the bottom garment, such that the bottom garment is hung on the bottom hanger, with the bottom garment being hung in front of and beneath the top garment;

turning around the double garment hanger and hung garments, such that the front facing top garment is hung and displayed above and in front of the front facing bottom garment on the front facing double hanger.

17. The method of claim 16, wherein the step of displacing includes stretching the neck of the top garment to enable a second arm of the top hanger to be inserted into a second arm of the top garment, and the step of displacing includes stretching the neck of the bottom garment to enable a second arm of the bottom hanger to be inserted into a second arm of the bottom garment.
18. The method of claim 16, for mounting a matched set of top garments.
19. The method of claim 16, for mounting a coordinated set of top garments.

16

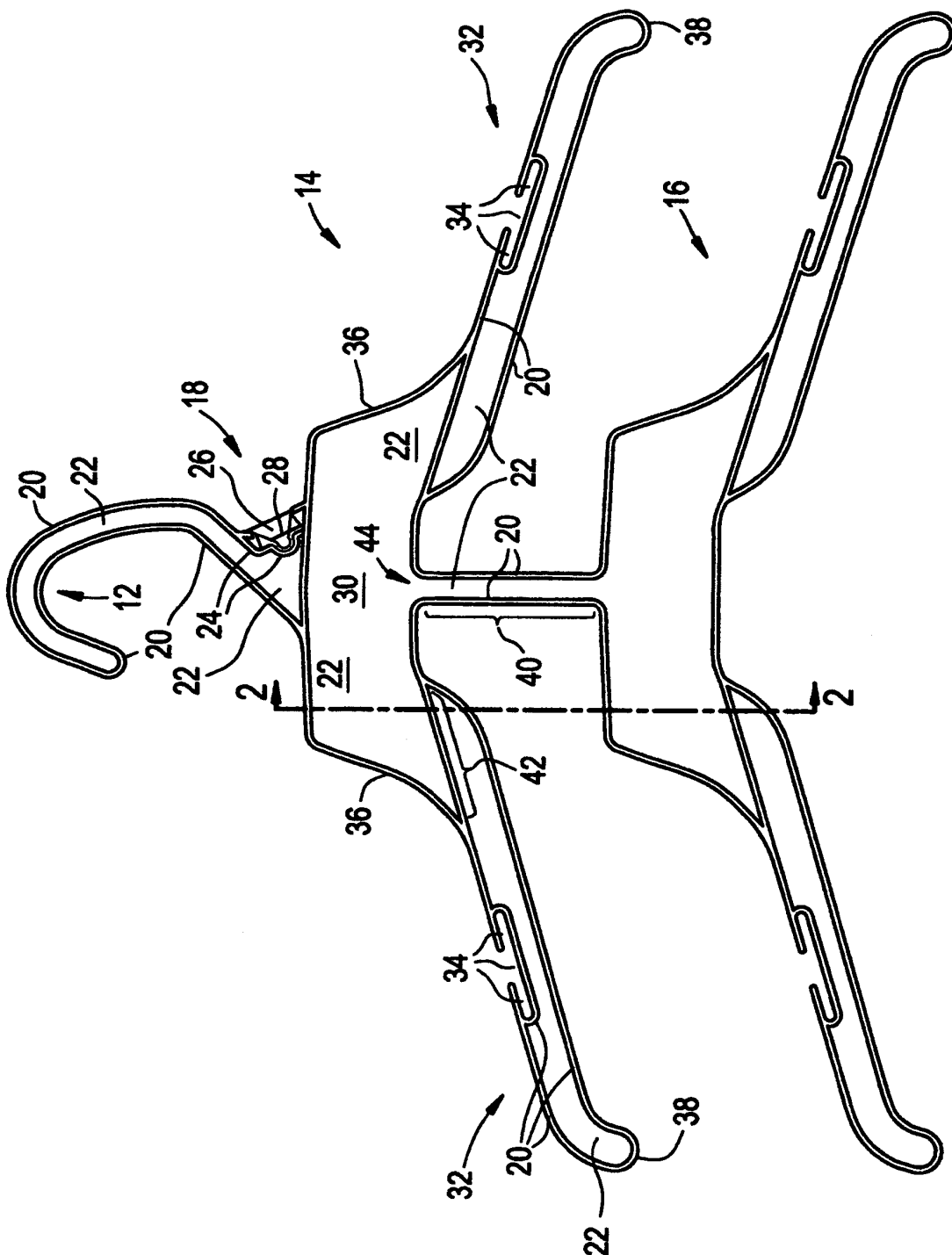


FIG. 2

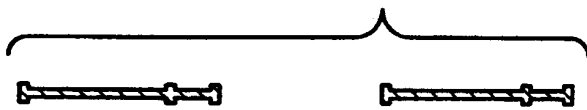


FIG. 3





European Patent
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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	FR 2 351 633 A (MOFP) 16 December 1977 (1977-12-16)	1-4, 12-19	A47G25/18
Y	* the whole document *	5-11	
Y	US 4 438 874 A (ZUCKERMAN ET AL.) 27 March 1984 (1984-03-27) * figures *	5-11	
X	US 6 209 763 B1 (RAHMEY) 3 April 2001 (2001-04-03) * figures 10,6 *	1,12-19	
A	FR 2 588 175 A (HUTT) 10 April 1987 (1987-04-10) * page 2, line 1 - line 5; figure 1 *	1,12,16	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47G
Place of search		Date of completion of the search	Examiner
THE HAGUE		25 May 2004	Beugeling, G.L.H.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 00 7341

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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25-05-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
FR 2351633	A	16-12-1977	FR 2351633 A1	16-12-1977
US 4438874	A	27-03-1984	NONE	
US 6209763	B1	03-04-2001	US 2001015363 A1	23-08-2001
FR 2588175	A	10-04-1987	FR 2588175 A1	10-04-1987

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82