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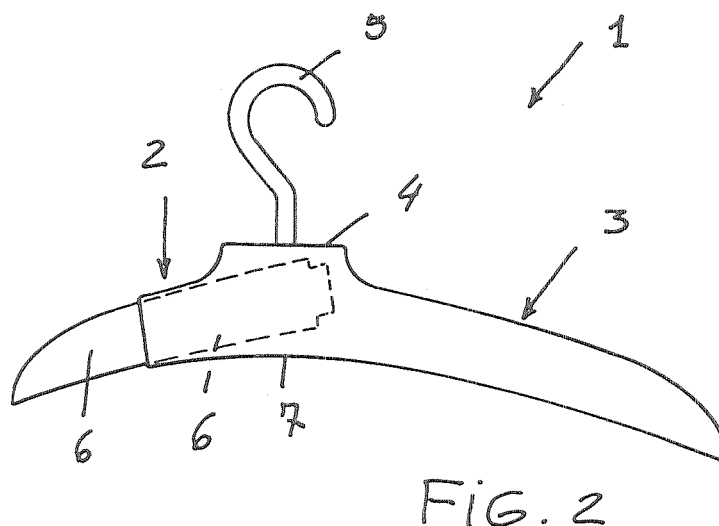
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(54) **Variable geometry coat hanger construction**

(57) A variable geometry coat hanger comprises a pair of hanger coat arms (2,3) coupled to a central body (4) including a hook element (5), the coat hanger being **characterized in that** at least a arm is geometrically variable to allow the coat hanger to assume at least two

positions, that is a regular use position, in which the two coat hanger arms extends in opposite direction from the central hanger body, and a folded or collapsed position, in which at least a coat hanger arm does not fully extend in a direction opposite to the other coat hanger arm.



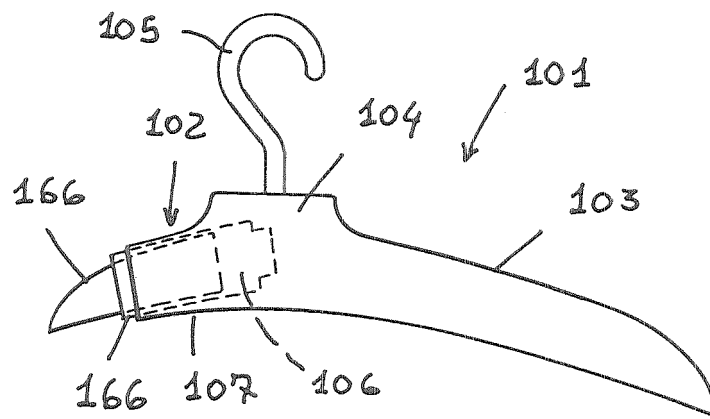


FIG. 4

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a variable geometry coat hanger construction.

[0002] As is known, by using conventional coat hanger, it is very difficult, or impossible, to hang and remove a cloth article which does not have a sufficiently large neck opening.

[0003] The sole method for using conventional coat hangers with a cloth article having only the neck opening, is that of threading and unthreading the coat hanger from the bottom of the article, by performing a rather complex operation.

[0004] Moreover, it is difficult to remove a cloth article supported by a coat hanger as, for example, it is arranged in a wardrobe.

SUMMARY OF THE INVENTION

[0005] Accordingly, the aim of the present invention is to provide a variable geometry coat hanger construction which can be easily used with any desired type of garment or cloth article.

[0006] Within the scope of the above mentioned aim, a main object of the invention is to provide such a coat hanger construction allowing to quickly and easily support a cloth article.

[0007] Yet another object of the present invention is to provide such a coat hanger construction which may be easily introduced into the neck portion of a cloth article or garment, as it is not possible, or it is not desired, to open the front or rear part of the garment.

[0008] Another object of the present invention is to provide such a coat hanger construction which, owing to its specifically designed constructional features, is very reliable and safe in operation.

[0009] Yet another object of the present invention is to provide such a coat hanger construction which can be easily made and which, moreover, is very competitive from a mere economic standpoint.

[0010] According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a variable geometry coat hanger construction comprising a pair of hanger arms coupled to a central body including a hook element, said construction being **characterized in that** at least one of said arms is geometrically variable thereby allowing said construction to assume at least two positions, a regular use position, in which the two hanger arms extend in opposite directions with respect to a hanger central body, and a folded or collapsed position, in which at least one said arm does not fully extend in a direction opposite to the other arm.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of the invention, which is illustrated, by way of an indicative, but not limitative, example in the accompanying drawings, where:

Figure 1 is a front elevation view of the coat hanger construction according to a first embodiment thereof; Figure 2 is a elevation view similar to figure 1, but showing the coat hanger construction with a withdrawn arm thereof;

Figure 3 is a further elevation front view of a second embodiment of the coat hanger construction according to the invention;

Figure 4 is a front elevation view similar to figure 2, but showing the coat hanger construction with a withdrawn arm thereof;

Figure 5 is a further front elevation view of the coat hanger construction according to a third embodiment the invention;

Figure 6 is a front elevation view similar to figure 5 but showing the coat hanger construction with a turned arm thereof;

Figure 7 is yet another front elevation view of the coat hanger construction according to a fourth embodiment thereof;

Figure 8 is a front elevation view similar to figure 7 but showing the coat hanger construction with closed arms;

Figure 9 is yet another front elevation view of the coat hanger construction according to fifth embodiment of the invention;

Figure 10 is a front elevation view similar to figure 9 but showing the coat hanger construction with a partially rotated or turned arm;

Figure 11 is a side view of the coat hanger shown in figure 9;

Figure 12 is a side view of the coat hanger construction of the preceding figures, with a turned or rotated arm as shown in figure 10;

Figure 13 is yet another front elevation view of a sixth embodiment of the coat hanger construction according to the invention;

Figure 14 is a view similar to figure 13, but showing the coat hanger construction with a withdrawn arm thereof;

and

Figures 15 to 18 show yet another modified embodiment of the coat hanger construction according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] With reference to the number references of the

above mentioned figures, the coat hanger construction, according to a first embodiment of the invention, has been generally indicated by the reference number 1 and comprises a pair of arms 2 and 3 coupled to a central body 4 including a hook element 5.

[0013] According to the present invention, the arm 2 comprises an insert 6 which is telescopically engaged in the side body 7 of the arm 2, so as to define at least two positions, that is an extended position, shown in figure 1, and a withdrawn or retracted position, shown in figure 2.

[0014] Figures 3 and 4 show a modified embodiment of the invention, generally indicated by the reference number 101, comprising a pair of arms 102 and 103 coupled to a central body 104 including a hook element 105.

[0015] With respect to the preceding construction, the arm 102 of this second embodiment of the invention comprises two telescopic inserts, respectively indicated by the reference 106 and 166, which can be telescopically engaged in the side body 107 to define either a withdrawn or retracted position or an extended position of the arm 102.

[0016] Figures 5 and 6 show a third embodiment of the invention coat hanger construction, indicated by the reference number 201, and comprising a pair of arms 202 and 203.

[0017] The arm 203 comprises a central body 204 including a hook element 205.

[0018] According to the present invention, the arm 202 is pivoted to the central body 204 so as to define at least two positions, an extended position, shown in figure 5, and a turned or rotated position, shown in figure 6, in which the arm 202 is substantially parallel to the arm 203.

[0019] Figures 7 and 8 show a fourth embodiment of the inventive coat hanger construction, generally indicated by the reference number 301, and comprising a pair of arms 302 and 303.

[0020] Each arm is pivoted to a central body 304 including a hook element 305.

[0021] According to the present invention, the arms 302 and 303 are adapted to turn or rotate with respect to the central body 304 so as to define at least two positions, an extended position, shown in figure 7, and a turned or rotated position, shown in figure 8, in which said arms are substantially parallel to one another.

[0022] Figures 9 to 12 show a fifth embodiment of the coat hanger construction according to the invention, generally indicated by the reference number 401, and comprising a pair of arms 402 and 403.

[0023] The arm 403 comprises a central body 404 including a hook element 405.

[0024] According to the present invention, the arm 402 may swing with respect to the central body 404 so as to define at least two positions, an extended position, shown in figures 9 and 11, and a turned or rotated position, shown in figures 10 and 12, in which the arm 402 is substantially parallel to the arm 403.

[0025] According to the above embodiment, the arm

402 rotates with respect to the central body 404 about an offset axis 406 and comprises a peg 407 which is normally arranged, that is in the extended position, in the center of the central body 404 in a dedicated recess thereby allowing the arm to be locked in its extended position.

[0026] By rotating the arm, in order to cause the coat hanger to be folded, the peg 407 will resiliently deform the central body 404 for exiting its recess.

[0027] Figures 13 and 14 show a sixth embodiment of the coat hanger construction, generally indicated by the reference number 501, comprising a pair of arms 502 and 503, coupled to a central body 504 including a hook element 505.

[0028] According to this embodiment, the arm 502 comprises an insert 506 which is telescopically engaged in the side body 507 of the arm 502, so as to define at least two positions, that is an extended position, shown in figure 13, and a withdrawn position, shown in figure 14.

[0029] For guiding the insert 506, a guide element 508 is provided in the side body 507, said guide element 508 also extending longitudinally in said side body 507.

[0030] It has been found that the invention fully achieves the intended aim and objects.

[0031] In fact, the invention has provided a coat hanger having a variable geometry, thereby allowing to quickly and easily remove any cloth articles supported by said coat hanger.

[0032] Figures 15, 16, 17, 18 illustrates modified embodiments of figures 5, 6, 7, and 8, in which to the coat hanger construction a compression or pressure spring 420 has been added, to urge the arms 402 and 403 of the coat hanger construction upward, thereby facilitating the arms in returning to their cloth article supporting extended position.

[0033] The coat hanger construction 401 shown in these figures comprises a central push-button 407, which may be pressed to unlock the two arms 402 and 403, thereby the coat hanger construction will tend to closed, being hindered or stopped by the spring 420.

[0034] By applying a side pressure on the arms 402 and 403, it is possible to achieve a maximally turned or rotated position, where the two arms nearly contact one another.

[0035] That same central unlocking device 407 will lock the arms 402 and 403 in this position, thereby allowing a new cloth article to be easily engaged, while reducing the size of the coat hanger for an easy transport thereof.

[0036] By pressing again the central push-button 407, the arms 402 and 403 of the coat hanger 401 will be opened, owing to the provision of the spring 420 and will return substantially to their natural position: it will be necessary for this operation to manually aid a full closure with a snap lock engagement of the central push-button 407.

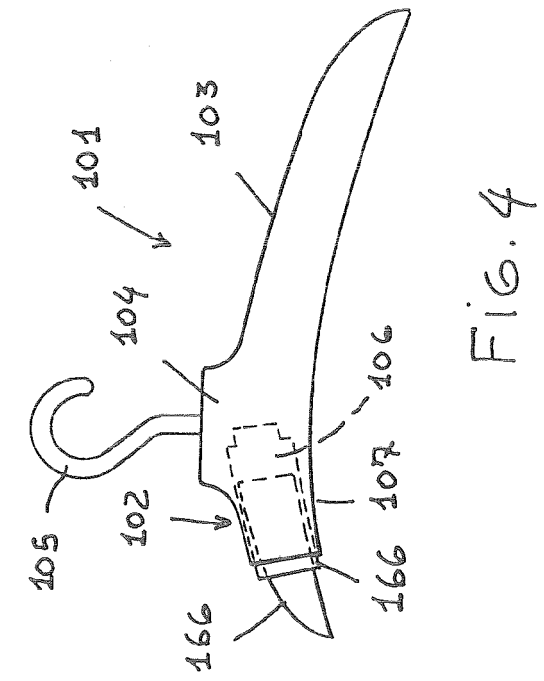
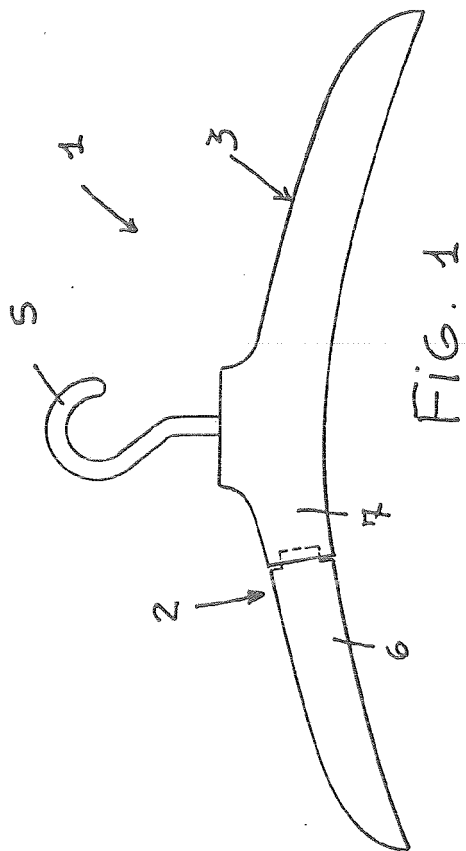
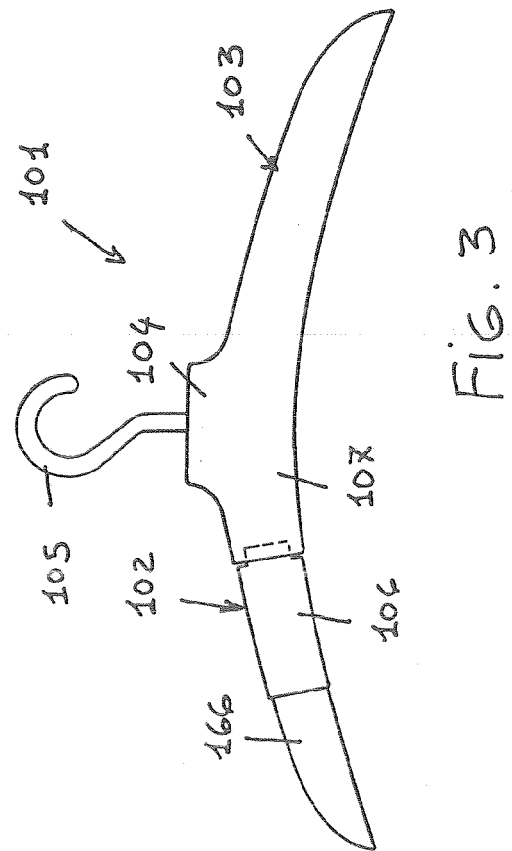
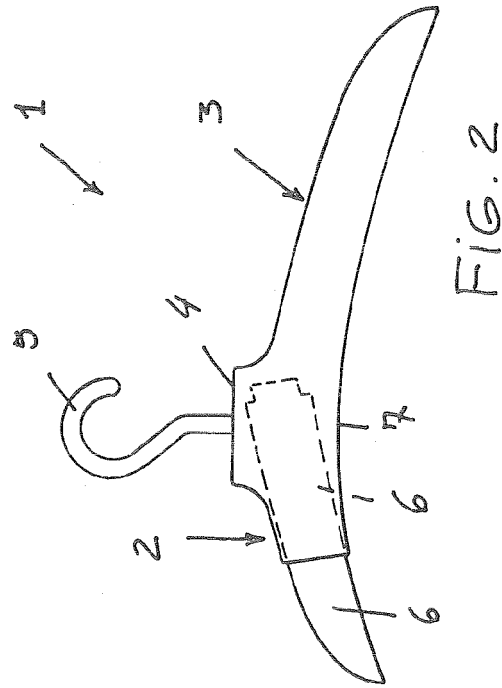
[0037] A further advantage of the variable geometry coat hanger construction according to the present invention is that it can be easily transported and moreover, in

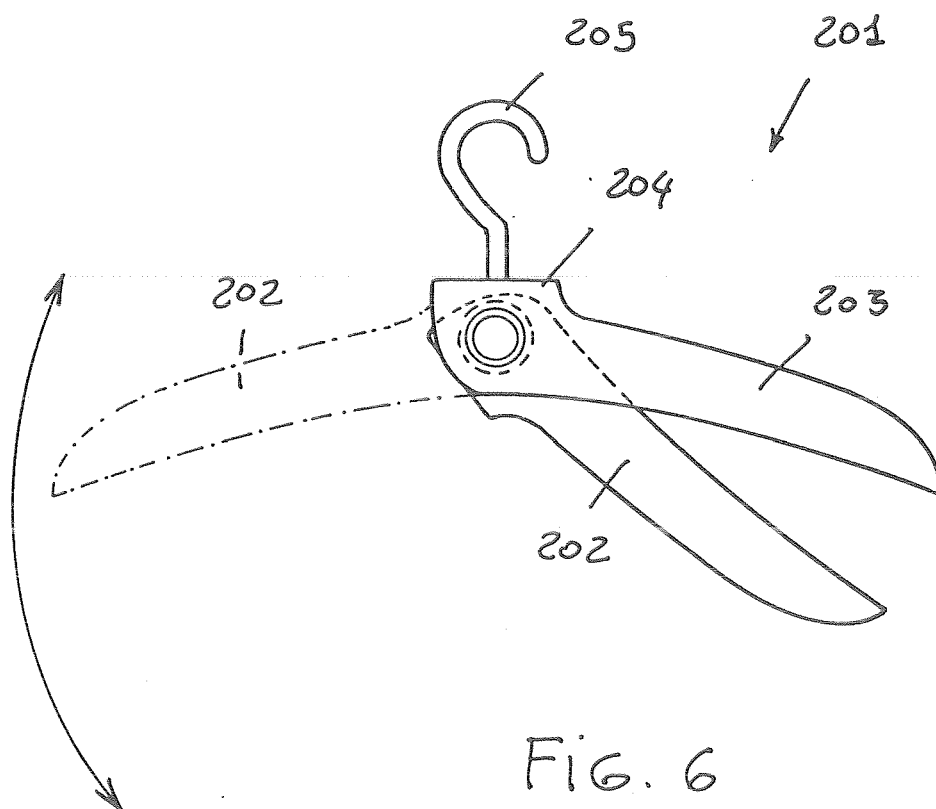
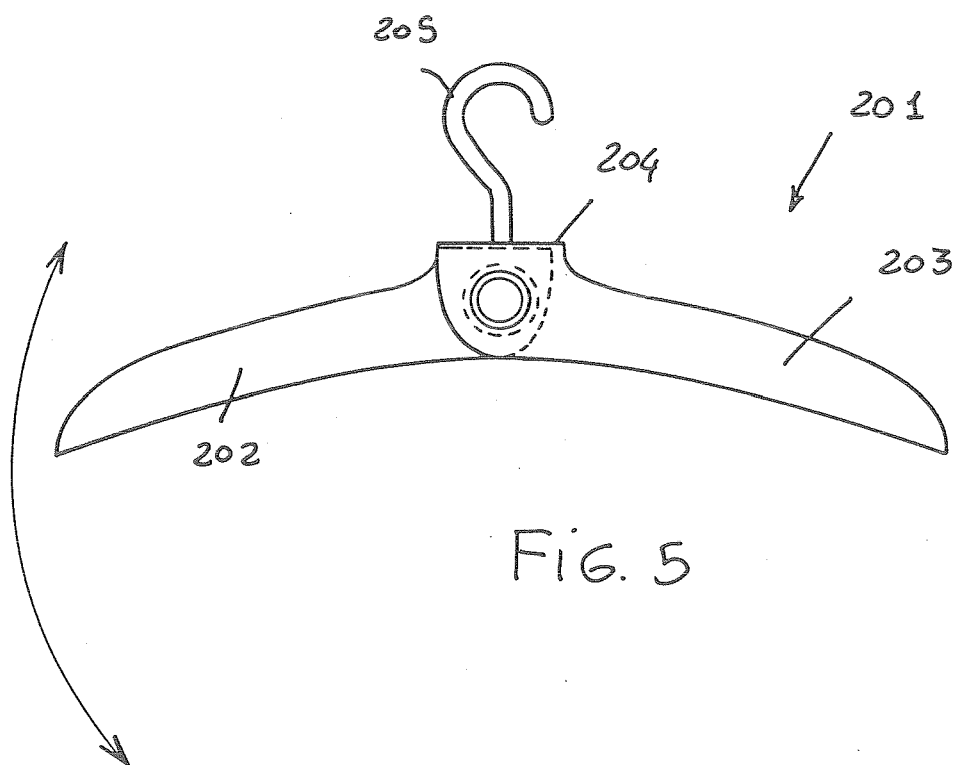
its folded position, it can be easily stored in a bag or the like.

[0038] In practicing the invention, the used materials, as well as the contingent size and shapes, can be any, according to requirements.

Claims

1. A variable geometry coat hanger construction comprising a pair of hanger arms coupled to a central body including a hook element, said construction being **characterized in that** at least one of said arms is geometrically variable thereby allowing said construction to assume at least two positions, a regular use position, in which the two hanger arms extend in opposite directions with respect to a hanger central body, and a folded or collapsed position, in which at least one said arm does not fully extend in a direction opposite to the other arm.
2. A coat hanger construction, according to claim 1, **characterized in that** one of said arms comprises an insert element telescopically engaged in a side body of said arm, so as to define at least two positions, an extended position and a withdrawn position.
3. A coat hanger construction, according to claim 1 or 2, **characterized in that** one of said arms comprises two telescopic insert elements, which can be telescopically engaged in a side body to define a withdrawn or extended position of said arm.
4. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** one of said arms comprises said central body including said hook element, the other of said arms being pivoted to the central body of the first arm so as to define at least two positions, an extended position and a turned position, thereat said one arm is substantially parallel to said other arm.
5. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** each said arm is pivoted in said central body, said arms being adapted to rotate with respect to said central body to define at least two positions, an extended position and turned position, thereat said arms are substantially parallel to one another.
6. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** one of said arms comprises said central body including said hook element, the other arm being adapted to swing with respect to said central body thereby defining at least two positions, an extended position and a turned position, thereat one said arm is substantially parallel to the other arm, the second arm turning with respect to said central body of the first arm about an offset axis and including a peg which is normally engaged, that is at its extended position, in a recess of said central body to allow said arm to be locked in its extended position, said second arm, as it is rotatively driven, for collapsing or folding said coat hanger construction, causing said peg to resiliently deform the central body of said first arm to exit said recess.
7. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** a said arm comprises an insert element telescopically engaged in a side body of said arm thereby defining at least two positions: an extended position and a withdrawn position; to guide said insert element, a guide element being arranged in said side body and extending longitudinally in said body.
8. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** said coat hanger construction comprises a pressure spring, urging the coat hanger arms upward while facilitating said arms to return to their extended supporting position for supporting a cloth or garment article.
9. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** said coat hanger construction comprises a central push-button body which, as it is pressed, allows the two arms of the coat hanger to be unlocked thereby closing said coat hanger while being braked by a spring.
10. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** said coat hanger construction comprises rotary arms which can be pressed to provide a maximum rotary movement to cause said arm to contact one another, the same central unlocking locking said arms in this position while facilitating an engagement of a further garment article, and reducing the coat hanger size to be easily transported.
11. A coat hanger construction, according to one or more of the preceding claims, **characterized in that**, by pressing again said central push-button, said coat hanger arms are opened, aided by said spring, to return to their natural position, a full closure of the coat hanger being manually aided by causing said central push-button to be snap disengaged.
12. A coat hanger construction, according to one or more of the preceding claims, **characterized in that** said coat hanger construction comprises one or more of the disclosed and/or illustrated features.





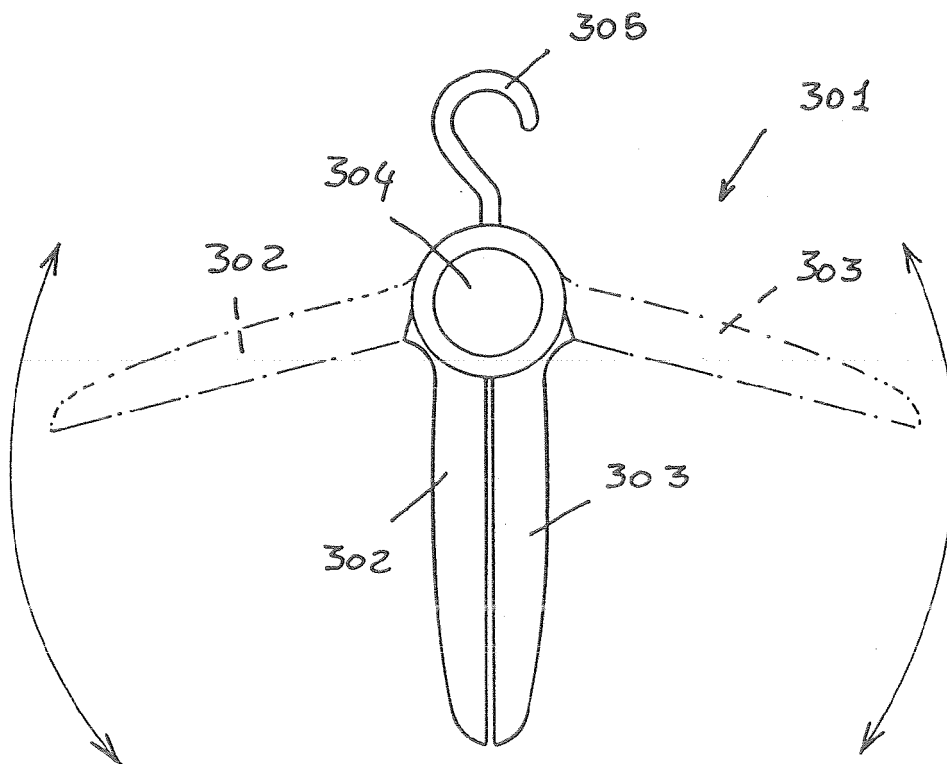
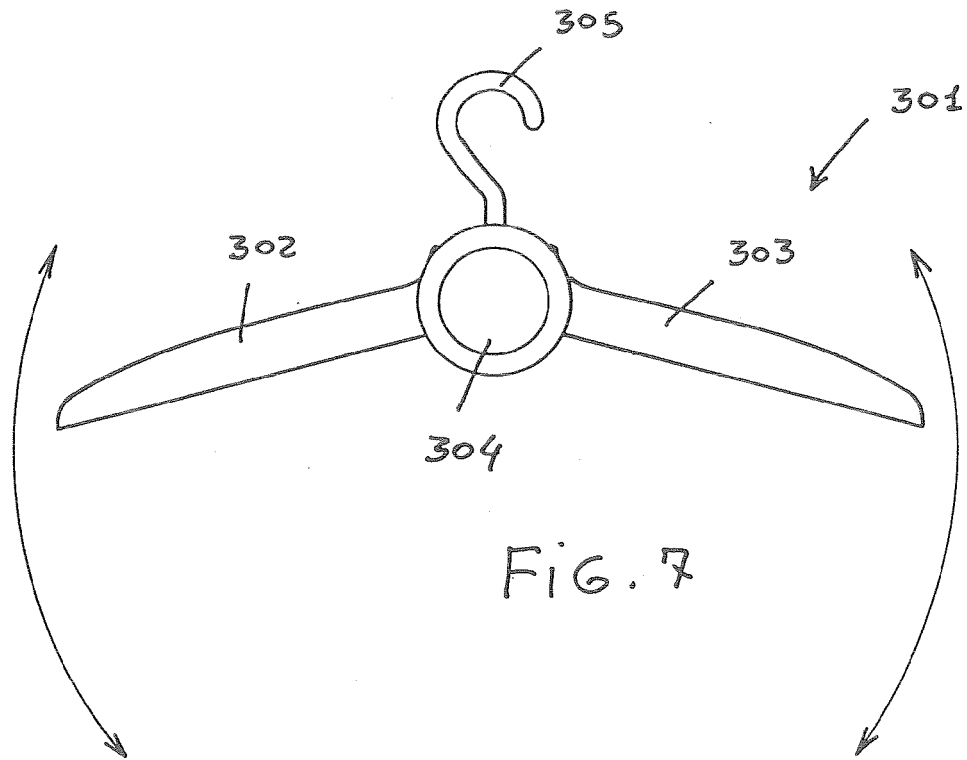


FIG. 8

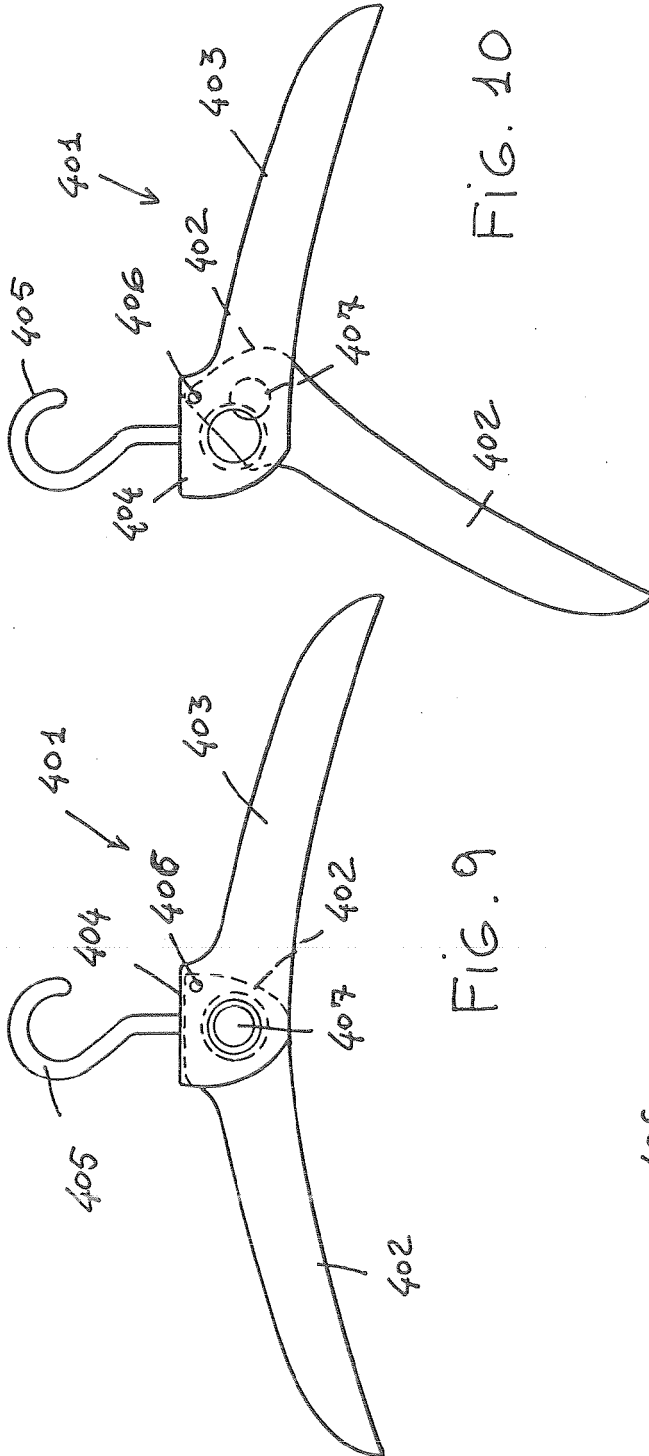


FIG. 10

FIG. 9

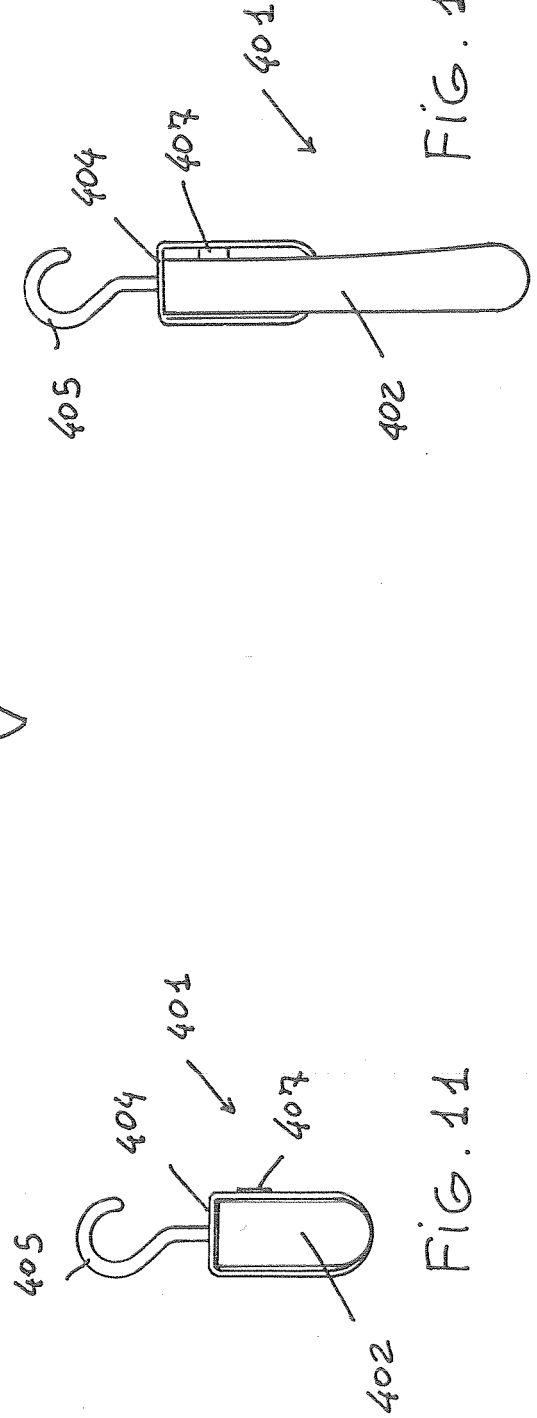


FIG. 12

FIG. 11

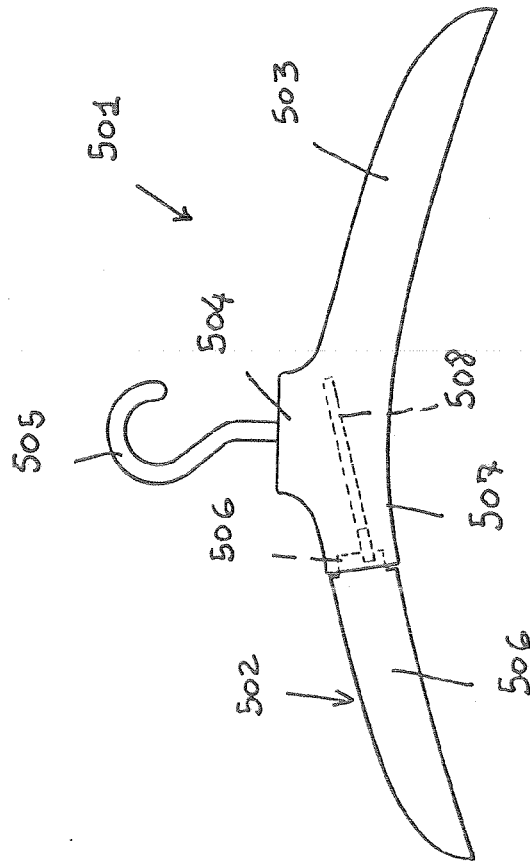


FIG. 13

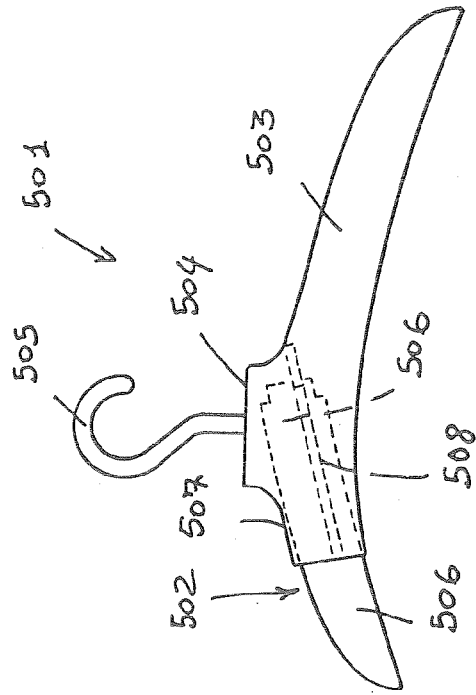


FIG. 14

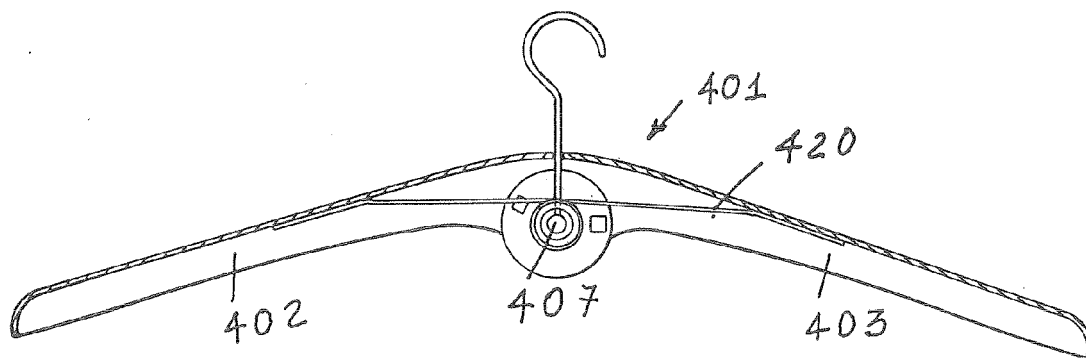


FIG. 15

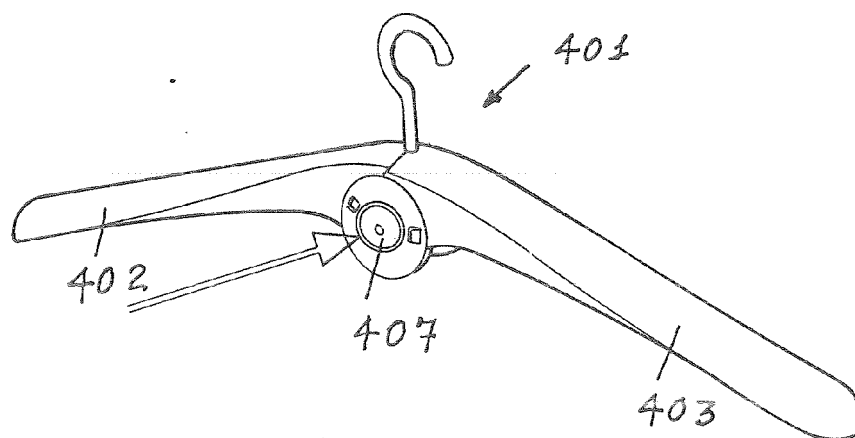
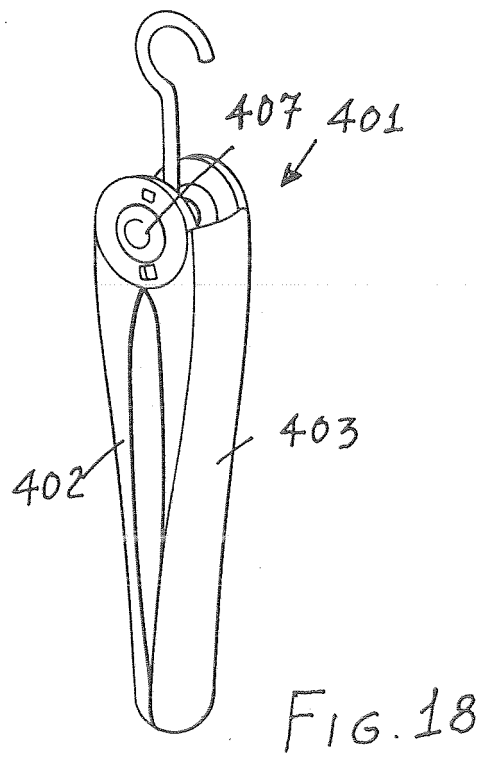
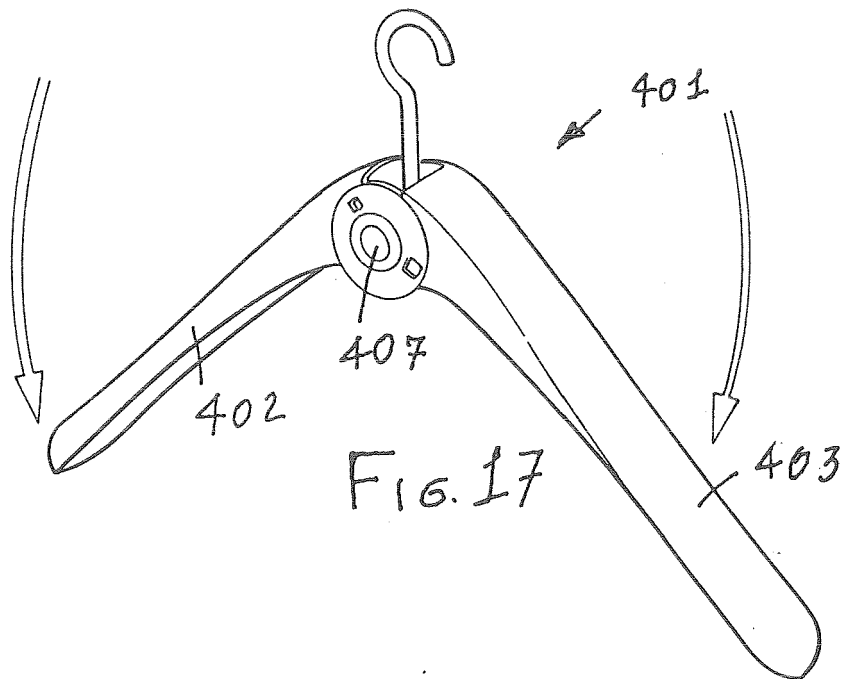


FIG. 16





EUROPEAN SEARCH REPORT

Application Number
EP 09 17 3225

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 25 March 2010	Examiner Tempels, Marco
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 09 17 3225

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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