

FOLDABLE CLOTHES HANGER

DESCRIPTION

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Technical Field

This invention relates to foldable clothes hangers particularly but not exclusively to clothes hangers to support and preserve the original shape and body of garments of different neck sizes, the folded position of the hanger conveniently enabling the user to insert the arms of the hanger into the neck of the garment and then open those arms so that the garment can be hung onto the hanger easily and effectively.

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Background

Current clothes hangers are, in some ways, inflexible and not user-friendly with garments that vary in neck span sizes, in particular. Although such hangers are well known, they can be difficult to use with T-shirts, pullovers, children clothes or any other kind of garment having a smaller neck span size. Foldable clothes hangers have been proposed with a view to overcoming the problem, e.g. the clothes hangers described in GB-1526867, WO-01/21048, DE-19680605, FR-2773449, JP-10-0323268, US-6149038 and US-4524890. Disadvantages arising with each of these are in general overcome by the arrangement described and claimed in GB-2376878 and embodiments of the present invention aim to provide foldable clothes hangers which may further improve that arrangement.

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In GB-2376878 there is described a foldable clothes hanger comprising two foldable arms mounted pivotably on a common axis, each arm having a part provided with a toothed arcuate rack engaging a pinion that is mounted pivotally on an adjacent parallel axis. At least one of the arms carries a generally arcuate limb provided with latch means, and the hanger comprises catch means to engage with the latch means. The hanger also comprises means to effect resilient engagement between the latch means and the catch means and release means manually operable to counter the resilient

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engagement and permit disengagement of the latch means and the catch means. As shown in GB-2376878, each of the arms carries a generally arcuate limb provided with latch means engageable by catch means, and the means to effect resilient engagement is common to the catch means associated with both the arcuate limbs.

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Because the two arms move in opposite arcuate directions towards one another to effect engagement, and disengagement is similarly in opposite directions but away from one another, engagement and disengagement between the catch means and the two latch means require considerable accuracy in the formation and location of the parts. This requirement is especially pertinent where the catch means are provided on an elongate arcuate strip constituting the resilient means, and the release means is operable to deflect the strip such that the catch means thereof moves out of engagement of the latch means.

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According to this invention there is provided a foldable clothes hanger comprising two foldable arms mounted pivotably on a common axis, each arm having a part provided with a toothed arcuate rack engaging a pinion that is mounted pivotally on an adjacent parallel axis, wherein each of the arms carries a generally arcuate limb provided with arcuately extending latch means, the hanger comprises arcuately extending catch means to engage with the latch means; means to effect resilient engagement between the latch means and the catch means, and release means manually operable to counter the resilient engagement and permit disengagement of the latch means and the catch means, wherein the latch means are provided adjacent one another towards one end of a generally arcuate rib resiliently displaceable in a generally arcuate direction about a relatively fixed opposite end of the rib, characterised in that the rib is mounted upon a carrier member moveable arcuately about said common axis.

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Preferably the release means comprises a resiliently depressible pushbutton engageable with a nodule on the strip, depression of the pushbutton onto the nodule causing the strip to deflect and effect disengagement of the catch means with the latch means.

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Advantageously, the arms protrude from a housing that encloses the toothed arcuate racks, a hook or a ring for the hanger being fast with, e.g. provided integrally with, the housing and extending upwardly and outwardly therefrom.

- 5 In a preferred embodiment the housing comprises a main part moulded of plastics material with axle pins to provide said common axis and adjacent parallel axis, and further comprises a closure plate snap-fit engageable with the main part by engagement means. The closure plate is preferably moulded of plastics material with C-shaped resilient clips or catches to engage the free ends of the axle pins and retain thereon the
- 10 arms and the pinions. Preferably the said elongate arcuate strip is moulded integrally with the main part of the housing, and the pushbutton is provided at the end of a resilient strip moulded as part of the closure plate.

- 15 Advantageously one of the latch means and the catch means is formed as a series of ratchet teeth and the other is formed as at least one projection to engage with said ratchet teeth.

- Preferably the part of one arm provided with a toothed arcuate rack is an arcuately extending limb that is concentric with and slidable over another arcuately extending
- 20 limb projecting from the other arm.

Brief Description of the Drawings

Preferred embodiments of the invention will now be described by way of examples with reference to the accompanying drawings of which:

- 25 Figure 1 is a perspective exterior view of a foldable clothes hanger according to a first embodiment of this invention in folded position,
- Figure 2 is a perspective view of a main housing part of the foldable clothes hanger of Fig 1,
- Figure 3 is a perspective view interior of a carrier plate that is accommodated in the
- 30 main housing part of Fig 2,

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Figure 4 is an enlarged schematic view (with a housing cover plate removed) of internal working parts of the the foldable clothes hanger of Fig 1 in a first pre-engagement stage prior to the foldable clother hanger adopting a fully unfolded condition,

5 Figure 5 is an enlarged schematic view showing the main housing part of Fig 2 and the carrier plate of Fig 3 when said internal working parts are in a second pre-engagement stage immediately subsequent to that shown in Fig 4, and before final engagement,

10 Figure 6 is an enlarged schematic view of the internal working parts of the foldable clothes hanger of Fig 1 in the same pre-engagement stage shown in Fig 5,

Figure 7 is a further enlarged view of a detail 'A' shown in Fig 6,

Figure 8 is an enlarged schematic view of the internal working parts when in fully engaged state and the hanger's arms in fully unfolded position,

15 Figure 9 is an enlarged schematic view of the carrier plate of Fig 3 accommodated in the main housing part of Fig 2 and showing the carrier plate's rest position when it is in the engaged state when the arms are unfolded (and/or in its unstressed disengaged sate when the arms are folded),

20 Figure 10 is a schematic illustration of the relative positions of the carrier plate, the main housing part and a nodule-engaging push button (which is molded integrally with the cover plate) when depressed to disengage the arms from their engaged state,

Figure 11 is an enlarged schematic view of the internal working parts showing the position adopted by the arcuate rib when displaced outwardly whne the button of Fig 10 is depressed,

25 Figure 12 is a perspective view of a double pinion providing a pair of mutually attached gear wheels,

Figure 13 is a perspective view of the left arm of the hanger of Fig1,

Figure 14 is a perspective view of the right arm of the hanger of Fig 1,

30 Figure 15 is a perspective view of the top cover plate (main body protection plate) provided with a pushbutton and a system-locking upper lug,

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Figure 16 is a perspective view of the underside of the cover plate (main body protection plate), and

Figure 17 is a view somewhat similar to Fig 4 but of a modification to the foldable clothes hanger of Figs 1 to 16.

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Detailed Description of Example(s) of the Invention

The foldable clothes hanger illustrated in Figs 1 — 16 and, in a modification, in Figure 17 comprises a shallow generally cylindrical body comprising, as a single molding of plastics material, *inter alia* a disc-like plate 1 with a shaped spacer block 10, an arcuate wall 31, and with a hook 2 by which the hanger is in use supported (e.g. from a rail). Garment support arms 17 and 22 are provided to support shoulder portions of one or more hanging clothes, and these arms 17,22 extend through apertures in the body's cylindrical wall that are formed by the spaces between block 10 and arcuate wall 31. The body is provided with a protection or cover plate 26 to securely lock the system, and hold the internal working parts in place. A push button 28 for releasing the arms 17,22 from their garment support position is provided in the closure member/cover plate 26.

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Arm 22 is provided with a boss 21a having a bore 21 therethrough (Figs 4,13,17) by which arm 22 is mounted on a spindle 8 upstanding from (and integral with) the disc-like base plate 1. Arm 17 has a similarly positioned sector-toothed gear wheel 14 with a bore 15 therethrough (Figs 4,14,17) by which arm 17 is mounted on the same spindle 8. The sector-toothed gear wheel 14 engages the smaller diameter gear wheel 24 of a double pinion (Fig 12) which has a central bore 25 by which the double pinion is mounted pivotally on an axle pin 9 upstanding from (and integral with) the disc-like base plate 1. The double pinion is held on axle pin 9 by a C- shaped resilient clip or catch 34 provided integrally on the underside of cover plate 26 (Fig 16). In the illustrated embodiment, the axle pin 9 is spaced from common spindle 8 by a distance of between 13mm to 15mm, preferably a distance of 14mm.

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5 The larger diameter gear wheel 23 of the double pinion engages an arcuate gear track 19 provided on an arcuate limb extension 22a of arm 22. This arcuate limb extension 22a can slide arcuately and concentrically within an arcuate limb extension 17a of arm 17 (see Figs 4 and 17). The outer arcuate surface of the limb extension 17a is provided with raked ratchet teeth 13 (Figs 4,14,17). These raked ratchet teeth 13 can ratchet past co-operating ratchet teeth 5 provided internally of a resilient arcuate rib 35 that is upstanding from a disc-like carrier plate or member 36 lying in the body above the plate 1 (see Fig 3). This rib 35 is also provided with adjacent but oppositely directed raked ratchet teeth 4 which are ratchetingly co-operable with ratchet teeth 18 provided on an arcuate portion 22b extending radially outwards from arm 22 (see Figs 4, 9 and 14). A downwardly tapered and inwardly directed release nodule 6 is provided integrally on rib 35 between ratchet teeth 4,5. This release nodule 6 is engageable by the depressible push button 28 to push rib 35 outwards and thereby effect substantially simultaneous disengagement both of engaged parts 13,5 and of engaged parts 4,18. It will be appreciated that during engagement the trailing faces of raked ratchet teeth 13 provide a catch for the teeth 5, and that the trailing faces of raked ratchet teeth 18 provide a catch for the teeth 4.

20 In the modification of Fig 17, a single tooth 5 is engageable by a catch 13, and a single tooth 4 is engageable by a catch 18.

25 It will be seen from Fig 17 that in this modification the leading end face 17b of limb extension 17a is angled. This serves to deflect rib 35 outwardly as that end face 17b engages the sloping edge 5a of tooth 5, the tooth entering the recess of catch 13 as the end face 17b and end rib 17c of limb extension 17a move past tooth 5 to leave the end rib 17c between tooth 5 and nodule 6. The inner face of rib 17c is also provided with a taper 17d (directed in the opposite direction) at its arris with the recess of catch 13. The primary function of taper 17d is explained below but it will be appreciated that it can facilitate disengagement of the latching arrangement.

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It will also be seen from Fig 17 that tooth 4 is provided with a sloping edge 4a to be engaged by the end face of arcuate portion 22b. This serves to deflect rib 35 outwardly as that end face and end rib 22c move past tooth 4 and permit tooth 4 enter into the recess of catch 18 and to leave end rib 22c between tooth 4 and nodule 6. The inner
5 face of end rib 22c is provided with a taper 22d (directed in the opposite direction) at its arris with the recess of catch 18. The primary function of taper 22d is explained below.

Operation of the working parts can be best understood from Figs 1, 4-11 and 17. With
10 the arm 17,22 in the folded position of Fig 1, the co-operative parts 5 and 13 are disengaged and the co-operative parts 4 and 18 are disengaged. Movement of arms 17,22 is controlled by the double pinion 23,24 which is rotatably mounted on the off-centre axle 9 extending through bore 25. The teeth 24,23 of the double pinion engage arcuate gears 14,19 respectively. The lower spacer block 10 also functions to stop the
15 arms 17,22 coming too close to one another when in the folded position. This spacer block 10 is of generally triangular shape and enters into a generally triangular cut-out 36a (in the carrier plate 36) that is of somewhat greater apex angle. This allows the carrier plate 36 to move arcuately about the common axis of rotation of the arms 17,22 (provided by spindle 8) but to a limited extent determined by the differences in apex
20 angle of the two triangles. Preferably, this angular difference is less than 10° and, in this specific embodiment, is of the order of approximately 5°. The limit to angular motion may alternatively, or additionally, be provided by enlarging aperture 9a in carrier plate 36 such that it is oversize as compared to the diameter of the spindle 9 that extends through it. (Aperture 8a in the carrier plate may be of the same diameter as
25 the diameter of spindle 8 that extends through it.)

Figure 4 shows the parts in a first, pre-engagement stage. The arms 17,22 have been raised to a point at which the leading tooth 13 is about to abut against the first of teeth 5 and, with continued motion of the arms, it causes the carrier plate 36 to move
30 arcuately in an anti-clockwise direction until edge 36b of its cut-out 36a abuts against side face 10b of the spacer block 10 — see Fig 5. This movement of carrier plate 36

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ensures temporary disengagement of teeth 4 and 18 as the raked teeth 13 and 18 move ratchetingly past the raked teeth 5 and 4 respectively — see Figs 6 and 7 — and eases such passage without binding of such relatively moving parts, e.g. due to aggregating of manufacturing tolerances. It will be apparent from Figs 6 and 7 that as the teeth 13,18 move ratchetingly past teeth 5,4 respectively, they cause the arcuate rib 35 to move outwards somewhat arcuately about a pivot 35a provided by the zone of integral attachment of rib 35 to the carrier plate 36 (see also Fig 3). This motion of rib 35 is resilient due to the inherent resiliency of the molded combination of rib 35 and carrier plate 36.

Another way of appreciating this engagement operation is to consider that as teeth 5,13 co-act to urge rib 35 outwards, an increase arises in the radial separation between teeth 4,18 and a motion is effected of the carrier plate 36 counter-clockwise about the axis of spindle 8. As the teeth 5,13 and 4,18 move beyond the points of nearest approach of their tips, the teeth 5,13 begin to engage — or provide for a catch-like operation — which permits rib 35 to pivot inwards and allows the engaged teeth 5,13 to pull the carrier plate 36 back, in a clockwise direction, finally to allow the teeth 4,18 to engage more positively and accurately. The operation has some resemblance to that of inserting a hook into a recess and then pulling the hook into a more positive hooked engagement of that recess.

Thus, when the teeth 13,18 have moved past the tips of teeth 5,4 respectively, the inherent resiliency of rib 35 allows it to move inwards to the position shown in Fig 9 in which its teeth 5,4 engage behind the teeth 13,18 respectively which thus serve as a retaining catch for the teeth 5,4. In effecting this engagement the tooth or teeth 5 are urged abuttingly against the trailing faces of the teeth 13 and act to pull the carrier plate 36 back, in a clockwise direction, to the position shown in Fig 9 in which the nodule 6 is again located immediately below the push button 28.

This position constitutes the open or garment support position of the foldable clothes hanger where the garment support arms 17 and 22 have been pushed out fully to be

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retained in that open position by the co-operating engagement of parts 4,18 and 5,13.

The two arms 17,22 move in unison. If the left arm 22 is lifted manually to move in a clockwise direction, the arcuate limb having the gear 19 rotates over the gear wheel 23 to enter into recess or indent 16 in arm 17, and the arcuate limb having raked ratchet teeth or catch 18 moves towards the ratchet tooth or teeth 4. If the right arm 17 is lifted manually to move in an anti-clockwise direction, the sector-toothed gear wheel 14 rotates over the gear wheel 24 (coaxially under gear wheel 23) and the arcuate limb providing raked ratchet teeth or catch 13 moves towards the ratchet tooth or teeth 5 and to be retained in position.

As best seen from Figs 2 and 6, the arcuate wall 31 of the generally circular housing (from which hook 2 projects) provides an arcuate sliding track perpendicular to the base plate 1 and concentric with an arcuate upper recess or channel 7 provided with open ends 7a and 7b. The lower spacer block 10 is provided opposite channel 7 and is likewise integral with the housing's disc-like base plate 1. Recesses 11 and 12 are provided to each side of block 10 and are engageable by respectively tags 29,30 provided on the cover plate 26 for the main body. The block 10 and its recesses 11,12 are designed to keep the system aligned and locked with the cover plate 26 (Fig 15) so that the moving parts are retained in position. This is apparent from Figs 15 and 16 which show the cover plate 26 with a system-locking upper lug 32 to enter engagingly into channel 7, a catch 33 to engage the centre axle provided by spindle 8, a catch 34 to engage the off-centre axle provided by spindle 9, and the system-locking lower catch provided by resilient tags 29,30 that enter respectively into the recesses 11,12 of the spacer block 10. The dimensions of the cover plate 26 and the circular main body or housing providing base plate 1 are selected and designed to be suitably commensurate with one another to facilitate system locking.

It will be appreciated that the illustrated hook 2 enables the hanging of the foldable clothes hanger on a rail, coat-hook, or similar support, and its ready removal from off that support in a conventional manner. The folded position shown in Fig 1 for the arms 17,22 enables the user to insert the hanger into the neck of a garment and then, by

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effecting sideways movement in opposite directions, towards the “12 o’clock” position, bring the arms to the open position or garment support position which allows the user to hang the now-unfolded hanger (with garment thereon) on the said support . It will be noted that, to bring the arms from the folded position into the open (or unfolded) position, the arms 17,22 are pushed outwards and upwards by the user until the arms 17,22 come into a ratchet-clamped state which can be heard by a clicking sound as the ratchet teeth 4,5 engage with their associated teeth or catches 18,13 respectively. It will be appreciated that due to their geared inter-connection, the simultaneous movement of both arms towards the arms-outstretched or unfolded position can be attained simply by moving either one of the arms 17,22 upwards from its closed or folded position.

The garment can be easily released or removed from off the hanger by the user pressing the pushbutton 28. The pushbutton 28 is moulded integrally with the cover plate 26 at the end of an arcuate resilient strip (Figs 15,16). The pushbutton 28 is positioned above the inwardly projecting release nodule 6 that is moulded integrally with the arcuate resilient rib 35 which extends integrally with and is perpendicular to the separate carrier disc 36. As the pushbutton 28 is depressed, it engages the nodule 6 to push it, and the rib 35 with which it is integral, outwards substantially pivotally of the other (fixed) end 35a of rib 35 (see Fig 9). Such outwards movement of rib 35 effects disengagement of the mutually co-operating teeth or catch/latch 4,18 and of the mutually co-operating teeth or catch/latch 5,13 so that the arms 17,22 can drop down (under gravity and/or under the weight of the garment they support) so as to adopt the arms-folded position shown in Fig 1. In this arms-folded position, a garment on the hanger can be removed, or alternatively the folded hanger can be inserted into the neck of a garment, in readiness for return of the hanger to its open or unfolded position.

It will be appreciated that due to the geared connection between the arms 17 and 22, arcuate motion of one arm in a clockwise or in an anti-clockwise direction will automatically give rise to arcuate motion of the other arm in respectively an anti-clockwise or clockwise direction. This synchronised arrangement may allow for teeth

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5,13 to start to engage with one another momentarily prior to the start of engagement of the teeth 4,18 with one another.

5 The embodiment of Fig 17 incorporates chamfered edges on its enagging parts that provide different impact forces on the on the teeth 4,5 on rib 35 of disc 36 depending on whether the arms 17,22 are being opened outwards rapidly or are being opened outwards slowly (when there is more of a sliding action between parts 4,18 and parts 5,13). When the arms 17,22 are being opened outwards rapidly, the impact between surface 17b of arm 17 and surface 5a of tooth 5 on rib 35 is such as to move the disc 10 36 anticlockwise(when viewed as in Fig 17) so that parts 4,18 interengage momentarily before parts 5,13 fully interengage. When the arms 17,22 are being opened outwards slowly, the motion of disc 36 is in three distinct stages. Firstly, the disc 36 moves anticlockwise — due primarily to the urging abutment of face 17b against surface 5a of tooth 5. Then secondly, the disc 36 moves clockwise — due primarily to the urging 15 abutment of chamfered surface 17d against the corner 5b of tooth 5. Thirdly, and finally, the disc 36 again moves anticlockwise — due primarily to the urging abutment of chamfered surface 22d against corner 4b of tooth 4 so that parts 5,13 engage momentarily before parts 4,18 interengage.

20 From the foregoing it will be apparent that the carrier plate 36 is movable arcuately between predefined limits. This allows for catch/latch engagement of the ratchetingly engageable parts 4,18 and 5,13 as the rib-attached parts can, in effect, move around about the common axis of the arcuately movable arms (i.e. the axis of spindle 8) and thereby compensate for arcuate foreshortening that can arise as the rib 35 moves non-radially 25 outwardly away from the common axis 8 and instead moves more generally pivotally outwards about a pivot “axis” 35a remote from the common axis 8 and from the point of engagement of the ratchetingly engageable parts. This allows for the teeth 4,5 to engage and disengage in more positive and precise fashion, without the parts binding up, and allowing for greater manufacturing tolerances for the engaging parts (as 30 compared with circumstances in which the rib 35 is rotationally fixed).

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It will be appreciated that all the parts mentioned above can readily be moulded of a suitable plastics material.

5 It will be appreciated that the above described and illustrated embodiment of the invention can operate to move between folded and unfolded positions even whilst mounted by its hook (or ring) 2 on a rail or other support.

10 It will be noted that the above-described and illustrated embodiment of this invention provides a foldable clothes hanger which, in its folded position, can be easily inserted into the neck of the garment regardless of variations of neck span size and, with minimum effort, the arms of the hanger can then be opened and latched in their open position for hanging the garment thereon. To remove the garment from the hanger, the pushbutton 28 (that is integral with the main body cover plate 26) can be pressed by the user to effect folding of the hanger.

15 This illustrated foldable clothes hanger has exceptional features of folding and unfolding of arms by precise mechanical movements. Notably it removes the need for undoing and doing up buttons on the garment in order to insert or remove the hanger, and the neck span size of the garment no longer hinders or prevents this .

20 It will also be appreciated that the above-described and illustrated embodiment can be modified without departing from the scope of the appended Claims. For example the illustrated hook 2 can have the form of a ring or closed eye that in use is threaded onto the end of a rail before the rail is mounted in a manner which prevents hanger removal, . i.e. such that the hanger is retained on the rail and cannot be easily removed from off the rail. Nevertheless, clothes can still be easily put onto the hangers or taken off the hangers due to the folding and unfolding movements to which the arms 17,22 can be subject as described above.

30 Other modifications and embodiments of the invention, which will be readily apparent to those skilled in this art, are to be deemed within the ambit and scope of the invention,

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5 and the particular embodiment(s) hereinbefore described may be varied in construction and detail, e.g. interchanging (where appropriate or desired) different features of each, without departing from the scope of the patent monopoly hereby sought. For example, the spindle 9 is illustrated as being in the vertical line of gravity between the hook 2 and the axis 8. In fact this spindle 9 can be located up to 54° to each side of this line of gravity.

CLAIMS

- 5 1. A foldable clothes hanger comprising two foldable arms (17,22) mounted pivotably on a common axis (8), each arm (17,22) having a part provided with a toothed arcuate rack (14,19) engaging a pinion (24,23) that is mounted pivotally on an adjacent parallel axis (9), wherein each of the arms (17,22) carries a generally arcuate limb provided with arcuately extending latch means (13,18), the hanger comprises arcuately
10 extending catch means (5,4) to engage with the latch means (13,18); means to effect resilient engagement between the latch means (13,18) and the catch means (5,4), and release means (6,28) manually operable to counter the resilient engagement and permit disengagement of the latch means (13,18) and the catch means (5,4), wherein the latch
15 means are provided adjacent one another towards one end of a generally arcuate rib (35) resiliently displaceable in a generally arcuate direction about a relatively fixed opposite end of the rib(35), characterised in that the rib (35) is mounted upon a carrier member moveable arcuately about said common axis (8).
- 20 2. A foldable clothes hanger according to Claim 1, characterised in that motion limiting means are provided to limit said arcuate movements of the carrier member.
- 25 3. A foldable clothes hanger according to Claim 2, characterised in that the arcuate movement is limited to less than 10°.
- 30 4. A foldable clothes hanger according to Claim 2 or Claim 3, characterised in that the arcuate movement is limited to approximately 5°.
5. A foldable clothes hanger according to any preceding claim, characterised in that the carrier member is of generally disc-like shape and said rib protrudes from the plane of the disc in the vicinity of the disc's periphery (e.g. extends around part of the disc's periphery).

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6. A foldable clothes hanger according to Claim 5, characterised in that the disc-like carrier member sits on the base of a shallow, generally cylindrical cup-shaped housing and supports the two foldable arms thereon, the housing being closed by a closure member retaining the parts therein.

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7. A foldable clothes hanger according to any preceding Claim, characterised in that the means to effect resilient engagement is constituted by the inherent resiliency of the rib.

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8. A foldable clothes hanger according to any preceding Claim, characterised in that the release means (6,28) comprises a resiliently depressible pushbutton (28) engageable with a nodule (6) on the rib (35), depression of pushbutton (28) onto nodule (6) causing the rib (35) to deflect and effect disengagement of catch means (5,4) with latch means (13,18).

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9. A foldable clothes hanger according to any preceding claim, wherein the arms (17,22) protrude from a housing (1,26) that encloses the toothed arcuate racks (14,19).

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10. A foldable clothes hanger according to Claim 9, wherein a hook (2) for the hanger is fast with, e.g. provided integrally with, the housing (1,26) and extends upwardly and outwardly therefrom.

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11. A foldable clothes hanger according to Claim 9, wherein a ring (2) for the hanger is fast with, e.g. provided integrally with, the housing (1,26) and extends upwardly and outwardly therefrom.

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12. A foldable clothes hanger according to any preceding claim, wherein the common axis (8) is spaced from said adjacent parallel axis (9) by a distance of between 13mm and 15mm.

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13. A foldable clothes hanger according to any preceding claim, wherein the common axis (8) is spaced from said adjacent parallel axis (9) by a distance of 14mm.
- 5 14. A foldable clothes hanger according to any preceding claim, wherein the spindle (9) is located up to 54° to each side of the vertical line of gravity through the common axis (8).