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(54) **HANGER WITH MAGNETS**

(57) Foldable hanger (100), characterized in that it comprises a couple of elongated elements or wings (101, 102) rotating one respective to the other along a central axis of rotation (X) in correspondence of an own central portion (104) arranged on a first end thereof, and wherein said hanger (100) comprises a first operative configuration wherein said elongated elements or wings (101, 102) are rotated so that to rest one in proximity of the other at

a first minimum distance, and a second operative configuration wherein said elongated elements or wings (101, 102) are positioned at a distance angularly greater respective to said first minimum distance and are suitable for holding a suit; said hanger (100) comprising movable blocking means (107) in said second operative configuration.

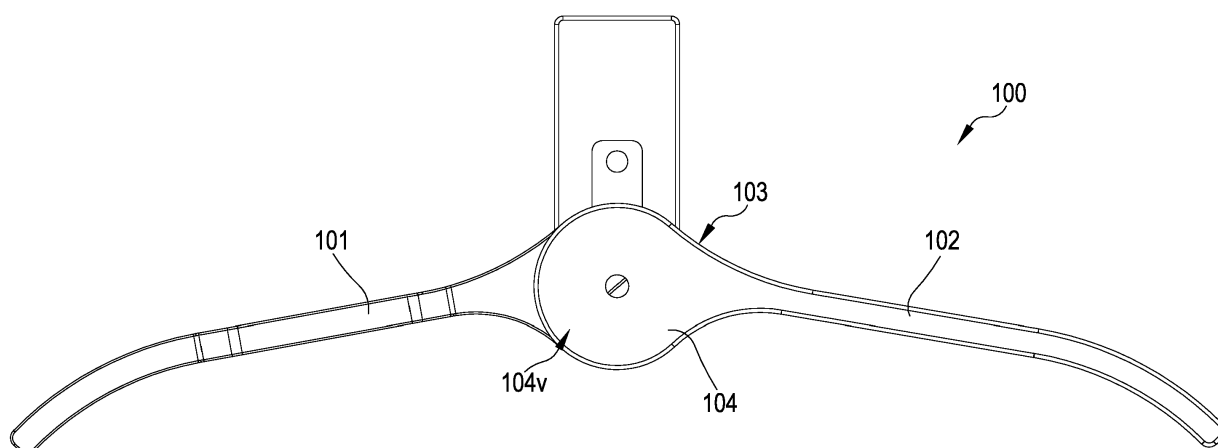


FIG.1

Description

[0001] The present invention refers to the field of the devices suitable for holding garments. In detail the present invention refers to a hanger and foldable hanger.

[0002] Traditional hangers are devices provided with a couple of supporting wings of a garment and of a central element provided with of a hook suitable for being hanged to a bracket or supporting bar. Typically, known hangers are further provided with wings directed downwards.

[0003] Some hanger of a known type have furthermore a central beam that joints the ends of the two wings. Said central beam, is typically used for holding trousers in such a way that they can be put below an outfit that instead is placed on the wings of the hanger.

[0004] The applicant has noticed that known hangers have the drawback of not being foldable, and therefore of occupying a relevant space also in case they are not used.

[0005] The applicant has furthermore noticed that often many outwears have small neck apertures, and that the traditional users attempt to stretch or broaden said aperture in such a way to allow the passage of the traditional rigid hanger. This many times bring to tear the cloth in the zone of the neck or, alternatively, in proceeding with a greater broadening of the zone of the neck that consequently cannot return to the traditional size.

[0006] The scope of the present invention is therefore to describe a foldable-type hanger of that solves the aforementioned drawbacks.

Summary of the invention

[0007] The present invention is targeted to describe a foldable-type hanger that allows for occupying a small space in case folded and that at the same time offers a valid support to the heavy garments when in use. The hanger object of the present invention sees the presence of magnets for being arranged in an operative position wherein the wings are open.

[0008] According to the present invention is therefore realized a foldable hanger, characterized in that it comprises a couple of elongated elements or wings rotating one respective to the other along a central axis of rotation in correspondence of a their central portion positioned on a first end thereof, and wherein said hanger comprises a first operative configuration wherein said elongated elements or wings are rotated so that to rest the one in proximity of the other at a first minimum distance, and a second operative configuration wherein said elongated elements or wings are positioned to a distance which is angularly greater respective to said first minimum distance and are suitable for holding a suit; said hanger comprising movable blocking means in said second operative configuration.

[0009] According to a first aspect of the present invention, said movable blocking means are magnets positioned in respective recesses on each of the said central

portions. According to a further aspect of the present invention, in said second operative configuration said magnets are axially aligned on a respective axis which is parallel to said central axis of rotation.

[0010] According to a further aspect of the present invention, said magnets rest flow with the inner surface of the central portions.

[0011] In detail, each of the two central portions comprises means of engagement for the reciprocal engagement of the two central portions of the first and of the second wing, wherein a first engagement means is a dovetail recess; a second engagement means is a dovetail-arched prominence.

[0012] According to a further aspect of the present invention, if the means of engagement are not present, in correspondence of said central axis of rotation there is a through hole for letting a screw of reciprocal rotating fastening between said first or second elongated element pass.

[0013] For the purpose of having a correct keeping for heavy suits, said second operative configuration ceases in case the magnets are reciprocally misaligned by means of a pressure on the ends of said elongated elements or wings with a force having a value comprised between 5 and 10 kg.

[0014] According to a further aspect of the present invention, furthermore, the ends of said elongated elements or wings have an increased section.

[0015] According to a further aspect of the present invention, it is possible to cause that said movable blocking means are blockable elastic elements susceptible of automatically bring, when unblocked, said hanger from said first to said second operative configuration.

Description of the figures

[0016] The invention will be herein described referring to the annexed figures in a preferred and non-limiting embodiment thereof. In the annexed figures,

- figure 1 shows a plane view of a foldable hanger object of the present invention;
- figure 2 shows a perspective view of the foldable hanger of figure 1, in a first operative configuration;
- figure 3 shows a perspective view of the foldable hanger of figure 1, in a second operative configuration;
- figure 4 shows a exploded view of the foldable hanger object of the present invention;
- figure 5 shows a plane view of a part of the foldable hanger object of the present invention; e
- figure 6 shows a section view of an alternative embodiment of the foldable hanger object of the present invention.

Detailed description of the invention

[0017] For the purposes of the present invention, with

the wording hanger shall be meant a equivalently a coat hanger, a hanger or a rack, i.e. an accessory device used for sustaining garments for the purpose of stacking them in a wardrobe or in specific stands.

[0018] With reference to figure 1, with the reference number 100 is shown in its complex a foldable hanger.

[0019] The foldable hanger 100, comprises a couple of elements or wings 101, 102, each of which is formed by a bar substantially linearly extended which ends in correspondence of a own end 103 with a circular portion 104. The circular portion 104 of each of the couples of elements or wings 101, 102, is configured for coupling with the corresponding circular portion 104 of the other wing. The elements or wings 101, 102 are substantially symmetrical.

[0020] In correspondence of the central position of the circular portion 104, there is an ideal axis X which represents the axis of rotation is reciprocal of the two wings 101, 102.

[0021] As it is shown in figure 4, the circular portion 104 has a plurality of recesses 105 106 within which are positioned magnets 107. The magnets 107 are conceived for allowing to keeping open the hanger in case in operative position. In detail, the recesses 105, 106 are such that the magnets 107 are flush with the inner wall of the central portions 104 that faces on the reciprocal opposite.

[0022] In fact the hanger 100 object of the present invention has a first operative configuration wherein the wings 101, 102 are folded and a second operative configuration wherein the wings 101, 102 are open, and wherein the hanger is ready to house a garment.

[0023] As it is shown in figure 4 and in figure 5, the recesses 105, 106 are positioned in such a way that the magnets which are present on the circular portions 104 of each of the wings 101, 102 are faced one to the other in case the rotation reciprocal of the wings 101, 102 brings the hanger 100 object of the present invention in said second operative configuration.

[0024] In fact, while in the first operative configuration, shown in figure 3, the wings 101, 102 can be folded up to the point of being axially substantially aligned, occupying therefore the least possible space having furthermore the magnets 107 which are not axially aligned, the reciprocal rotation of the wings 101, 102 around the axis X allows bringing the magnets 107 of the two circular portions 104 in substantial axial coupling in a second operative configuration shown in figure 2.

[0025] The magnets 107 are oriented in such a way to have reciprocally attracting poles when in axial coupling. This means that if a magnet 107 of the circular portion 104 of the first wing 101 has a pole N directed outwards, and that is towards the second circular portion 104, the corresponding magnet 107 of the second circular portion will instead present a magnet with the S pole directed outwards, and towards the first circular portion 104.

[0026] Therefore, in case reciprocal the rotation of the wings 101, 102 brings the magnets in axial coupling,

along an axis Z which is parallel to the axis X, generates a magnetic force of reciprocal attraction of the magnets 107 faced one to the other so that movably block the wings 101, 102 in said second operative configuration.

[0027] The magnetic attraction force that the magnets 107 can generate is calculated basing on the weight that the wings 101, 102 of the hanger can withstand, as well as on the material with which those are produced and - finally - in function of their length. In fact, the more the wings 101, 102 are long, the greater is the lever with which they act on the circular portion 104 wherein there are the magnets 107.

[0028] Preferably even though in a non-limiting extent the magnets are rendered such that they have an attraction force for which their reciprocal disengagement in case are positioned into the second operative configuration is given by a force exerted on the ends of the wings 101, 102 equal to 10kg. Preferably the minimum force necessary for disengaging the magnets from the reciprocal alignment is 5kg. This guarantees on one side that the hanger 100 object of the present invention can withstand also heavy garments without inadvertently fold and at the same times guarantees that also not particularly strong users can use and comfortably close it.

[0029] In a preferred and non-limiting embodiment, the hanger object of the present invention has in correspondence of the circular portions 104 of the means of engagement 111, 112 for the reciprocal engagement of the two circular portions 104 of the first and of the second wing.

[0030] A first engagement means 111 is a dovetail recess; a second engagement means 112 is a dovetail arched prominence.

[0031] Alternatively, as it is shown in figure 4, into the central portion of the circular portions 104 there is a coupling screw 120. In said case, each circular portion has a respective central through hole positioned and oriented on the axis X, that allows the passage of the coupling screw 120.

[0032] In a preferred but non-limiting embodiment, each one of the two wings 101, 102 ends with shoulders of increased size that advantageously allow of offering a greater contact are with the shoulders of the garment.

[0033] As it is shown in figure 4, the magnets 107, for each circular portion 104 are at least two in number. Anyway said number can be varied in accordance to their magnetic force.

[0034] Furthermore, a of the two circular portions 104 is provided with a hook 130 or of an equivalent means for allowing to hang the hanger object of the present invention to the respective support.

[0035] In a preferred and non-limiting embodiment of the present invention, the hanger object of the present invention has finally a visible surface 104v of the circular portion that is suitable for containing therein a logo or equivalent graphic means representing a trademark or similar.

[0036] Furthermore, even if in the course of the present description reference has been made to an hanger 100

provided with of central circular portions 104, said configuration of shape shall not be intended as limitative. Other shapes in fact can be equivalently used without that this causes a variation in the technical operation of the invention.

[0037] The advantages of the foldable hanger object of the present invention are clear in the light of the description that precedes. It advantageously allows for occupying less space when folded and at the same time allows for providing a valid support for the garments when positioned in said operative configuration.

[0038] The substantial symmetry of the two wings 101, 102, especially in case there is a central fastening screw 120, renders the realization of the hanger 100 particularly advantageous in terms of economy.

[0039] In particular, the use of the hanger 100 object of the present invention advantageously allows for example for hanging round neck pullovers or sweaters or anyway garments with a neck opening smaller than the maximum extension that the hanger when deployed can have, without forcing on the neck opening itself.

[0040] In other words, through the hanger object of the present invention is no more necessary to turn the sweater upside down for causing the introduction within the hanger.

[0041] It is finally clear that to the hanger 100 object of the present invention can be applied addition, adaptations or variants, obvious for a skilled person, without for this departing from the scope of protection provided by the annexed claims.

[0042] For example, it is possible to add a spring with block that allows of automatically bringing the hanger object of the present invention from the first to the second operative configuration.

Claims

1. Foldable hanger (100), **characterized in that** it comprises a couple of elongated elements or wings (101, 102) rotating one respective to the other along a central axis of rotation (X) in correspondence of a their central portion (104) arranged on a first end thereof, and wherein said hanger (100) comprises a first operative configuration wherein said elongated elements or wings (101, 102) are rotating so that to rest one in proximity of the other at a first minimum distance, and a second operative configuration wherein said elongated elements or wings (101, 102) are positioned to a distance which is angularly greater respective to said first minimum distance and are suitable for holding a suit; said hanger (100) comprising movable blocking means (107) in said second operative configuration.
2. Hanger (100) according to claim 1, **characterized in that** said movable blocking means (107) are magnets positioned in respective recesses (105, 106) on

each of the said central portions (104).

3. Hanger (100) according to claim 2, wherein in said second operative configuration said magnets (107) are axially aligned on a respective axis (Y) which is parallel to said central axis of rotation.
4. Hanger (100) according to claim 2 or claim 3, wherein said magnets (107) are flush with the inner surface of the central portions (104).
5. Hanger (100) according to any of the preceding claims, wherein each of the two central portions (104) comprises means of engagement (111, 112) for the reciprocal engagement of the two central portions (104) of the first and of the second wing, wherein a first engagement means (111) is a dovetail recess; a second engagement means (112) is a dovetail-arched prominence.
6. Hanger (100) according to any of the preceding claims 1-4, wherein in correspondence of said central axis of rotation (X) there is a through hole for letting a screw (120) of reciprocal rotating fastening between said first or second elongated element or wing (101, 102) pass.
7. Hanger (100) according to any of the preceding claims, **characterized in that** said second operative configuration ceases in case the magnets (107) are reciprocally misaligned by means of a pressure on the ends of said elongated elements or wings (101, 102) with a force having value comprised between 5 and 10 kg.
8. Hanger (100) according to any of the preceding claims, **characterized in that** the ends of said elongated elements or wings (101, 102) have an increased section.
9. Hanger (100) according to claim 1, **characterized in that** said movable blocking means (107) are blockable elastic elements susceptible of automatically bringing, when unlocked, said hanger (100) from said first to said second operative configuration.

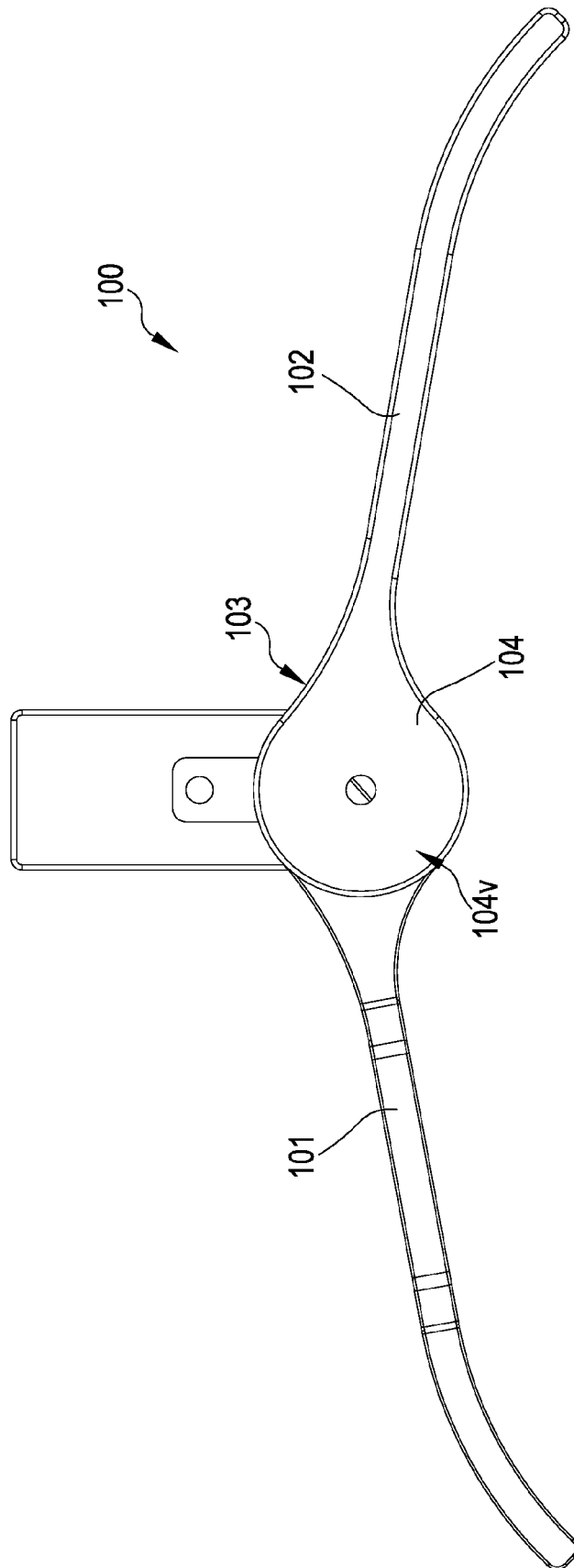


FIG.1

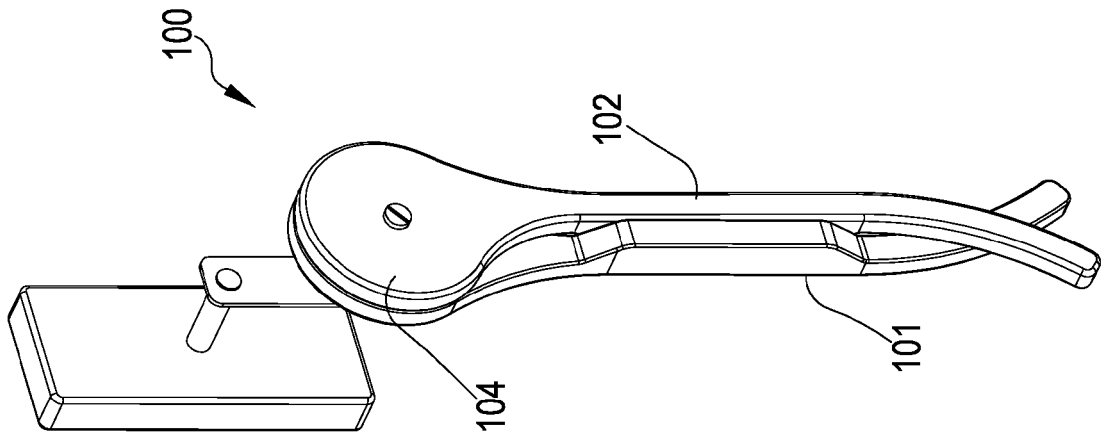


FIG.3

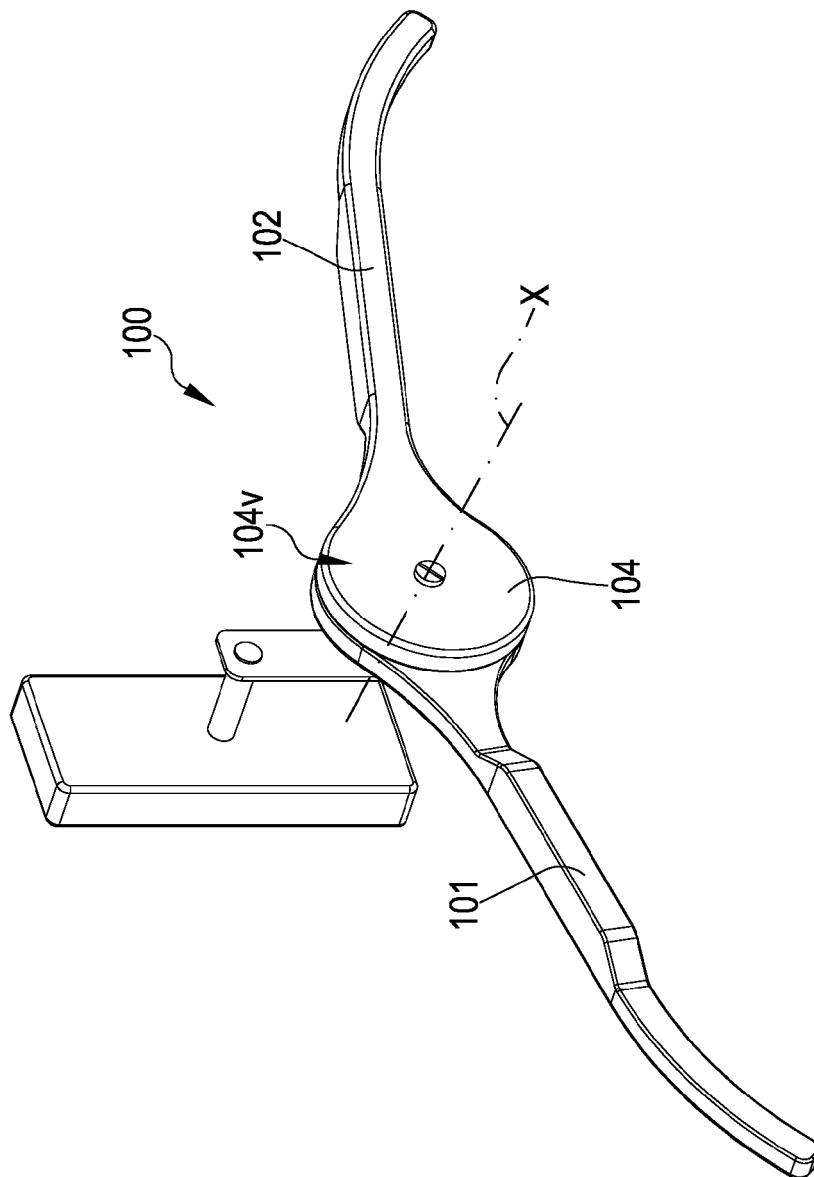


FIG.2

FIG.4

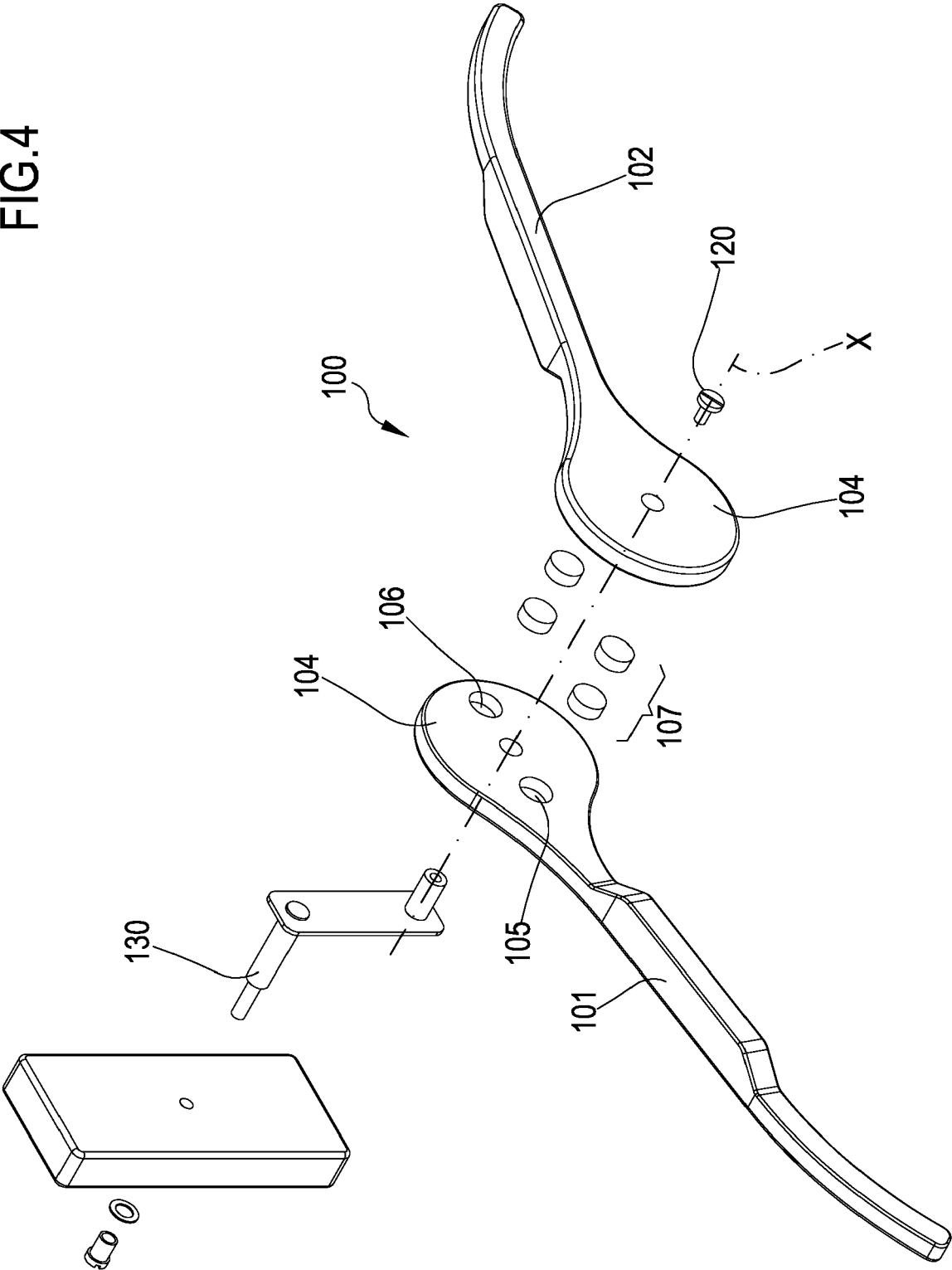


FIG.5

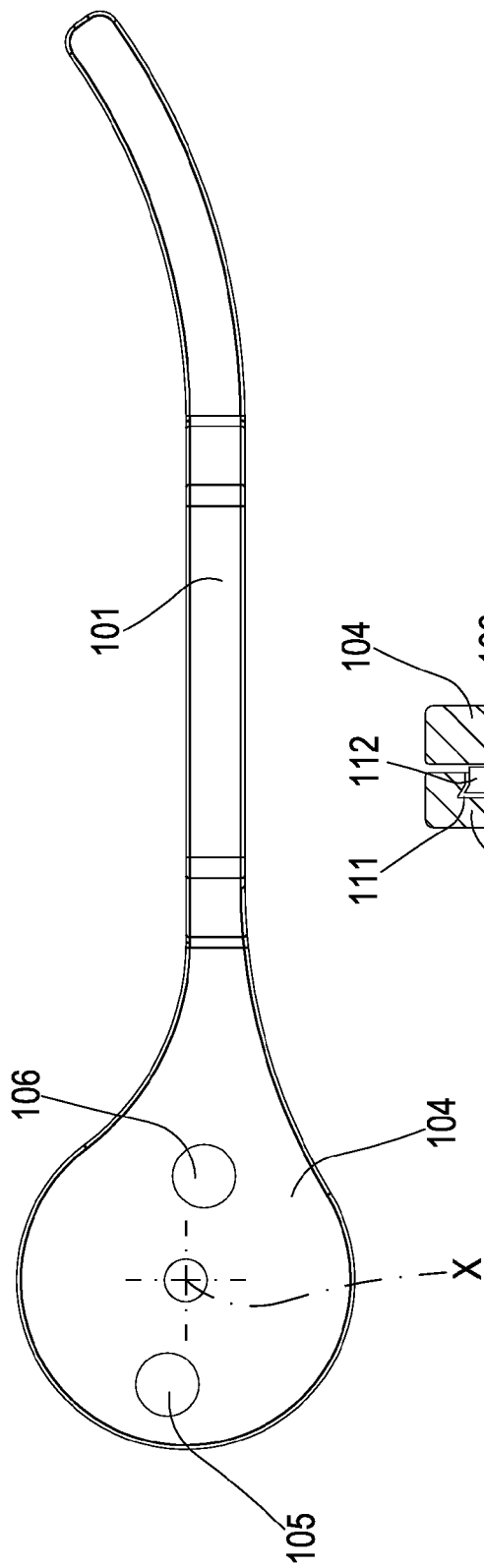
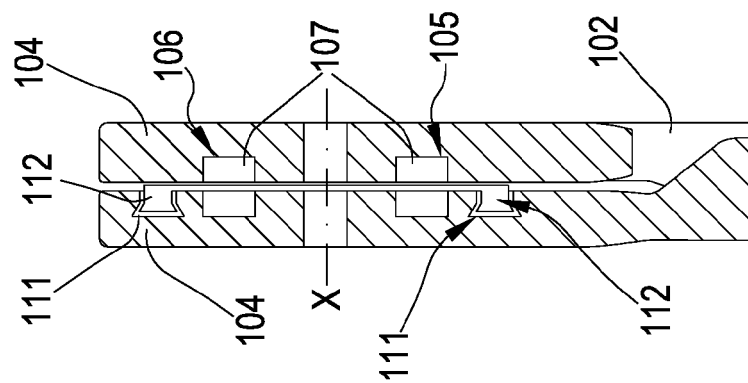


FIG.6





EUROPEAN SEARCH REPORT

Application Number
EP 16 18 0386

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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 (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
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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 2 June 2017	Examiner Beugeling, Leo
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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