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(54) **A system for locking the adjustable hook of a hanger**

(57) The invention regards a system for locking the adjustable hook of a hanger, for coats/jackets, pants hangers, lingerie and the like, of the type which can rotate around the axis of its shank and remain locked, in a removable manner, in two or more different angular positions.

Such locking system is **characterized in that** the hook is equipped at the end of the shank with a block

(10), which is stably inserted into the body of the hanger, said block is constituted by a capsule (1), closed by a bottom (2), containing an elastic thrust element (3), which has the function of retaining the aforesaid hook in the oriented position. Such oriented position is defined by the coupling of at least one tooth (5) projecting from the terminal portion of the shank (4), which is inserted in the capsule, in one of the slots made on the inner wall of the aforesaid capsule (Fig. 2).

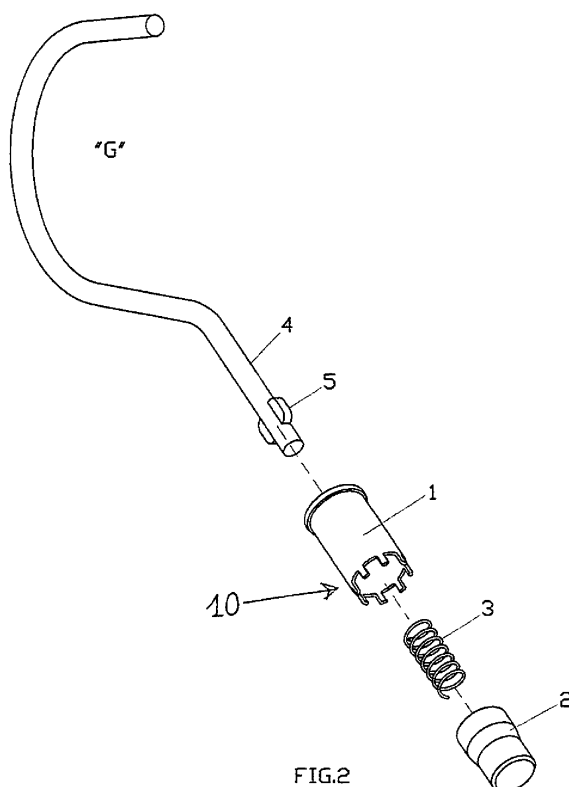


FIG.2

Description

[0001] The present finding regards the locking system of the hook of a hanger, according to the general part of claim 1.

[0002] Hangers are constituted by a body that is curved, for jackets/coats, or rectilinear, for pants; in central position, it is equipped with a thread-like metal hook that serves for hanging it to a horizontal bar.

[0003] Normally, the hook - stably inserted with its shank in the body - is positioned in a coplanar manner with the aforesaid body.

[0004] In many operative situations, during working, transport or exposition, it is required that the garment is hung in a differently-oriented manner, and this is obtained by using a hanger in which the hook is rotatable around its shank.

[0005] At the current state of the art, the systems which allow the hook to rotate around its shank and lock it when it is oriented in the desired direction are constituted by mechanisms which manifest drawbacks - such as a complex manufacture, considerable bulk and difficulty in handling by the operator.

[0006] The object of the present finding is to make an adjustable hook for a hanger equipped with a locking system that lacks the drawbacks shown by similar products of known type. Specifically, the object of the present invention is the achievement of a system for locking the adjustable hook that is composed of a limited number of elements, which is easy to make and to handle, with reduced size and limited cost.

[0007] Such object is obtained with a hook equipped at the end of its shank with a block, which is stably inserted in the hanger body, which in addition to preventing the unthreading of the hook from the aforesaid body, allows the same hook to rotate around the axis of its shank and to be locked, in a removable manner, in two or more angular positions.

[0008] Structurally, the block is comparable to a covering, constituted by a capsule closed by a bottom, containing an elastic thrust element which retains the hook in the oriented position.

[0009] Specifically, the hook is maintained oriented by means of the coupling of at least one tooth, projecting on the terminal portion of the shank, which is inserted inside a capsule, in one of the slots made on the inner wall of the aforesaid capsule. In addition, in order to prevent the unthreading of the hook from the block, it is provided that the radial projections of the shank are formed after having inserted the shank through the calibrated hole made on the head of the capsule.

[0010] The finding will be better defined by means of the description of a possible embodiment thereof, given only as a non-limiting example, with the aid of the attached drawing tables, wherein:

- Figures 1-2 (Table I) respectively represent overall and exploded section views of the hook in accord-

ance with the finding:

- Figures 3-4 (Table II) respectively represent elevation and plan section views of the locked hook;
- Figures 5-6 respectively represent elevation and plan section views of the free-to-rotate hook;
- Figures 7-8 (Table III) represent the assembly steps of the coupling system in accordance with the finding.

[0011] As is visible from the figures, the hook "G" is equipped at the base with a block, indicated with the reference 10, stably inserted in the body "C" of the hanger, which allows the aforesaid hook to rotate angularly and to be locked around the axis "K" of the shank, on which the aforesaid block is inserted.

[0012] The block 10 is composed of a capsule 1 closed by a bottom 2 and containing a spring 3.

[0013] Inserted on the block 10 is the shank 4 equipped with lateral teeth 5, which come to be coupled on the slots 6 made inside the capsule 1.

[0014] Operatively, as is visible in figures 3-4, the locking of the oriented hook is ensured by the action of the spring 3 which, preloaded and in thrust step, retains the teeth 5 inside the slots 6.

[0015] On the other hand, as is visible in figs. 5-6, in order to change the orientation of the hook it is necessary to free the teeth 5 from the corresponding slots 6, by making the hook axially slide (arrow VI) and then newly orienting it (arrow V2), in a manner such that the thrust action of the compressed spring comes to make the new coupling.

[0016] As is visible in figs. 7-8, the assembly of the block 10 first provides for the insertion of the shank 4 into the calibrated hole 7, made on the head of the capsule 1, and afterward provides for making radial projections or teeth 5 on the aforesaid shank. The assembly is completed by attaching the bottom 2, containing the spring 3, on the capsule 1, retained in position by the subsequent riveting of the tabs 8 made on the aforesaid capsule.

[0017] The finding thus conceived is susceptible to modifications and variants and its details can be substituted by technically equivalent elements, all falling within the scope of the inventive concept defined by the following claims.

Claims

1. A SYSTEM FOR LOCKING THE ADJUSTABLE HOOK OF A HANGER, for coats/jackets, pants hangers, lingerie and the like, of the type which can rotate around the axis of its shank and remain locked, in a removable manner, in two or more different angular positions, said locking system being **charac-**

terized in that the hook is equipped at the end of the shank with a block (10), which is stably inserted in the body of the hanger, said block being constituted by a capsule (1), closed by a bottom (2), containing an elastic thrust element (3), which has the function of retaining the aforesaid hook in the oriented position, said oriented position being defined by the coupling of at least one tooth (5), projecting from the terminal portion of the shank (4), which is inserted in the capsule, in one of the slots (6) made on the inner wall of the aforesaid capsule.

2. LOCKING SYSTEM, according to claim 1, **characterized in that** the elastic element (3) is constituted by a preloaded spring which, in thrust step, retains the teeth (5) inside the corresponding slots (6).
3. LOCKING SYSTEM, according to claim 1, **characterized in that** the radial projections or teeth (5) are made on the shank (4) after the insertion of said shank in the calibrated hole (7), made on the head of the capsule (1).
4. LOCKING SYSTEM, according to one or more of the preceding claims, **characterized in that** the bottom (2), which supports the elastic element (3), is locked on the capsule (1) by means of the final riveting of tabs (8), obtained in said capsule.
5. HANGER, of the type constituted by a curved or rectilinear body, equipped with adjustable central hook, **characterized in that** it is equipped with a system for locking said hook made according to one or more of the preceding claims.

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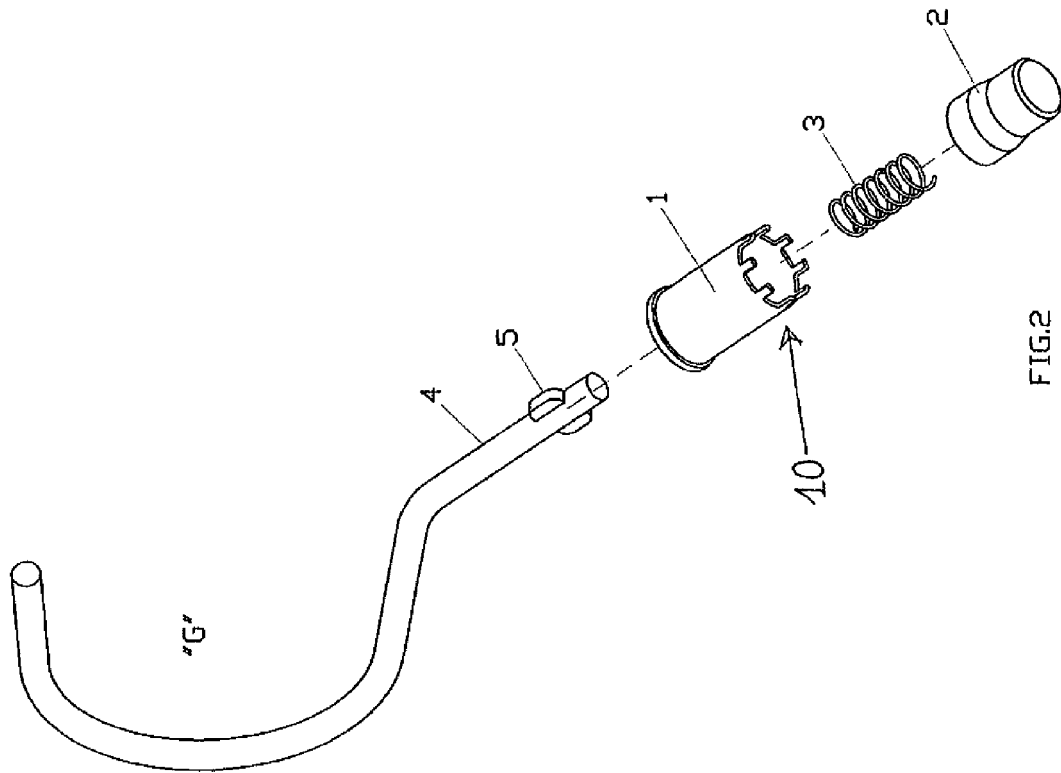


FIG.2

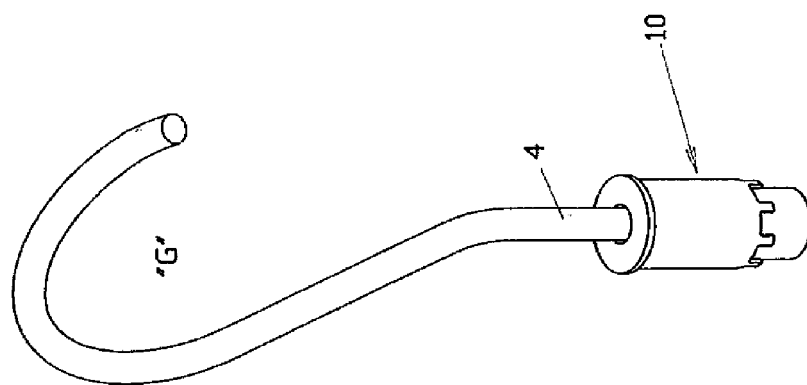
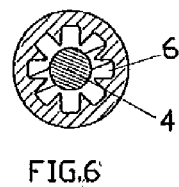
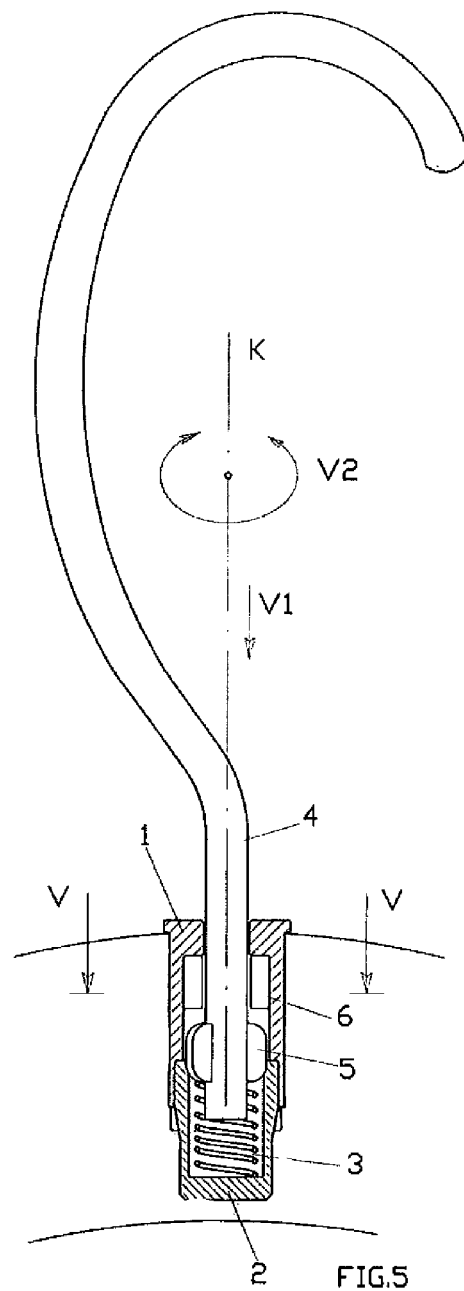
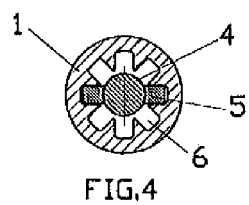
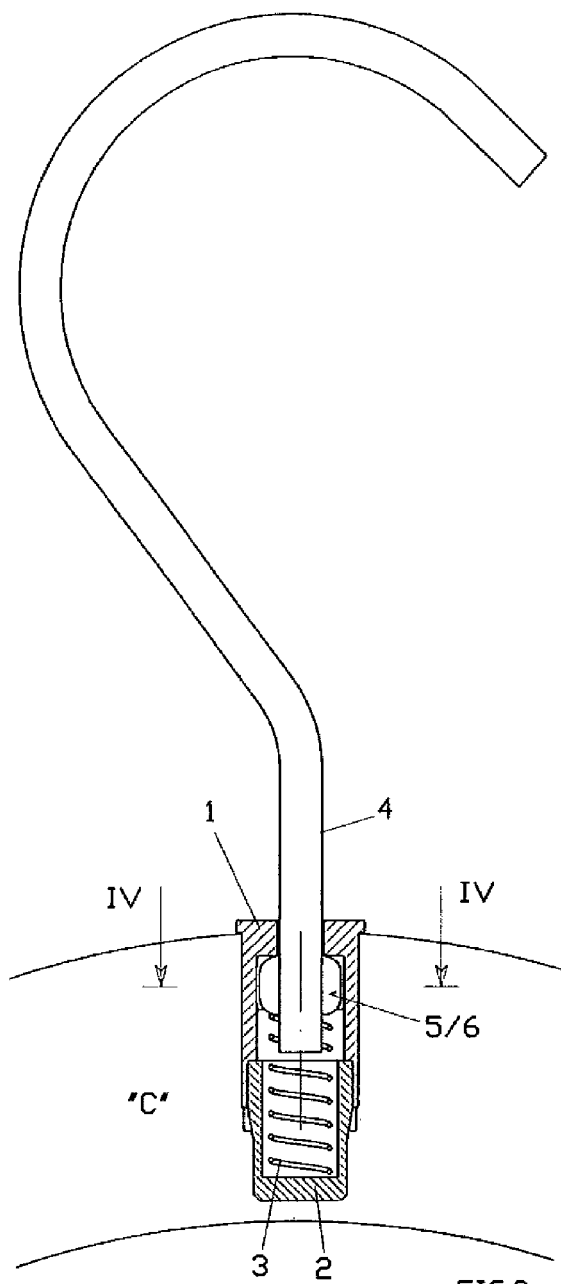
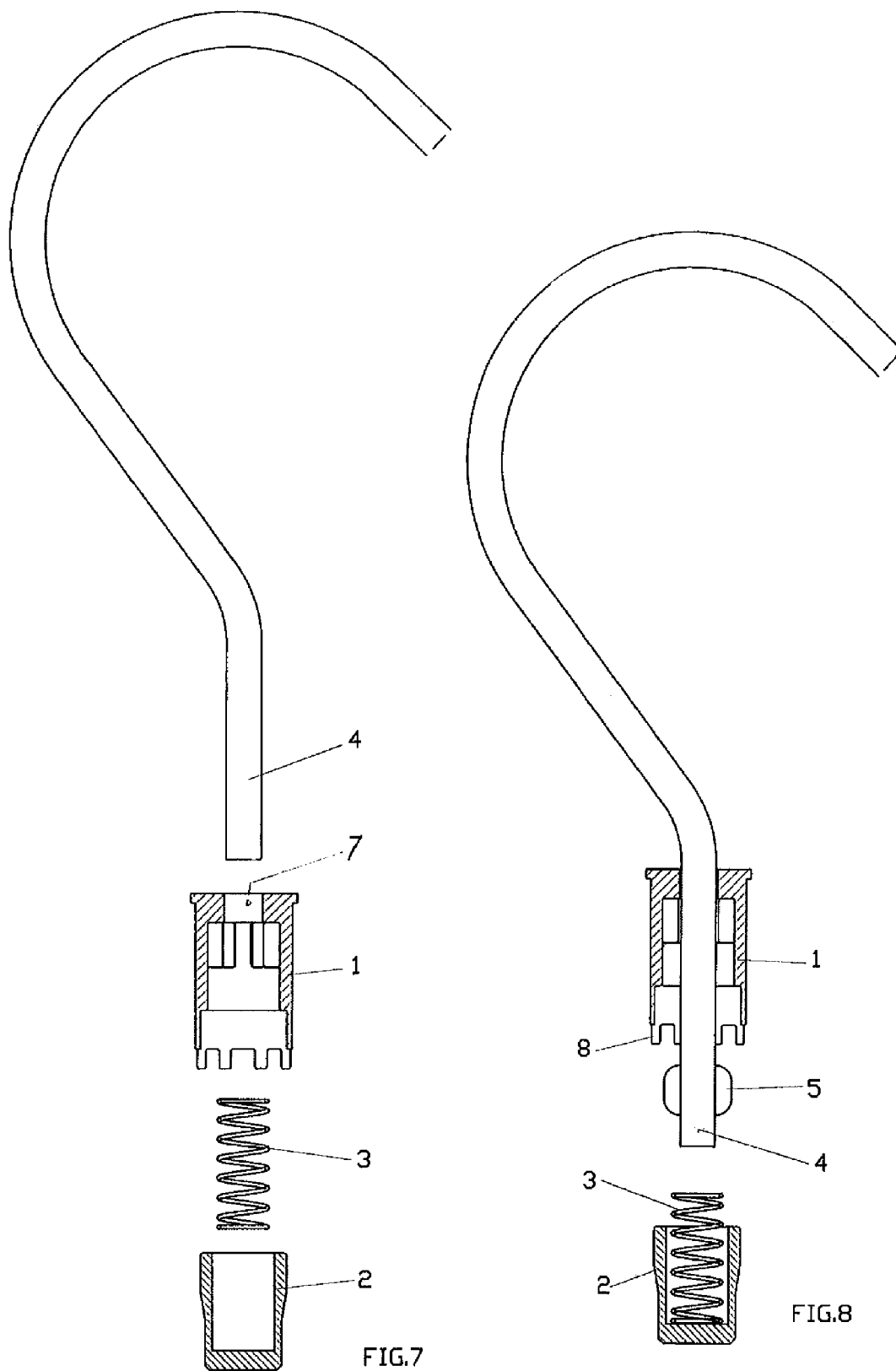


FIG.1







EUROPEAN SEARCH REPORT

Application Number
EP 10 17 1185

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 298 13 739 U1 (WAGNER METALLWAREN MAWA [DE]) 9 December 1999 (1999-12-09)	1,2,4,5	INV. A47G25/32
Y	* abstract *	3	
	* page 10, lines 1-22; figures 11,12,13 *		

Y	CA 2 450 873 A1 (CLOW CRAIG D [CA]) 25 May 2005 (2005-05-25) * abstract; figures 1-7 *	3	

A	DE 200 20 892 U1 (BRAITRIM DEUTSCHLAND GMBH [DE]) 8 March 2001 (2001-03-08) * abstract *	1,5	
	* page 13, lines 21-36 - page 14, lines 1-15; figures 7-10 *		

			TECHNICAL FIELDS SEARCHED (IPC)
			A47G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 19 November 2010	Examiner Longo dit Operti, T
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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EPO FORM 1503 03.82 (P04C01)

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

EP 10 17 1185

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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19-11-2010

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