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## **EUROPEAN PATENT APPLICATION**

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71) Applicant: CARE PAK AB Flisevägen S-372 52 Kallinge (SE)

Inventor: Holm, Stig3 Rue Hêtre PropreF-69130 Ecully Lyon (FR)

(74) Representative: Rostovanyi, Peter et al

AWAPATENT AB,

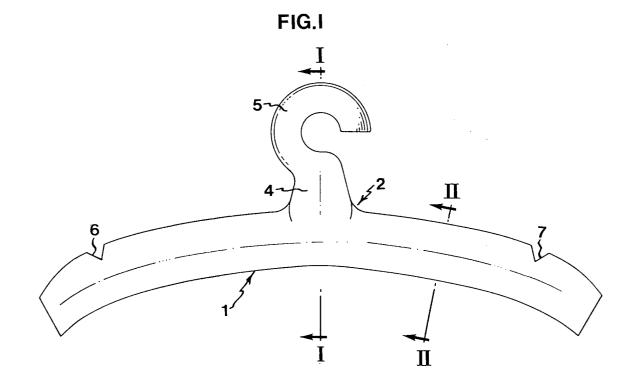
Box 5117

S-200 71 Malmö (SE)

(54) Clothes hanger.

© A clothes hanger to be used but a few times, which is made as an integral piece of compressed wood-fibre material and which comprises a body portion (1) to support a garment, and a hook portion (2) for suspending the hanger. The clothes hanger is

characterised in that the body portion (1) and the hook portion (2) are designed as an open shell, such that the hanger is substantially completely nestable in a correspondingly-shaped clothes hanger.



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This invention relates to a clothes hanger and more specifically to a clothes hanger of the type recited in the preamble to appended claim 1.

Clothes are today stored in shops either folded up on shelves or carried on clothes hangers. The latter option is the commoner since customers generally demand that the clothes should be easily accessible and easy to try on, prior to a purchase decision.

The clothes are carried on hangers which are more or less conformed to the garments concerned.

The hanger body is often made of wood or plastics, and has a metal hook. There are also other solutions according to which the entire hanger is made of plastics, wood or some metal.

For reasons of economy, many shops selling clothes, especially large ones, only use plastic hangers. These also tend to an increasing extent to be hangers to be used only once or but a few times. The handling of such disposal plastic hangers thus is a problem today. Since the hangers are made of plastics, complicated equipment is required if, in compliance with today's recycling aims, it should be possible to recover the used plastic for producing other objects or new hangers.

Another problem linked with this type of hanger, as well as with wooden hangers, is that the handling and transport of the hangers requires much space and therefore is costly. This is due to the special shape of the hanger, making it difficult to pack or store efficiently, especially as the hangers are easily entangled with each other.

One object of the invention therefore is to provide a hanger which is easy to recover and therefore easy to recycle to the original producer.

Another object is to provide a hanger which, during storage, handling and transport, requires less room than previously known hangers.

A special object of the invention is to provide a clothes hanger carrying the garments in an aesthetically appealing way.

These objects are achieved by means of a clothes hanger of the above-mentioned type having the features recited in claim 1.

Preferred embodiments of the invention are recited in the appended subclaims.

A currently preferred embodiment will be described hereinafter with reference to the accompanying drawings, in which

Fig. 1 is a side view of a clothes hanger according to the invention,

Fig. 2 is a section taken along line I-I in Fig. 1, and

Fig. 3 is a section taken along line II-II in Fig. 1.

Fig. 1 shows a clothes hanger according to the invention, which is made as an integral piece and has a body portion 1 and a hook portion 2. The

body portion 1 is designed as an elongate groove which is gently curved in the longitudinal direction in conventional manner. As appears from Fig. 3, the cross section of the groove is substantially semi-circular, which means that the groove has the shape of a curved semi-cylinder, with a boundary surface extending through about 180°.

From the central part of the body portion 1, there extends a tapering groove 4 which is part of the hook portion 2 and whose wider end is connected to the central part of the groove. The tapering groove 4 also has a cross section which extends through about 180 ° of a circle.

The tapering groove 4 passes into a groove 5 which is curved in part-circular fashion. The part-circular groove 5 also has substantially semi-circular cross section and forms the hanger hook.

Moreover, the body portion 1 has geometrically shaped indentations 6, 7, in which a given garment can be hooked.

The hanger thus is shaped as a shell which consists of a number of differently-shaped grooves, all of which have substantially semi-circular cross sections, whose ends, i.e. the edges 8 of the shell, are contained in one and the same plane. In the suspended state of the hanger, the edges 8 are situated in a substantially vertical plane.

The hanger is made of a wood-fibre material, such as fresh fibre pulp or recycled fibre pulp, by compression. The hanger material has a thickness of about 0.5-2 mm, which, of course, depends on the weight the hanger is to carry.

The hanger is compressed in a single operation where the tool is adapted to the shape of the hanger.

A clothes hanger according to the invention confers several advantages over known hangers. Producing the clothes hanger from a wood-fibre material makes it environmentally-friendly, since wood-fibre material is an infinite resource. At the same time, it is easy to recover in a way similar to that used today for recovering old newspapers.

Yet another essential advantage of the clothes hanger according to the invention is that its shell design enables it to be nested in or on another similar clothes hanger. When nesting several clothes hangers on or in one another, the required space is increased only by the thickness of the hanger material.

It is understood that the clothes hanger according to the invention can be modified in several different ways within the scope of the appended claims. Especially, it should be noted that reinforcing beads may be formed on the outer boundary surfaces of the different grooves. The outer boundary surfaces of the grooves may also be provided with depressed portions, which also contributes to increase the rigidity of the clothes hanger. The

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reinforcing beads and the depressed portions may be designed, for example, as a company logo or company mark.

It should also be pointed out that the body portion may be designed with an extra, elongate, straight groove, which further stiffens the clothes hanger and enables the suspension of trousers.

**Claims** 

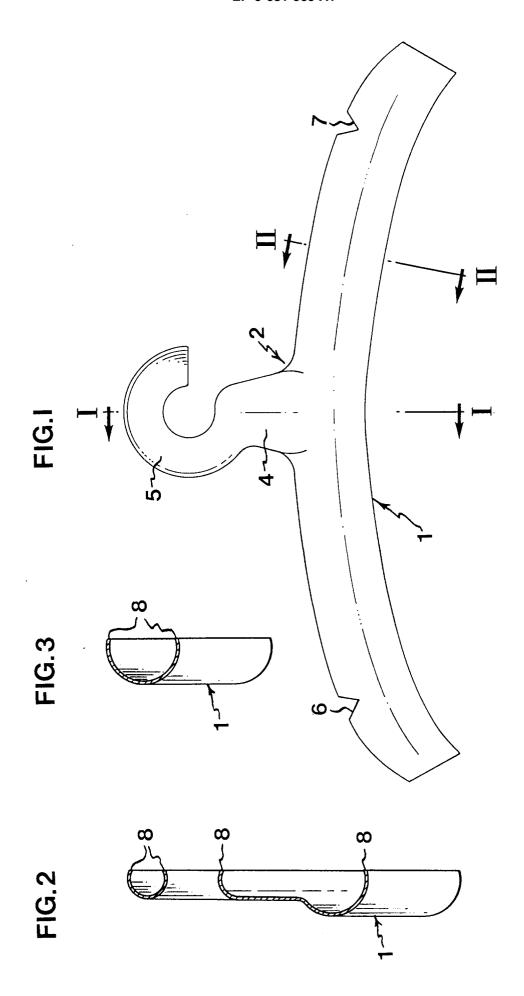
- 1. A clothes hanger to be used but a few times, which is made as an integral piece of compressed wood-fibre material and which comprises a body portion (1) to support a garment, and a hook portion (2) for suspending the hanger, characterised in that the body portion (1) and the hook portion (2) are designed as an open shell, such that the hanger is substantially completely nestable in a correspondingly-shaped clothes hanger.
- 2. A clothes hanger as claimed in claim 1, characterised in that the body portion (1) is designed as an elongate groove, and that the hook portion (2) is designed as a tapering groove (4) and a part-circularly-curved groove (5).
- A clothes hanger as claimed in claim 2, characterised in that the respective grooves have substantially semi-circular cross section.
- **4.** A clothes hanger as claimed in any one of claims 1-3, **characterised** in that the edges (8) of the shell are situated in a common plane.

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## **EUROPEAN SEARCH REPORT**

Application Number EP 94 85 0198

Category	Citation of document with inc of relevant pass		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)	
Y	US-A-2 741 408 (BROW * column 1, line 50;	ENSHIRE) 1 figure 5 *	-3	A47G25/36	
Y	DE-U-92 09 313 (RIET * page 5, line 10 -	TSCHEL) 1 line 11 *	-4		
Y	US-A-4 805 816 (FREUND) * figures 6,8 *		, 4		
<b>4</b>	WO-A-89 10718 (ROFUL * figures 2,3 *	E PTY.) 1	-4		
				TECHNICAL FIELDS SEARCHED (Int.Cl.6)	
				A47G	
	The present search report has be	en drawn up for all claims			
Place of search		Date of completion of the search	D.	Examiner C	
X : par Y : par doc	THE HAGUE  CATEGORY OF CITED DOCUMEN ticularly relevant if taken alone ticularly relevant if combined with anotument of the same category mological background	E : earlier patent docum after the filing date	nderlying the ent, but publ e application	lished on, or	

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