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(54) **Improved wall hanger, for neck scarves and lightweight textiles**

(57) Wall hanger that comprises a physical pendulum where its pendular mass is mainly gathered in the free end of its arm which is formed by a part which widens out in the form of a partially-open small dish that houses a magnet. The magnet has a flat surface, parallel to its axis of rotation, which faces towards the open part of the small dish from which it protrudes. Hanging and at rest, the lower part of the pendulum rests on a

fixed part of ferromagnetic material which has a flat surface facing that of the magnet and parallel to the latter's axis of rotation. The arm of the pendulum has a swinging action and together with the specific positioning of the ferromagnetic part, make the flat part of the latter and that of the magnet, when resting against one another, have coplanar contact before the pendulum reaches its lowest point

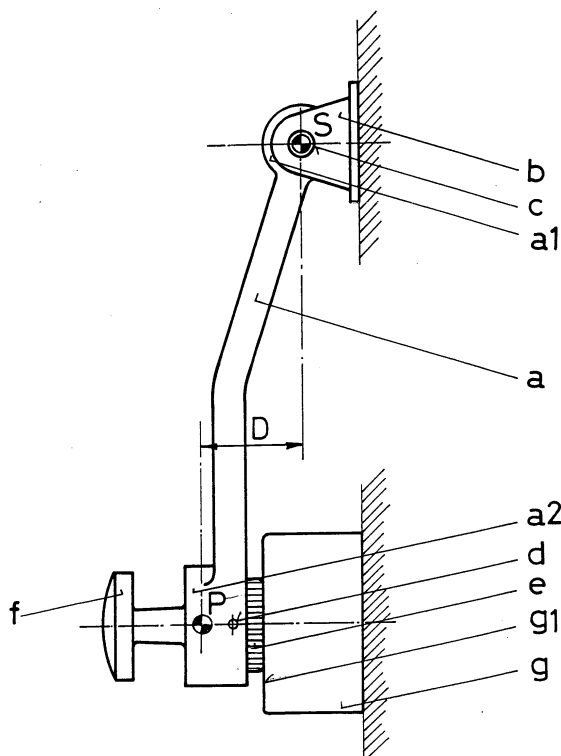


Fig.2

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Description

BACKGROUND OF THE INVENTION

[0001] In commercial establishments which sell clothing for domestic use only, it is frequently felt that there is a need for a hanging device to provide a quick and convenient means for holding, placing and sorting small, lightweight garments, which allows them to be fully displayed and contemplated simultaneously, with a plurality thereof, and which, as a result, allows the subsequent choice of the most appropriate garment. The invention presented claims to cover said necessity and we could classify it among those devices which provide rational organization for things, in this case, lightweight textiles, in general, and neck scarves in particular.

[0002] In the past, this has involved offering a solution to this need via different devices, generally levers or pegs worked by springs, which, at times, are combined with rings and hooks, on other occasions a sort of membrane is used, formed by a type of elastomer which is more or less rigid, wherein two perpendicular cuts have been made and between the edges whereof a part of the garment is inserted. The drawback usually presented by these systems is the poor treatment the garments are subjected to, which are usually made of delicate textiles that do not stand up well to the wear produced by repeated hanging. No device, such as the one presented herein, is known to be used for such a function.

[0003] The invention is based on a simple mechanism for easy use, whereby the positive results of sorting and displaying needed are achieved, avoiding any possibility of deterioration of the items to which it applies. One form of embodiment is disclosed, which must be understood as being an example only and in no way restrictive and, in order to help provide a better understanding of how it is made and its advantages, the drawings attached herewith will be used and reference will be made to them via the numbers and letters indicated therein.

DESCRIPTION OF THE DRAWINGS

[0004]

Figure 1 shows a plan view,
Figure 2 shows an elevational side view and
Figure 3 shows a partial section of the part with which the prehensile effect is obtained for holding the garment.

DESCRIPTION AND PREFERRED EMBODIMENT

[0005] The embodiment disclosed in the invention is comprised of a single hanging element which does not, in practice, preclude any number of such elements deemed appropriate from being grouped together. From this point of view, it can be considered as being a mod-

ular device wherein the module is a single hanger.

[0006] Unlike the other aforementioned references, the invention presented (Figs. 1 and 2) consists in a physical pendulum whose centre of suspension "S" is produced by a support (b), which can be fixed to a vertical surface or wall, and by a horizontal axis (c) whereon the arm (a), which can swing freely, is articulated, by its upper end (a1),.

[0007] On the lower end of the arm (a) is a part which widens out (a2) in the form of a partially-open small dish (Figs. 1 and 2) wherein (Fig. 3) a permanent magnet (e) is housed which can freely swing at a certain angle "x" in both directions on a horizontal axis (d) joined to the small dish and parallel to the hanging of the pendulum; this magnet has a flat surface (e1) parallel to its axis of rotation, which faces towards the open part of the small dish (a2), from which it protrudes; inserted in the outer part of the closed part of the small dish is a handle or knob (1).

[0008] The mass of the small dish (a2) added to that of the parts (d), (e) and (f) has a much larger value than the rest of the arm (a) which is why the centre of swing "P" of the physical pendulum (Fig. 2) will be considerably displaced towards the lower part thereof.

[0009] At rest, the pendulum described hangs by its upper end (a1) from the axis (c) of the support (b) and at its lower end, the flat surface (e1) of the permanent magnet (e) rests on the flat surface (g1) of a part (g) of ferromagnetic material which can be attached to the same vertical surface or wall to which the support (b) is attached.

[0010] The arm (a) has a swinging movement in its middle part and the surface (g1) of the part (g) is separate from the surface to which it is fastened for a certain distance, and thus when the surfaces (e1) and (g1) come into contact, the uprights which pass through the centres of suspension "S" and centres of swing "P" will not coincide, maintaining a certain separation "D" and the pendulum will not be able to reach its lowest position, with a horizontal gravitational force emerging which will push the part (e) against the part (g); and in view of the magnetic attraction between them, we can conclude that both forces, gravitational and magnetic, will contribute towards (e) and (g) remaining firmly joined together.

[0011] The effectiveness of this join will be strengthened because the free swinging action of the part (e) on the axis (d) will automatically enable the surfaces (e1) and (g1) to have full coplanar contact, in the case described, which will increase the effectiveness of their mutual magnetic attraction.

[0012] In accordance with the above, the invention will function as follows:

[0013] It is assumed that the device described is at rest, with no hanging garments. In such circumstances, the parts (e) and (g) will be firmly joined together.

[0014] Pulling the handle (f) will separate the parts (e) and (g) and the garment to be hung will be placed between them which, when the handle (f) is released, the

garment will remain fixed by the friction action produced between itself and the surfaces (e1) and (g1) caused by the forces of attraction and gravitation that exist between the parts (e) and (g), which will have rounded edges so as not to damage the fabric of the garments.

[0015] Positioning of the garment fabric hanging between the parts (e) and (g), not allowing them to be in direct contact, will weaken the magnetic force which draws them together, but will also increase the horizontal gravitational force which will push one against the other. Also contributing towards compensating for the reduction in the magnetic attraction caused by said positioning of the garment, is the ability of the part (e) to swing, which will enable the flat facing surfaces (e1) and (g1) to position themselves in a closely parallel position meaning that, first, the magnetic field produced by (e) will be used to the maximum and, second, the friction between said surfaces and the garment will be optimized, as well as ensuring that the right pressure is exerted against the garment so that its edges cannot damage the fabric.

[0016] The invention is not strictly limited to the form of embodiment illustrated but may include any other variation of embodiment.

[0017] The materials foreseen are those normally used in carrying out standard mechanical work.

which the above configuration would not let it reach anyway; in the outer part of the closed part of the small dish, a handle (f) or knob is inserted.

Claims

1. IMPROVED WALL HANGER FOR NECK SCARVES AND LIGHTWEIGHT TEXTILES of the type which make use of the effect produced by two parts which are forced to press one against another; it may comprised modularly by a single hanger (or module) or by a set of several hangers; **characterized in that** each module comprises a physical pendulum where its pendular mass is mainly gathered in the free end of its arm (a) which is formed by a part which widens out in the form of a partially-open small dish (a2) that houses a magnet (e) which is permanent mounted on a horizontal axis joined to the small dish (a2) and parallel to the hanging of the pendulum, whereon said magnet (e) can freely swing at a certain angle "x" in either direction; the magnet (e) has a flat surface, parallel to its axis of rotation, which faces towards the open part of the small dish (a2) from which its protrudes; hanging and at rest, the lower part of the pendulum rests on a fixed part (g) of ferromagnetic material which has a flat surface (g1) facing that of the magnet (e) and parallel to the latter's axis of rotation; the arm (a) of the pendulum has a swinging action in its centre part which, together with the specific positioning of the ferromagnetic part (g), make the flat part (g1) of the latter and that of the magnet, when resting against one another, have coplanar contact before the pendulum reaches its lowest point, a position at

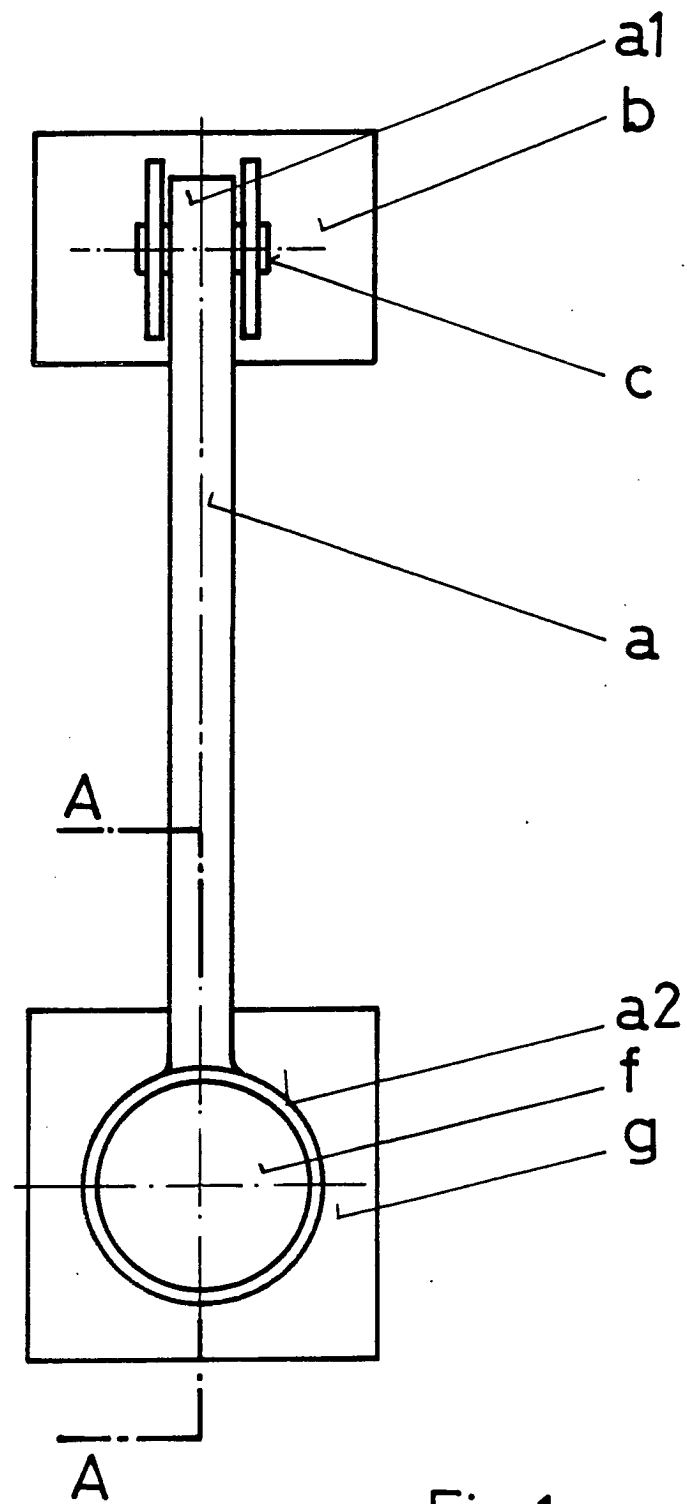


Fig.1

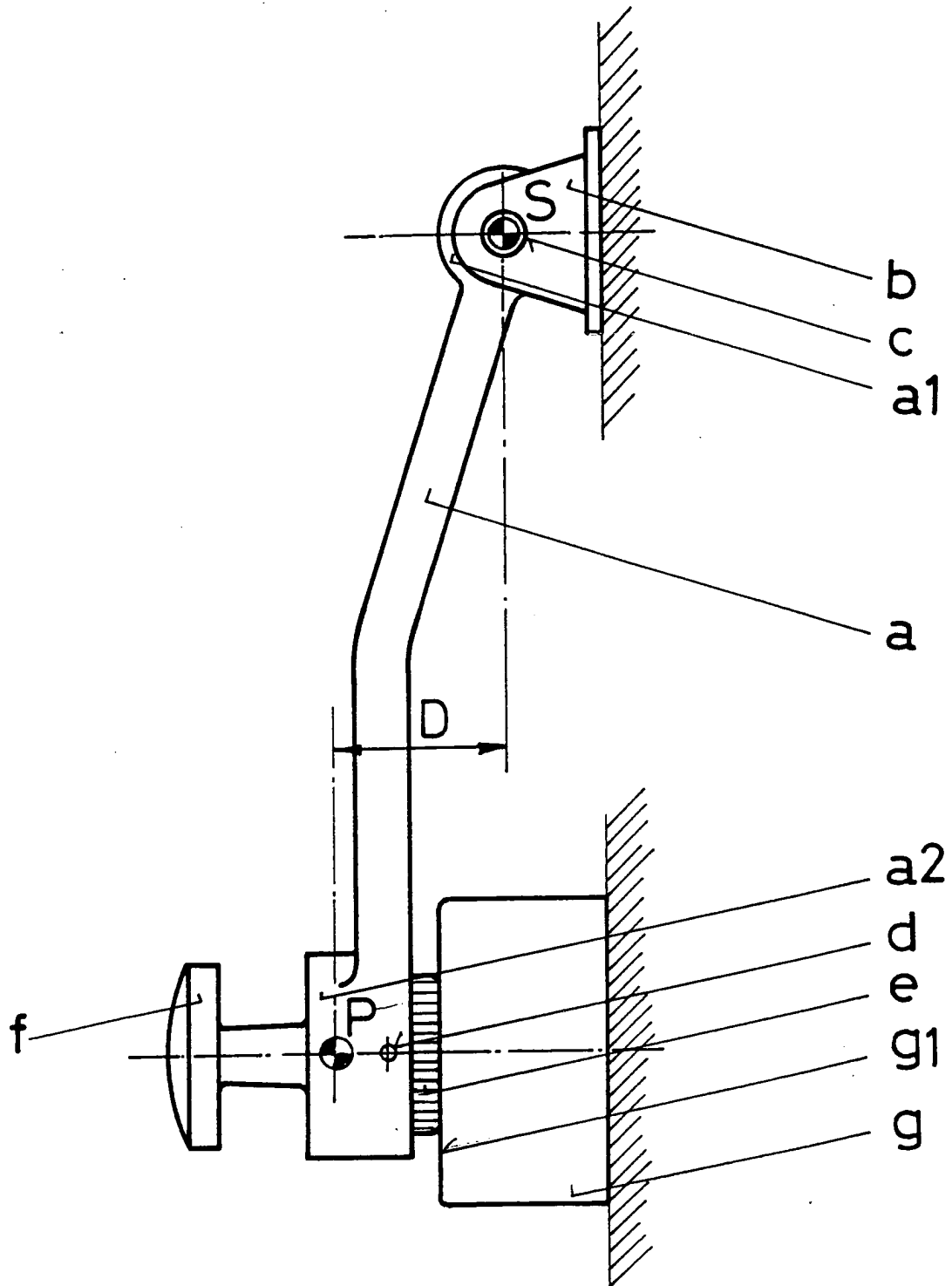


Fig.2

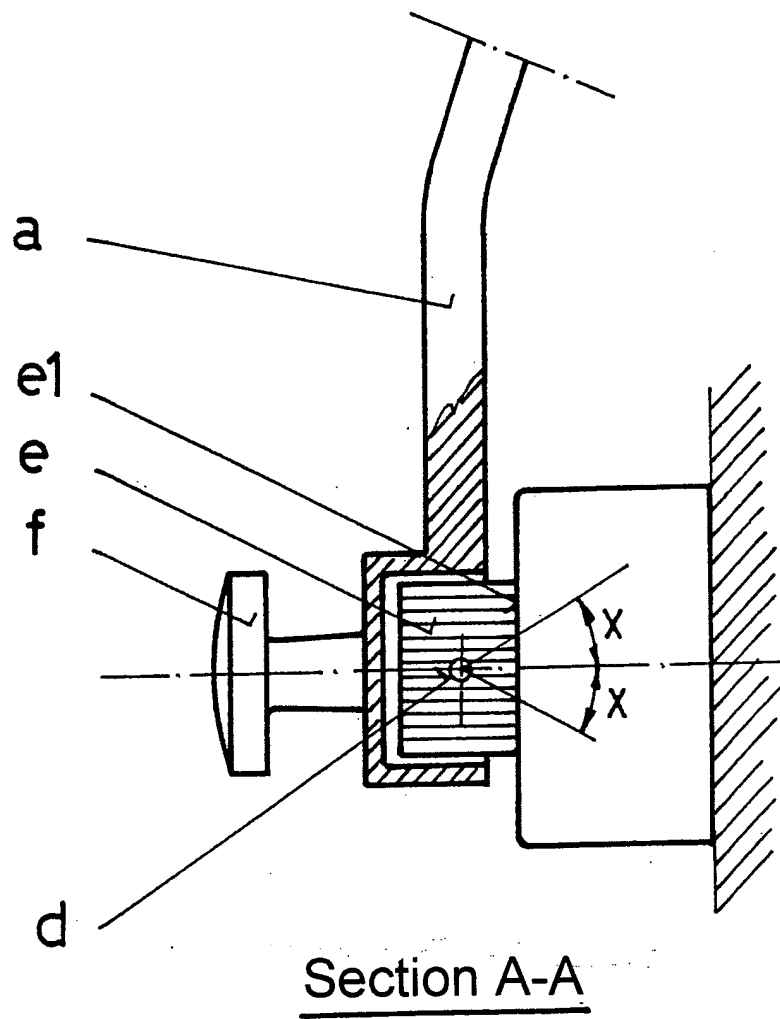


Fig.3



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EUROPEAN SEARCH REPORT

Application Number
EP 04 38 0218

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 2003/106913 A1 (KOHNO TATSUYUKI) 12 June 2003 (2003-06-12) * figures 13-16 *	1	A47G25/74
A	US 2003/146178 A1 (BRADY YVONNE M) 7 August 2003 (2003-08-07) * abstract *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 9 February 2005	Examiner Alff, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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EPO FORM 1503 03/82 (P04/C01)

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

EP 04 38 0218

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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09-02-2005

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US 2003146178 A1	07-08-2003	NONE	