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(54) **MOVABLE HANDLE ATTACHABLE TO SHAFTS**

(57) The invention discloses a movable handle attachable to shafts (1) comprising: an elongate body (2) configured to be grasped by the hand of a user and featuring an inferiorly open longitudinal orifice destined to house an upper portion of the shaft (1) whereto the handle is to be coupled; a tensioner (4) housed in the longitudinal orifice of the body (2), featuring an upper extremity resting against an upper portion of the longitudinal orifice; and

an element (3) for the affixing of a lower extremity of the tensioner (4) to the shaft (1). Thus, when a user exerts a longitudinal downward force on the body (2) of the handle, the body (2) is displaced longitudinally downward and, consequently, the tensioner (4) housed in the orifice is compressed and exerts a longitudinal upward force which tends to return the body (2) to its initial superior position.

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Description

Technical field

[0001] This invention corresponds to the sector of accessories for more comfortable, effective and less tiring use of a particular handle.

[0002] The object of this invention is a mobile grip which can be attached to different types of handle, whether those used in cleaning tasks, handles used in sport, in signalling, walking sticks, etc.

Background of the invention

[0003] Various different types of grip associated with the multiple uses of a handle are currently known. We are familiar with anatomical grips, anti-allergenic grips, thermal grips, etc.

[0004] However, all these grips are fixed, since they are rigidly coupled to the handle, by means of screws or similar elements, for example. They therefore lack the specific feature of being designed to minimise the effort required of the user.

Explanation of the invention

[0005] In this document the term "*handle*" refers to any elongated and essentially straight element with, for example, a form comprising a prism with a circular, square, hexagonal or other cross section, designed to be held in a user's hand. Its diameter will for this purpose be between approximately 1 cm and 5 cm. Handles of this type would include those typically used for walking sticks, umbrellas, brooms, mops and other similar elements.

[0006] The mobile grip attachable to handles which is the object of this invention mainly comprises three elements: a body, a tensioning element and an attachment element. A more detailed description is given below of each of these elements.

a) Body

[0007] This is an elongated body configured to be gripped in a user's hand. The body may adopt an ergonomic form suited to the hand of a user, for example with indentations in which to place the fingers and the palm of the user's hand.

[0008] The body furthermore comprises a longitudinal orifice which is open at the base, intended to accommodate the upper portion of the handle to which the grip will be attached. In other words, the longitudinal orifice is open at least at the lower end of the body in order to allow the upper portion of the handle to be housed within.

[0009] In a particularly preferred embodiment of the invention, the longitudinal orifice is open at the upper end. This allows the upper portion of the handle to pass completely through the body via the interior of the longitudinal orifice until it protrudes through the upper opening

of said longitudinal orifice. This configuration allows the hole with which some handles are manufactured at the upper end to be used as a hanger.

b) Tensioning element

[0010] This is a tensioning element housed within the longitudinal orifice of the body, with an upper end supported on an upper portion of the longitudinal orifice. In this context, the term "tensioning element" refers to any elastic element which exerts a force opposing the displacement of some of its parts.

[0011] In principle the tensioning element may adopt any form, provided that it is capable of performing the described function, although it would preferably be a coiled spring.

c) Attachment element

[0012] The attachment element is configured to attach a lower end of the tensioning element to the handle. The attachment element may adopt any form provided that it attaches the lower end of the tensioning element to the handle, for example clamps tightened to the contours of the handle.

[0013] The main function of the clamps will be to tighten or attach the grip to the handle, irrespective of its size or thickness, allowing the body to perform a downward or upward movement. As a result, when a user exerts a downward longitudinal force on the body of the grip, the body is longitudinally displaced downwards, and the tensioning element housed in the orifice is compressed as a result. The compression of the tensioning element causes the emergence of a longitudinal force upwards, which tends to restore the body to its initial upper position. When the user exerts a downward force on the body of the grip, the tensioning element thus accumulates and transfers this pressure to the interior, thereby reducing the effort made by the user.

[0014] It should lastly be indicated that the mobile grip attachable to handles, and all components thereof, may be manufactured from plastic or metallic materials, or a combination of the two.

Brief description of the drawings

[0015] To complement the description being given and to assist in a better understanding of the characteristics of the invention, a figure is enclosed as an integral part of this description, containing the following elements by way of illustration without limitation:

Fig. 1 shows the mobile grip attachable to handles.

Preferred embodiment of the invention

[0016] Once the handle to be used (1) has been selected, the mobile grip attachable to handles of this invention will be fitted to the top of the handle in the form

of a cap. For this purpose, the upper end of the handle (1) is passed through the longitudinal orifice of the body (2) of the grip. In this specific example, the longitudinal orifice of the body (2) is open at the upper end, such that the upper end of the handle (1), which in this example comprises a wider part fitted with a hanger hole (6) in the handle (1), passes completely through the orifice to emerge via its upper opening (5).

[0017] A tensioning element (4) which in this example has the form of a coiled spring, housed in the longitudinal orifice of the body (2) of the grip. The tensioning element (4) has an upper end supported on an upper portion of the body (2) of the grip, which essentially has the form of a semi-spherical dome, such that when the body (2) is displaced downwards, it pulls this upper end of the tensioning element (4) with it. Meanwhile, the lower end of the tensioning element (2) is attached to the handle by means of clamps (3) capable of being tightened to the contours of each handle (1).

[0018] Once the mobile grip attachable to handles (1) is installed and attached, the user can make normal use of it. By gripping the body (2) of the grip in their hand, the user thus exerts a downward pressure on it. As a consequence of this pressure, the body (2) is displaced downwards, thereby compressing the tensioning element (4). The pressure exerted on the tensioning element (4) is transferred to the handle (1), with an upward longitudinal force being exerted on the body (2). In short, the downward displacement of the body (2) is dampened. As a consequence of this process, the effort required by the user to manage and use a particular handle (1) will be more agreeable and less tiring. When the user stops pushing downwards, the body (2) of the grip returns to its original position thanks to the force exerted by the tensioning element (4). In other words, the body (2) returns to the point closer to the upper end of the handle (1) where it was originally positioned, ready for further use. The grip will furthermore be interchangeable and capable of being used on any other handle.

List of reference symbols

[0019]

1	Handle	45
2	Body	
3	Clamps	
4	Tensioning element	
5	Longitudinal orifice	
6	Hanger hole	50

Claims

1. Mobile grip attachable to handles (1), **characterised in that** it comprises:

- an elongated body (2) configured to be gripped

by a user's hand, in which the body (2) comprises a longitudinal orifice open at the lower end intended to house an upper portion of the handle (1) to which the grip is to be attached;

- a tensioning element (4) housed within the longitudinal orifice of the body (2), in which the tensioning element (4) has an upper end supported on an upper portion of the longitudinal orifice; and

- an attachment element (3) of a lower end of the tensioning element (4) attaching it to the handle (1) such that when a user exerts a downward longitudinal force on the body (2) of the grip, the body (2) is displaced longitudinally downwards, and as a consequence the tensioning element (4) housed in the orifice is compressed and exerts a longitudinal force upwards which tends to restore the body (2) to its initial upper position.

2. Mobile grip attachable to handles (1), as claimed in claim 1, in which the longitudinal orifice is open at the upper end.

3. Mobile grip attachable to handles (1), as claimed in any of the previous claims, in which the attachment element (3) takes the form of clamps tightened to the contours of the handle (1).

4. Mobile grip attachable to handles (1), as claimed in any of the previous claims, in which the tensioning element (4) is a coiled spring.

5. Mobile grip (2) attachable to handles (1), as claimed in any of the previous claims, which is manufactured from plastic or metallic materials.

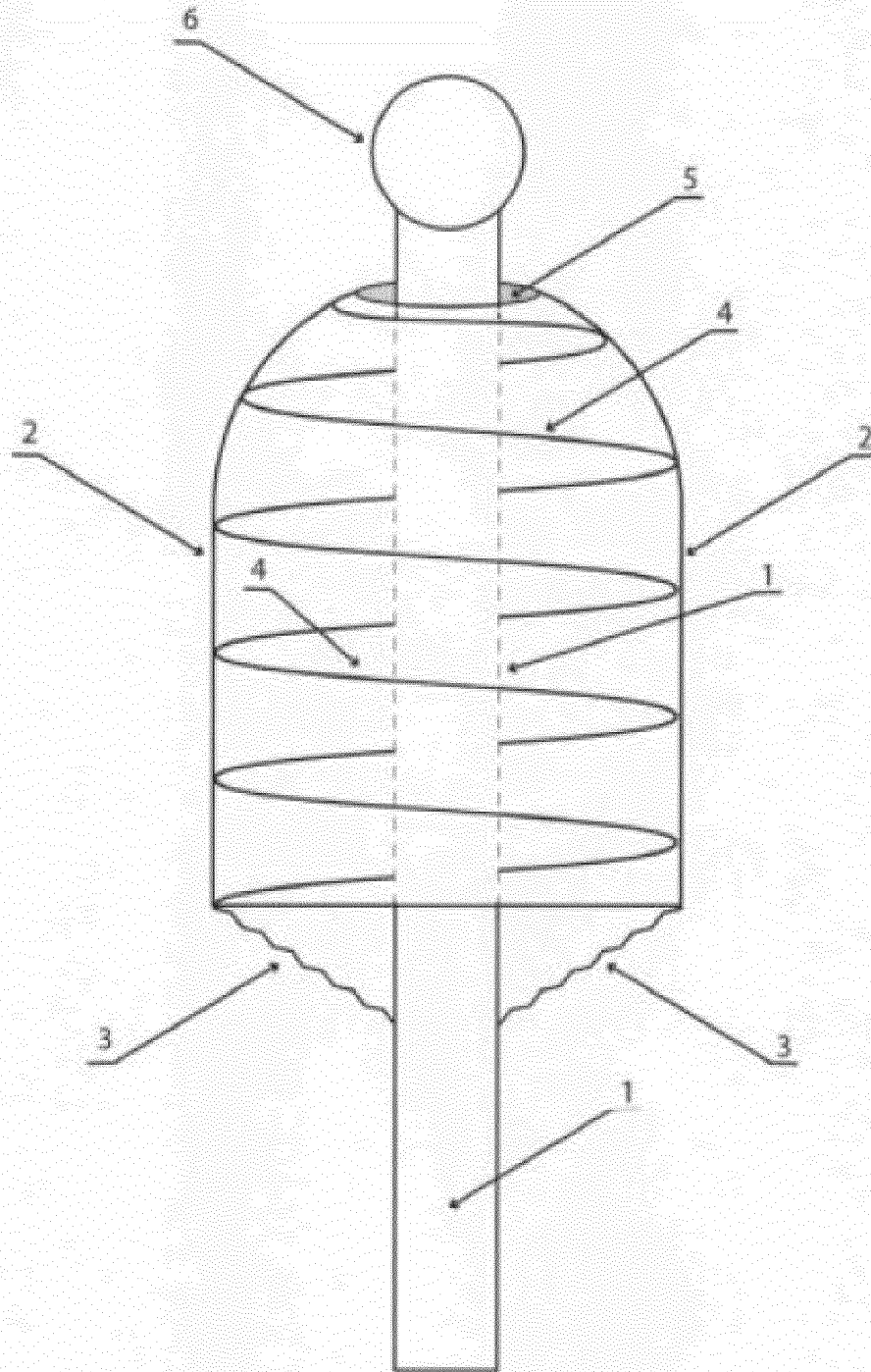


FIG.1

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2019/070758

A. CLASSIFICATION OF SUBJECT MATTER

B25G1/01 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B25G, A45B, A47L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, INVENES

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2011128845 A2 (J. P. VUILLAUME) 20/10/2011	1,2,4,5
Y	Page 5, line 25 - page 8, line 21; figures 1-3	3
Y	ES 1214376U U (J. C. RAMOS-VALCARCE MORCILLO) 19/06/2018	3
	Page 2, line 29 - page 3, line 21; claims 1 and 6; figure	
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	Figures	
A	US 2017297190 A1 (RAMPTON SEAN) 19/10/2017,	1,2,4,5
	Paragraphs 39-40; 44-52; figures 1-3c	

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance.	
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"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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Information on patent family members

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Form PCT/ISA/210 (patent family annex) (January 2015)