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(54) **Support**

(57) The present invention is a support for objects, comprising an internally threaded base device (2) adapted to be attached to a surface, an externally threaded top disc (6) comprising a magnetically conductive material and adapted to be threaded to the base device (2), and a magnet (8) adapted to be attached to the object to be supported.

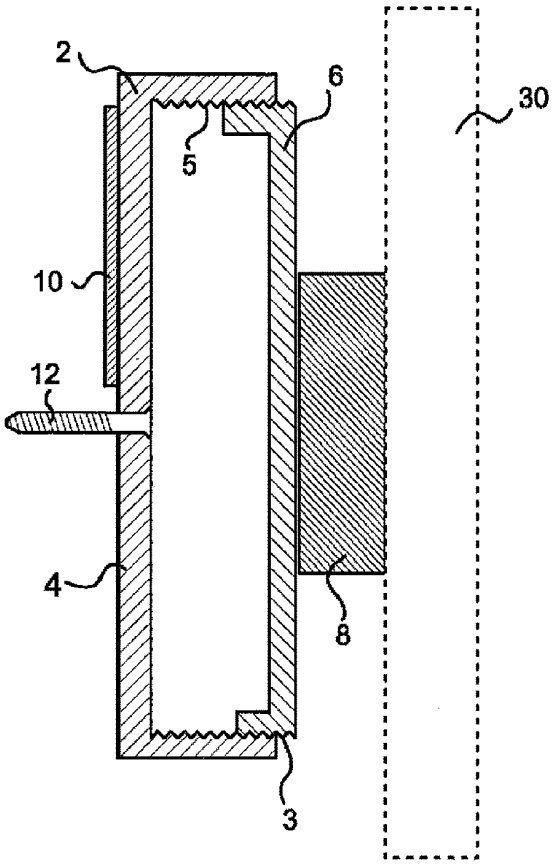

Fig.1a

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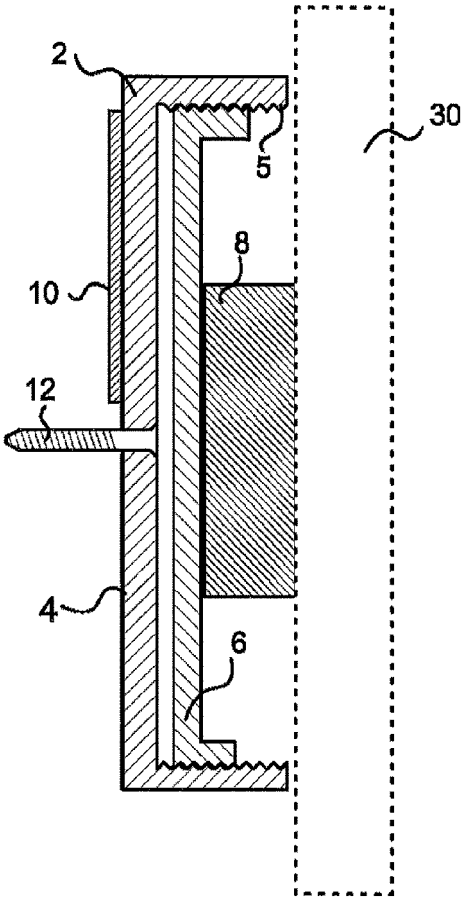

Fig.1b

Description

Technical field

[0001] The present invention relates generally to a support for objects, wherein the distance between the surface and the supported object is adjustable.

Background art

[0002] Many different types of supports for objects are known, such as common picture hooks, concrete hooks and screws. There are other supports, for example for lamps or TV sets, which enable movement of the object in different directions while it is still attached to the support.

[0003] EP 1692985 describes a support device for for example pictures which can be attached to a surface or a ceiling. The object can be removed from the support and be reattached thereto as required. The support is in this case a holding device which is attached to the surface by means of a screw, for example. There is a space in the support which is designed and adapted to receive a magnet with good fit which in turn is attached to the back side of a base plate, which comprises additional magnets in the periphery thereof for connection to a cover plate of the same size as the base plate but being transparent. The object is positioned and held in place between the base plate and the cover plate by means of the magnetic forces between the base plate and the cover plate.

[0004] The drawback with this prior art solution is that it is not possible to adjust the suspension of the object laterally or the distance between the surface and the object.

Summary of invention

[0005] An object of the present invention is to provide a support in which the distance from an object to a surface is adjustable, wherein the surface can be a wall, a ceiling, a table or any other surface to which an object is to be attached.

[0006] Another object of the present invention is to provide a support in which the position of the object in relation to a surface can be laterally adjusted.

[0007] Yet another object of the present invention is to provide a support in which the position of the object in relation to a surface can be vertically adjusted.

[0008] An object can in this case be a product, a document, a writing board, a notice board, a lamp or any other object suitable to be suspended by means of the support.

[0009] The support can be made of any material, depending on the object to be suspended, i.e., be adapted depending on the weight of the object, the size of the object and the environment. The base device can be made of plastic, ceramic, steel or other suitable materials.

[0010] The support can be made in different sizes, since it is suitable for supporting both small and very large objects.

[0011] The support is suitable for supporting decorative objects for a home and heavy lids, tools and boards of different kinds in an industrial building.

[0012] The base device can comprise different parts in different materials, such as a base plate made of plastic and a side wall and the internal threads made of steel. Another option is to make all parts from steel or plastic or only the threads from steel.

[0013] The top disc is made of a material attracting a magnet, i.e., a magnetically conductive material, preferably steel.

[0014] The top disc may also be made of plastic, for example, but then be coated with a magnetic tape or other magnetic coating.

[0015] The fastening device for the support is chosen depending on the kind of surface to which the support is to be attached. The fastening device may for example be a screw, a nail, a hook, adhesive tape, cement or other adhesive material, such as double-stick tape.

[0016] The objects are attained by a support as defined in the attached claims.

Brief description of drawings

[0017] The invention is now described, by way of example, with reference to the accompanying drawings, in which:

[0018] Figs. 1 a and b show a schematic view of different embodiments of the support in a side sectional view.

[0019] Fig. 2a shows a schematic view of the base plate of the support and Fig. 2b shows the top disc of the support from above.

[0020] Fig. 3a shows a schematic perspective view of the support and Fig. 3b shows a schematic perspective view of the top disc.

Description of embodiments

[0021] Before describing the invention in detail it is understood that the invention is not limited to the particular materials or configurations described herein, since such configurations and materials can vary.

[0022] It is also understood that the terminology used herein is used only to describe different embodiments and that it is not intended to be limiting to the scope of the present invention which is limited only by the appended claims and their equivalents.

[0023] In the following, a detailed description of the present invention will now be given with reference to the accompanying figures, in which embodiments of the invention are shown.

[0024] Fig. 1 a shows a support 1 in a side sectional view. The support is in this example adapted to support an ordinary picture frame of the size 40 by 50 centimetres and comprises a base device 2, a top disc 6, something

by which the base device 2 is attached to the wall, such as a screw or double-stick tape, and a magnet 8 which is attached to the object, in this case the picture to be supported.

[0025] The base device 2 is in the shape of a cylinder comprising a base plate 4 which is attached to the surface, in this case a wall. The base device 2 has a thickness of 3 millimetres and is cylinder shaped. Double-stick tape 10 or a screw 12 can for example be used to attach the support 1 to the wall, depending on the kind of base the support 1 should be attached to. Also the top disc 6 has a round shape and a thickness of 3 millimetres. The top disc 6 is threaded to be mounted in the base device which is internally threaded. The threads of the base device run all way down to the base plate 4 so that the top disc 6 can be adjusted to abut the base plate up to a maximum distance from the base plate, which depends on the height of the cylinder shaped base device 2. The top disc is shaped like an externally threaded cylinder, exhibiting an end surface comprising magnetically conductive material and wherein the other end is open. This embodiment enables a maximum distance from the wall, i.e., the distance can vary from 14 millimetres to 24 millimetres from the wall. This can of course be reduced to about 10 millimetres if a thinner magnet is used or be extended if a thicker magnet is used.

[0026] Fig. 1b shows a different embodiment of the support 1, wherein the top disc 6 is arranged in the opposite direction in the base device 2 as compared with the embodiment of Fig. 1 a. This embodiment corresponds to the case where for example the picture is placed in the shorter interval from the wall, which is about 10-11 centimetres.

[0027] In yet an embodiment the top disc can be attached directly to the wall. This means that for example the picture also has the minimum distance from the wall, corresponding to about 10-1 1 millimetres. This can be further reduced if the top disc, which in this case is made of steel, is made thinner or if a thinner magnet is used, or both.

[0028] The magnet 8 is attached to the object to be supported by means of double-stick tape 10, for example, or by means of a screw 12 if the object is heavy. The magnet 8 will then stick to the top disc 6 which is made of steel. The size of the magnet 8 depends on the size and the weight of the picture. In this example, the magnet has a size in the order of 25 x 7 millimetres and is attached by means of double-stick tape. The dashed object 30 is a picture, wherein the magnet is to be attached to the back side of the picture for subsequent magnetic attachment to the top disc 6 in the desired position.

[0029] The base device 2 which is also shown in Fig. 2a is internally threaded 5 for reception of the top disc 6. The base device 2 comprises the base plate 4, which has a central hole 7 which in this case has a diameter of 8 millimetres and is countersunk for reception of a screw. The hole is also adapted for use as a cross template, i.e., to mark (by means of a pencil or other device) the position to which the support 1 is to be attached for drilling a hole or attaching the double-stick tape. The base device 2 can be made of plastic, metal or a ceramic material. The base device is attached to the wall or other surface by means of a screw or a double-stick tape.

[0030] The top disc 6 shown in Fig. 2b is preferably made of steel, but it can also be made by other materials. In the case it is made of a material to which a magnet will not attach, a magnetic tape can be used, for example, or be provided with a thin coating of steel. The side of the top disc is externally threaded 3 for mounting in the base device 2. The surface of the top disc is also provided with a groove or a slit 62 for facilitating the turning operation when the top disc 6 is mounted to the base device 2.

[0031] Fig. 3a shows a perspective view of the base device 2 and Fig. 3b shows a perspective view of the top disc 6. The top disc can, as in this case, be a flat disc without any surrounding rib, but it can also be provided with a rib or flange, as in Fig.1.

[0032] Other features and uses for the invention and advantages associated therewith are obvious for the person skilled in the art when reading the description and the different examples.

[0033] It will be appreciated that the described embodiments can be varied as regards the dimensions thereof without departing from the inventive idea.

Claims

1. A support for objects, **characterized by** an internally threaded base device (2) adapted to be attached to a surface, an externally threaded top disc (6) comprising a magnetically conductive material and adapted to be threaded to the base device (2), and a magnet (8) adapted to be attached to the object to be supported.

2. The support according to claim 1, comprising a fastening device comprising a screw, a nail, or an adhesive, such as double-stick tape.

3. The support according to claim 1, wherein the base device (2) and the top disc (6) are mutually adjustable.

4. The support according to claim 1, wherein the base device (2) comprises a base plate (4) having a central hole (7) for alignment of a screw, for example, and which also is adapted to be used as a cross template.

5. The support according to any of the preceding claims, wherein the magnet (8) has a diameter of 1-150 millimetres and a thickness of 1-50 millimetres.

6. The support according to any of the preceding claims, wherein the base device (2) has a diameter

of 10-500 millimetres and a depth of 5-500 millimetres.

7. The support according to any of the preceding claims, wherein the top disc (6) has a diameter of 10-500 millimetres and a thickness of 1-500 centimetres.

8. The support according to any of the preceding claims, wherein the top disc (6) has the shape of an externally threaded cylinder, having an end surface comprising magnetically conductive material and wherein the opposite end is open.

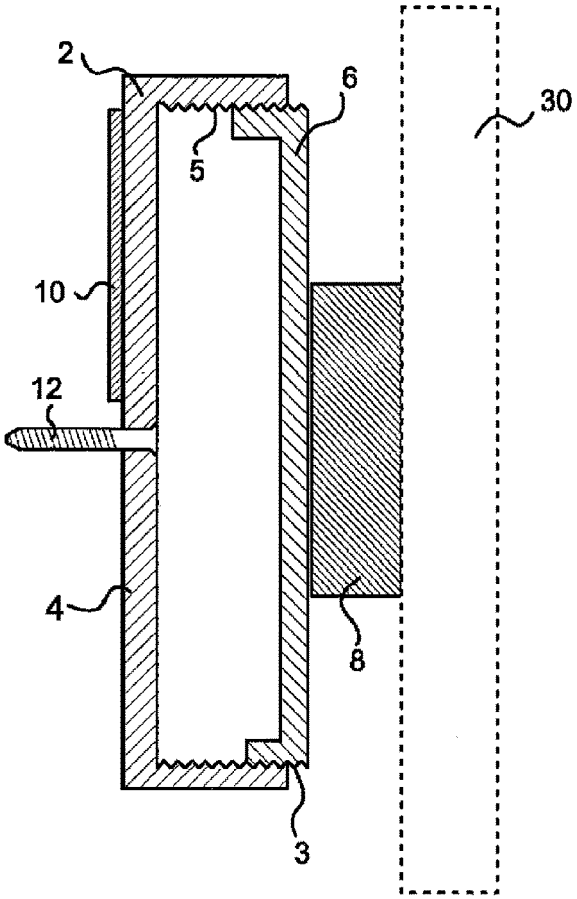

Fig.1a

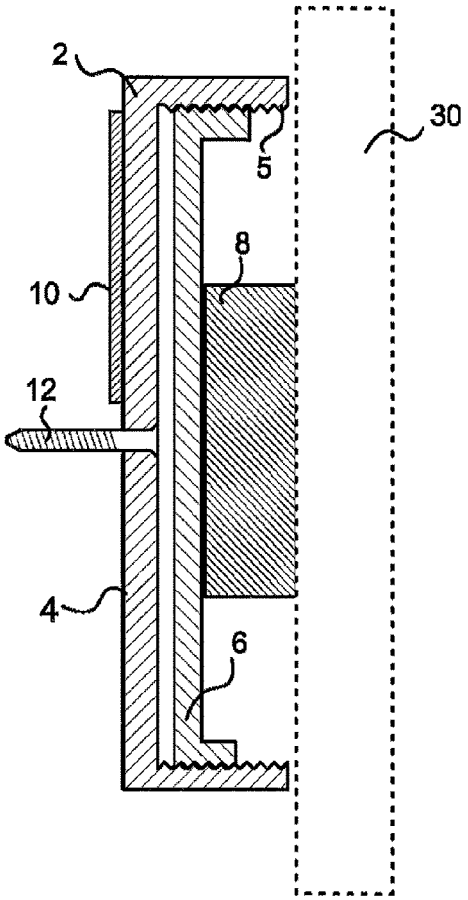

Fig.1b

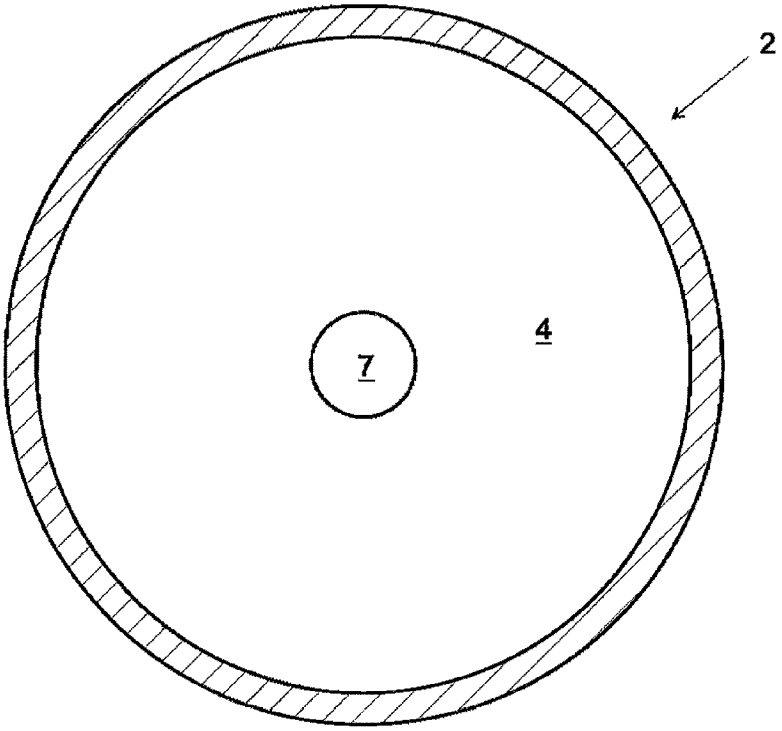

Fig.2a

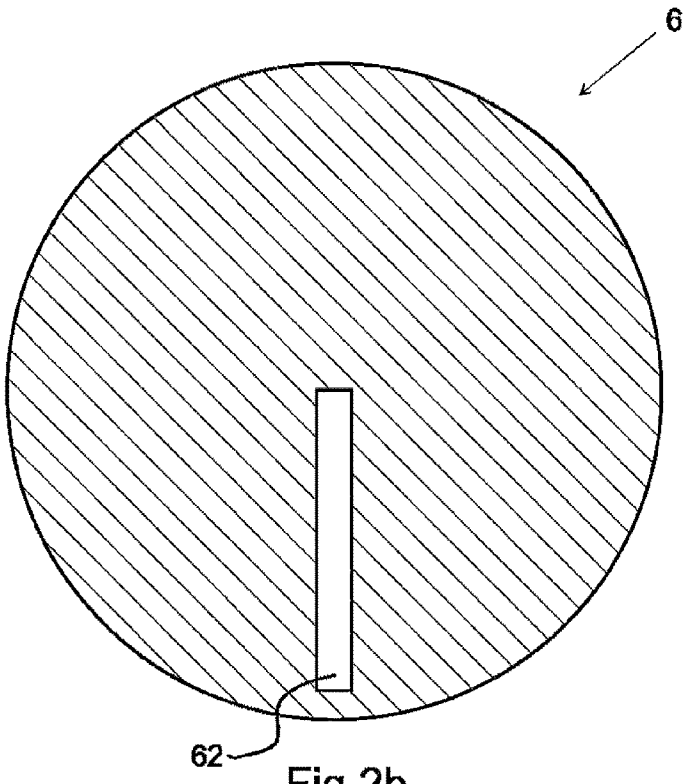

Fig.2b

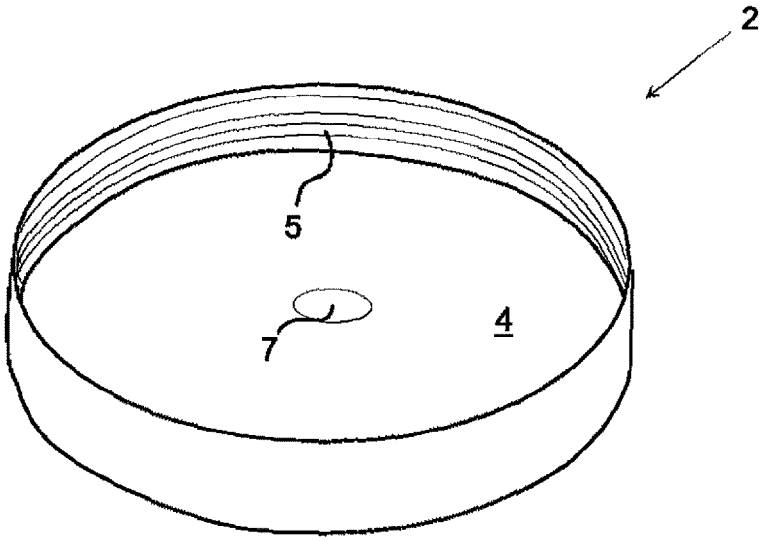

Fig.3a

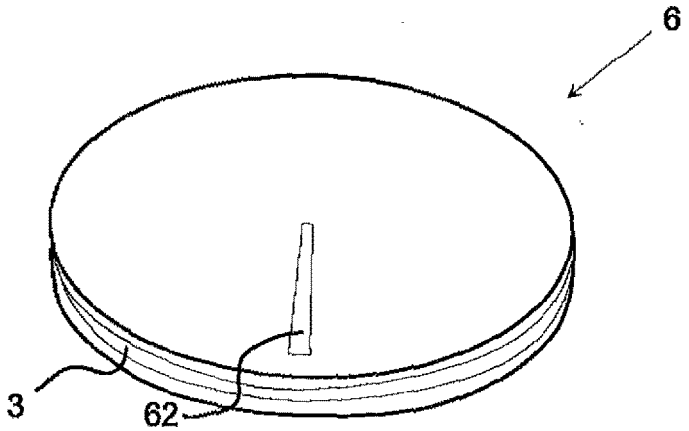

Fig.3b

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EUROPEAN SEARCH REPORT

Application Number
EP 12 17 4703

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 Y	DE 203 01 277 U1 (GAB GMBH) 27 March 2003 (2003-03-27) * page 8, line 1 - page 9, line 5; figure 2 * * page 10, line 11 - line 15 * -----	1-3,5-7 4	INV. A47G1/17
Y,D	EP 1 692 985 A1 (VARIANTUS AG) 23 August 2006 (2006-08-23) * figures * -----	4	
			TECHNICAL FIELDS SEARCHED (IPC) A47G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	29 October 2012	Beugeling, Leo

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
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T : theory or principle underlying the invention
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 12 17 4703

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29-10-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		EP 1692985 A1	23-08-2006

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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Patent documents cited in the description

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