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Maggia

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[54] **DEVICE FOR SUPPORTING MIRRORS, PLATES, PANELS AND THE LIKE**

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[52] **U.S. Cl.** **248/491**

[51] **Int. Cl.** **A47g 1/16**

[58] **Field of Search** 248/449, 488, 490, 491

[56] **References Cited**

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[57] **ABSTRACT**

This invention provides a support device for a mirror or like flat member in which upper and lower horizontal edges of the flat member are engaged by hook portions carried by upper and lower cross pieces mounted on a common vertical support rod by which the device is suspended. The upper cross piece is spring urged downwardly to enable the device to grip flat members of different heights.

5 Claims, 4 Drawing Figures

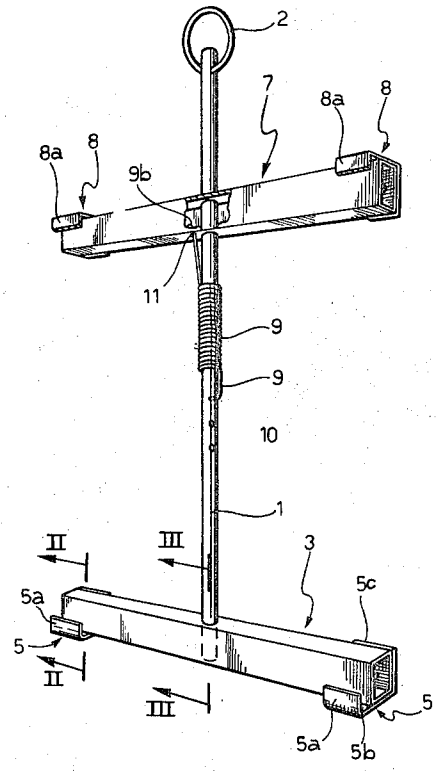


FIG. 1

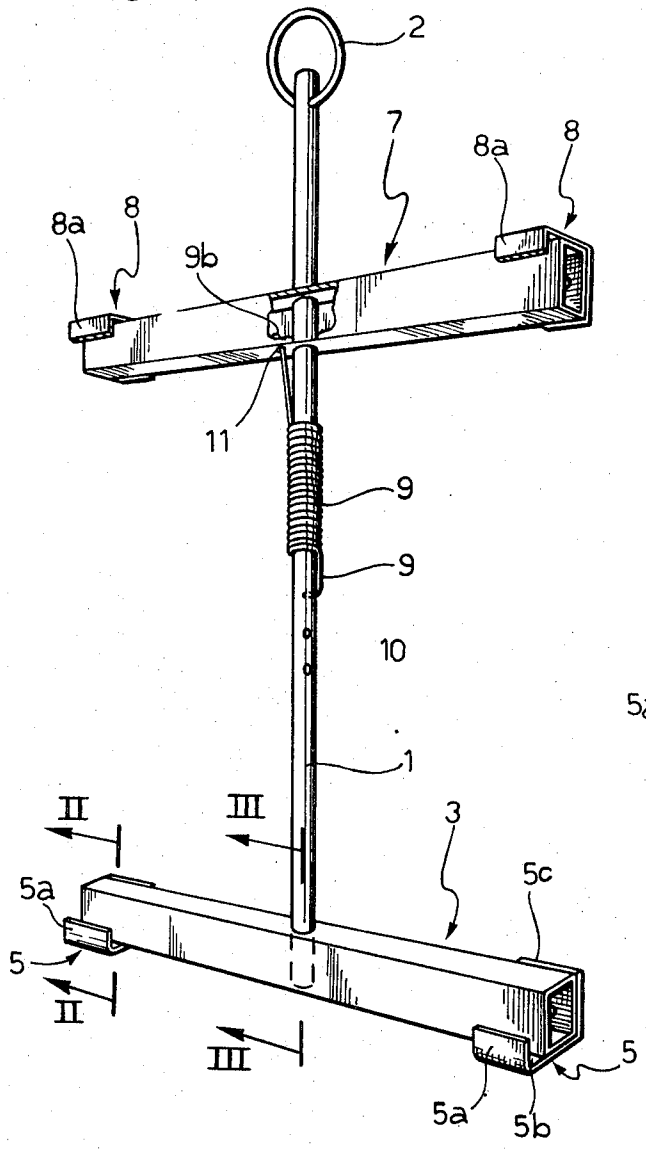


FIG. 2

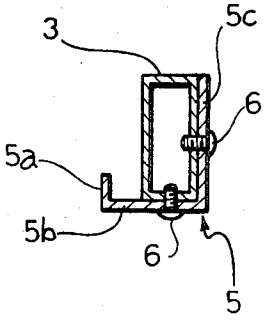


FIG. 3

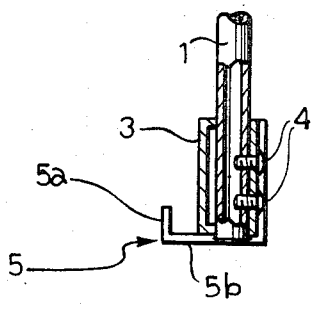
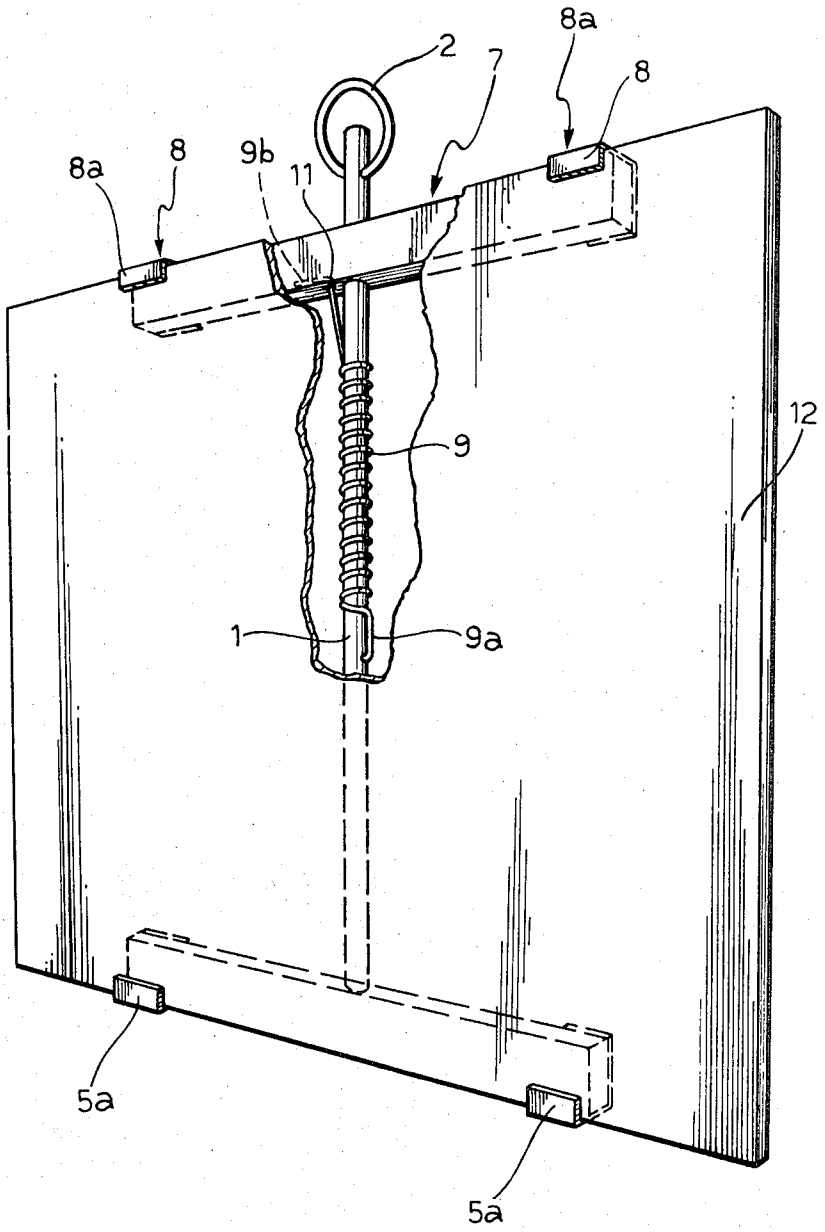


FIG. 4



DEVICE FOR SUPPORTING MIRRORS, PLATES, PANELS AND THE LIKE

This invention relates to a device for supporting mirrors, plates, panels and like flat members.

An object of the invention is to provide a supporting device as aforesaid which is of simple and strong construction, easy and practical to assemble and which is automatically adjustable to support flat members of different heights.

A further object of the invention is the realization of a supporting device of the aforesaid type, which permits immediate and easy dismounting of the flat member supported by the device.

Another object of the invention is the provision of a supporting device of the aforesaid type, having component elements with maximum transverse stability.

According to the present invention there is provided a device for supporting mirrors, plates, panels and like flat members, comprising in combination:

- a. a vertical cylindrical support member having suspension means at its upper end;
- b. a lower tubular cross piece secured to the lower end of said support member, said lower cross piece having a rectangular cross section;
- c. two upwardly projecting hook portions carried at the ends of said lower cross piece;
- d. an upper tubular cross piece of rectangular cross section mounted slidably and rotatably on the upper part of said support member;
- e. two downwardly projecting hook portions carried at the ends of said upper cross piece, and
- f. a spring mounted on the support member and attached to the upper tubular cross piece to pull the latter downwardly towards the lower cross piece,

said hook portions being adapted to engage respective upper and lower horizontal edges of a said flat member to grip the latter by virtue of the force exerted on the upper cross piece by said spring.

In order that the invention may be more clearly understood one practical embodiment will now be described, by way of non-limiting example, with reference to the accompanying drawings, wherein:

FIG. 1 is a perspective view of a supporting device according to the invention for supporting mirrors, plates, panels and like flat members;

FIGS. 2 and 3 are two transverse cross sections taken respectively on the lines II-II and III-III of FIG. 1, and

FIG. 4 is a perspective view of the device when in use, supporting a flat member which is shown partly broken away.

The device according to the invention comprises a vertical cylindrical support rod 1 carrying at its upper and a rotatable ring 2 which forms a means of suspension for attaching the device to a fixed support projecting from a vertical wall, such as, for example, a hook, nail or the like.

At its lower end the support rod 1 carries a fixed horizontal tubular metal cross piece 3 having a rectangular cross section. The cross piece 3 has centrally located holes in its horizontal faces to allow for the insertion of the support rod 1 (FIG. 3) and is rigidly secured to the support rod 1 by means of screws 4 or rivets extending through the rear vertical wall of the cross piece 3. At its ends the cross piece 3 carries two moulded stirrup elements 5 acting as hooks: each stirrup element 5 has a rear wing 5*c* which lies against the rear face of the

cross piece 3, a lower wing 5*b* part of which lies against the lower face of the cross piece and part of which projects forwards from the front face of the cross piece, and a terminal upwardly projecting wing 5*a*, of reduced height compared with the rear wing 5*c*, projecting upwards to form a hook portion parallel to the front face of the cross piece. The two wings 5*a*, 5*b* of each stirrup element 5 are fixed to the cross piece by means of screws 6 or rivets (FIG. 2).

An upper cross piece 7 is mounted on the upper part of the support rod 1 for axial sliding movement thereon and for rotation about the axis of the rod 1. The cross piece 7 is similar to the lower cross piece 3 and is provided at its ends with stirrup elements 8 similar to the stirrup elements 5, with respective hook portions 8*a* projecting downwards.

The upper cross piece 7 is acted upon by a helical tension spring 9, wound around the support rod 1 and anchored at its lower end 9*a* in a perforation in the rod 1. The support rod 1 is provided with several perforations 10 along its length for selective engagement by the end 9*a* of the spring 9 to regulate the tension of the spring.

The method of use of the device is as follows. The panel, plate, mirror or other flat member 12 to be supported is located between the two pairs of hook portions 5*a* and 8*a* and is gripped thereby by virtue of the tension of the spring 9 acting on the upper cross piece 7. Spacer elements of rubber or similar material may be interposed between the edges of the flat member 12 and the stirrup elements 5,8 which grip the member.

The flat member 12 can easily be mounted and dismounted by overcoming manually the force of the spring 9.

The device according to the invention is able to support flat members of different heights, included within a substantial range, determined by the length of the rod 1 and the limit of stretching of the spring 9. The possibility of varying the tension in the spring 9 and displacing the spring in a vertical direction by engaging it in different selected ones of the perforations 10 in the support rod, increases the range of variation of the height of the flat members 12 which can be supported by the device.

In the illustrated example the vertical support rod 1 comprises a length of cylindrical tube: the rod 1 can, however, be formed by two or more telescopic elements, axially slidable and lockable relative to each other in different relative positions, to provide an even greater range of variation in the overall height of the support rod.

The two cross pieces 3,7 are firmly anchored to the vertical support rod 1 against rotation about axes perpendicular to the longitudinal axis of the rod, thus ensuring that the two cross pieces are always horizontal and cannot be displaced laterally relative to the support rod.

It will be appreciated that this invention, although described with reference to one example, also includes within its scope other practical embodiments using the same inventive concept.

I claim:

1. Device for supporting mirrors, plates, panels and like flat members, comprising in combination:

- a. a vertical cylindrical support member having suspension means at its upper end;

- b. a lower tubular cross piece secured to the lower end of said support member, said lower cross piece having a rectangular cross section;
- c. two upwardly projecting hook portions carried at the ends of said lower cross piece;
- d. an upper tubular cross piece of rectangular cross section mounted slidably and rotatably on the upper part of said support member;
- e. two downwardly projecting hook portions carried at the ends of said upper cross piece, and
- f. a spring mounted on the support member and attached to the upper tubular cross piece to pull the latter downwardly towards the lower cross piece,

said hook portions being adapted to engage respective upper and lower horizontal edges of a said flat member to grip the latter by virtue of the force exerted on the upper cross piece by said spring.

2. Device as claimed in claim **1,** wherein the spring is a helical tension spring coaxially surrounding the support member and anchored at its lower end to said support member.

3. Device as claimed in claim **2** wherein the support member is provided with a number of perforations in which the lower end of the spring is selectively engageable.

4. Device as claimed in claim **1,** wherein the hook portions are formed by respective stirrup elements secured to the ends of the respective tubular cross pieces.

5. Device as claimed in claim **1,** wherein the support member is formed by telescopic elements which are relatively adjustable to regulate the overall height of the support member.

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