

[54] **VERTICALLY AND CIRCULARLY DISPLACEABLE SUPPORT**
 [76] Inventor: **Achille Castiglioni**, Pizza Castello 27, Milan, Italy
 [22] Filed: **Nov. 4, 1970**
 [21] Appl. No.: **86,832**

300,857 6/1884 Evans.....188/65.4
 783,741 2/1905 D'Olier.....248/328
 2,231,137 2/1941 Ohm.....248/328
 3,251,569 5/1966 Rynearson.....248/328

Primary Examiner—Marion Parsons, Jr.
Attorney—Clario Ceccon

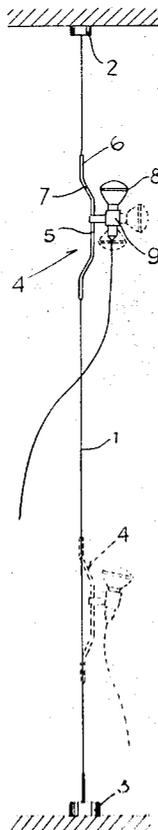
[30] **Foreign Application Priority Data**
 Aug. 28, 1970 Italy.....5201 A/70
 [52] U.S. Cl.....248/328
 [51] Int. Cl.....F21v 21/34
 [58] **Field of Search**.....248/328, 493, 495, 496;
 24/123 G, 129 B, 129 A; 188/65.4; 240/70

[57] **ABSTRACT**

The support of the invention, suitable for illuminating devices, consists of a taut, vertical cable and of a slidable support which may be positioned at any point along the vertical axis of the cable and may be rotated thereabout. The force of gravity is overcome by frictional forces exerted by the support through the axial displacement of its central section.

[56] **References Cited**
 UNITED STATES PATENTS
 194,507 8/1877 Van Wie188/65.4

4 Claims, 3 Drawing Figures



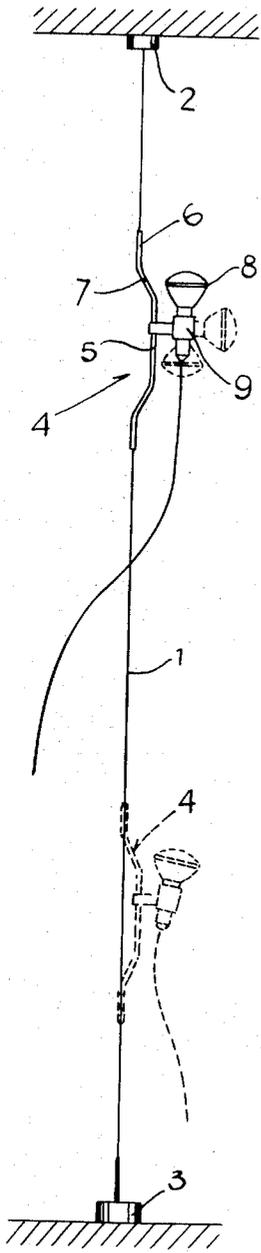


Fig. 1

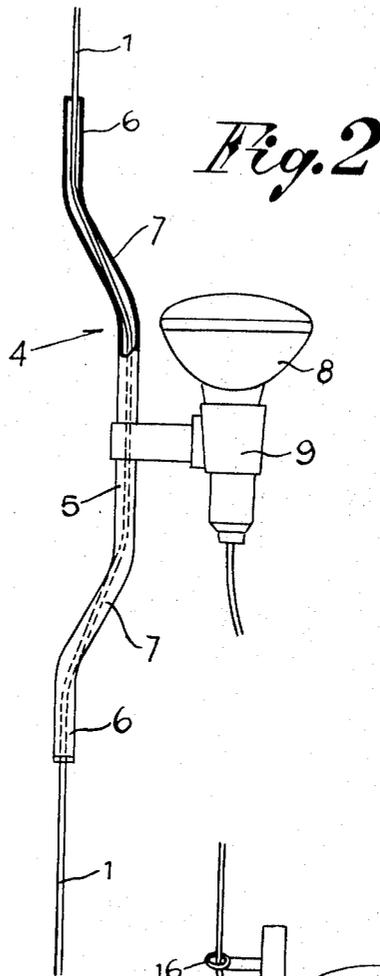


Fig. 2

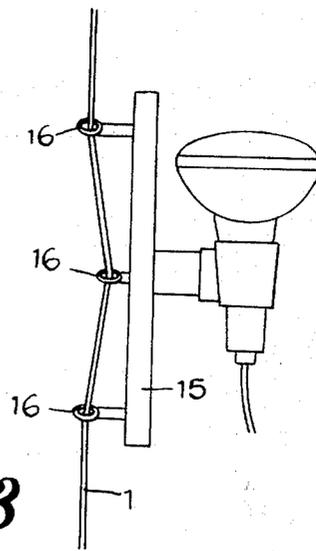


Fig. 3

VERTICALLY AND CIRCULARLY DISPLACEABLE SUPPORT

The present invention relates to vertically movable supports for such devices as illuminating means or other displaceable objects and, more specifically, to a vertically movable support which comprises a vertical cable or rope extending tautly between a ceiling and a floor of a room and a tubular, predeterminedly shaped element mounted on the cable or rope, which element is displaceable vertically along the cable or rope and contains as integral part thereof the device which is desired to be displaced according to the user's needs.

It is therefore one object of the present invention to provide a vertically displaceable support for a freely positionable device such as, for example, a freely orientable illuminating device.

It is another object of the invention to provide a vertically displaceable support capable of resting at any point along a vertically taut cable or rope by friction at the contact points between the support and the cable or rope, the contact points being non-axially located with respect to one another, so as to cause a forced deviation of the vertical axis of the taut cable or rope.

It is still another object of the invention to provide a vertically displaceable support which is concurrently rotatable about the vertical axis of the cable or rope, so as to afford the device associated with the said support any desired planar orientation.

These and other objects of the invention will become apparent from the following detailed description thereof and from the accompanying drawings, in which:

FIG. 1 shows the assembly of the support of the invention;

FIG. 2 shows, partly in cross-section, an exploded detail of the support; and

FIG. 3 shows a second embodiment or variance of the invention.

Referring now to the drawings, the support of the invention comprises a vertical cable or rope 1, preferably a metallic cable, extending tautly between a fastener 2 connected fixedly to the ceiling of a room and a heavy basic element 3 resting on the floor. A pre-shaped tubular member 4 is mounted on the cable 1 and comprises an intermediate portion 5 which is non-coaxial with respect to the terminal portions 6 and connected to the coaxial terminal portions 6 by means of inclined junction segments 7.

The pre-shaped member 4 is mounted on the cable 1 by threading the cable 1 inside the tubular member 4, the cable resulting thusly axially displaced in a forced manner. In this manner, there is created between the tubular member 4 and the cable 1 a plurality of contact points, axially displaced with respect to one another, which points determine a considerable friction force sufficient to overcome the gravity force of the device supported by the support of the invention and to prevent any uncontrolled displacement of the tubular member 4 along the cable 1.

To position the tubular member 4 at any point along the cable 1 is necessary to apply on the member 4 a force greater than the friction force exerted by the displaced cable and to relocate the member 4 along the cable 1.

The supporting member 4 is connected to a device, such as for example, a lamp, which is to be positioned at different heights along the cable 1. In the illustrative example shown in the drawings, the supported device is a lamp 8 suitably mounted on a movable arm 9.

The tubular member 4 is capable furthermore of circular rotation about the vertical axis of the cable so as to enable the supported device 8 to be oriented accordingly in any planar position about said axis.

The same results obtained by the structural configuration shown in FIGS. 1 and 2, namely the vertically linear and planarly circular displacements, may be achieved with the variant shown in FIG. 3 of the drawings. In FIG. 3 it can be seen that, instead of utilizing a pre-shaped tubular member 4, a straight member 15 is used which is provided with at least three annular guides 16 axially displaced with respect to the vertical axis of the cable 1.

The cable is threaded within said guides 16 so as to obtain a portion of the cable axially displaced in a forced manner, as discussed hereinbefore. The illustration has been typically limited to supporting of lamps; however, it is readily seen that the concept of the invention is not limited thereto but may be applied to any object which is to be displaced and positioned at different heights along the cable.

What I claim and wish to secure by Letters Patent of the United States is:

1. Vertically displaceable support means for a lamp or the like, said support means comprising a taut length of cable that is linear throughout substantially the entire length thereof, means for rigidly restraining the upper and lower ends of said cable for preventing relative movement thereof and an article mounting member that is always loosely and rotatably positioned on said cable intermediate the ends thereof and axially slidable with respect thereto, whereby the lamp is always intermediate the ends of said cable, said article mounting member including a first portion in frictional engagement with said cable for defining first and second cable sections that are at an obtuse angle with respect to each other, a second portion in frictional engagement with said cable at a location that is axially spaced from said first portion for defining a third cable section that is at an obtuse angle with respect to said second cable section and a third portion in frictional engagement with said cable at a location that is axially spaced in the same direction from said first and said second portions for defining a fourth cable section that is at an obtuse angle with respect to said third cable section, the axes of said first and said fourth cable sections being substantially parallel.

2. The support means in accordance with claim 1 wherein said article mounting member comprises a rigid bar and three axially spaced apart ring-like members spacedly secured thereto for receiving said cable therethrough, said ring-like members defining said first, said second and said third portions.

3. The support means in accordance with claim 1 wherein said article mounting member comprises an elongated, rigid tube for receiving said cable therethrough, said tube including two axially spaced apart end portions and at least one portion intermediate said end portions, the axis of said intermediate portion being at an obtuse angle with respect to the axes of said end portions.

3

4

4. The support means in accordance with claim 1 wherein said article mounting member comprises an elongated, rigid tube for receiving said cable therethrough, said tube including a first, linear portion at the upper end thereof, a second linear portion contiguous with said first portion and at an obtuse angle with respect thereto, a third linear portion contiguous with said second portion and at an obtuse angle with respect thereto, the axes of said first and said third portions being substantially parallel and offset with respect

to each other, a fourth linear portion contiguous with said third portion and at an obtuse angle with respect thereto, said second and said fourth portions being at oppositely directed angles with respect to said third portion and a fifth linear portion contiguous with said fourth portion and at an obtuse angle with respect thereto, said first portion and said fifth portion being substantially coaxial.

* * * * *

15

20

25

30

35

40

45

50

55

60

65