

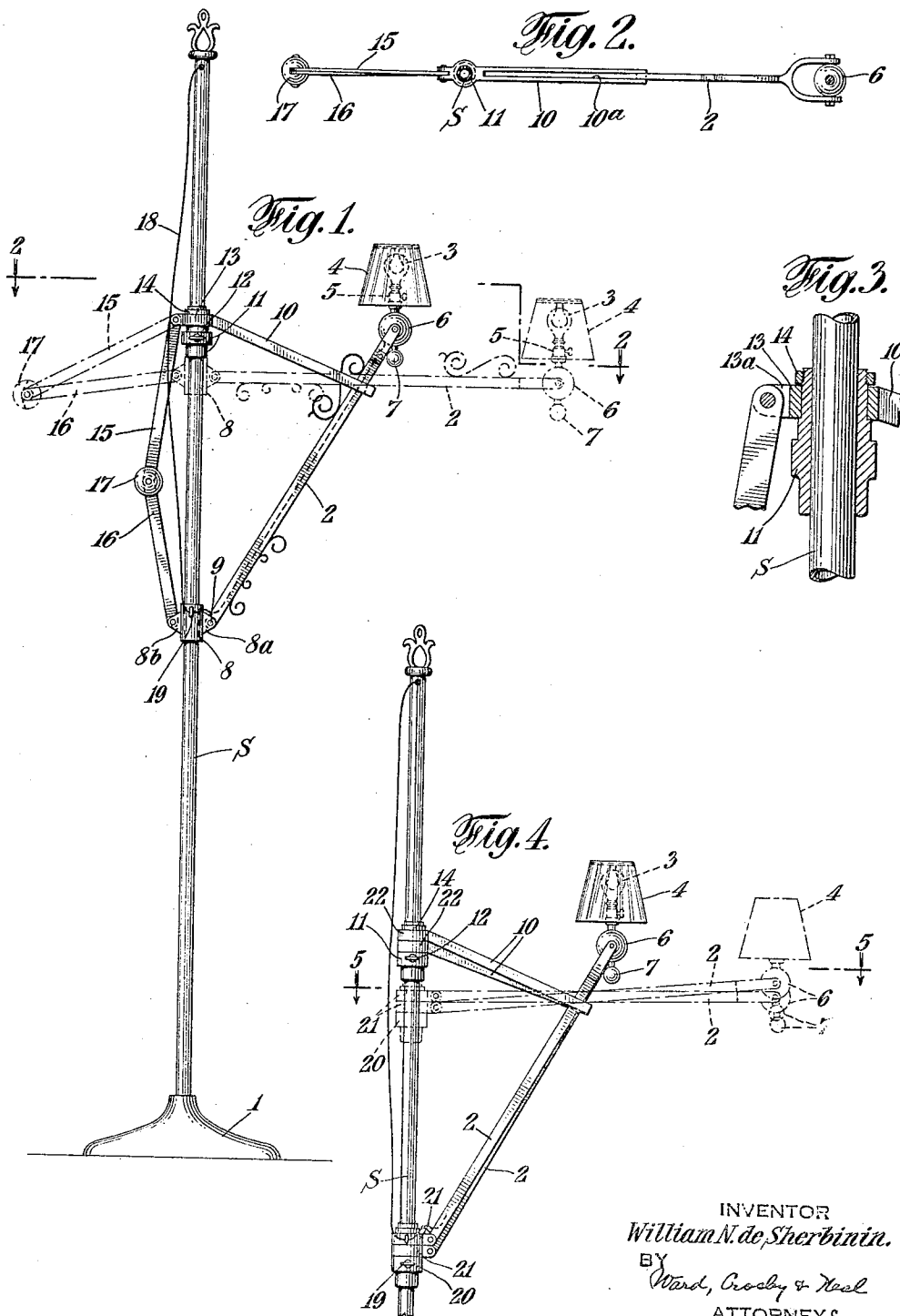
Jan. 3, 1933.

W. N. DE SHERBININ

1,893,071

ADJUSTABLE SUPPORTING MECHANISM FOR LAMPS

Original Filed April 9, 1929 3 Sheets-Sheet 1



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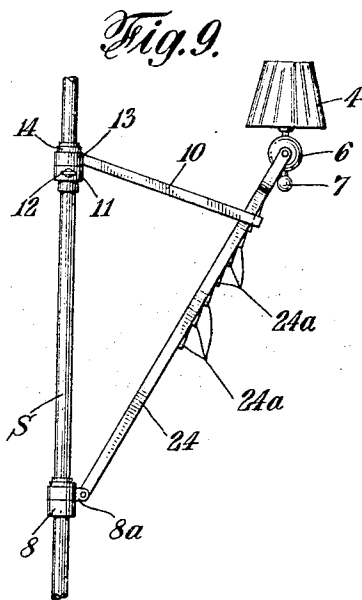
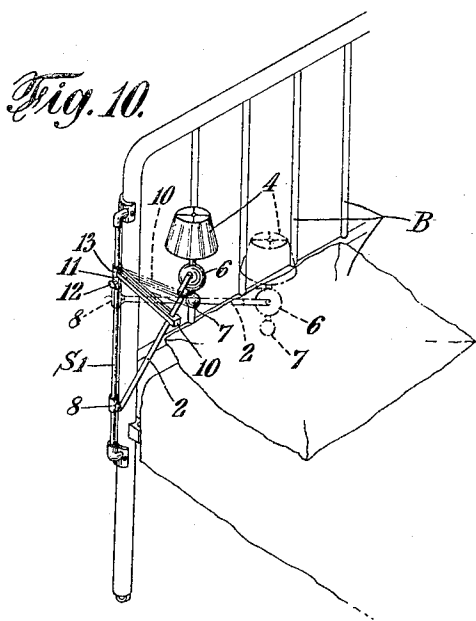
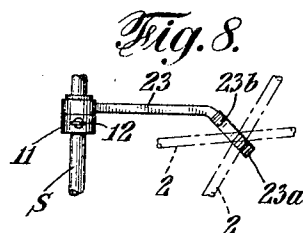
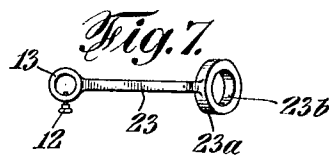
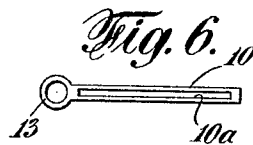
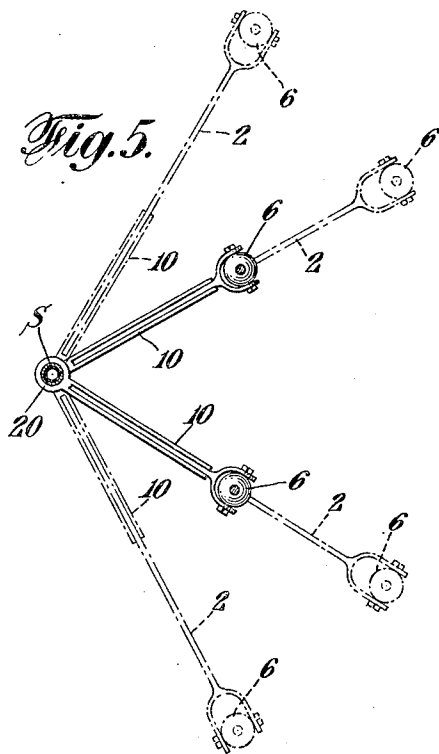
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ADJUSTABLE SUPPORTING MECHANISM FOR LAMPS

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ADJUSTABLE SUPPORTING MECHANISM FOR LAMPS

Original Filed April 9, 1929 3 Sheets-Sheet 3

Fig. 11.

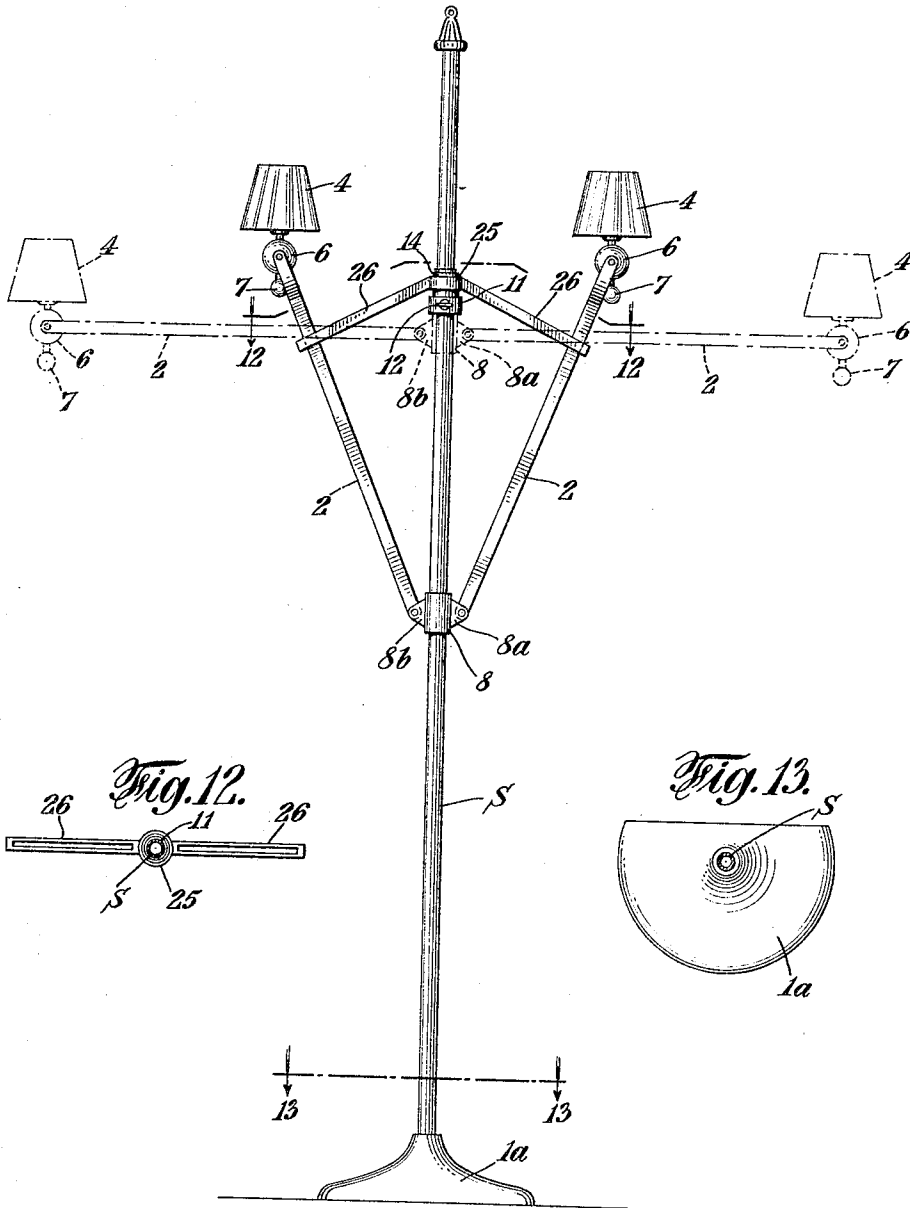


Fig. 12.

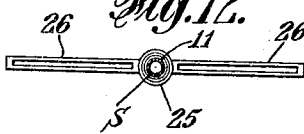
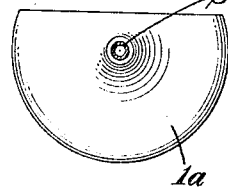


Fig. 13.



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ADJUSTABLE SUPPORTING MECHANISM FOR LAMPS

Application filed April 9, 1929, Serial No. 353,852. Renewed May 21, 1932.

My invention relates to adjustable supporting mechanism readily actuatable to position and retain a lamp or other object or device in a selected or desired position.

- 5 My invention relates particularly to lamp supporting structure comprising a standard having a lamp carrying pivoted arm slidably and/or rotatably mounted thereon and manually actuatable at will to bring the lamp
10 into or closely adjacent a region wherein a high degree of illumination is desired.

Further objects, advantages and characteristics of my invention will appear from the following detailed description.

- 15 My invention resides in the supporting mechanism, arrangements and features of construction of the character hereinafter described and claimed.

- For an illustration of some of the many
20 forms my apparatus or mechanism may take, reference is to be had to the accompanying drawings; in which:

- 25 Figure 1 is a side elevational view of lamp supporting mechanism constructed in accordance with my invention;

Fig. 2 is a horizontal sectional view, partly in plan, and is taken on the line 2—2 of Fig. 1 looking in the direction of the arrows;

- 30 Fig. 3 is an enlarged vertical sectional view, partly in elevation, of a part of my supporting mechanism;

Fig. 4 is a side elevational view of another form of lamp supporting mechanism;

- 35 Fig. 5 is a horizontal sectional view, partly in plan, and is taken on the line 5—5 of Fig. 4 looking in the direction of the arrows;

Figs. 6 and 7 are plan views illustrating different forms of arms coactable with a lamp supporting arm;

- 40 Fig. 8 is a fragmentary side elevational view showing the arm shown in Fig. 7 associated with a lamp supporting arm;

- 45 Fig. 9 is a side elevational view illustrating an arrangement for temporarily and releasably retaining a lamp in a multiplicity of positions;

Fig. 10 is a perspective view illustrating a modified form of standard of support;

- 50 Fig. 11 is a side elevational view of another form of lamp supporting mechanism;

Fig. 12 is a horizontal sectional view, partly in plan, and is taken on the line 12—12 of Fig. 11 looking in the direction of the arrows; and

Fig. 13 is a horizontal sectional view, partly in plan, and is taken on the line 13—13 of Fig. 11 looking in the direction of the arrows.

Referring to Figs. 1, 2 and 3, S is a standard or support of any suitable character upstanding, in the example shown, from a base or pedestal 1. Slidable lengthwise of standard S and pivoted for movement in a vertical plane is an arm or member 2 to the upper end of which is secured, in any suitable manner, an illuminating device herein shown as the bulb 3 of an incandescent lamp. In the example shown, bulb 3 supports any suitable shade 4 and, in turn, is supported by a socket 5 upstanding from a member 6 pivoted for free movement in the bifurcated end of arm 2. Depending from the member 6 is a weight 7 utilizable for maintaining the bulb 3, shade 4, socket 5 and member 6 in substantially the position shown no matter to what position the arm 2 is moved.

The end of the arm 2 removed from the lamp may be slidably, pivotally and rotatably secured to the standard S in any suitable manner. As shown, there is thus utilized a sleeve 8 freely slidable on said standard S and having a projecting ear 8a to which at 9 said last named end of the arm 2 is pivoted. By virtue of the construction just described, arm 2 is freely slidable on and with respect to said standard S and, due to the provision of the pivot 9, is freely oscillatable in a vertical plane. Obviously, the arm 2 may be swung on its pivot, as desired, to move the thereby-carried lamp either toward or from the standard S. Thus, for example, said lamp may be retracted as illustrated by the full lines of Fig. 1 or extended as illustrated by the broken lines of said Fig. 1, the latter position being the one usually occupied thereby when it is desired to bring the source of light into a particular or desired region.

Any suitable construction may be utilized for thus retaining the arm 2 and the thereby-carried lamp in a desired position. In the example shown, there is provided an arm or

member 10 fixed to or with respect to the aforesaid standard S and suitably coacting with the arm 2. A satisfactory arrangement for effecting connection between the arms 2 and 10 involves the provision of an elongated, closed slot 10a in the latter arm for slidably receiving said arm 2. For securing the arm 10 to the standard S, there may be utilized a sleeve 11 suitably fixed to the latter, as by a set screw 12, and, by preference, rotatably receiving on a shouldered surface thereof the ring 13 in which the aforesaid arm 10 terminates, said ring 13 being suitably retained against the aforesaid shouldered surface, as by a member 14 threaded to said sleeve 11.

With the parts positioned as illustrated by the full lines of Fig. 1, the arm 2 or some part carried thereby may be manually manipulated to elevate the lower end thereof and the sleeve 8 to thereby move said arm 2 into the position illustrated by the broken lines of Fig. 1. In so doing, the sleeve 8 slides upwardly on the standard S and the arm 2 slides through the slot 10a of arm 10. Upward movement of sleeve 8 is limited by the sleeve 11, the latter, therefore, defining the fully extended position of the arm 2 and the extended position of the lamp. In this position and in its retracted position, the lamp and its supporting structure comprising the arms 2 and 10 may be rotated or moved around the standard S.

The arrangement is such that, ordinarily, the arm 2 and the parts carried thereby remain in the position illustrated by the broken lines in Fig. 1 until manually moved from such position. This result follows due to the friction of the parts and to the weight of the lamp and its direct supporting structure comprising the parts 3, 4, 5, 6 and 7 to the right of the arm 10, Fig. 1.

Under some circumstances, it may be desirable to provide a counterbalancing arrangement for the standard S when the arm 2 and the parts carried thereby are in the position illustrated by the broken lines of Fig. 1. To this end, if desired, links 15 and 16 may be pivoted together in end-to-end relation, the link 15 being pivoted to the sleeve 11 or, and preferably, to an ear 13a of the aforesaid ring 13 and the link 16 being pivoted to an ear 8b of the aforesaid sleeve 8. Where the links 15 and 16 are pivoted in end-to-end relation, there is mounted or disposed a weight 17. By virtue of the arrangement just described, the standard S does not readily tip when the parts are in the position illustrated by the broken lines of Fig. 1. In this position, the weight 17 lies below the pivotal connection of the link 16 to the sleeve 8 to releasably lock links 15 and 16 in the position illustrated.

The aforesaid incandescent lamp may be supplied with electrical current in any suitable manner. As shown, the standard S is

hollow and contains a cable comprising a pair of conductors, the end 18 of said cable extending outwardly through an opening at or adjacent the top of said standard S, then downwardly as illustrated in Fig. 1, through an eyelet 19 projecting from the sleeve 8, if desired, then through the arm 2 which is likewise hollow, through the member 6 and finally into the socket 5 where the respective conductors are connected in the usual manner to the terminals, not shown.

Ordinarily, the base or pedestal 1 should be relatively heavy so as to preclude tilting of the standard S under the influence of the various projecting parts carried thereby; particularly is this true when the links 15, 16 and weight 17 are omitted. However, it shall be understood that supplementary devices may be utilized, if desired, for retaining the base 1 in engagement with its supporting surface.

Referring to Figs. 4 and 5, a plurality of lamp structures are illustrated as supported or carried by the same standard S and the arrangement is such that said lamp structures may be disposed in suitable diverging relation as desired as well as extended to a position removed from the standard S. The structural arrangement for obtaining this end may be of any suitable character. As illustrated, the standard S has mounted thereon a sleeve 20 carrying, in superposed relation, rings 21, 21 freely rotatable thereon. To the respective rings 21, the arms 2 are pivoted and said arms may be identical in construction with the corresponding arm described above in connection with Fig. 1. The sleeve 11 illustrated in Fig. 4 may be fixed to the standard S the same as is the corresponding sleeve illustrated in Figs. 1 and 3. Carried by and freely rotatable on said sleeve 11 are rings 22, 22 having arms 10 projecting, respectively, therefrom, said arms 10 being substantially identical with the corresponding arm 10 described above in connection with Fig. 1 and the arms 2, 2 of Fig. 4 likewise being substantially identical with the corresponding arm 2 described above in connection with Fig. 1.

Obviously, one or both of the lamp structures may be moved to the fully extended position as illustrated by the broken lines in Figs. 4 and 5. At the same time, said lamp structures may be brought closely adjacent to or substantially removed from each other by either decreasing or increasing the angle between the respective structures comprising an arm 2 and an arm 10. The result last stated is readily attainable because the rings 21 are freely rotatable on the sleeve 20 and, similarly, the rings 22 are freely rotatable on the sleeve 11.

In Fig. 6, there is illustrated one of the aforesaid arms 10 which, as hereinbefore stated, comprises a closed elongated slot 10a

for the slidable reception of an arm 2. To emphasize the fact that an arm 10 of the exact character illustrated in Fig. 6 is not essential to my invention, there is illustrated in Fig. 7 a modified arm 23 identical in function with the arm 10. Arm 23 comprises a terminal section 23a angularly related thereto and provided with a perforation 23b relatively large in diameter. As illustrated in Fig. 8, a lamp supporting arm 2 extends through the perforation 23b and, due to the angular relation just specified, said arm 23 functions as satisfactorily as arm 10 to position the coacting arm 2 as desired.

With the arrangements hereinbefore described, the construction is such that, ordinarily, the various lamp structures remain in but two positions, i. e., the fully extended position when the sleeves 18 or 20 as the case may be are in their uppermost positions or the fully retracted positions when said sleeves are at their lowermost positions. Referring to Fig. 9, there is illustrated an arrangement for temporarily and releasably retaining a lamp structure in any one of a multiplicity of positions. To this end, there may be utilized an arm 24 which may be identical with the arms 2 hereinbefore described with the exception that one face thereof is roughened, serrated or provided with rack teeth 24a coactable with an end wall defining the slot 10a, or equivalent, of a member 10, or equivalent. Obviously, as the member 24 or some part carried thereby is manipulated to raise the sleeve 8, the rack teeth 24a are ineffective to halt the tilting progress of said arm 24. However, after said sleeve 24 has been tilted to some extent, it may be released whereupon one of the rack teeth 24a by engagement with arm 10, retains arm 24 and the parts carried thereby in this position until said arm 24 is released.

In Fig. 10, there is illustrated an application of my invention and one wherein there is utilized a modified form of standard S1 suitably secured, in spaced relation, to a post at the head of a bed B. As shown in Fig. 10, standard S1 carries structure identical with that heretofore discussed in connection with Fig. 1 with the exception that the counterbalancing mechanism comprising the links 15 and 16 together with the weight 17 is omitted. Obviously, with the construction such as illustrated in Fig. 10, a person reclining upon the bed B may readily extend the lamp to such position that highly satisfactory illumination is provided for reading or other purposes.

Referring to Figs. 11, 12 and 13, there is illustrated an arrangement wherein duplicate lamp structures are disposed in a single plane, or substantially so, and on opposite sides of the standard S. As one example of an arrangement which is thus utilizable, the standard S may have a sleeve 8 slidably dis-

posed thereon which corresponds substantially with the similar sleeve 8 heretofore described in connection with Fig. 1 and therefore having lugs or ears 8a and 8b projecting therefrom on opposite sides thereof and disposed in a single plane. To the ears 8a and 8b, the respective arms 2 are secured and these arms may be of the character above described in connection with Fig. 1. Fixed to the standard S a suitable distance above the lowermost position of the sleeve 8 is the sleeve 11 which is substantially a duplicate of the corresponding sleeve illustrated in Figs. 1 and 3, said sleeve 11 being retained in a desired position by a set screw 12, or equivalent. Carried by the sleeve 11 in non-movable relation with respect thereto is a ring 25 having arms 26, 26 projecting from opposite sides thereof and being disposed substantially in vertical alinement with the respective arms 8b and 8a of sleeve 8, said arms 26, preferably, being slotted and otherwise conforming with the hereinbefore described arms 10, the slots of said arms receiving the respective arms 2.

One or both of the arms 2 or parts carried respectively thereby may be manually grasped to move the sleeve 8 upwardly and thereby bring the lamp structures to their fully extended positions such, for example, as indicated by the broken lines in Fig. 11 wherein said lamp structures are disposed on opposite sides of the standard S and substantially in a single plane.

A construction of the character illustrated in Fig. 11 is especially suited to be disposed closely adjacent the wall of a room. When thus disposed, it may be desirable to provide a base or pedestal 1a of the character illustrated in Fig. 13 to thereby enable the standard S and the lamp structures carried thereby to be brought closely adjacent said wall.

With all forms of my invention save that illustrated in Fig. 9, it may be desirable to utilize an anti-friction roller, member or structure between the lamp supporting arms and the arms coacting respectively therewith and secured to the standards S, S1, or equivalent. Ordinarily, such anti-friction mechanism is suitably mounted or disposed at those ends of said last named arms immediately adjacent the respective lamp supporting arms.

Although the various lamps have been illustrated as upstanding from their respective supporting arms, it shall be understood that my invention is not to be so limited. Thus, for example, said lamps may be arranged so as to depend from their respective supporting arms.

It shall also be understood that my invention is not to be limited to the illustrated arrangement for retaining the various lamps or their respective supporting arms. Obviously, if desired, a lamp supporting member may

be frictionally associated with any one of the pivoted arms 2, 24, or equivalent, the degree of frictional engagement being such that the lamp may be readily tilted to and remain in any desired position.

It shall also be understood that the arms 10, 23 or 26 may be slidably mounted on their respective brackets so as to move in an angular direction with respect to the respective standards. Moreover, said arms 10, 23 or 26 may be formed of members adapted to telescope each other.

In lieu of the weight 17 or in addition thereto, a lamp may be suitably supported at this point, said lamp, therefore, being retractable and extensible the same as is the lamp 3. Moreover, if desired, the arms 2 and 10 may be omitted and the links 15 and 16 utilized as the supporting structure for a lamp.

While the invention has been described with respect to certain particular preferred examples which give satisfactory results, it will be understood by those skilled in the art after understanding the invention, that various changes and modifications may be made without departing from the spirit and scope of the invention and it is intended therefore in the appended claims to cover all such changes and modifications.

What is claimed as new and desired to be secured by Letters Patent is:

1. The combination with a standard, of a pivoted arm slidable lengthwise of said standard, a lamp carried by said pivoted arm, and means comprising a non-resilient arm of constant length fixed to said standard and coacting with said pivoted arm for retaining it in a selected position.

2. The combination with a standard, of a sleeve slidable on said standard, an arm pivoted to said sleeve, a lamp carried by said pivoted arm, a second arm having a slot receiving said pivoted arm, and means for securing said second arm to said standard, said means limiting movement in one direction of said sleeve.

3. The combination with a standard, of an arm connected to and mounted for pivotal movement with respect to said standard, a lamp carried by said arm, and a second arm coacting with said standard and with said first arm for holding the latter in retracted or extended position, said arms being slidable with respect to each other.

4. The combination with a standard, of an arm slidable on said standard, and a lamp carried by said arm, said standard comprising constant-length means with respect to which said arm is slidably related, said means guiding said arm for movement to retracted or extended position.

5. The combination with a standard, of an arm, means for slidably securing one end of said arm to said standard, a lamp carried

by said arm, and a member projecting from said standard, said arm being slidably related with respect to said member, said member guiding said arm for movement to retracted or extended position.

6. The combination with a standard, of an arm carried by said standard, a lamp carried by said arm, means forming a connection between said standard and arm at or adjacent the end of the latter removed from said lamp, and a member projecting from said standard, said arm being slidably related with respect to said member, said member guiding said arm for movement to retracted or extended position.

7. The combination with a standard, of an arm slidable on said standard, a lamp carried by said arm, and a member secured to and projecting laterally from said standard, said arm being slidably related with respect to said member, said member guiding said arm for movement to retracted or extended position, that section of said arm which is slidable on the standard being movable toward or from that section of said member which is secured to the standard.

8. The combination with a standard, of an arm slidably and pivotally mounted on said standard, a lamp carried by said arm, and a member secured to and projecting laterally from said standard, said arm being slidably related with respect to said member, said member guiding said arm for movement to retracted or extended position, that section of said arm which is slidable on the standard being movable toward or from that section of said member which is secured to the standard.

9. The combination with a standard, of an arm slidable on said standard, a lamp carried by said arm, and a member secured to and projecting laterally from said standard, said arm being slidably related with respect to said member, said member guiding said arm for movement to retracted or extended position, that section of said arm which is slidable on the standard being movable toward or from that section of said member which is secured to the standard, said arm and said member being rotatable around said standard.

In testimony whereof I have signed my name to this specification.

WILLIAM N. DE SHERBININ.