

March 17, 1953

V. J. MARCHESE

2,632,098

SELECTABLE SWITCHING MEANS FOR STAND LAMPS

Filed Sept. 14, 1949

3 Sheets-Sheet 1

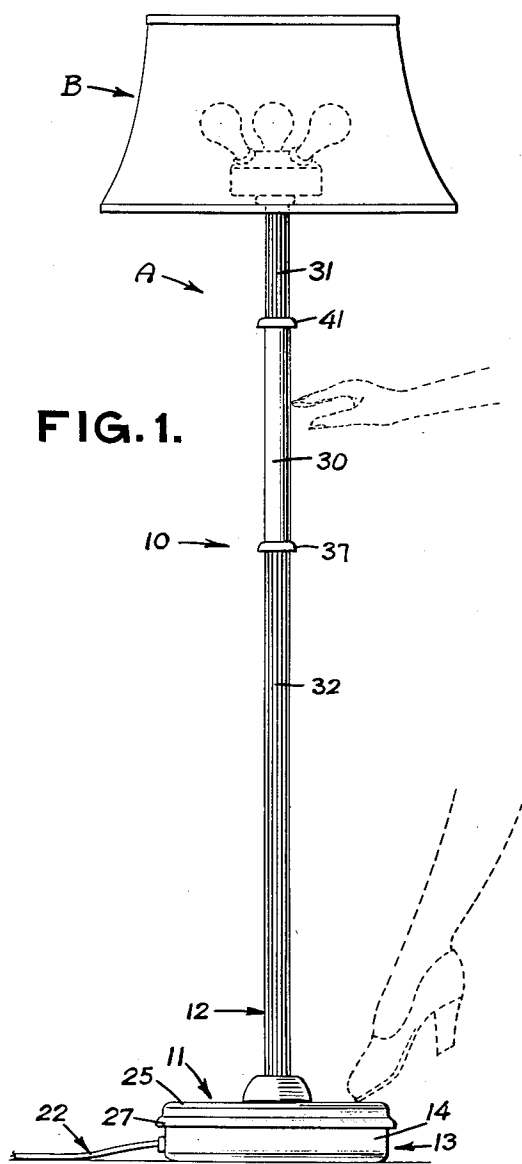


FIG. 1.

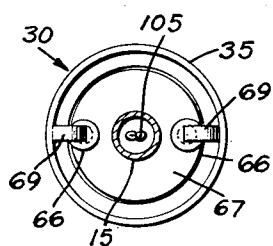


FIG. 3.

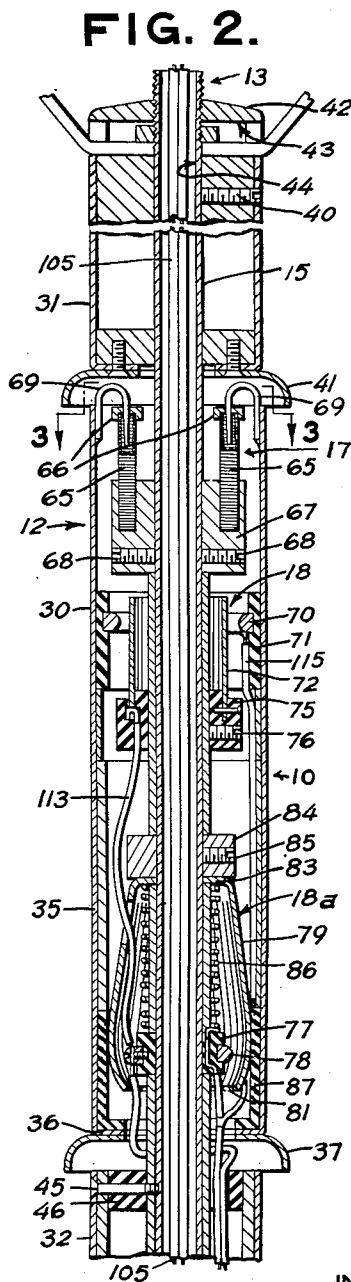


FIG. 2.

INVENTOR.

Vincent J. Marchese

BY *Laurie, Allen & Rummel*
ATTORNEYS.

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FIG. 9.

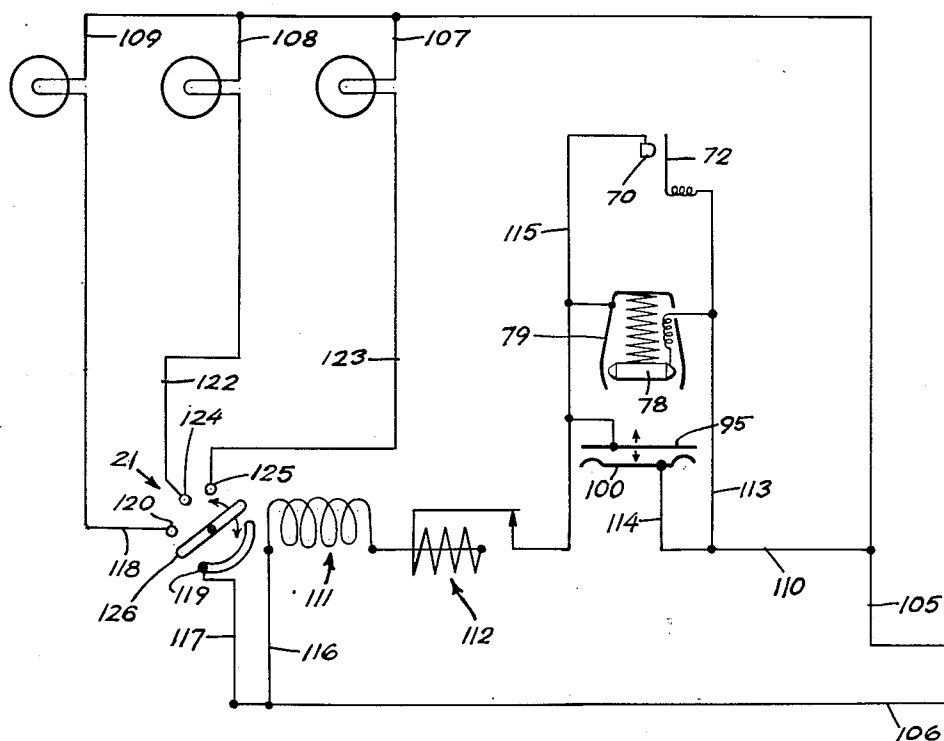


FIG. 4.

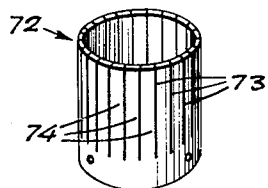


FIG. 5.

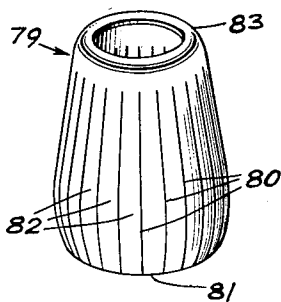
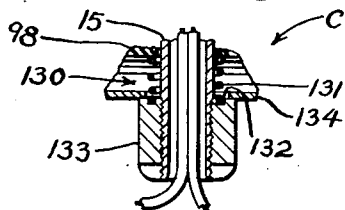


FIG. 10.



INVENTOR.
Vincent J. Marchese
BY *Lawrence A. Kimmel*
ATTORNEYS.

V. J. MARCHESE

SELECTABLE SWITCHING MEANS FOR STAND LAMPS

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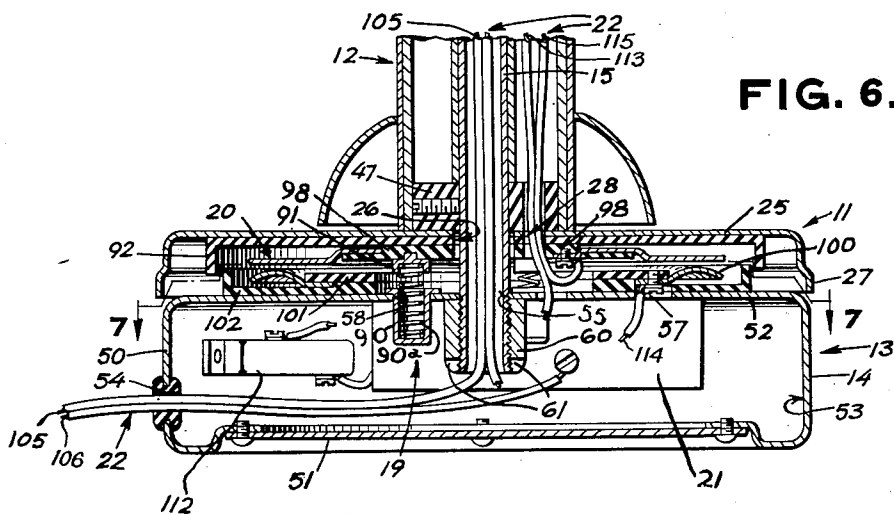


FIG. 6.

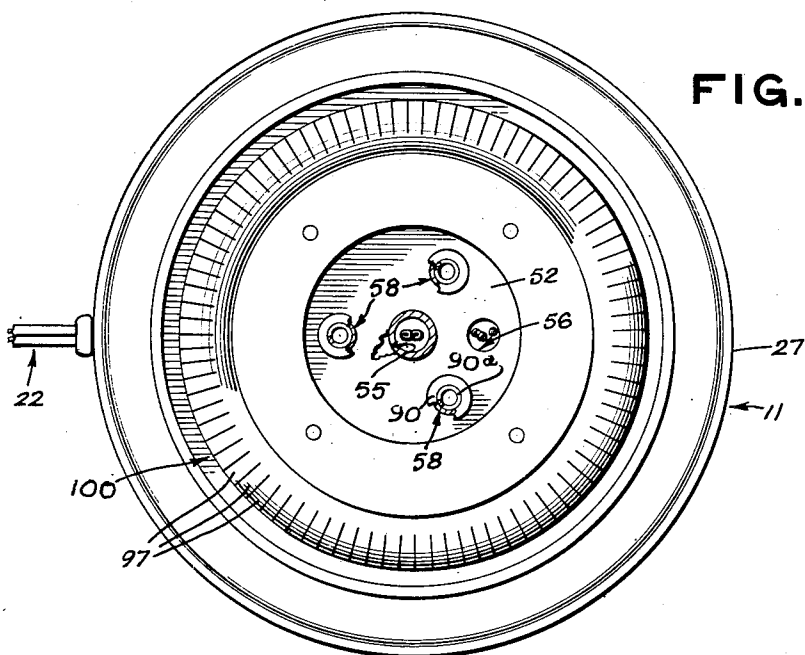


FIG. 7.

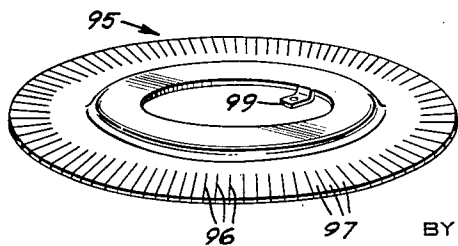


FIG. 8.

INVENTOR.

Vincent J. Marchese

BY

Lancaster, Allvins ^{and} Pommel
 ATTORNEYS.

UNITED STATES PATENT OFFICE

2,632,098

SELECTABLE SWITCHING MEANS FOR
STAND LAMPS

Vincent J. Marchese, New York, N. Y.

Application September 14, 1949, Serial No. 115,639

7 Claims. (Cl. 240—123)

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This invention relates to electric lighting equipment and more particularly to the electric circuit controls of electric lighting fixtures, such as portable electric lamps.

An important object of the invention is to provide an electric lighting fixture embodying means to cause the lamp or lamps of the fixture to be energized or deenergized by a slight pressure upon confined portions of the fixture.

In my application for patent Serial Number 20,771, filed April 13, 1948, now matured in Patent 2,474,484, dated June 28, 1949, I disclose an electric lighting fixture in which the lamp or lamps thereof are caused to be energized or deenergized by a slight tilting movement imparted to a portion of the fixture by a slight manual pressure upon this portion, in this present disclosure, one embodiment of the structure contemplates the employment of a movable portion of the fixture, moved, by slight manual pressure, in a path substantially transverse to the longitudinal axis of this movable portion, and I provide suspension means for the herein-disclosed movable section considerably different from that contained in my application referred to above.

In addition, the herein-disclosed fixture may include a second means to cause the lamp or lamps to be energized or deenergized by a slight manual pressure parallel to the longitudinal axis of the fixture, which, of course, does not cause tilting of the portion pressed. This latter means is not embodied in the structure disclosed in my prior application referred to above.

Another important object is to provide a novel electric lighting fixture having no electric switch portion, as a button, projecting outwardly from the fixture housing, yet the electric circuit to light the lamp or lamps of the fixture may be actuated from the exterior of the housing.

A further important object is to provide a portable electric lighting fixture, such as a table or floor lamp, which may be carried from place to place without accidentally operating the electric switch associated therewith.

It is also an important object of the invention to provide means, having plural functions, forming an electric contact as well as a movement dampener for the new lighting fixture.

One of the defects of lighting fixtures, including manually actuated portions (not switch buttons or the like) to cause lighting and extinguishing of the lamp, is that there is an undesirable so-called "fluttering" caused by uncertain or defective electric contacts. An important object of this invention is to eliminate such fluttering.

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Other objects and advantages of the invention will be apparent during the course of the following detailed description of the invention, taken in connection with the accompanying drawings, forming a part of this disclosure, and in which drawings:

Figure 1 is an elevation of the new lighting fixture, as embodied in a floor lamp, with hand and foot illustrating methods of lighting and extinguishing the same.

Figure 2 is a fragmentary vertical longitudinal section of an upper portion of the new fixture.

Figure 3 is a transverse section, substantially on the line 3—3 of Figure 2.

Figures 4 and 5 are perspective views of novel electrical contacts forming parts of the new fixture.

Figure 6 is a fragmentary vertical longitudinal section of the lower portion of the new fixture.

Figure 7 is a horizontal section, substantially on the line 7—7 of Figure 6.

Figure 8 is a perspective view of another novel electric contact forming a part of the new fixture.

Figure 9 is a wiring diagram of the new fixture.

Figure 10 is a fragmentary vertical section of a fragment of the structure of Figure 6, showing a modification of a resilient support means.

In the drawings, wherein for the purpose of illustration are shown two embodiments of the invention, the letter A designates one embodiment, B a shade therefor, and C a second embodiment.

The fixture A is illustrated as including a housing structure 10, comprising a first or lower housing portion 11 and a second or sectional upper housing portion 12, a support structure 13, including a lower support or base portion 14, preferably immediately above which the portion 11 extends, and an elongated standard 15 carried by the base portion 14 and supporting a lamp shade B and a conventional two-terminal electric lamp base-receiving socket structure, of any approved kind, at its upper end. An example of one kind of such electric lamp base-receiving structure and a conventional two-terminal electric lamp are disclosed in my copending application referred to above. There is also shown means 17 to movably support a section of the upper housing portion 12, a dual electric switch or electric contacts assembly, comprising units 18 and 18^a carried, as by the housing 10 and support structure 13, means 19 to resiliently support the lower housing portion 11, and another electric switch or electric contacts assembly 20 carried by the lower housing portion 11 and base portion 14. The fixture A also in-

cludes a suitable off-and-on electric switch assembly 21 and electric wiring or conductor means 22.

Any suitable material or materials may be employed for the housing structure 10, such as metal, hardened plastics, wood or combinations of these, as well as minor portions of suitable conventional dielectric material or materials, and the housing is of sectional construction for the proper functioning of the electric switch assemblies 18, 18^a and 20.

The first or lower housing portion 11, best shown in Figure 6, is preferably bell or inverted dish-shaped having an upper foot-contacting section 25 with an axial opening 26, and a flared lower edge section 27. The section 25 may be provided with a suitable opening 28 for portions of the wiring 22. As may be seen in Figure 1, the section 27 gives the appearance of a bead on a solid base of an electric lamp.

Above the housing portion 11 is the second or sectional upper housing portion 12, which comprises a movable section 30, first fixed section 31 and second fixed section 32.

Preferably, the movable section 30 is the intermediate of the three sections and this movable section 30, best shown in Figure 2, includes a tube or sleeve 35 open at its upper and lower ends, but the lower end may be partly closed by an intumed flange 36. The section 35 may carry a narrow skirt 37, which may be a somewhat inverted dish-shaped member, with a central opening aligning with the edge of the flange 36. Viewed in elevation, the skirt 37 appears as a bead on the upper housing portion 12.

The first fixed section 31 is, preferably, above the section 30, may be cylindrical and is supported by the standard 15 as by being secured thereto by a set screw 40 extending through a screw threaded radially extending bore in a plug within the section 31 and bearing against the standard 15. Preferably, the section 31 carries a narrow skirt 41 at its lower end, which may be substantially like the skirt 37 and gives the exterior appearance of another bead, as may be seen in Figure 1. Both skirts 37 and 41 are normally spaced from the sections immediately below them. An axially perforated cap 42 at the upper end of the cylinder permits the upper screw threaded end of the standard 15 to protrude. The upper end part of the cylinder may also support the conventional bracket arms which, in turn, at times support the lamp shade B. This may be accomplished by providing a suitable number of radially-extending bores 43 through this upper end part and a central recess 44 closed by the cap 42.

Like the section 31, the lower section 32 is preferably cylindrical, may be a tube and is supported by the standard 15, as by a screw 45 extending through the wall of the section 32 and through a suitable ring-shaped upper spacer 46 (preferably of dielectric material and disposed at the upper end portion of the section 32) and into the standard 15. The lower end portion of the section 32 may be spaced from the periphery of the standard 15 as by a ring-shaped, dielectric-material, lower spacer 47 (Figure 6).

The support structure 13 may be of metal, wood, hardened plastic material or combinations thereof, and the lower support or base portion 14 thereof, best shown in Figure 6, comprises a wall 50, which may be cylindrical, extending upwardly from a preferably removable bottom wall 51, and an upper wall 52 at the upper end

of the wall 50, all defining a chamber 53. The wall 50 may contain an opening 54, from the exterior of the base portion 14 to the chamber 53, to receive a dielectric sleeve through which may extend portions of the electric wiring 22, while the upper wall 52 may be provided with an axial opening 55 and a plurality of openings 56 and 57 to receive other portions of the electric wiring 22. There is also provided a plurality of thimble-receiving openings 58 in this wall 52, equally spaced apart, one from another, and each spaced the same distances from the axial center of the wall 52. In the example shown, there are three openings 58.

Extending upwardly from the axial center of the upper wall 52 is the elongated standard 15, which may be a metallic tube through which extend parts of the wiring 22, and with the upper and lower end parts of the tube exteriorly screw threaded. Upon the lower screw threaded part is an enlargement 60, below and secured to the upper wall 52, in any approved way. I prefer to slot the lower end face of the enlargement and peen the lower end of the standard so parts thereof will enter the slot 61 and thus fixedly secure the standard to the base portion 14.

The means 17 to resiliently support the movable section 30 of the upper housing portion 12 by the standard 15 is shown in Figures 2 and 3. There, by way of illustration (since their number may vary) are shown two spiral springs 65 (preferably retraction springs), carried upright in and extended from socketed members 67 spaced substantially 180° apart and an equal distance from the axial center of a ring support 67 mounted upon the standard 15 and spaced from the surrounding section 30. A set screw 58 extending through an axially-disposed, screw-threaded bore in the support 67, bears against the standard. The upper end portion of each of the springs 65 may each carry an outwardly-flanged socketed member 66 with the sockets thereof opening upwardly and each containing the free end of a yoke 69 which may be an inverted U-shaped member, with the other end of each yoke fixedly secured to the inner face of the section at its upper end. The socketed members 66 have outwardly-extending flanges resting upon the uppermost convolutions of the springs 65. The springs 65 are not intended to support the section 30 for rocking thereon but, rather, to permit movements of the section 30 in a path substantially normal to the longitudinal axis of the standard 15 (and, of course, substantially normal to the longitudinal axis of the entire fixture A). That is, the springs 65 will distort longitudinally upon pressure upon the section 30, such as illustrated by the advancing hand in Figure 1. This distortion will minutely shorten the distance between the ends of each spring but the reciprocatory motion of the section 30 will be so slight that it will be negligible. Of course, as soon as the hand is removed from contact with the section 30 and the momentum imparted to the section has ceased, the springs will straighten and restore the section 30 to its initial position. When so restored and because the adjacent convolutions are in substantial contact, there will be no tendency whatever for the section 30 to oscillate. This is not always the case with swinging movable sections.

The dual electric switch assembly, actuated by the lateral movement of the section 30, comprises in the example shown in Figure 2, two switch units 18 and 18^a. This first includes a ring 70

of electricity-conducting metal (which provides a movable contact), carried by a support sleeve 71 of dielectric material, presents a continuous face to a special cylindrical fixed contact sleeve 72 of electricity-conducting, somewhat springy metal and shown particularly in Figure 4. This sleeve 72 is provided with a plurality of longitudinally-extending, substantially parallel slots 73 extending from one edge to short of the opposite edge, whereby a plurality of contact fingers or segments 74 are provided. I have discovered that this plurality of independent, springy fingers 74 provides for several point contacts during the closing of the electric circuit and eliminates so-called "fluttering."

This fixed contact sleeve 72 may be mounted upon a ring support 75 of dielectric material, fixed to the standard 15 as by a set screw 76.

The second electric switch unit 18^a has its fixed and movable contacts carried by the standard 15, but the movable contact is moved by the section 30. That is, a ring or sleeve support 77 is fixed to the standard and carries a fixed contact ring 78 of electricity-conducting metal, while a special skirt-like movable contact 79 (shown particularly in Figure 5) of electricity-conducting, somewhat springy metal is provided. This contact 79 has a plurality of spaced-apart, substantially parallel, longitudinally extending slits 80, extending from its slightly inturned lower edge 81 to short of the opposite end of the contact 79, whereby a plurality of springy contact fingers or segments 82 are provided for the same general purpose as the fingers 74. The upper end of the contact 79 is provided with an inturned flange 83 encircling the standard 15 and abutting the lower face of a ring-shaped abutment 84 carried by the standard 15 as by means of a set screw 85. The flange 83 is urged against the abutment by an expansion spring 86, one end of which bears against the under face of the flange 83 while the other end of the spring bears against the upper face of the support 77. This spring 86 thereby supports the contact 79 in a floating manner but with the widest portion of the latter in contact with the inner face of a dielectric sleeve 87 carried by the section 30 whereby, when the section 30 is moved laterally it pushes one or more of the contact fingers 82 until it causes one or more of them to make contact with the fixed contact ring 78. Of course, the entire contact 79 can rock, upon yielding of the spring 86, to cause contact, but the spring resists accidental closing of the electric circuit and, in fact provides (taken with the skirt-like contact 79), a means to resist accidental or undesired lateral movements of the section 30 (as when the fixture A is being carried about).

Means 19 to resiliently support the lower housing portion 11 preferably comprises a plurality of expansion springs 90^a with their upper portions projecting upwardly from the wall 52 and with their lower portions within sockets formed by upwardly-opening, outwardly-flanged thimbles 90 within the openings 58. The upper ends of these springs are seated in suitable sockets, as downwardly-opening shallow thimbles 91 secured to the underside of a dielectric material disc 96 forming a part of the electric switch assembly 20, which disc 98 is, in turn, in contact with the under side of a downwardly-flanged disc 92 bearing against the under face of the wall 25. Since the wall 25 bears against the lower end edge of the fixed housing section 32, this edge forms an abutment limiting upward move-

ment of the housing portion 11, while downward movement thereof is limited by the flange of the flanged disc 92.

The electric switch assembly 20 includes a movable contact (shown best in Figure 8) which is a flattened ring 95 of electricity-conducting resilient metal, provided with a plurality of spaced-apart radially-extending slits 96 extending from its outer periphery toward its axis and providing a plurality of resilient contact fingers or segments 97, and the ring 95 is retained in a horizontal position by a disc 98 of dielectric material which is disposed on the under face of the flanged disc 92. The flattened ring 95 has a lug 99 at its inner periphery adapted to electrically receive the end of a lead of the wiring 22.

Below, and interposed in the path of travel of the movable contact ring 95 is a fixed contact which is preferably a disc 100 having a central opening and supported by two supports 101 and 102 of dielectric material, these also having openings and through which extend the springs 90^a, standard 15 and portions of wiring 22. Preferably, the outer portions of the disc 100 are bowed and are convex as viewed from above. The assembly of disc 100 and supports 102 are secured to the upper face of the wall 52. Downward pressure upon any portion of the wall 25 will cause yielding of one or more of the springs 95 and consequent downward movement of the wall 25, being either a straight vertical movement of this wall or a tipping thereof. In either event, one or more of the movable fingers 97 will engage the fixed contact disc 100.

The off-and-on electric switch assembly 21 may be the same as the off-and-on electric switch assembly of my prior application referred to above and this switch assembly 21 is preferably contained in the chamber 53. However, a conventional off-and-on electric switch assembly is illustrated diagrammatically in Figure 9.

The wiring diagram of Figure 9 is arranged for a three-lamp fixture but, obviously, one or two lamps instead of three may be employed without invention and the wiring thereto is conventional. Through the electrical insulated opening 54 in the wall 50 extend the two conductors 105 and 106, with leads 107, 108 and 109 extending from the conductor 105 for electric contact with one terminal of each of the lamps. From the conductor 105 also extends a lead 110 with branch 113 which extends to the movable contact 72 with which it is electrically connected, and to the movable contact ring 78 with which it is also electrically connected. Still another lead 114 is electrically connected with the conductor 105, extends to the fixed contact disc 100, and is electrically connected therewith.

A lead 115 extends to the fixed contact ring 73, movable contact skirt 79 and movable contact ring 95, and is electrically connected therewith (the connection with the latter being by way of lug 99). This lead 115 extends to one terminal of a thermostat 112 which is electrically connected with one terminal of a coil 111. This thermostat 112 is provided in the event someone or something leans or is leaned against the switch assemblies 18, 18^a and/or 20, singly or collectively. When any one of these is closed, current flows through the coil. In normal operation, the circuit is closed for a fraction of a second (just a touch). In that short interval, the coil does not heat up. But if any of the switch assemblies are kept closed, whether intentionally or not, the coil will, after a few minutes, begin to heat up.

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A book, for example, may be laid against the section 25, or a cat may lay against it, or a child push on the section 39 out of curiosity. When the coil has heated up, the thermostat opens the coil circuit. The normal positions of the parts of the thermostat are circuit-closed positions. As previously stated, the off-and-on electric switch assembly may be the same as that disclosed in my U. S. patent referred to previously and illustrated in Figures 3, 4 and 5 of that patent, the coil 111 being the coil of the conventional solenoid illustrated and described in that patent.

A second lead 116 extends to the other end of the coil 111 and another lead 117 extends to a contact, as an arcuate bus bar 119 of the conventional off-and-on switch assembly 21. Electrically connected with the contact 120 of the off-and-on switch assembly 21 is a lead 118 extending to the other terminal of one of the electric lamps. Additional leads 122 and 123 extend to the other terminals of the other lamps and to fixed contacts 124 and 125 respectively of the off-and-on electric switch assembly. The assembly 21 also includes a centrally-pivoted conventional switch arm 126 adapted to make and break contacts with the several contacts 119, 120, 124 and 125.

With the conductors 195 and 196 in condition to conduct electric current and the base portion 14 of the fixture A disposed upon a substantially flat horizontal surface and the housing portion 12 extending upwardly, a slight push, as by the fingers, upon the movable section 39 will close either (or both) electric switch assemblies 18 and 18^a, depending upon the portion of the section 39 contacted by the fingers. If the push is in the vicinity of the switch assembly 18, that assembly will be actuated, but if the push is low down upon the section 39, the assembly 18^a will be actuated. A push intermediate the assemblies 18 and 18^a will actuate both or one of them. In any event, the off-and-on switch 21 will be actuated to close the circuits to the lamps. Another slight push will close either or both of the switch assemblies 18 and 18^a and the off-and-on switch 21 will be actuated to open the circuit to the lamps.

A slight push downwardly to either tip the lower housing portion 11 or cause it to bodily descend vertically, will close the switch assembly 20 and actuate the off-and-on switch 21 to close the circuit to the lamp then in circuit therewith. If, then, either switch assembly 18, 18^a or 20 is closed, the off-and-on switch will be actuated to open the circuit of the lamp in which the switch 18, 18^a or 20, as the case may be, is interposed. Thus, selective controls are provided, yet it is now apparent that accidental actuation of the off-and-on switch will not take place if the fixture A is being carried (as by grasping the fixed section 31 or 32 of the upper housing portion 12) and so-called fluttering will not take place.

Referring to Figure 10, there is shown the only structure differing in the form C from the form A. In form C the means 130 of form C is substituted for the means 19 of form A, and comprises an expansion spiral spring 131 with its lower end preferably contained in a circular upwardly-opening groove 132 in the upper end of an enlargement 133 carried at the lower screw-threaded end portion of the standard 15. Otherwise this enlargement is preferably like the enlargement 60, and is welded or otherwise secured at its outer upper end portion to the un-

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der side of a wall 134 which may be like the wall 52, except that the wall 134 has an axial opening 135 spaced from the standard 15 in order that there may be clearance for the spring 131.

The upper end of the spring 131 bears against the disc 98. The function of the spring 131 is substantially the same as the springs 99^a and it, too, urges the wall 25 against the lower end edge of the fixed housing portion 11 but downward pressure upon the wall 25 will cause shortening of the spring 131 and permit consequent closing of the electric switch assembly 20.

Various changes may be made to the form of the invention herein shown and described without departing from the spirit of the invention or the scope of the claims.

What is claimed is:

1. In an electric lighting fixture, an elongated support structure; an elongated housing structure disposed about and spaced from the support structure; means for supporting the housing structure by the support structure so that the housing structure may be manually moved in a path substantially normal to the longitudinal axis of said support structure and will then return along said path to its normal position, including a pair of spaced-apart retraction spiral springs with adjacent convolutions of each spring in substantial contact and said springs being carried upright and in parallelism by said support structure, and members bridging said housing structure and upper end portions of said springs and connected with said housing structure and said upper end portions of said springs; a two-terminal electric lamp carried by said support structure; a first electric contact carried by said housing structure; a second electric contact carried by the support structure and disposed in a straight path of travel of said first electric contact; an off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said lamp to one of the terminals of said switch; a lead from the other of said contacts to another terminal of said switch; and thermostat means placing said electric means in electric circuit with said first electric contact and said another terminal of said switch.

2. In an electric lighting fixture, an elongated support structure; an elongated housing structure disposed about and spaced from the support structure; means for supporting the housing structure by the support structure so that the housing structure may be manually moved in a path substantially normal to the longitudinal axis of said support structure and will then return along said path to its normal position, including a pair of spaced-apart retraction spiral springs with adjacent convolutions of each spring in substantial contact and said springs being carried upright and in parallelism by said support structure and inverted substantially U-shaped members bridging said housing structure and upper end portions of said springs and connected with said housing structure and said upper end portions of said springs at the leg portions of said members; a two-terminal electric lamp carried by said support structure; a first electric contact carried by said housing structure; a second electric contact carried by the support structure and disposed in a straight path of travel of said first electric contact; an

off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said lamp to one of the terminals of said switch; a lead from the other of said contacts to another terminal of said switch; and thermostat means placing said electric means in electric circuit with said first electric contact and said another terminal of said switch.

3. In an electric lighting fixture, an elongated support structure; an elongated housing structure disposed about and spaced from the support structure; means for supporting the housing structure by the support structure so that the housing structure may be manually moved in a path substantially normal to the longitudinal axis of said support structure and will then return along said path to its normal position, including a pair of spaced-apart retraction spiral springs with adjacent convolutions of each spring in substantial contact and said springs being carried upright and in parallelism by said support structure, a socketed ring support mounted upon said support structure and having a pair of spaced apart, upwardly-opening sockets with the lower portions of said springs within said sockets, and members bridging said housing structure and upper end portions of said springs and connected with said housing structure and said upper end portions of said springs; a two-terminal electric lamp carried by said support structure; a first electric contact carried by said housing structure; a second electric contact carried by the support structure and disposed in a straight path of travel of said first electric contact; an off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said lamp to one of the terminals of said switch; a lead from the other of said lamp to one of the terminals of said switch; and thermostat means placing said electric means in electric circuit with said first electric contact and said another terminal of said switch.

4. In an electric lighting fixture, an elongated support structure; an elongated housing structure disposed about and spaced from the support structure; means for supporting the housing structure by the support structure so that the housing structure may be manually moved in a path substantially normal to the longitudinal axis of said support structure and will then return along said path to its normal position; a two-terminal electric lamp carried by said support structure; a first electric contact and a second electric contact carried by said support structure, said second electric contact comprising a skirt of electricity-conducting metal surrounding said first contact and provided with an upper intumed flange and plurality of resilient segments extending downwardly below said flange and normally spaced from said first contact, said flange having an upper face and an under face, a pair of spaced apart abutments of dielectric material carried by said support structure above said first contact, and an expansion spiral spring surrounding a portion of said support structure above said first contact and with one end bearing against one abutment and its other end bearing against the under face of said

flange, the upper face of said flange being in contact with the other of said abutments, the widest portion of said skirt at said segments being in operative contact with said housing structure and said first contact being in the path of travel of any of said segments moved upon movement of said housing structure toward said support structure in said path; an off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said lamp to one of the terminals of said switch; a lead from the other of said contacts to another terminal of said switch; and thermostat means placing said electric means in electric circuit with said first electric contact and another of the terminals of said switch.

5. In an electric lighting fixture, a lower housing portion, an upper housing portion extending upwardly therefrom and including a fixed substantially cylindrical section having a lower edge; a support structure comprising a base portion below said lower housing portion and spaced therefrom, and an upper support portion surrounded by said upper housing portion including said fixed section; means securing said fixed section to said upper support portion; means resiliently supporting said lower housing portion from said base portion with said lower housing portion normally in contact with said lower edge; a first electric contact carried by said base portion; a second electric contact within said lower housing portion, resiliently supported by said resilient means above said first contact and in a position to be moved into abutment with said first contact upon downward pressure upon said lower housing portion away from said edge; a two-terminal electric lamp; an off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said lamp to one of the terminals of said switch; a lead from the other of said contacts to another terminal of said switch; and thermostat means placing said electric means in electric circuit with said movable electric contact and said another terminal of said switch.

6. In an electric lighting fixture, an elongated support structure; an elongated housing structure disposed about and spaced from the support structure; means for supporting the housing structure by the support structure so that the housing structure may be manually moved in a path substantially normal to the longitudinal axis of said support structure and will then return along said path to its normal position; a two-terminal electric lamp carried by said support structure; a first electric contact and a second electric contact carried by said support structure, said second electric contact comprising a skirt of electricity-conducting metal surrounding said first contact and provided with an upper intumed flange and plurality of resilient segments extending downwardly below said flange and normally spaced from said first contact, said flange having an upper face and an under face, a pair of spaced apart abutments of dielectric material carried by said support structure above said first contact, and an expansion spiral spring surrounding a portion of said sup-

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port structure above said first contact and with one end bearing against one abutment and its other end bearing against the under face of said flange, the upper face of said flange being in contact with the other of said abutments, the widest portion of said skirt at said segments being in operative contact with said housing structure and said first contact being in the path of travel of any of said segments moved upon movement of said housing structure toward said support structure in said path; an off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said lamp to one of the terminals of said switch; a lead from the other of said contacts to another terminal of said switch; and thermostat means placing said first electric contact and another of the terminals of said switch.

7. In an electric lighting fixture, an elongated support structure; an elongated housing structure disposed about and spaced from the support structure; means for supporting the housing structure by the support structure so that the housing structure may be manually moved in a path substantially normal to the longitudinal axis of said support structure and will then return along said path to its normal position, including a plurality of spaced-apart retraction spiral springs with adjacent convolutions of each spring in substantial contact and said springs being carried upright and in parallelism by said support structure, and members bridging said housing structure and upper end

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portions of said springs and connected with said housing structure and said upper end portions of said springs; a two-terminal electric lamp carried by said support structure; a first electric contact carried by said housing structure; a second electric contact carried by the support structure and disposed in a straight path of travel of said first electric contact; an off-and-on electric switch; electric means for actuating said switch upon abutment of said contacts; an electric connection between one of said contacts and one of the terminals of said lamp; an electric connection between the other of the terminals of said contacts to another terminal of said switch; a lead from the other of said contacts to another terminal of said switch; and thermostat means placing said electric means in electric circuit with said first electric contact and another of the terminals of said switch.

VINCENT J. MARCHESE.

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