Oct. 11, 1938. G. J. MEUER 2,132,428

DOOR CONTROLLED LIGHTING UNIT FOR REFRIGERATORS AND THE LIKE

Filed Sept. 14, 1936 3 Sheets-Sheet 1

Fig. 1

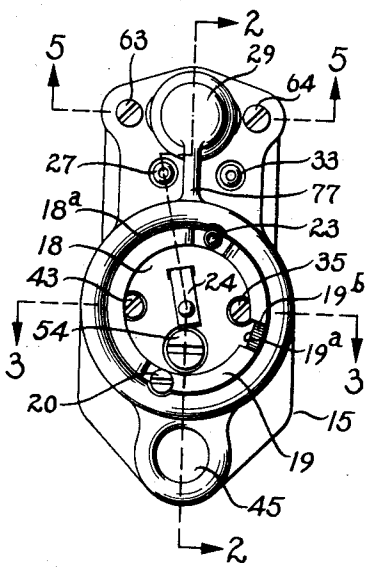


Fig. 2

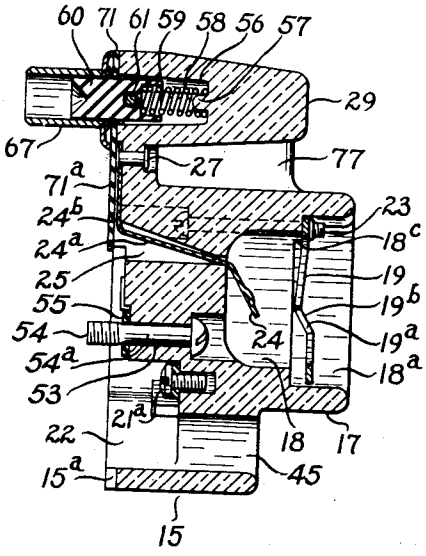


Fig. 3

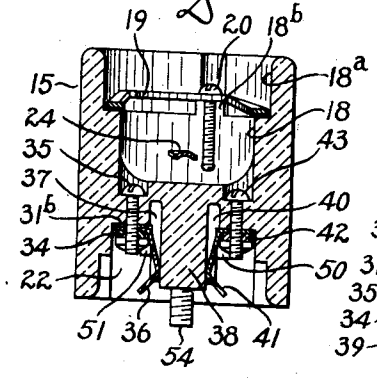


Fig. 4

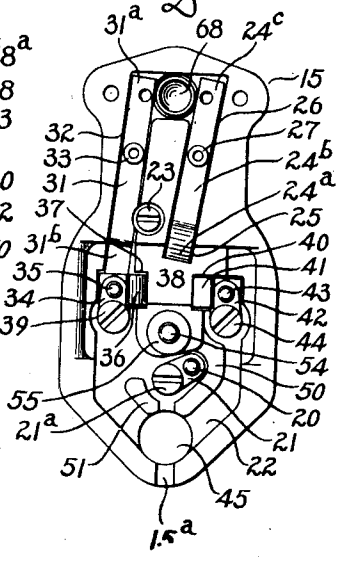


Fig. 5

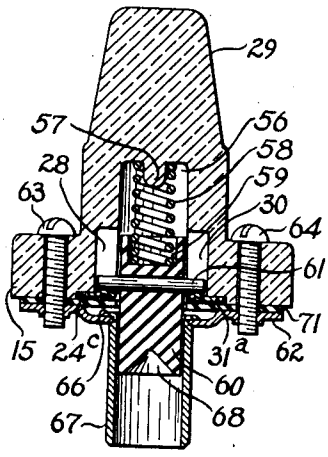
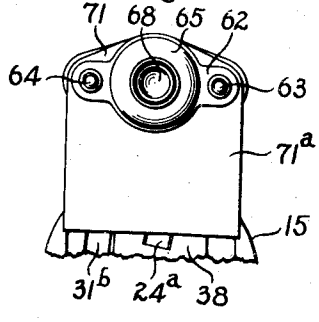


Fig. 6



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DOOR CONTROLLED LIGHTING UNIT FOR REFRIGERATORS AND THE LIKE

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Fig. 7

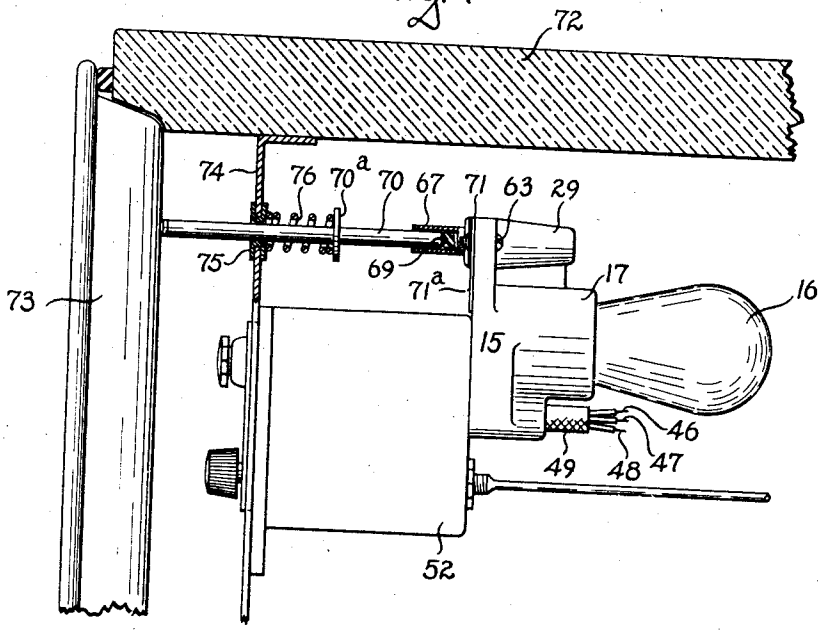


Fig. 8

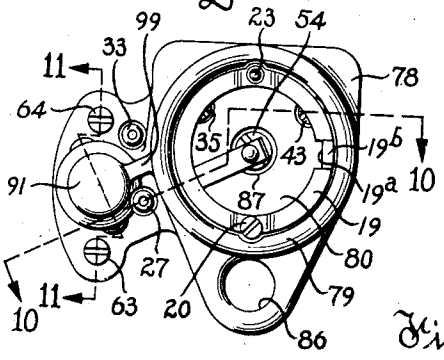


Fig. 9

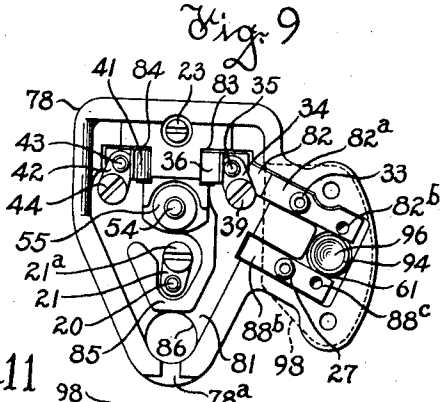


Fig. 10

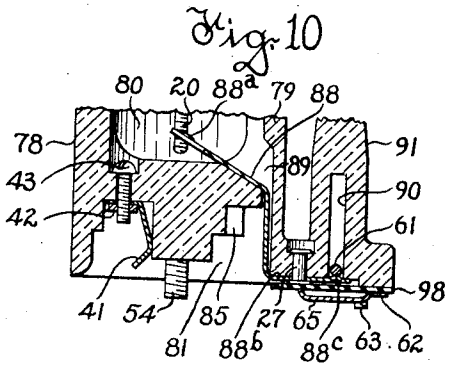
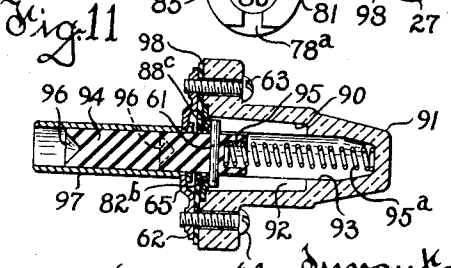


Fig. 11



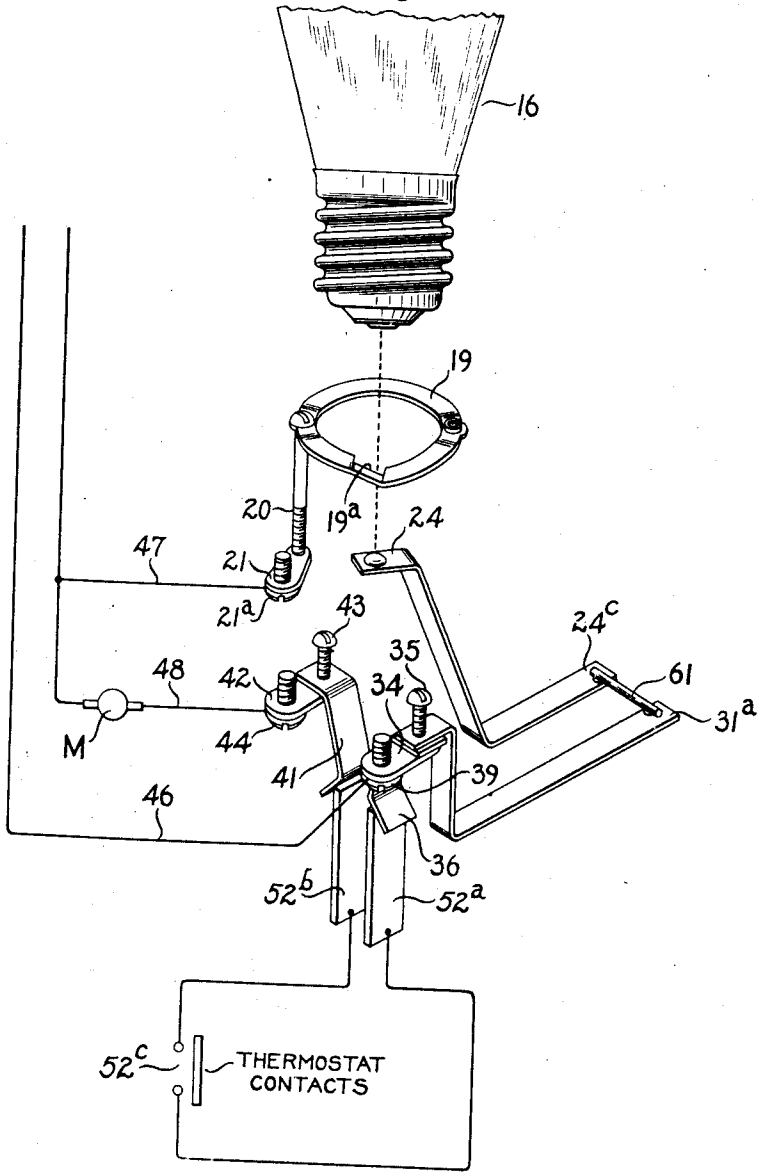
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DOOR CONTROLLED LIGHTING UNIT FOR REFRIGERATORS AND THE LIKE

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Fig. 12



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UNITED STATES PATENT OFFICE

2,132,428

DOOR-CONTROLLED LIGHTING UNIT FOR REFRIGERATORS AND THE LIKE

George J. Meuer, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Application September 14, 1936, Serial No. 100,611

6 Claims. (Cl. 240—4)

This invention relates to improvements in door-controlled lighting units for refrigerators and the like.

A primary object of the invention is to provide a unit of the aforementioned character having novel means for electrically and mechanically connecting the same with the thermostat of a refrigerator.

Another object is to provide such a device embodying a single insulating base produced by a straight-line molding operation to house the lamp socket contacts, the switch, the plug jack receiving contacts, and the wiring terminal elements for all of said parts.

Another object is to provide such a combination device having a minimum number of parts of simple and inexpensive form which may be readily and inexpensively assembled.

Another object is to generally improve and simplify the form of the respective parts of such combination devices, and the operative relationship thereof when assembled.

Another and more specific object is to provide novel means for mounting the device, and novel means for actuating the switch mechanism.

Another object is to simplify the wiring arrangement and to facilitate wiring of such combination devices.

Other objects and advantages of the invention will hereinafter appear.

The accompanying drawings illustrate certain embodiments of the invention which will now be described, it being understood that the embodiments illustrated are susceptible of modification in respect of certain details of construction thereof without departing from the scope of the appended claims.

In the drawings, Figure 1 is a front elevation (normal size) of a combined lamp receptacle, switch, and plug jack receptacle device as constructed in accordance with my invention.

Fig. 2 is a sectional view on the broken line 2—2 of Fig. 1.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a rear elevation of the device,—with the insulating cover plate and the metal top plate and bushing omitted.

Fig. 5 is a sectional view on the line 5—5 of Fig. 1.

Fig. 6 is a fragmentary view similar to Fig. 4, but showing the insulating cover plate and the metal top plate and guide bushing in position.

Fig. 7 is a fragmentary view of a refrigerator, showing the manner of mounting the combination device of Figs. 1 to 6 with respect to a thermostat, and showing one form of door-operated actuating means for the switch.

Fig. 8 is a view (normal size) similar to Fig. 1, but showing a modified form of the combination device, wherein the switch mechanism is positioned at a point approximately ninety degrees removed from that shown in Fig. 1,—the throw or movement of the switch contactor in Fig. 8 being substantially greater than that of the contactor in Fig. 1.

Fig. 9 is a rear elevation of the switch illustrated in Fig. 8,—the metal top plate being omitted and the shape of the insulating cover plate being indicated by dotted lines.

Fig. 10 is a sectional view on the broken line 10—10 of Fig. 8.

Fig. 11 is a sectional view on the broken line 11—11 of Fig. 8,—illustrating the manner of providing for a relatively large throw or movement of the contactor, and

Fig. 12 is a diagrammatic view illustrating the circuit connections for a device like that shown in Figs. 1 to 7.

Referring first to Figs. 1 to 7, inclusive, the numeral 15 designates a one-piece base molded by a straight-line molding operation from a suitable insulating material, preferably porcelain. Those surfaces of the base which are exposed when in use are glazed in a well known manner to facilitate cleaning thereof and to afford a maximum degree of reflection of the light emitted by the lamp 16 (Fig. 7) when illuminated. Base 15 is provided with a projection 17 of substantially cylindrical form,—said projection having a recess 18 of a size to freely accommodate the standard size screw shell contact (not shown) of a lamp (16, Fig. 7). Recess 18 is provided with an outer portion 18a of relatively larger diameter to accommodate an annular sheet metal contact member 19 which is adapted for cooperation with the screw shell contact of a lamp. Member 19 as shown is of the form described and claimed in the patent of George J. Meuer and Ralph A. Millermaster, No. 2,063,044, dated December 8, 1936.

Thus member 19 is provided at the inner edge thereof with a notch 19a,—the portion 19b radial to said notch being bent to extend in a plane angularly related to the portions of member 19 adjacent thereto, whereby said portions are offset relatively to each other to accommodate the screw shell thread of the lamp (see Fig. 2). The portion 18a of the recess is provided with an abutment 18b (Fig. 3) against which a portion

of member 19 is adapted to seat, and a diametrically opposed relatively lower abutment 18c (Fig. 2) against which another portion of member 19 is adapted to seat.

A screw 20 has its shank extending downwardly through a clearance opening in member 19 and through a passage in base 15 to threadedly engage a tapped opening in a punched sheet metal terminal member 21 (Fig. 4) located within a recess 22 in the lower surface of said base,—whereby the head of said screw clamps a portion of member 19 against the abutment 18b. Member 21 is provided with a screw 21a for attachment of one of the three terminal wires. The diametrically opposed portion of member 19 is provided with a tapped opening to accommodate the shank of a screw 23, the head of which is located in a relatively deep countersink in the lower surface of base 15 (Figs. 2 and 4), whereby said portion is clamped against abutment 18c (Fig. 2).

As best illustrated in Fig. 1, member 19 is bent downwardly to a predetermined degree at the left-hand side of screw head 20, and said member is bent downwardly to predetermined degrees on opposite sides of screw 23. The effect of this arrangement is to give the member 19 a circumferentially undulating form whereby spaced portions thereof will resiliently engage the opposed walls of the screw shell thread of the lamp 16.

The center contact portion 24 of the lamp socket is an integral part of a strip 24a of a suitable resilient metal or alloy, such as phosphor bronze,—said strip extending upwardly through a passage 25 provided in base 15, and having the contact portion 24 bent as illustrated for proper engagement thereof by the center contact of a lamp. The portion 24b of strip 24a is seated flatwise within a recess 26 provided in the lower surface of base 15,—the same being rigidly secured within said recess, as by means of an eyelet 27. The other end portion 24c of said strip (Figs. 4 and 5) is arranged to overlie an auxiliary recess 28 (Fig. 5) formed in a boss or projection 29 which is an integral part of base 15.

Directly opposite to recess 28 is a second auxiliary recess 30,—a resilient strip metal member 31 being seated within a recess 32 in the bottom surface of base 15 and having a portion 31a overlying said recess 30. Member 31 is rigidly attached to base 15, as by means of an eyelet 33. Another portion 31b of member 31 is offset to lie within the aforementioned recess 22 in underlying relationship to a punched sheet metal terminal member 34, which is clamped in position as by means of a screw 35 the head of which is located in a countersink in the bottom wall of recess 18. Also underlying member 34 and clamped in position thereby is a resilient plug receptacle contact 36 which is positioned as shown within a guide groove 37 formed in one side of a ridge or abutment 38 formed integrally with the bottom wall of recess 22. Member 34 is provided with a screw 39 for attachment of another of the terminal wires.

Ridge 38 is provided on the opposite side thereof with a guide groove 40 within which is positioned a second resilient plug receptacle contact 41 (which may be identical in form with respect to contact 36),—a portion of contact 41 underlying the terminal member 42 which is clamped in position by a screw 43 the head of which is similarly located within a countersink in the bottom wall of recess 18. Member 42 is provided with a screw 44 for attachment of another terminal wire. Base 15 is provided with a passage 45 leading from the front face thereof and communicating with recess 22 whereby the three terminal wires 46, 47 and 48, forming the cord 49, may be inserted and attached to the respective terminal members. The bottom wall of recess 22 is preferably provided with integral raised portions 50 and 51 to properly insulate the wires and their terminal connections within said recess.

The thermostat 52 (Fig. 7) is provided with a pair of jacks or prongs 52a, 52b, Fig. 12, which are respectively received within the guide grooves 37 and 40,—the same being frictionally engaged by the contacts 36 and 41. Base 15 is provided with a passage 53 (Fig. 2) to accommodate the shank of a securing screw 54 which takes into a suitably threaded opening in a part (not shown) of thermostat 52. The head of screw 54 is seated in a countersink provided in the bottom wall of recess 18, whereby said screw is readily accessible from the front of base 15. Screw 54 is of special form,—the major portion 54a of the shank thereof being unthreaded and of relatively smaller diameter than the threaded portion thereof. Said screw is held captive within passage 53 by threading thereonto a washer 55 of fiber or other suitable material,—said washer being trapped when the same moves from the threaded portion to the relatively small diameter portion of the shank.

Referring again to the switch mechanism, it will be noted (Figs. 2 and 5) that the boss 29 is provided with a main recess 56 of substantially cylindrical form, the inner end of which is preferably provided with an integral boss or projection 57 which serves to receive and center one end of a coiled compression spring 58,—the other end of which spring is seated, under a predetermined degree of compression, within a recess 59 provided in the inner end of an insulating cylinder or plunger 60 which is adapted to slide within said recess 56. Plunger 60 is provided at a point spaced outwardly from its recess 59 with a diametrically extending passage which is adapted to receive with a sliding fit a contactor 61, which is in the form of a rod, or a length of stiff wire of circular cross section. The opposite ends of contactor 61 extend into the respective auxiliary recesses 28 and 30 and are guided by the side walls of the latter for movement in a single plane. The contactor 61 is normally biased by spring 58 into bridging engagement with the aforementioned contact portions 24c and 31a, the latter being preferably provided with bosses (Fig. 5) projecting into the respective auxiliary recesses to insure proper engagement between said parts.

Overlying that portion of base 15 which carries the projection 29 is a metal cover plate 62, which is attached to the base, as by means of a pair of screws 63 and 64. Plate 62 is provided with a raised or bulged portion 65 of annular form, and the same is provided with a circular opening which accommodates the reduced end 66 of a tubular metal bushing 67,—said reduced end being upset over the inner surface of plate 62 to secure said parts against movement relatively to each other. Bushing 67 is provided with a bore to assist in guiding the plunger 60.

The outer end of plunger 60 is preferably provided with a conical depression or recess 68 which is adapted to receive the conical end 69 (Fig. 7)

of a switch actuating plunger or rod 70. As shown, the bushing 67 is of such length as to accommodate a portion of the rod 70 to assist in guiding the latter for movement in a straight line. As shown in Figs. 2, 5 and 6 a relatively thin but relatively rigid insulating plate 71 is clamped by screws 63 and 64 between top plate 62 and base 15,—said insulating plate having an opening to provide clearance for plunger 60. At the same time plate 71 backs the aforementioned stationary contact portions 24c and 31a to prevent excessive bending of the latter under the impact of contactor 61 as impelled by spring 58. Also as shown in Figs. 2 and 6, plate 71 is provided with an extension 71a which overlies those live portions of the device which would otherwise be exposed upon complete assembly of the device as shown in Fig. 7.

Referring more particularly to the arrangement illustrated in Fig. 7, I have shown a conventional form of refrigerator box 72 having a hinged door 73. Offset inwardly from door 73 is the front panel 74 of a refrigerator evaporator unit,—the thermostat being attached to said panel in any suitable manner for support thereby. Panel 74 is provided with an opening having therein a grommet or eyelet 75 which is alined with the aforementioned bushing 67. One end of rod 70 extends outwardly from panel 74 beyond the position thereof illustrated in the open position of door 73 to permit closure of the switch contacts under the bias of spring 58,—whereby said rod will be engaged by the door during and upon closure of the door to effect interruption of the circuit of lamp 16. Rod 70 has attached thereto a stop 70a which acts as an abutment for one end of a coiled compression spring 76, the other end of which engages the grommet 75. It is to be understood that spring 58 when unrestrained predominates over spring 76,—the purpose of the latter being to cushion the outward movement of rod 70 under the pressure of spring 58, and to stabilize said rod when the door 73 is in open position.

The device may be connected with a two-wire source of current supply in the following manner: One line of the source may be connected by one of the conductors (say, 46, Figs. 7 and 12) to terminal member 34 by screw 39,—the other line of the source being connected by a conductor (say, 47) with the terminal member 21 by screw 21a, thus providing for completion of the circuit of lamp 16 when the contactor 61 is engaged with the stationary contacts 24c and 31a. One terminal of a motor M, Fig. 12, may be connected by a conductor (say 48) with the terminal member 42 by screw 44,—the other terminal of said motor being connected to that line of the source to which conductor 47 is connected. The motor will thus be subjected to control by the switch 52c, Fig. 12, which forms a usual part of the thermostatic device 52.

To strengthen the base 15 and to prevent warping thereof after molding I prefer to provide between the projection 17 and boss 29 an integral web or diaphragm 77 (Figs. 1 and 2). The under surface of base 15 (Figs. 2 and 4) is preferably provided with a notch or recess 15a for interlocking engagement with a part of the thermostat casing 52. The parts of the combination device are of simple and inexpensive form, and the cost of assembling the same is minimized. The device is extremely compact in form and is neat and attractive in appearance, while the several parts thereof are nevertheless of extremely rugged and durable construction and not likely to get out of order.

The device illustrated in Figs. 8 to 11, inclusive, is essentially like that aforedescribed, but differs therefrom in respect of certain details of construction and arrangement of the parts. Certain of the parts employed in the device of Figs. 8 to 11 may be identical with the corresponding parts aforedescribed and have been designated by like reference numerals. In said device the porcelain base 78 is shaped or formed as illustrated to provide for production thereof by a straight-line molding operation. Said base is provided with a substantially cylindrical projection 79 having a recess 80 to accommodate the screw shell base of an electric lamp. Located within recess 80 is a contact 19 to receive the screw shell contact of the lamp,—said contact 19 being retained in position by a screw 20 the shank of which takes into a tapped opening provided in the terminal member 21 located within a wiring recess 81 in the under surface of said base, and by a screw 23 the head of which is located in a deep countersink (Fig. 9) in the under surface of said base,—the shank of said screw taking into a tapped opening provided in contact 19.

The bottom wall of recess 80 is provided with countersinks (Fig. 8) to accommodate the heads of screws 35 and 43,—the shank of screw 35 taking into a tapped opening in terminal member 34 which overlies a portion of the plug-jack receiving contact 36 and a portion of a metal strip or bus member 82, whereby said parts are electrically and mechanically connected. The shank of screw 43 takes into a tapped opening in terminal member 42 which overlies a portion of the plug-jack receiving contact 41, to clamp the latter in position. Contacts 36 and 41 are respectively positioned within guide grooves 83 and 84 provided in the under surface of the base. The bottom wall of recess 81 is preferably provided with an integral raised portion 85 (Figs. 9 and 10) which substantially surrounds the terminal member 21, while providing an entrance way for one of the three conductors of the cord 49 (Fig. 7) which enters from the front of the base through passage 86. By the arrangement illustrated the conductors leading from passage 86 to the three terminal members may be of substantially equal length. This is likewise true of the aforedescribed device, as shown in Fig. 4.

The under surface of base 78 is provided with a groove or notch 78a (Fig. 9) for cooperation with a suitable projection formed upon the casing of thermostat 52, to assist in positioning the device. The bottom wall of recess 80 is provided with a centrally located countersink 87 to accommodate the head of screw 54, the shank of which extends beyond the under surface of base 78 (Fig. 10) for threaded engagement with a tapped opening provided in a part of the thermostat casing, as heretofore described, to provide a rigid mounting for the combination device. Screw 54 is of the special form aforedescribed, whereby the same is normally held captive to base 78 by threading onto the lower end thereof the washer 55.

A resilient metal strip 88 is inserted upwardly through a passage 89 (Fig. 10) formed in the base,—the bent end portion 88a forming the center contact of the socket. Another portion 88b of said strip is secured within a groove in the the under surface of the base, as by means of the eyelet 27; and still another portion 88c thereof

is adapted to overlie an auxiliary recess 90 provided in the boss or projection 91 which is formed integrally with base 78. Diametrically opposed to recess 90 is a second auxiliary recess 92,—the aforementioned resilient metal strip 82 having a portion thereof secured within a groove or recess in the under surface of the base, as by means of eyelet 33; another portion 82b thereof overlying said auxiliary recess 92.

Boss 91 is provided between the recesses 90 and 92 with a substantially cylindrical main recess 93, the walls of which assist in guiding the movement of a molded insulating cylinder or plunger 94, which is relatively longer than the corresponding plunger of the device of Figs. 1 to 7. Plunger 94 is provided at its inner end with a recess 95 to accommodate one end of a coiled compression spring 95a,—the other end of which is seated against and centered by the reduced lower end wall of main recess 93. The outer end of plunger 94 is provided with a conical recess 96 to accommodate the conical end of a suitable actuating rod or pin. The contactor 61 is freely insertable into a passage extending diametrically through plunger 94 above the spring recess formed in the latter. It is contemplated that plunger 94 shall have a throw or movement corresponding to the dotted line showing of 96 in Fig. 11. Accordingly the auxiliary recesses 90 and 92 are made relatively deep as shown to accommodate the corresponding movements of the projecting ends of contactor 61.

The metal cover plate 62 is of the form heretofore described, but the boss or raised portion 65 has rigidly attached thereto a relatively long hollow bushing 97 to assist in guiding the plunger 94 and an actuating rod like or similar to that shown at 70 in Fig. 7. Interposed between top plate 62 and the under surface of base 78 is a relatively thin but relatively rigid insulating plate 98 of the form illustrated in dotted lines in Fig. 9. Plate 98 is provided with an opening to afford clearance for the plunger 94, said plate backing up the contact portions 82b, 88c to prevent excessive bending of the latter under the impact of the contactor 61. Top plate 62 is secured to base 78 by screws 63 and 64, as aforedescribed. An integral web or diaphragm 99 (Fig. 8) is provided to strengthen the molded base 78 and to prevent warping thereof. The device of Figs. 8 to 11 may be attached to a thermostat in the manner illustrated in Fig. 7,—it being understood that a slightly different arrangement of the actuating rod (corresponding to 70) will be required, due to the angular displacement of the switch mechanism (Fig. 8) as compared with the arrangement shown in Fig. 1.

What I claim as new and desire to secure by Letters Patent is:

1. In a device of the character described, in combination, a one-piece molded insulating base having a wiring cavity formed in the rear surface thereof, said base having a forwardly opening conductor passage communicating with said cavity, three wiring terminal members located within said cavity, a pair of plug jack engaging contacts located within said cavity and respectively connected with two of said terminal members, said base having a recess formed in the front surface thereof, center and screw-thread type lamp socket contacts located within said recess, one of said two terminal members and the third terminal member being adapted to provide for connection of said center and screw-thread type lamp socket contacts to a source of current supply independently of the other of said two terminal members, a switch for interrupting and completing said connection, the stationary and movable contacts of said switch being carried by said base in laterally offset relation to said wiring cavity, one stationary contact being connected with one of said two terminal members and the other stationary contact being connected with one of said socket contacts, a spring carried by said base for biasing said movable contact to a given extreme position, and means to provide for movement of said contact out of said extreme position against said bias.

2. In a device of the character described, in combination, a one-piece molded insulating base having a wiring cavity formed in the rear surface thereof, said base having a conductor passage communicating with said cavity, three wiring terminal members located within said cavity, a pair of plug jack engaging contacts located within said cavity and respectively connected with two of said terminal members, said base having a recess formed in the front surface thereof, center and screw-thread type lamp socket contacts located within said recess, one of said two terminal members and the third terminal member being adapted to provide for connection of said center and screw-thread type lamp socket contacts to a source of current supply independently of the other of said two terminal members, a switch for completing and interrupting said connection, the stationary and movable contacts of said switch being carried by said base in laterally offset relation to said wiring cavity, a coiled spring carried by said base for biasing said movable contact to a given extreme position, means to provide for movement of said contact out of said extreme position against said bias, said base having a passage extending therethrough within the area of said first mentioned recess, and a single screw penetrating said passage and adapted for threaded engagement with a suitable support.

3. In a combined lamp socket, door-operated switch and plug jack receptacle for electrically controlled refrigerators and the like, in combination, a one-piece insulating base adapted to be produced by a straight-line molding operation, said base having a recess formed in the front surface thereof, center and screw-thread type lamp socket contacts located within said recess, a recess formed in the rear surface of said base in substantial alinement wtih said lamp socket recess, three wiring terminal members secured within said last mentioned recess, a pair of plug jack receiving contacts located within said last mentioned recess and electrically connected with two of said terminal members, said base having a main recess and a pair of auxiliary recesses formed in said rear surface in laterally offset relationship to said recesses aforementioned, a pair of stationary switch contacts overlying the respective auxiliary recesses, said switch contacts being respectively connected with one of said jack receiving contacts and with one of said socket contacts, the other socket contact being connected with the third terminal member, an insulating plunger located within and guided by the walls of said main recess and spring-biased outwardly therefrom, said plunger having a diametrical passage formed therein, a contactor freely insertable through said passage, said contactor having its end portions located within said auxiliary recesses and guided by the walls thereof for movement in a straight line, a metal cover plate secured to said rear surface of the base and over-

lying said switch contacts, and a hollow bushing rigidly secured to said cover plate to conceal said plunger and to assist in guiding the same.

4. In a combined lamp socket, door-operated switch and plug jack receptacle, in combination, a one-piece insulating base adapted to be produced by a straight line molding operation, said base having a recess formed in the front surface thereof, center and screw-thread type lamp socket contacts located within said recess, said base having a wiring cavity formed in the rear surface thereof in substantial alinement with said recess, three wiring terminal members secured within said cavity, a pair of plug jack receiving contacts located within said cavity and connected with two of said terminal members respectively, said base having a main recess and a pair of auxiliary recesses formed in the rear surface thereof and offset laterally from said cavity and said first mentioned recess, an insulating plunger slidably mounted within said main recess and spring-biased outwardly therefrom, a contactor loosely carried by said plunger and having opposite ends thereof located within the respective auxiliary recesses to be guided thereby, a pair of resilient stationary contacts respectively overlying said auxiliary recesses to be normally engaged by said contactor, a cover plate secured to said base and overlying said auxiliary recesses, said plate having a hollow metal bushing rigidly attached thereto and alined with said main recess to assist in guiding said plunger, one of said switch contacts being connected with one of said two terminal members, the other of said switch contacts being formed integrally with said center lamp socket contact, and the third terminal member being connected with said screw-thread type lamp socket contact.

5. In a device of the character described, in combination, an insulating base adapted to be produced by a straight line molding operation, said base having a recess formed in the front surface thereof, center and screw-thread type lamp socket contacts located within said recess, a cavity formed in the rear surface of said base in substantial alinement with said recess, three wiring terminal members secured with said cavity, a pair of plug jack receiving contacts also located within said cavity and connected with two of said terminal members respectively, said base having a main recess and a pair of opposed auxiliary recesses formed in said rear surface thereof in laterally offset relation to said cavity and said first mentioned recess, a plunger formed of insulating material and slidable within said main recess, a spring interposed between said plunger and the end wall of said main recess, a bridging contactor extending transversely through said plunger and having its ends received within and guided by the walls of said auxiliary recesses, a pair of resilient stationary contacts respectively overlying said auxiliary recesses and into and out of engagement with which said contactor is adapted to move, said stationary contacts being respectively connected with one of said jack receiving contacts and with one of said socket contacts, the other socket contact being connected with the third terminal member, a plate of insulating material overlying said stationary contacts, a metal cover plate overlying said insulating plate and rigidly secured to said base, said plates having alined openings formed therein to accommodate said plunger, and said metal plate having a hollow metal bushing attached thereto to assist in guiding said plunger.

6. In a device of the character described, in combination, a one-piece molded insulating base having a wiring cavity formed in the rear surface thereof, said base having a conductor passage extending from the front surface thereof into communication with said cavity, three wiring terminal members located within said cavity, a pair of plug jack engaging contacts located within said cavty and respectvely connected with two of said terminal members, said base having a recess formed in the front surface thereof, center and screw-thread type lamp socket contacts located within said recess, one of said two terminal members and the third terminal member being adapted to provide for connection of said center and screw-thread type lamp socket contacts to a source of current supply independently of the other of said two terminal members, a switch foı completing and interrupting said connection, said switch comprising stationary and movable contacts normally biased into engagement with each other, means comprising a door-operated insulating plunger for effecting disengagement of said contacts against said bias, said base having a passage extending therethrough within the area of said recess, and a headed screw the shank of which penetrates said passage and is adapted for threaded engagement with a suitable support.

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