Aug. 11, 1959 C. M. SMITH 2,899,524

WIRING DEVICE

Filed June 28, 1956 2 Sheets-Sheet 1

Fig. 1.

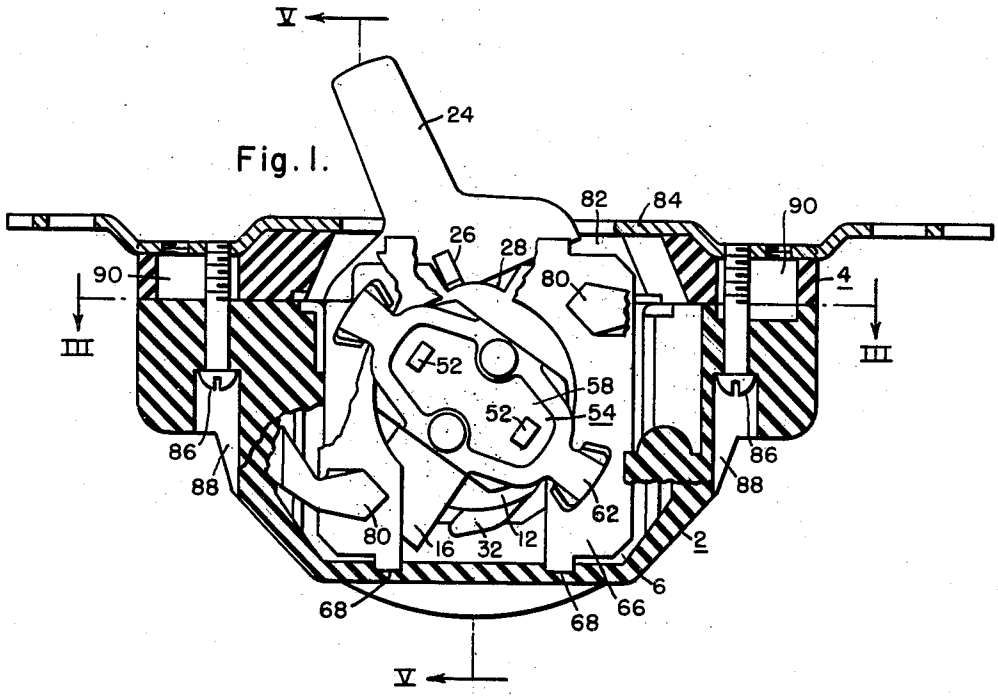
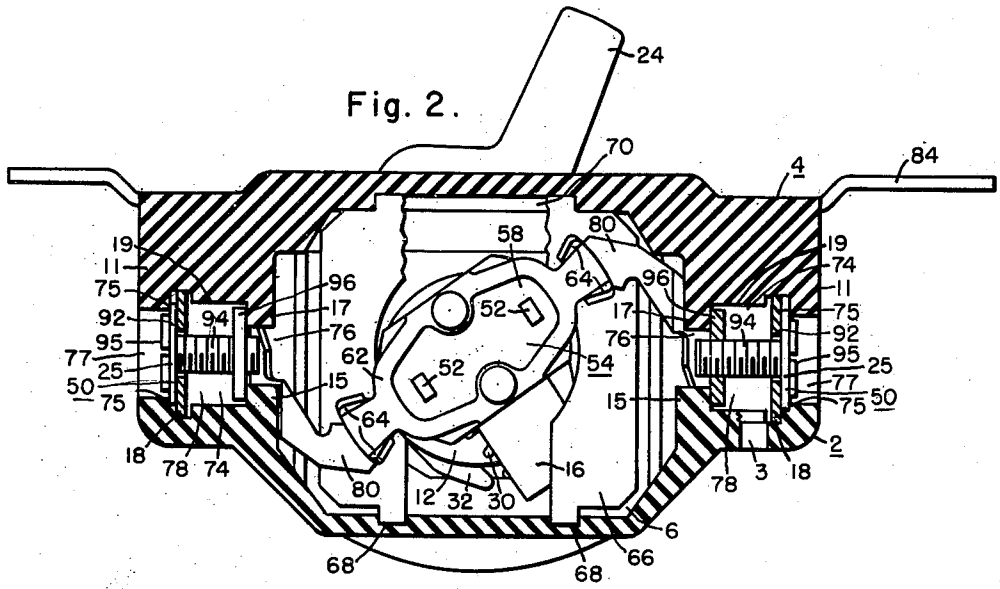


Fig. 2.



WITNESSES

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Filed June 28, 1956 2 Sheets-Sheet 2

Fig. 3.

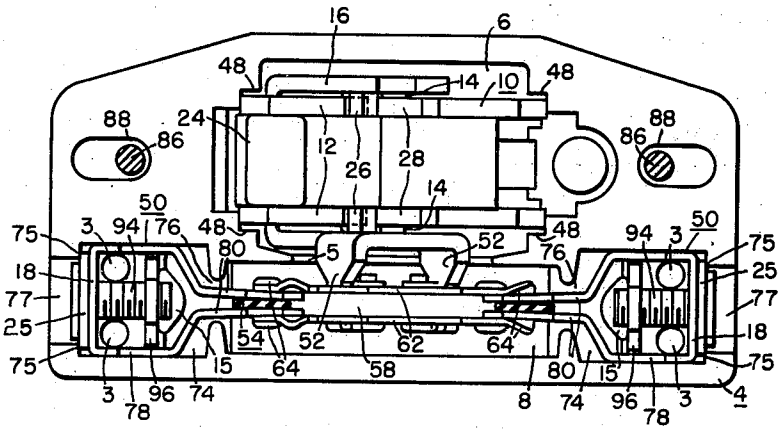


Fig. 6.

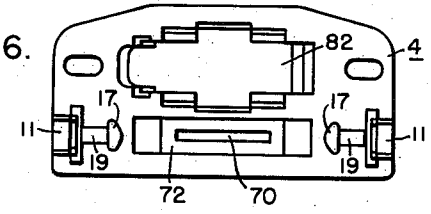


Fig. 4.

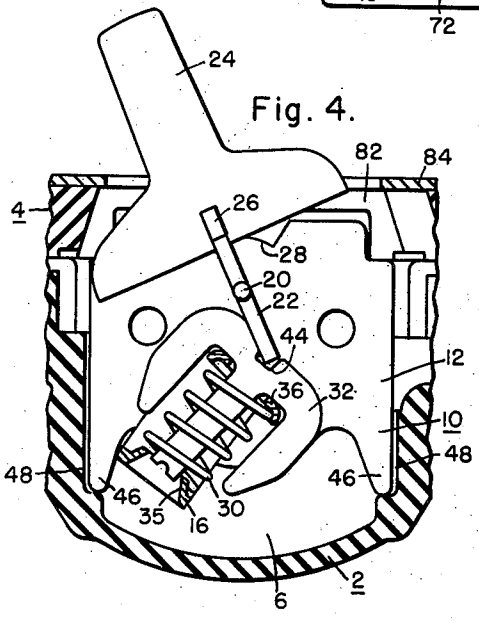
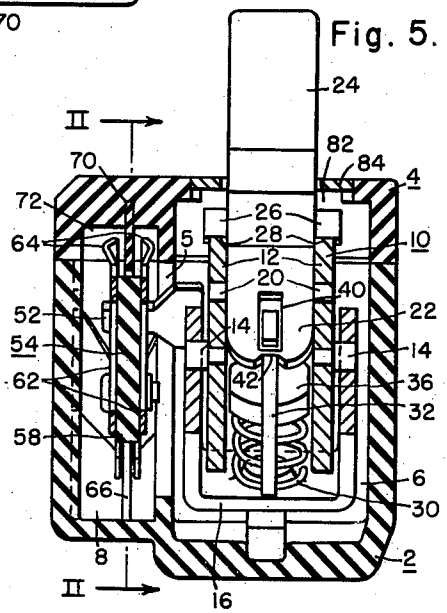


Fig. 5.



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2,899,524

WIRING DEVICE

Clarence M. Smith, Trumbull, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Application June 28, 1956, Serial No. 594,412

21 Claims. (Cl. 200—168)

My invention relates to an electrical wiring device, and more particularly to a wiring device having a new and novel terminal which may be placed in various spaced positions within the housing for the device and which is cooperable with the housing to facilitate securing and releasing of electrical conductors to the device.

At the present time it is common practice to provide various wiring devices such as lamp holders, receptacles, sockets, switches and the like with terminal screws, the shanks of which freely pass through a terminal plate and threadedly engage a clamping means in order that electrical connections may readily be made to the terminal. With the conventional type of machine screws a great deal of annoyance is caused by either the screw slot eluding the screw-driver tip due to the free floating construction of the screw, or the clamping means twisting sideways because of lack of suitable guides. Although the first objectionable condition can be somewhat minimized by employing special screws having a formed engagement recess in the head, such as a Phillips type screw, such formed screws are not entirely satisfactory as they do not eliminate the free floating condition of the screw. A more serious objection to such special recessed head screws is the fact that wiring devices are used in huge numbers in numerous field installations where it is difficult to obtain the cooperation of field installers to carry the special screw-drivers required by such screws. Thus, in order to obtain market acceptance of a wiring device for general use, it is practically mandatory that an ordinary screw slot be employed in the terminal screw.

As is also well known, such wiring devices in substantially all cases are provided with spaced terminals in order that the common two-wire system may be employed. From a manufacturing standpoint, it is quite desirable on a cost basis that each spaced terminal be of identical construction in order to reduce the cost of the device. Heretofore, many devices, such as receptacles, have employed reversible terminals; however, electrical switches have presented more of a problem in this regard due to the fact that a moving contact member is involved.

Accordingly, one object of my invention is to provide a wiring device having new and improved reversible terminals therein.

Another object of my invention is to provide a wiring device having a terminal screw which is captively located with respect to the housing thereof.

A more specific object of my invention is to provide a terminal screw having a flange extending outwardly from the head thereof, which flange is restrained from outward movement by engagement with the housing of the device.

Another specific object of my invention is to provide a terminal screw which extends inwardly of the housing of the device which is supported at its inner end by means formed integral with the housing.

Another object of my invention is to provide a wiring device having a terminal screw with the underside of its head being held in engagement with the plate portion of the terminal at all times by means formed integral on the housing of the device.

Still another more specific object of my invention is to provide a terminal having a U-shaped portion in which a generally rectangular clamping means is captively retained.

A further object of my invention is to provide a wiring device having a terminal therein with a portion to which electrical connection may be made and a contact engaging portion extending angularly therefrom so that the terminal may be reversed within the housing of the device to vary the point at which the contact engaging portion is energized.

These and other objects of my invention will become more apparent upon consideration of the following detailed description of a preferred embodiment thereof, when taken in conjunction with the attached drawings, in which:

Figure 1 is an enlarged sectional view of a switch in the open position taken longitudinally through the housing with the movable mechanism being shown in elevation;

Fig. 2 is a longitudinal sectional view of the switch shown in Fig. 1 in the closed position taken along the lines II—II of Fig. 5 with the movable mechanism being shown in elevation and with a pair of spaced terminals located therein which are constructed in accordance with the principles of my invention;

Fig. 3 is a top plan view of the switch shown in Fig. 1 taken along the lines III—III thereof;

Fig. 4 is a partial side elevational view of the operating mechanism for the switch as shown in Fig. 1 with a portion of the switch casing being shown in section;

Fig. 5 is a lateral cross-sectional view of the switch shown in Fig. 1 taken along the line V—V thereof; and

Fig. 6 is a plan view on a reduced scale of the underside of the cover for the switch shown in Fig. 1.

Referring to the drawings, it will be noted that terminals constructed in accordance with the principles of my invention are shown embodied in a switch; however, it is to be realized that such representation is illustrative only and that the features of my invention are readily adapted for use with other types of wiring devices. As shown in Figs. 1, 3 and 5, the illustrated switch comprises an elongated cup-shaped housing **2**, the open side of which is adapted to be closed by means of an elongated cover **4** to form a unitary structure. The housing **2** and cover **4** may be formed from any suitable insulating material and are preferably formed from an insulating material which may readily be molded with the necessary structure as hereinafter described, such as a phenolic resin.

As more clearly shown in Fig. 3, one lateral side of housing **2** is provided with a recess **6** and the other lateral side of housing **2** is provided with a recess **8**. The recesses **6** and **8** each extend longitudinally within the housing **2**, and are located substantially centrally between the ends of the housing **2**. It will further be noted that the adjacent sides of recesses **6** and **8** are connected by means of an opening **5** in the wall of the housing **2** therebetween. The recess **6** is provided for receiving a toggle mechanism **10** which, for the purposes of my invention, may be of any suitable construction.

The toggle mechanism **10** shown (Figs. 4 and 5), comprises a pair of spaced generally rectangular plates **12** having opposed outwardly extending pins **14** for pivotably supporting a U-shaped bridge **16** with the arms thereof being located adjacent the outer surfaces of the plates **12**. The plates **12** are also provided with laterally aligned openings for pivotably supporting outwardly extending pins **20** on an actuating member **22** located between the

plates 12. The actuating member 22 extends upwardly from the plates 12 so that its upper end may be suitably secured to an operating handle 24. The handle 24 may be of any well-known construction and is preferably formed from a phenolic resin material which may readily be molded into the desired shape. Each side of the actuating member 22 is also provided with an outwardly extending projection 26, which projections 26 extend outwardly above inwardly located arcuate surfaces 28, respectively, on the upper edges of the plates 12 so that the travel of the operating handle 24 is limited about the pivot pins 20 by the engagement of the projections 26 with the parts of the plates 12 at each end of the arcuate surfaces 28.

As shown, the bridge 16 has its bight portion extending laterally across the bottom of the plates 12, and the pivot pins 14 are spaced below the pivot pins 20. In order to permit the bridge 16 to be moved pivotably about the pivot pins 14, a spring 30 is supported by the bight portion of the bridge 16 and extends upwardly between the plates 12. A spring retainer 32 is interposed between the actuating member 22 and the spring 30, having three downwardly extending legs, the central one of which extends centrally through the spring 30 and through an opening 35 in the bight portion of the bridge 16. The outer end of the central leg may thereafter be laterally enlarged to engage the outer surface of the bight portion 16 to prevent the central leg of the spring retainer 32 from moving upwardly through the opening 35. The outer legs of the spring retainer 32 are located closely adjacent the opposite sides of spring 30 so as to captively retain the spring 30 therebetween. A retaining ring 36 is located around the central leg of the spring retainer so as to provide a seat for the upper end of the spring 30.

It will also be noted that the inner end of the actuating member 22 is provided with a longitudinally elongated centrally located slot 40 having a pin 42 extending transversely thereacross at its inner end. The pin 42 is located within a slot 44 in the upper end of the spring retainer 32 so that the toggle mechanism 10 may be operated in the well-known manner to cause the bridge 16 to be pivotably moved about the arms 14 with a distinct snap action in either direction. In order to limit the pivotable movement of bridge 16, each plate 12 is provided with a downwardly extending stop 46 at each of its ends which is engageable with the sides of the bight portion of the bridge 16.

In order to obtain a rapid assembly, it will be noted that each end of each plate 12 is slidably received in an inwardly extending slot 48, which slots are located adjacent each end of each side of the recess 6. Slots 48 are provided with a bottom land which engages the free end of the stops 46 so that the toggle mechanism 10 is supported above the bottom of the recess 6 and substantially centrally therein, so that the bridge 16 may be freely moved therein. As additionally shown, the arm of bridge 16 adjacent the recess 8 is provided with spaced outwardly extending projections 52 at its upper end which extends through the opening 5 substantially centrally into the recess 8. The projections 52 are located on opposite sides of the pivot pin 14 so that the projections 52 are moved in an oscillatory manner about the pin 14 when the bridge 16 is oscillated in the manner heretofore indicated.

Referring to Figs. 3 and 5, an oscillatory member 54 is provided to make and break contact between the stationary portions of the spaced terminals in the housing 2 as hereinafter described. As shown, the oscillatory member 54 comprises a generally rectangular support 58 formed from a suitable insulating member such as a laminated plastic, having a pair of spaced openings therein so that the oscillatory member may be supported on the spaced projections 52 by merely inserting the oscillatory member 54 thereon. In order to position the oscillatory member 54, it will be noted that the projections 52 are laterally enlarged at the point approximately in alignment with opening 5 so that the oscillatory member is restricted from movement toward the recess 6.

A formed elongated contact 62 is secured to each side of the support 58 in any suitable manner such as by riveting. As shown, each contact 62 extends generally around the outer edge of the support 58 and around the outwardly extending projections 52 with the opposite ends thereof extending longitudinally outwardly beyond the opposite ends of the support 58. In order to obtain a better contact action with the stationary contact portion of the terminals, each of the sides of the outwardly extending ends of contact 62 are provided with a laterally outwardly extending tongue 64. Of course, it will be realized that the oscillatory member 54 is inserted on the projections 52 prior to the insertion of the operating mechanism 10 into the recess 6, so that when the operating mechanism 10 is inserted the oscillatory member 54 is located approximately centrally within the recess 8. In order to guide the oscillatory member 54 when it is oscillated within recess 8, an inverted U-shaped guide plate 66, formed from any suitable insulating material, such as a laminated plastic, is provided which extends around the support 58 and between the outwardly extending ends of the contact 62. The free ends of the arms of the plates 66 are located in cooperable depressions 68 in the bottom of the housing 2, while the upper edge of the guide plate 66 is adapted to be received in a longitudinally extending slot 70 on the underside of the cover 4. It will also be noted that the slot 70 is located at the bottom of a recess 72 on the underside of the cover 4 to provide sufficient space for the ends of the oscillatory member 54.

Referring to Figs. 2 and 3, it will be noted that a longitudinally and inwardly extending terminal recess 74 is provided in housing 2 at each end of the recess 8 which is of a lateral width somewhat greater than the lateral width of the recess 8. Each recess 74 is connected to the recess 8 by means of a slot 76 extending therebetween and inwardly of the housing 2. In a similar manner the outer end of each recess 74 is provided with a slot 77 so that each recess 74 is accessible from the outside of housing 2. It will be noted that the sides of slots 77 are offset laterally inwardly from the longitudinally extending sides of recesses 74 so as to provide a generally U-shaped shoulder 75.

As shown, the terminals 50 are formed from any suitable electrical material, which may be formed as hereinafter described, such as an alloy of copper, and are closely received in each recess 74, respectively. Each terminal 50 is formed in a particular manner to accomplish the purpose of my invention and, as shown, comprises a U-shaped portion 78 having its bight portion 18 located adjacent slot 77 and a contact engaging portion 80 extending angularly outwardly from each arm of the U-shaped portion 78 so as to provide a pair of spaced contact engaging portions 80. Each contact engaging portion 80 is also offset inwardly toward each other so as to define an opening therebetween which is of a width slightly less than the thickness of the material from which the guide plate 66 is formed.

In assembling the switch, the operating mechanism 10, oscillatory member 54, guide plate 66 and a pair of terminals 50 may be assembled as a unit outside of the housing 2 and thereafter merely slipped into the proper recesses as heretofore described. One manner of accomplishing such an assembly is to place the oscillatory member 54 upon the projections 52 of the operating mechanism 10; thereafter, the guide plate 66 is inserted around the oscillatory member 54 so that the arms thereof extend between the outwardly extending ends of contacts 62. Thereafter, a terminal 50 is slidably secured to each arm of the guide plate 66 by opening the

contact engaging portions 80 to permit them to slidably engage the sides of the arms of the guide plate 66. Due to the resiliency of the contact engaging portions 80, the terminals 50 are held outwardly of the guide plate 66 so that the entire assembly may be lowered into the aligned recesses 6, 8 and 74. In assembling such a switch, it will be noted that one pair of contact engaging portions 80 at one end of housing 2 extend from a recess 74 through slot 77 into one end of recess 8 and downwardly toward the base of housing 2, and the other pair of contact engaging portions 80 at the other end of housing 2 extend from the other recess 74 through the other slot 77 into the other end of recess 8 and upwardly toward the open side of the housing 2. When so located the inner ends of the contact engaging portions 80 are spaced diagonally from each other a distance corresponding to the longitudinal length of the contacts 62 of the oscillatory member 54 so that when the oscillatory member 54 is in the position shown in Fig. 2, the contact engaging portions 80 of the terminals 50 are electrically connected by the contact 62. Similarly upon movement of the handle 24 to cause the oscillatory member 54 to oscillate in a clockwise direction, the contact 62 of the oscillatory member 54 disengages the contact engaging portions 80 as shown in Fig. 1.

Once the subassemblies have been inserted within the housing 2, the assembly of the switch may be completed by placing the cover 4 over the open side of the housing 2. In order to accomplish this purpose the cover 4 is provided with a longitudinally extending opening 82 to permit the handle 24 to pass therethrough so that the handle 24 may be oscillated therein as previously described. The upper surface of the cover 4 is also provided with a groove for receiving a yoke 84 so that the yoke 84 may be positioned thereupon. The yoke 84 is of standard construction and is formed from any suitable material having sufficient structural strength such as sheet steel and is provided with an opening in alignment with opening 82 to permit handle 24 to extend therethrough. The entire assembly is completed by means of standard screws 86 (Fig. 1) extending upwardly through longitudinally spaced openings 88 in the housing 2, through aligned slots 90 in the cover 4 and threadedly engaging aligned openings in the yoke 84.

In order to make electrical connections to the terminals 50, the bight portion 18 of each terminal 50 is provided with a clearance opening 92 (Fig. 2) through which the shank of a formed screw 94 extends. A rectangular clamping nut 96 is threadedly secured to the shank of each screw 94 so that it moves longitudinally thereacross upon rotation of the screw 94. The sides of each nut 96 are located closely adjacent the inner surface of the arms of the U-shaped portion 78 of the terminals 50 so that the nuts 96 are restrained from movement around the shank of the screw 94 during the period the screw 94 is rotated. Although not essential, if desired, the inner end of the shank of the screw 94 may be turned over or upset to prevent the nut 96 from being backed off of the shank. A pair of laterally spaced wire-receiving openings 3 are provided in the bottom of each recess 74 of housing 2 which extend therethrough adjacent the inner surface of the bight portion 18 of the terminals 50 so that electrical conductors may be inserted therethrough and secured between the bight portions 78 and the nuts 96 in the well-known manner.

It will be noted that a standard terminal screw has not been employed, but that each screw 94 has a flat circular head with a flat circular washer portion 25 formed integral therewith which extends outwardly around the head of the screw 94. The head of screw 94 is provided with a slot 95 so that it may be rotated in the well-known manner by means of a standard screwdriver blade.

As shown in Fig. 3 the diameter of the head of each screw 94 is slightly less than the width of each slot 77 so that it may be freely located therein from the open side of housing 2 when the terminal 50 is inserted into the recess 74. The circular washer portion 25 of each screw 94 being larger in diameter than the head of each screw 94 engages the inner surface of the shoulders 75 formed by the slots 77 at the outer end of the recesses 74 in which the screws 94 are located. With such a construction, rotation of the screws 94 will cause each nut 96 to travel longitudinally along the shank of each screw 94 so that conductors (not shown) inserted through the openings 3 may be clamped or released from between the inner surface of the bight portion 18 of the terminals 50 and the nuts 96. The bottom of each slot 77 is preferably arcuate in form so that the entire lower edge of the washer portion 25 of each screw 95 is restrained against outward movement by the lower portion of the shoulders 75.

In order to provide engagement of the washer portions 25 around their entire periphery, it will be noted (Figs. 2 and 6) that the undersurface of the cover 4 is provided with a pair of projections 11 which extend downwardly from the opposite ends of the cover 4 and have a lateral width so as to be freely received within the upper portions of the slots 77. The lower portion of each projection 11 is provided with an upwardly extending arcuate curvature to provide clearance for the head of the screw 94, and is of a thickness so that its inner surface is in alignment with the shoulders 75 whereby the upper portion of the washer portions 25 is enclosed so that substantially only the heads of the screws 94 are exposed externally of the device.

In order to prevent the shank of the screws 94 from becoming tilted with respect to the bight portion 18 of the terminals 50, it will be noted that the housing 2 is provided with integral projections 15 which extend upwardly from the base of each recess 74 and are spaced inwardly of the openings 3 so as to be located adjacent the ends of the shanks of the screws 94. The cover 4 is similarly provided with a pair of integral downwardly extending projections 17 which are spaced inwardly of the projections 11 and are spaced longitudinally so as to be in alignment with the projections 15. The projections 15 and 17 are of a length (Fig. 2) so as to terminate adjacent the lower and upper sides, respectively, of the inner ends of screws 94. With such construction the inner end of screws 94 will be prevented from any substantial movement upwardly or downwardly within recess 74 due to engagement with the projections 17 and 15, respectively. It will also be noted that the outwardly facing surfaces of the projections 17 and 15 function as an inward stop for the nuts 94, so that upon releasing of the inserted conductor there is no danger that the nuts 94 will become disassociated from the shank of the screws 94. Preferably, in order to provide a guide for the upper edge of each nut 96, projections 17 and 11 of the cover 4 are connected by means of an integral projection 19 extending downwardly from the cover 4 so as to be located adjacent the upper edge of the nuts 96. As the top and bottom of the nuts 96 are closely received between the bottoms of the recesses 74 and the lower edge of the projections 19, respectively, and the sides of nuts 94 are closely received between the sides of the respective terminals 50, the nuts 96 will always be in alignment to insure proper engagement with an inserted conductor. If desired, nuts 96 may be curved slightly toward the bight portion 18 of the terminals 50.

Another important advantage of my invention resides in the fact that the U-shaped portion of the terminal 50 is symmetrical about the longitudinal center line of the recesses 74 so that the terminals 50 may be reversibly located in either of the recesses 74 so that the point at which they engage the contact 62 may be varied. Thus, as shown in Fig. 2, the contact engaging portions 80 of the left terminal 50 extend downwardly toward

the base of housing 2, and the contact engaging portions 80 of the right terminal extend upwardly into the slot 70 of the cover 4. As terminals 50 are symmetrical, they could be removed from their recesses 74, reversed and re-inserted into the recesses 74 from which they had been withdrawn. In such event Fig. 2 would have the contact engaging portions 80 of the left terminal 50 extending upwardly into the slot 70 on the cover 4, and the contact engaging portions 80 of the right terminal 50 extending downwardly as before described. With such reversal of the terminals 50, the "off" and "on" positions of the switch may be varied. Of more importance is the fact that due to such reversal the identical terminal 50 may be located in each recess 74 so that the cost of the terminals is substantially reduced.

Since numerous changes may be made in the above-described construction, and different embodiments of my invention may be made without departing from the spirit and scope thereof, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative, and not in a limiting sense.

I claim as my invention:

1. A wiring device comprising, an insulating housing having at least one generally quadrangular recess extending inwardly thereof, one side of said recess having an outwardly extending slot therein which is open to one side of said housing, an electrical conducting terminal comprising a pair of spaced rigid sides with an integral cross portion extending therebetween slidably insertable within said recess, at least a portion of said spaced sides of said terminal being closely received between the sides of said recess extending laterally from said one side thereof, said spaced sides of said terminal being formed to be engageable with the side of said recess opposite said one side to prevent any substantial movement of said terminal away from said slot, said cross portion extending across the inner end of said slot, a machine screw having a shank portion extending through a clearance opening in said cross portion into said recess betweeen said spaced sides of said terminal, and a nut threadedly received on the inner end of said shank portion having spaced flat sides located closely adjacent the oppositely facing surfaces of the spaced sides of said terminal whereby said nut is moved only longitudinally over said shank portion upon rotation of said screw.

2. A wiring device comprising, an insulating housing having at least one recess extending inwardly thereof, one side of said recess having an outwardly extending slot therein which is open to one side of said housing, an electrical conducting terminal within said recess having a portion thereof supported to extend across the inner end of said slot, a machine screw having a shank portion extending through a clearance opening in said portion of said terminal into said recess above the base thereof, a nut threadedly received on the inner end of said shank portion, said housing having an integral projection spaced from said one side extending upwardly from the base of said recess and having its upper surface spaced below the lower inner edge of said shank portion whereby said shank portion is prevented from being tilted substantially toward said base, said nut extending outwardly from said shank portion so as to be engageable with said projection whereby the distance said nut may be moved away from said portion of said terminal is limited, and a portion of the head of said screw being closely received between the outer surface of said portion of said terminal and the inner surface of said one side of said recess to prevent movement thereof outwardly from said housing.

3. A wiring device comprising, an insulating hollow housing having an opening in one side thereof, an electrical conducting terminal having at least a portion supported within said housing to extend across the inner end of said opening, a fastening member having a shank portion extending through a clearance opening in said portion of said terminal, and said fastening member having a head with a first portion closely received within said opening and a second portion extending outwardly from said first portion located between said portion of said terminal and the inner surface of said housing adjacent said opening whereby said fastening member is prevented from moving outwardly from said housing.

4. A wiring device comprising, an insulating hollow housing having an opening in one side thereof, an electrical conducting terminal having at least a portion supported within said housing to extend across the inner end of said opening, a machine screw having a shank portion extending through a clearance opening in said portion of said terminal, said machine screw having a head with a first portion closely received within said opening and a second portion extending outwardly from said first portion located between said portion of said terminal and the inner surface of said housing adjacent said opening, whereby said machine screw is prevented from moving outwardly from said housing, and oppositely spaced projections formed on said housing extending inwardly therefrom toward the inner end of said shank portion and located adjacent thereto to prevent tilting of said shank portion to any substantial degree with respect to said portion of said terminal.

5. A wiring device comprising, an insulating hollow housing having an opening in one side thereof, an electrical conducting terminal having at least a portion supported within said housing to extend across the inner end of said opening, a machine screw having a shank portion extending through a clearance opening in said portion of said terminal, said machine screw having a head with a first portion closely received within said opening and a second portion extending outwardly from said first portion located between said portion of said terminal and the inner surface of said housing adjacent said opening whereby said machine screw is prevented from moving outwardly from said housing, a nut on said shank portion for securing an electrical conductor to said portion of said terminal, oppositely spaced projections formed on said housing extending inwardly therefrom toward the inner end of said shank portion and located adjacent thereto to prevent tilting of said shank portion to any substantial degree with respect to said portion of said terminal, and said nut extending outwardly from said shank portion so as to be engageable with said projections whereby the distance said nut may be moved away from said portion of said terminal is limited.

6. A wiring device comprising, a cup-shaped insulating housing having a slot in one side thereof which is open to one side of said housing, a terminal having a machine screw extending through a portion thereof, means for supporting said terminal within said housing so that at least a part of the head of said machine screw is located within said slot, an insulating cover secured to said housing having an integral projection extending therefrom located within said slot so as to form an opening in conjunction with the bottom of said slot to permit access to the head of said screw.

7. A wiring device comprising, an insulating housing having a generally quadrangular recess extending inwardly thereof, one side of said recess having an outwardly extending slot therein which is open to one side of said housing, an electrical conducting terminal having a generally U-shaped portion, a machine screw having a shank portion extending through a clearance opening in the bight part of said portion of said terminal so as to be approximately centrally located between the arms of said portion of said terminal, a nut threadedly received on said shank portion located between said arms, said nut having spaced sides located closely adjacent said arms of said terminal, whereby said nut is non-rotatably received between said arms, said U-shaped portion of said terminal being of a size so as to be inserted within said

recess with the arms thereof being located closely adjacent the sides of said recess extending transversely to the slotted side of said recess with said bight being spaced slightly inwardly from the inner end of said slot, and said machine screw having a head portion closely received within said slot and an integral portion extending outwardly therefrom located between the opposed surfaces of said bight and said slotted side to prevent movement of said screw outwardly of said housing.

8. A wiring device comprising, a housing having a first recess therein, means supported by said housing for supporting a movable contact within said recess, a second recess in said housing located adjacent said first recess and connected thereto by means of a first slot in the side adjacent thereto, a second slot extending outwardly from another side of said second recess which is open to one side of said housing, an electrical conducting terminal having a portion thereof insertable within said second recess with a part thereof extending across the inner end of said second slot, said terminal having integral means extending angularly from said portion, aid integral means extending angularly through said first slot so as to be engageable with said movable contact, and said portion of said terminal having a uniform configuration so as to be reversibly received within said second recess whereby the point at which said integral means engages said movable contact may be varied.

9. A wiring device comprising, a formed insulating support having a recess therein, means supported by said support for supporting a movable contact adjacent one side of said recess, a slot in said one side of said recess, an electrical conducting terminal having a portion insertable within said recess so as to be supported thereby and having integral means extending angularly from said portion thereof through said slot so as to be engageable with said movable contact, and said portion of said terminal having a uniform configuration so as to be reversibly received within said recess whereby the point at which said integral means engages said movable contact may be varied.

10. An electrical wiring device comprising an insulating support having three aligned recesses therein with each wall between adjacent recesses being slotted, means mounted on said support for supporting a contact within the central recess for oscillatory movement therein, terminals having portions insertable within the end recesses, respectively, so as to be supported thereby, each terminal having integral means extending angularly from said portion and angularly through said slot so as to enter said central recess and be engageable with said movable contact, and said portion of said terminal having a uniform configuration so as to be reversibly received within said recess whereby the point at which said integral means engages said movable contact may be varied.

11. A wiring device comprising, a housing of insulating material having two adjacent recesses therein and having a slot located in the common wall of said recesses, a conductor having terminal and contact portions thereon, said terminal portion located in one of said recesses and shaped to be closely received therein, said contact portion extending from said terminal portion through said slot and angularly into the other of said recesses and located therein at one predetermined location, said terminal portion having a uniform configuration so as to be reversibly received in said one recess, whereby said contact portion is located in said other recess at another predetermined location spaced from said one location, a movable contact located in said other recess and movable to engage said contact portion in both of its locations, respectively, and means for securing a lead wire to said terminal portion.

12. A wiring device comprising, a housing of insulating material having two adjacent recesses therein and having a slot located in the common wall of said recesses, a conductor having terminal and contact portions thereon, said terminal portion having a pair of spaced arms and located in one of said recesses and shaped to be closely received therein, said contact portion extending from said arms of said terminal portion through said slot and angularly into the other of said recesses and located therein at one predetermined location, said terminal portion having a uniform configuration so as to be reversibly received in said one recess, whereby said contact portion is located in said other recess at another predetermined location spaced from said one location, a movable contact located in said other recess and movable to engage said contact portion in both of its locations, respectively, and means for securing a lead wire to said terminal portion.

13. A wiring device comprising, an insulating housing having a generally quadrangular recess extending inwardly thereof, one side of said recess having an outwardly extending first slot therein which is open to one side of said housing, an electrical conducting terminal having a generally U-shaped portion, a machine screw having a shank portion extending through a clearance opening in the bight portion of said terminal so as to be approximately centrally located between the arms of said terminal, a nut threadedly received on said shank portion located between said arms and having spaced sides located closely adjacent said arms of said terminal, whereby said nut is non-rotatably received between said arms, and said U-shaped portion of said terminal being of a size so as to be inserted within said recess with said arms thereof being located closely adjacent the sides of said recess extending transversely to the slotted side of said recess and with the head of said machine screw facing the outer end of said first slot, a second slot in said recess located in the side opposite said first slot, said arms of said U-shaped portion extending through said second slot and at an angle relative to said arms to form a contact portion on said terminal, a movable contact in said housing having two operative positions and located to engage said contact portion in one operative position, said U-shaped portion of said terminal formed to be reversibly received in said recess, whereby said contact portion will be located to be engaged by said moving contact in its other operative position.

14. An electric wiring device comprising, an insulating support having a central recess having a side wall, a movable contact supported in said central recess to be movable in an arc in one plane perpendicular to the plane of said side wall, an end recess located adjacent said side wall and having a first slot lying in said one plane to connect said end recess to said central recess, said end recess having a second slot opened to the exterior of said support, a conductor having a terminal portion located in said end recess and having a portion thereof adjacent said second slot, a machine screw having a shank extending through a clearance opening in said last-mentioned portion, a nut threadedly received on said shank, another portion of said terminal portion located closely adjacent said nut and cooperating therewith to prevent rotation of said nut with said shank, a contact portion on said conductor extending from said terminal portion through said first slot and having end portions thereon extending at an angle from said terminal portion to lie adjacent one segment of said arc to be engaged by said movable contact, said terminal portion having a uniform configuration so as to be reversibly received within said end recess, whereby said end portions lie adjacent another segment of said arc where it is located to be engaged by said movable contact.

15. An electric wiring device comprising, an insulating support having a central recess having a side wall, a movable contact supported in said central recess to be movable in a segment of a circle in one plane perpendicular to the plane of said side wall, stop means to stop motion of said movable contact at each end of said segment, an end recess located adjacent said wall and hav-

ing a first slot lying in said one plane to connect said end recess to said central recess, said end recess having a second slot open to the exterior of said support, a conductor having a terminal portion located in said end recess and having a portion thereof adjacent said second slot, a machine screw having a shank extending through a clearance opening in said last-mentioned portion, a nut threadedly received on said shank, another portion of said terminal portion located closely adjacent said nut and cooperating therewith to prevent rotation of said nut with said shank, a contact portion on said conductor extending angularly from said other portion of said terminal portion through said first slot and having end portions thereon lying adjacent one end of said segment to be engaged by said movable contact, said terminal portion having a uniform configuration so as to be reversibly received within said end recess, whereby said end portion lies adjacent the other end of said segment where it is located to be engaged by said movable contact at its other stop position.

16. A wiring device comprising, a housing of insulating material having at least one recess extending inwardly thereof, a terminal fixedly mounted in said recess adjacent one wall thereof, a terminal screw having its head located between one side of said terminal and said one wall of said recess and having its shank extending through an opening in said terminal into said recess, said one wall of said housing having an opening therethrough extending to the exterior of said housing with a portion thereof aligned with said head of said terminal screw and formed of a size to prevent movement of said head therethrough.

17. A wiring device comprising, a housing of insulating material having at least one recess extending inwardly thereof, a terminal fixedly mounted in said recess adjacent one wall thereof, a terminal screw having its head located between one side of said terminal and said one wall of said recess and having its shank extending through an opening in said terminal into said recess, a clamping nut located in said recess on the other side of said terminal and threadedly engaging said shank, means located in said housing to prevent rotation of said clamping nut in said recess said one wall of said housing having an opening therethrough extending to the exterior of said housing with a portion thereof aligned with said head of said of said terminal screw and formed of a size to prevent movement of said head therethrough.

18. A wiring device comprising, a housing of insulating material having at least one recess extending inwardly thereof, a terminal fixedly mounted in said recess adjacent one wall thereof, a terminal screw having its head located between one side of said terminal and said one wall of said recess and having its shank extending through an opening in said terminal into said recess, a clamping nut located in said recess on the other side of said terminal threadedly engaging said shank, means in said recess located to engage said clamping nut at a point spaced from said terminal to limit the movement of said clamping nut away from said terminal, said one wall of said housing having an opening therethrough extending to the exterior of said housing with a portion thereof aligned with said head of said terminal screw and formed of a size to prevent movement of said head therethrough.

19. A wiring device comprising, a housing of insulating material having at least one recess extending inwardly thereof, a terminal fixedly mounted in said recess adjacent one wall thereof, a terminal screw having its head located between one side of said terminal and said one wall of said recess and having its shank extending through an opening in said terminal into said recess, a clamping nut located in said recess on the other side of said terminal threadedly engaging said shank, means in said recess located to engage said clamping nut at a point spaced from said terminal to limit the movement of said clamping nut away from said terminal, means located in said recess to prevent rotation of said clamping nut therein, said one wall of said housing having an opening therethrough extending to the exterior of said housing with a portion thereof aligned with said head of said terminal screw and formed of a size to prevent movement of said head therethrough.

20. A wiring device comprising, a housing of insulating material having two adjacent recesses therein and having a slot located in the common wall of said recesses, a conductor having terminal and contact portions thereon, said terminal portion fixedly mounted in one of said recesses, said contact portion extending from said terminal portion through said slot and angularly into the other of said recesses and located therein at one predetermined location, said terminal portion being shaped to be reversibly received in said one recess, whereby said contact portion is located in said other recess at another predetermined location spaced from said one location, a movable contact located in said other recess and movable to engage said contact portion in both of its locations, respectively, and means for securing a lead wire to said terminal portion.

21. A switch comprising, a housing of insulating material, a stationary contact fixedly mounted in said housing having a pair of spaced outwardly extending substantially parallel arms, a movable contact in said housing having an operative position wherein a portion thereof engages said arms of said stationary contact, said portion of said movable contact including a pair of spaced arms located to electrically and mechanically engage said arms of said stationary contact, respectively, when said movable contact is in said one operative position.

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