May 15, 1934. E. BRADLEY 1,958,782

ELECTRICAL SOCKET CONSTRUCTION

Filed Aug. 29, 1931 3 Sheets-Sheet 1

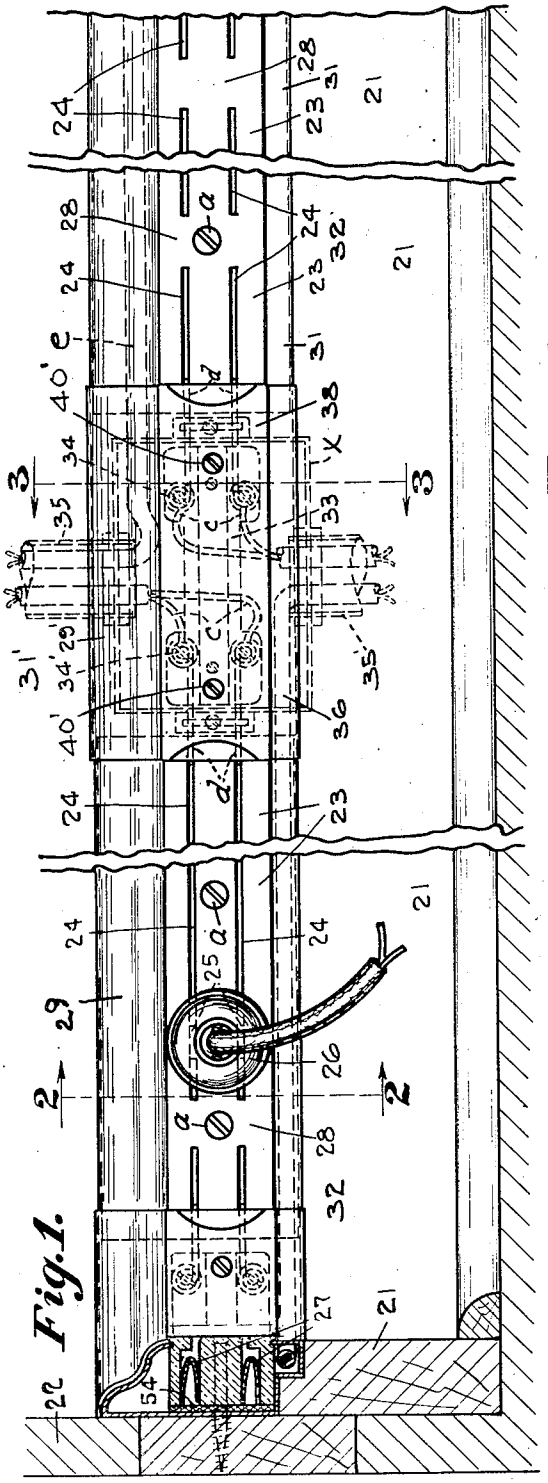


Fig. 1.

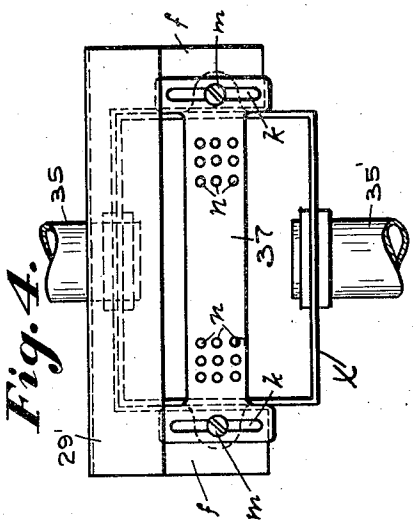


Fig. 4.

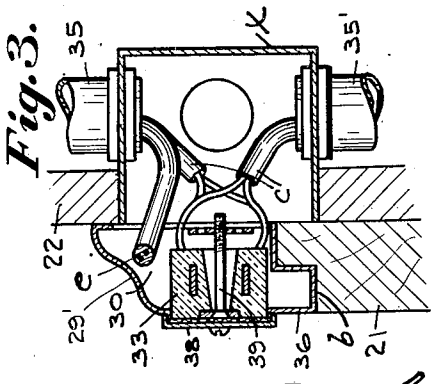


Fig. 3.

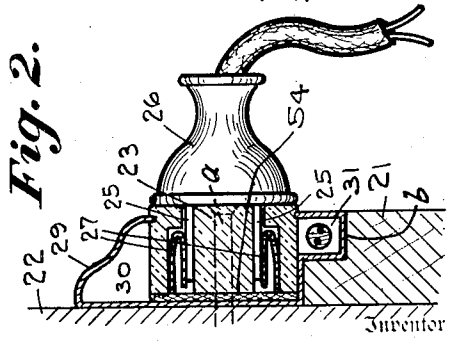


Fig. 2.

Inventor

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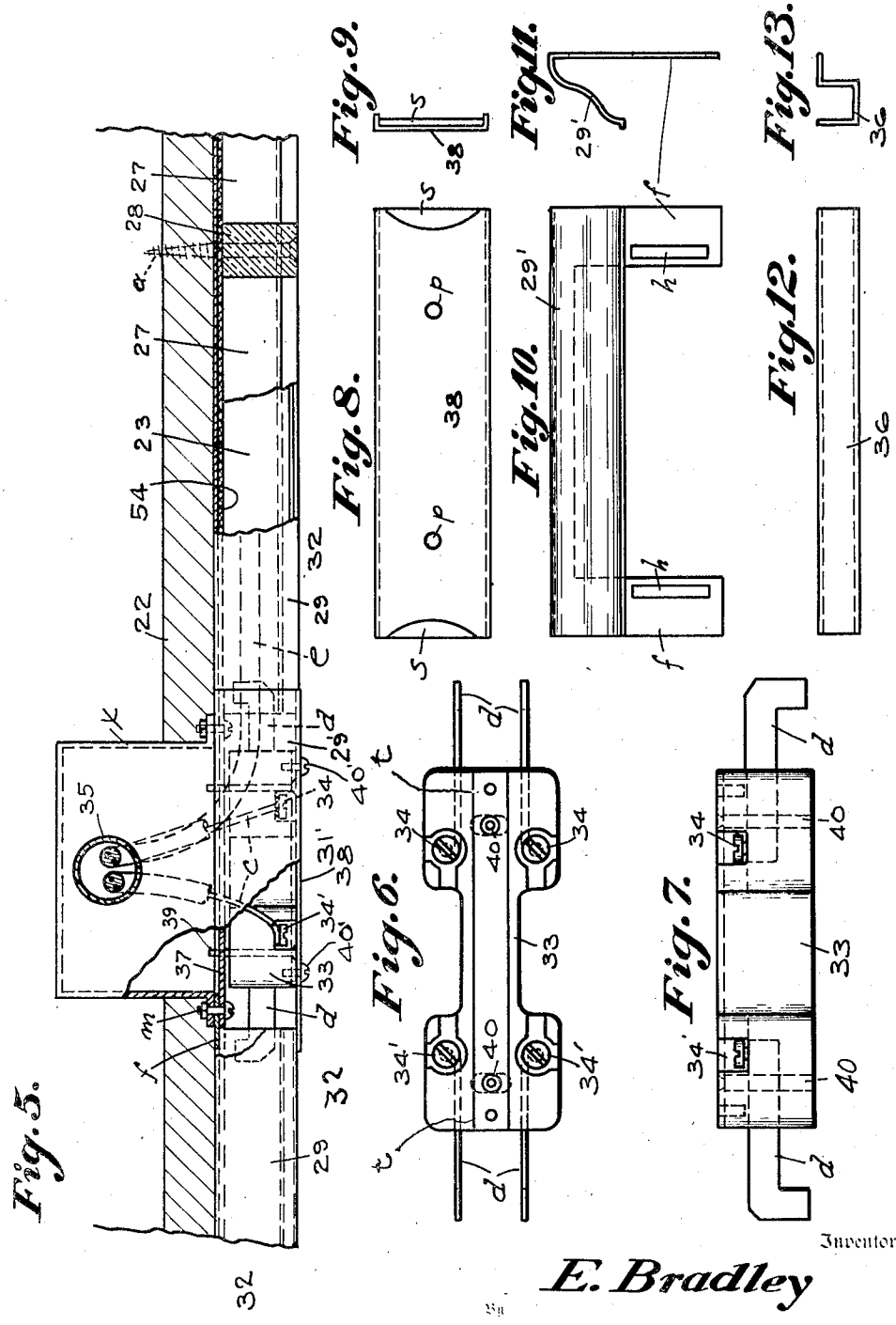
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May 15, 1934. E. BRADLEY 1,958,782

ELECTRICAL SOCKET CONSTRUCTION

Filed Aug. 29, 1931 3 Sheets-Sheet 2



Inventor

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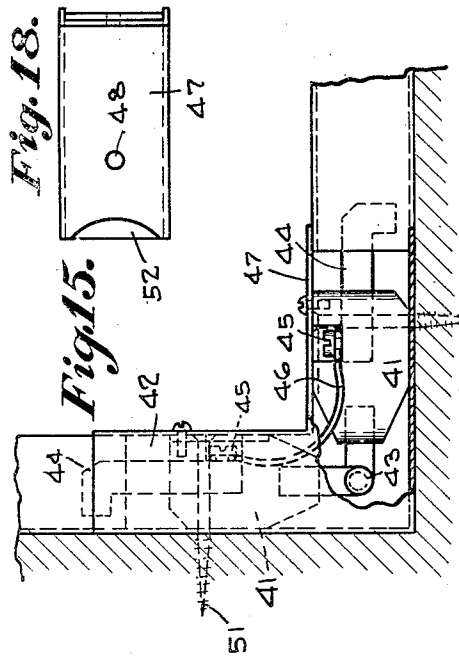
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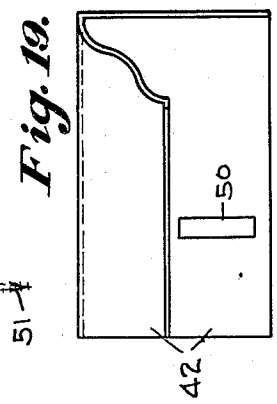
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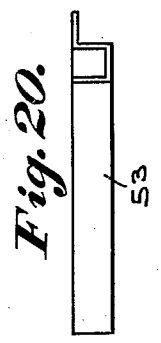
May 15, 1934. E. BRADLEY 1,958,782

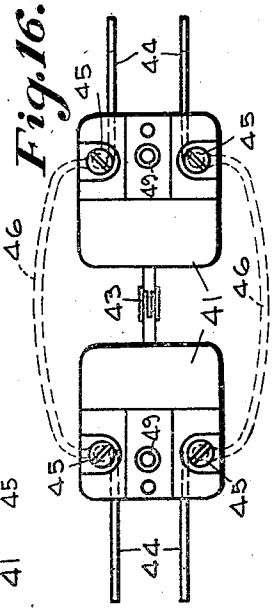
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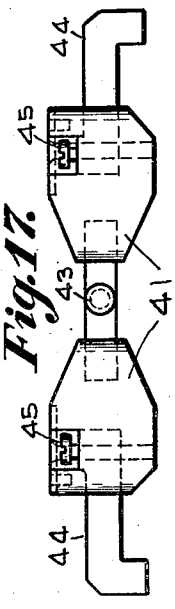
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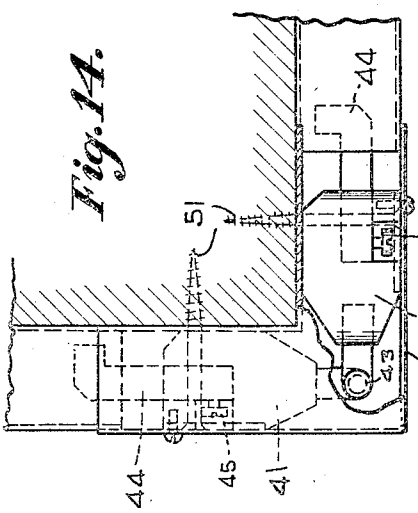












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ELECTRICAL SOCKET CONSTRUCTION

Edgar Bradley, Omaha, Nebr.

Application August 29, 1931, Serial No. 560,184

5 Claims. (Cl. 247—3)

This invention relates to an electric socket construction of the class employing slots of considerable length for receiving the prongs of electrical service plugs instead of separate sockets, the advantage in the use of slots being that the electrical cords used for connecting lamps, radios, cooking utensils or other electrical equipment with the sockets may have a lesser length than ordinary and will be more convenient in use.

The invention also refers to such a construction that electrical connections with the outlets and inlets may be conveniently and practically made.

The invention consists of the novel and useful construction, combination and arrangement of parts as described herein and claimed and as illustrated in the drawings, it being understood that changes may be made in form, size, proportions and minor details, said changes being within the scope of the invention as claimed.

In the accompanying drawings, Fig. 1 is a side view of a socket receptacle, the electrical socket therein, and an interposed switch box section, showing these parts mounted on a base board, parts being broken and in section.

Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is a section through the switch box and its attached receptacle. Fig. 4 is a side view of the switch box, its normally attached receptacle being removed.

Fig. 5 is a plan view of the socket receptacle partly broken away to show a stabilizing-member in section, a switch box section being disposed between the ends of two socket receptacles.

Figs. 6 to 13 inclusive illustrate details used in connection with the switch box section shown in Figs. 1, 3 and 5.

Fig. 6 is a side view of an electrical transmission block for the switch box section, and Fig. 7 is a plan view of the same. Fig. 8 is a side view of a metallic flush-plate provided on its inner side with fiber insulation, and Fig. 9 is an end view of the same.

Fig. 10 is a side view of the cover for the switch box section and Fig. 11 is an end view of the same.

Fig. 12 is a side view of a face-plate for the lower part of a switch box section, and Fig. 13 is an end view of the same.

Fig. 14 is a partly broken plan view showing the electric socket receptacle arranged as a corner piece and applied to a corner at the outer side of a wall, and Fig. 15 is a partly broken plan view showing the same applied to a corner at the inner side of a wall.

Figs. 16 to 20 illustrate parts used in connection with the corners shown in Figs. 14 and 15. For 16 is a side view of an electrical transmission coupling block, and Fig. 17 is a plan view of the same.

Fig. 18 is a side view of a metallic triangular flush-plate provided with fabric insulation. Fig. 19 is a side view of an apertured cover-plate. Fig. 20 is a side view of a face-plate for the lower part of the electric socket receptacle applied to the corners.

Referring now to the drawings for a more particular description, the invention is shown in connection with base boards 21 secured to the walls 22 in the rooms of a building, and it will be understood that while the device, as shown, is mounted on the base boards, operation would be the same if mounted on wall strips, moulding or other horizontally disposed strips secured to the walls in the rooms of buildings.

Since the invention is for use in the installation of electrical circuits in all parts of a building the parts for this purpose have been made uniform, standardized and simple so that there may be a saving in labor and that the work will be more convenient, practical and safely carried out than ordinary.

Therefore, the invention broadly includes horizontal electrical socket receptacles receiving and engaging the prongs of the electrical service plugs, covers for housing the socket receptacles and mounted on the base boards at the corners and rectilinear parts of the base boards, stabilizing each electrical socket receptacle at intervals of its length and interposing switch box sections between the adjacent ends of the socket receptacles.

Each electrical socket receptacle consists of a rectangular strip of bakelite 23, each provided with a pair of parallel slots 24 for receiving the prongs 25 of electric service plugs 26. Numerals 27 indicate a pair of electrical conductors, each disposed in a slot 24 and adapted to be engaged by a prong 25.

The bakelite strips 23 may have any suitable length and the metallic electrical conducting strips 27 extend approximately the entire length of the bakelite strips. Numerals 28 (Figs. 1, 5) indicate stabilizing portions for the bakelite strips, these portions being provided at intervals for strengthening these slotted strips and providing screw-holes so that they may be secured by screws *a* to the walls or to the ground strips in the walls as best shown in Figs. 1 and 5 of the drawings, all parts of the bakelite strips being provided with the slots 24 except the stabilizing portions 28, and as described, the electrical conductors 27 will be effectively insulated by the bakelite strips.

Each base board 21 is provided on its upper edge with a metallic cover 29 for housing the bakelite strips 23 and to provide raceways 30 and 31. This cover is constructed by use of an elongated strip of sheet metal bent transversely to provide the compartment or raceway 30 at its top and the raceway 31 at its bottom adapted to fit in the lap or groove *b* of the base board 21 (Fig. 2), the front part of the housing or cover being open for receiving the bakelite strip 23.

While only two broken sections of the electrical sockets are shown in Fig. 1 of the drawings it will be understood that all of the base boards of the several rooms of a building may be provided at their upper edges with the housing of covers 29 and the slotted bakelite strips 23 therein, said strips 23 and cover plates 29, however, not being continuous since one or more switch box sections 31′ best shown in Figs 1 and 5 may be disposed between the ends of the sections 32 of electrical socket members.

The use of the switch box sections is obviously a great advantage since each provides outlets to upper or lower rooms of a building. They provide convenient access for making electrical connections.

The parts used in a switch box section 31′ consist, in part, of an electrical transmission block 33 (Figs. 6, 7) preferably constructed of bakelite having metallic prongs *d* arranged in pairs projecting beyond its ends for engaging in the ends of the pairs of electrical conducting strips 27, and provided with binding-posts 34 and 34′ in electrical contact with the prongs *d*. The box *x* is provided with tubes or conduits 35 and 35′.

Other parts of the switch box section include a cover or housing 29′ normally in communication with and detachably engaging the switch box, and a face-plate 36 angular in cross-section (Figs. 11, 13) said face-plate being detached from the cover 29′ and disposed on the ledge *b* of the base board 21 as best shown in Fig. 3 of the drawings.

The switch box *x* also contains electrical conductors *c* arranged in pairs and connected with the binding posts 34 and 34′ at the respective ends of the block 33 and which extend into conduits 35 and 35′, and since all of the conductors *c* as well as the metallic strips 27 are electrically energized, the metallic strips 27 of a socket section 32 at one end of a switch box section will be in electrical communication with the metallic strips 27 of the socket section 32 at the opposite end of said switch box section.

Since the means for electrically energizing all of the electrical conductors coincidently in buildings are well known it is not considered necessary to illustrate or describe the same.

By referring to Fig. 2 of the drawings it will be seen that the metallic strips 27 in the bakelite strips 23 are of U-shape in cross-section and abut upon the fabric element 54. Also it will be understood that, the ends of the prongs *d* of the block 33 may engage said strips 27 for electrical contacts therewith.

At *c* (Figs. 1, 3) are indicated electrical conductors leading from the raceways 30 into conduits 35, and this is obviously of advantage since electric conductors must be carried from one part of a building to another, and the cover-plate 29 not only provides this raceway but is of curved form in cross-section to present the appearance of a bead or molding-cap for the upper edge of the base board to present an ornamental appearance.

It will be understood that the cover 29′ for the switch box section 31′ has a curvature corresponding to the curvature of the cover-plate 29 of the socket sections 32, and that the cover 29′ and certain other parts of said section 31′ may be removed to permit adjustments of the electrical conductors and other parts therein.

The cover-plate 29′ is provided at its ends with downwardly projecting leg-portions *f* (Fig. 10) each provided with a slot *h*, and when the cover 29′ is placed in its normal position as best shown in Fig. 3 the leg-portions will be disposed rearwardly of the block 33, and, as stated, this cover may be removed when a removal is required to permit access to the switch box.

Numeral 37 (Figs. 3, 4) indicates a yoke-plate provided at its ends with slots *k*, said yoke-plate being adapted to be disposed in engagement with the leg-portions *f*, and by means of screws *m* which engage in the slots *k* and *h*, the yoke-plate is secured to said leg-portions *f*, the slots *h* being narrow and of such proportions that the threads of the screws *m* will engage the walls of said slots *h*, the advantage in the use of the slots *h* and *k* being convenience in use when securing the yoke-plate to the leg-portions *f* or removing the yoke-plate therefrom.

The yoke-plate 37 is provided inwardly of its slots *k* with nests of small perforations *n* (Fig. 4). Numeral 38 indicates a metallic flush-plate (Fig. 8) provided with apertures *p*, its inner side being provided with an insulation sheet *s*, and by means of a pair of screws 40′ (Fig. 1) engaging in apertures *p* and threaded in apertures *t* of the block 33 (Fig. 6) the flush-plate 38 will be secured to the front of the switch box section 31′. By means of a pair of screws 39 (Fig. 3) engaging in apertures 40 (Fig. 6) of said block 33 and threaded in a perforation of each nest *n* of perforations of the yoke-plate said block 33 will be secured to the yoke-plate and legs *f* of the cover-plate 29′, the insulating sheet *s* being pressed against the outer side of the block 33 for insulating the metallic parts and electrical conductors on the outer side of the block 33 to prevent short circuits.

The object in providing the nests *n* of perforations is because the yoke-plate is remote from the front of the switch box section and not visible after the block 33 has been placed in position, and when applying the screws 39 they will readily enter one of the perforations of each nest *n*, this feature being simply a matter of convenience.

As thus described it will be seen that all of the parts at the front of the switch box section, including the cover-plate 29′, may be removed, and therefore installation of the block 33 and electrical conductors *c* may be practically accomplished.

In instances when a socket section 32 is disposed at the corner of a room, as shown in Figs. 14 and 15 of the drawings, a pair of hingedly connected electrical transmission blocks 41 indicated, in part, by broken lines are used and are disposed within a mitered cover-plate 42 (Fig. 19) upon the upper edge of a base board as heretofore described.

The hinge which permits the angular adjustments of the blocks for the corners of a room is indicated at 43, each insulating block 41 is provided with a pair of outwardly projecting prongs 44 and one side of each block is provided with a pair of countersunk binding posts 45 each being in engagement with a prong 44, and since the outer ends of the prongs 44 will engage in the energized electrical conductors 27, heretofore described, electric communication may be estab-

lished between the blocks of each pair, and the electrical conductors 46 (Fig. 16), shown in broken lines, may be used for this purpose.

Numerals 47 indicate metallic flush-plates, each provided with an aperture 48 (Fig. 18) and each block 41 is provided with an aperture 49, and each cover-plate 42 is provided with a slot 50, and by means of screws 51 which engage in said apertures and slots these parts may be secured to the walls 22 of a building.

Each flush-plate 47 is provided on its inner side with an insulating sheet 52, and when the parts are assembled each sheet will be disposed between pins or binding posts 45 and a metallic flush-plate for preventing short circuits.

Numeral 53 indicates a face-plate angular in cross-section and similar to the face-plate 36 heretofore described, and adapted to lie on the lap or ledge of the base-board.

The use of the invention will be appreciated by contractors and builders generally as well as owners of residences since installation of electrical conductors may be quickly made and extended to all rooms of a building.

It is considered that the stabilization of the slotted bakelite strips which maintain them in alignment, the establishment of the electrical socket sections at and around the corners of a room, and the interposed switch box sections between and in line with the socket sections are of great advantage.

By referring to Figs. 1, 2 and 5 of the drawings it will be seen that a fiber insulating element 54 is employed for each socket section, and is disposed between the rear side of the bakelite strip 23 and the metallic cover plate, the length of said element 54 being the same as the lengths of the bakelite strip and cover plate for each socket section, the advantages in the use of said insulating elements 54 being that short circuits may be avoided.

Since the slots 24 open on the back of the bakelite strips, as best shown in Fig. 2, the prongs 25 of the plugs 26 might engage the rear part of the metallic housing strip to cause short circuits, these prongs 25, in some instances, having an excessive length. It will be understood that the rear parts of the stabilizing sections 28 engage said fiber insulating elements 54.

I claim as my invention,—

1. In electrical socket construction, an insulating strip having slots arranged in pairs opening on its front and rear sides, a fabric insulating element covering the rear side of the insulating strip, a metallic cover-plate engaging the rear side of the fabric insulating element and providing a transversely curved bead covering the top of said insulating strip, and a pair of electrical conductors of U-shape in cross-section disposed in said slots abutting upon said fabric insulating element.

2. In electrical socket construction, an insulating strip provided at longitudinal intervals with slots arranged in pairs opening on its front and rear sides and having apertured stabilizing portions between the pairs of slots, a metallic cover-plate at the rear side of the insulating strip providing a transversely curved bead covering the top of said insulating-strip, a fabric insulating element between the metallic cover-plate and said slots, electrical conducting-strips in said slots, and keepers in the apertures of said stabilizing-portions for securing the insulating strip to a support.

3. In electrical socket construction, an insulating strip, a second insulating strip, each insulating strip being provided with slots arranged in pairs, electrical conducting strips in said slots, a box between the ends of said insulating strips and provided with outlet-conduits, an insulating-block in said box having metallic prongs engaging the conducting strips in said slots and provided with binding-posts, electrical conductors in said conduits connected with said binding posts, a cover-plate rearwardly of the insulating block and having a transversely curved part covering the top of said block, a flush-plate provided with fiber insulation engaging the insulating block, and threaded keepers in the flush-plate traversing the insulating block and said cover-plate.

4. In electrical socket construction, a pair of coupling-blocks hingeably connected at their inner ends and adapted to be disposed on a support, metallic prongs arranged in pairs projecting from the outer ends of said blocks, binding posts in the sides of said blocks in engagement with said prongs, flexible electric conductors each connecting a binding-post of one block with the other binding-post of said pair, a pair of cover-plates each having a curved part disposed above an insulating coupling-block, and a pair of flush-plates each provided with fiber insulation engaging an insulating coupling-block, and threaded keepers in the flush-plates traversing an insulating coupling-block and a cover-plate.

5. In electrical socket construction, a pair of insulating strips disposed in alignment each being provided with slots arranged in pairs longitudinally thereof, conducting strips in said slots, a box between the ends of said insulating strips provided with outlet conduits, an insulating-block having metallic prongs engaging said conducting strips and having binding-posts at its sides in communication with said prongs, electrical conductors leading from said conduits and mounted on the binding-posts, a cover-plate rearwardly of the insulating block having a transversely curved part disposed above said block, a yoke-plate provided near its ends with nested apertures and secured to the cover-plate, a flush-plate provided with fiber insulation on one of its sides engaging the insulation block, and threaded keepers in the flush-plate traversing the insulating-block, said yoke-plate and said cover-plate.

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