J. CUTHBERT.

ELECTRIC FITTING.

APPLICATION FILED JULY 26, 1915.

1,220,608. Patented Mar. 27, 1917.

Fig. 1

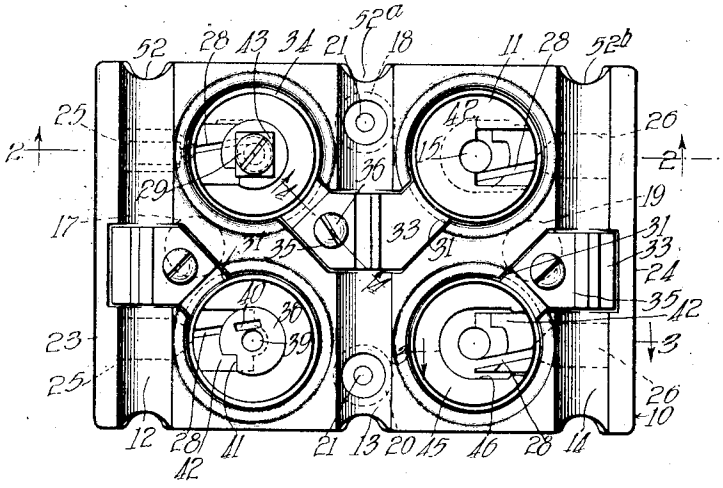


Fig. 2

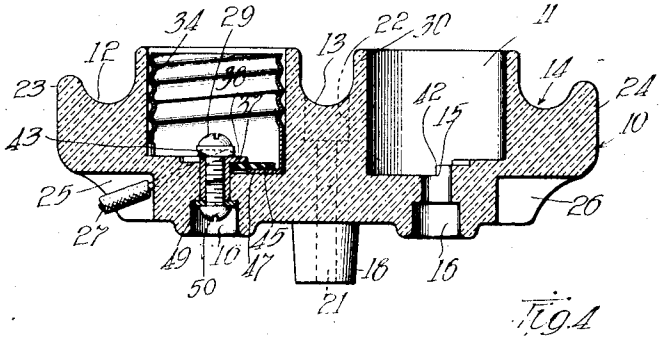


Fig. 3.

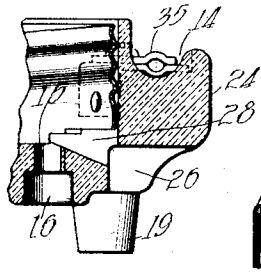


Fig. 5

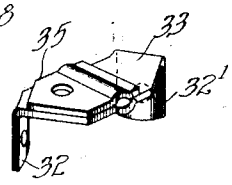


Fig. 4

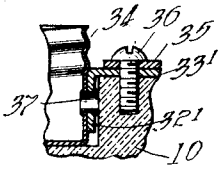
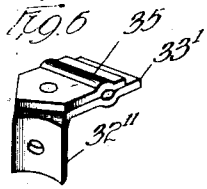


Fig. 6



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ELECTRIC FITTING.

1,220,608. Specification of Letters Patent. Patented Mar. 27, 1917.

Application filed July 26, 1915. Serial No. 41,827.

To all whom it may concern:

Be it known that I, JOHN CUTHBERT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric Fittings, of which the following is a specification.

My invention relates to improvements in electrical fittings and has especial reference to receptacles for current conducting devices, such as plural fuse plugs, two wire extension cut outs branching from a three-wire-circuit system.

One of the objects of my invention is to generally improve electric wiring fittings, of the class described, to cheapen the cost of their production; to increase the convenience of their installation, and render the parts and connections more accessible.

Other and further objects of my invention will become readily apparent, to persons skilled in the art, from a consideration of the following description when taken in conjunction with the drawings, wherein:—

Figure 1 is a plan view of a fitting embodying my invention.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Fig. 3 is a section taken on line 3—3 of Fig. 1.

Fig. 4 is a section taken on line 4—4 of Fig. 1.

Fig. 5 is a perspective view of a shell connector, and neutral wire clamp for connecting the screw shells of the two fuse plug receptacles to the neutral wire of a three wire system.

Fig. 6 is a similar view of a shell connector and positive or negative wire clamp for connecting the screw shells of one fuse plug receptacle to the positive or negative wire. One of these connectors is used to connect a receptacle to each of the outer or full potential wires.

In all the views the same reference characters are employed to indicate similar parts.

In the selected embodiment of my invention 10 is a generally rectangular block or insulating material, such as porcelain, or the like, provided with shell receiving depressions or cavities 11 and three transversely extending grooves 12, 13 and 14, to provide spaces within which to receive and secure the mains or branch means of a three-wire system.

In each of the depressions 11 there is contained conducting parts, constituting receptacles, for electrical current conducting devices, such as fuse plugs, lamps or the like; there is a central perforation 15, within which to contain the central contact of the receptacle. The perforation 15 terminates in counter-sunk screw-receiving depressions 16 for screws, to hold the center contact in place.

The block is supported on four integral legs 17, 18, 19 and 20 to increase the insulating qualities of the block and to provide wire containing space thereunder. These legs are longitudinally perforated, as at 21, to receive screws for attaching the device to a suitable support. The legs 18 and 20 are in line with and below the groove 13, on each side of the longitudinal axis of the block. The legs 17 and 19 are centrally disposed or substantially in a plane with the longitudinal axis of the device and extend a little into the vertical plane containing the grooves 12 and 14. The perforations through the legs are countersunk, in each instance, as at 22, to provide receptacles for the heads of the attaching screws so as to remove them below contact with any of the metal portions that are contained upon the face of the fixture. An over-hanging ledge 23—24 extends transversely of the fixture on each side and under this ledge are pockets 25 and 26 into which to insert the conducting wires, as 27. There is a slot 28, in each instance, made through the structure and which connects the pockets 25 and 26, as the case may be, with the respective depression 11, between the inner and outer contact to be inserted therein, as clearly shown in Fig. 3. Into the pockets, 25 and 26, and through the slots 28, the conducting wire is inserted for connection with the combined binding screw and central contact 29.

There is a rim 30 around each of the depressions 11 which is cut away, as at 31, to permit the insertion of a downturned portion 32—32′ of the shell connectors 33—33′. The connector 33 is connected to the shell 34 as clearly shown in Fig. 4. A wire engaging clip 35, overlies a part of the connector, and is clamped thereto by means of a clamping screw 36. The connector 33′ is preferably joined to the shell 34, by means of a hollow rivet 37. A double connector 33 joins two shells, one on each side of the groove 13, and the clip 35 is designed to con-

nect the neutral wire, of the three wire system, to the said shells. The central contact and connector within said shells are to be connected to branch wires by a means and in a manner to be hereafter more fully described.

The single connections 33′, of which there is one for each shell, is adapted to connect the shell of a receptacle with the positive and with the negative wires, respectively, which wires are to lie in the grooves 12 and 14, respectively.

The central contact connection 29 forms subject matter of my Patent No. 1,166,114, dated December 28th, 1915, filed June 19th, 1915, wherein it is specifically claimed.

The central receptacle connector in this case consists of interiorly threaded sleeve 37 provided with a head 38, centrally perforated and threaded for the screw 29, as at 39, and provided with a slot 40 which overlies the slot 28 made through the porcelain block. To prevent the head 38 from rotating, I may cut away a notch therefrom as at 41, and I provide a coacting shoulder 42 in the floor of the depression 11. Underlying the head of the screw 29 is a washer 43 having its edges downturned and adapted to turn the wire 27 around the shank of the screw when the wire is inserted through the notch 26 and the registering notch 40 in the head 38 of the sleeve, thus combining a wire binding screw and central contact member for the receptacle, in one structure.

In assembling the parts of the receptacle I place the shell 34 in the depression 11, and over the shell I place a slotted washer 45, of insulating material, cut away as at 46, more clearly shown in Fig. 1, and overlying the integral inturned base flange 47 of the shell 34 to hold the shell and the connectors 33—33′ in place. I then place the sleeve 37 in the orifice 15 with the cut away portion 41 confronting the shoulder 42 and the slot 40 registering with the slot 28 in the porcelain block. A washer 49 is now placed over a screw 50 and the latter is inserted in the lower end of the threaded sleeve 37 to hold the parts in assembled position. The wire clamping screw 29, with its wire turning washer 43 is now placed inside of the upper end of the threaded sleeve 37 and the parts are then in proper place for use.

The block 10 is also provided with vertically extending grooves 52—52ª and 52ᵇ in its edges, which register with the grooves 12, 13 and 14 in the face of the block. When two or more blocks are placed edge to edge these grooves 52, 52ª and 52ᵇ constitute substantially a round opening through which wires may be inserted from the space provided by the legs under the block.

Branch circuit wires can be entirely concealed, when facing the front of the cut-out or fitting, by laying the wiring close under the two projecting ledges and also within the spaces between the legs and under the four fuse receptacles.

Another advantage presented by the use of my block is in sub-main wiring where an assembled group of cut-outs are used and it is desired to wire up the mains of one, two or more cut-outs independently of the general mains. It can be accomplished in my improved structure by utilizing the vertical grooves in the ends of the block, which registering with adjacent blocks provides circular openings through which wires may be passed from below the under surface of the bolcks to the proper connections thereabove. This feature of my invention permits substantial contact of adjacent blocks, without the necessity of spacing them apart to provide space within which wires may be placed, as in the usual form of ungrooved structures.

In my structure these openings are always present and if perchance the workmen should subsequently find it desirable to place wires between adjacent blocks it would not be necessary to dismount the entire number of blocks in order to provide such space as in former fittings and the trouble and expense necessitated by re-locating the blocks, after such space has been provided by the subsequent separation thereof as in the expensive drilling and tapping required by such reorganization, is avoided.

A further advantage is presented in the use of my blocks wherein two parallel rows of such blocks may be placed with their ends substantially in contact, the outside boundary walls of the grooves 12 and 14 serving as sufficient separation for the potentiated clamping members.

Another feature that will be appreciated by the employment of such devices is the fact that its dimensions are smaller than blocks usually found upon the market, without sacrificing insulating separation.

Attention is called to the features of my improved device not for laudatory purposes but to more clearly differentiate it from prior devices of similar character.

While I have herein shown a single embodiment of my invention for the purpose of clear disclosure, it is evident that changes may be made in the disposition, arrangement and configuration of the parts within the scope of the appended claims.

Having described my invention, what I claim is:

1. A circuit connecting fitting comprising a block of insulating material having a plurality of depressions in its face, an equal number on each side of its median plane, for containing receptacles for current conducting devices and having three grooves in its face to receive wires, one groove in the median plane between a pair of depressions

and one groove outside of said depressions on each side of said block.

2. A circuit connecting fitting comprising a block of insulating material having four depressions in its face, two on each side of its median line for containing receptacles for current conducting devices and having three grooves in its face to receive wires, one groove in the median plane between pairs of depressions and one groove beyond each pair of depressions.

3. A support for a circuit connecting fitting comprising a block of insulating material having a depression in its face within which to contain receptacle connecting conductors for a current conducting device to be inserted therein and having a wire receiving groove in its face and a perforation under said groove through which to insert a wire into said depression.

4. A circuit connecting fitting comprising a block of insulating material having four depressions in its face, two on each side of its median line for containing receptacles for current conducting devices and having three grooves in its face to receive wires, one groove in the median plane between pairs of depressions and one groove beyond each pair of depressions and vertical grooves in its edges registering with the face grooves said block having legs whereupon to support the fitting to provide wire space therebelow.

5. A circuit connecting fitting comprising a block of insulating material having four receptacles in its face for current conducting devices, and having three grooves in its face to receive wires, one groove in the median plane between pairs of receptacles and one groove beyond each pair of receptacles and grooves in its edges registering with the face grooves and a wire clamping clip in the central face groove connecting receptacles on each side thereof and a clamping clip in each of the side grooves connected to the other receptacles, respectively, and a wire clamping binding screw in the center of each receptacle.

6. A support for a circuit connecting fitting, comprising a block of insulating material having two parallel wire receiving grooves and a series of alining depressions between the grooves in its face, within which depressions to contain conducting parts of receptacles for current conducting devices, said block being perforated under the side grooves within which perforations to insert wires into said depression.

7. A circuit connecting fitting comprising a block of insulating material having a group of depressions in its face; a group of receptacles, for current conducting devices, one in each said depression; said block having grooves in its face within which to receive wires, the outer walls of the outer grooves being unbroken, one groove on each side of said groups of receptacles and an intermediate groove, said depressions and grooves alternating in order; connections within the grooves, within said boundary walls thereof, whereby to connect said wires with selected receptacles.

8. An insulating block for electric fittings comprising a substantially rectangular body having receptacle receiving depressions in its face and having pockets in its edges with openings connecting said pockets with said depressions and grooves in its face near each end leaving unbroken outer walls, said grooves located above said pockets.

9. An insulating support for a circuit connecting fitting comprising a substantially rectangular block of insulating material having a depression in its face within which to contain conducting parts, for connection with a current conducting device to be inserted therein, and having grooves in its face within which to receive wires and having a laterally extending aperture opening in the floor of said depression, through which to insert a branch wire for connection to said current-conducting parts.

10. As an article of manufacture, an insulating support for a receptacle, comprising a substantially rectangular block of insulating material having a depression in its face, and a groove in its face to receive a wire, and a laterally extending perforation under said groove, through which to insert a wire into said depression.

In testimony whereof I hereunto set my hand in the presence of two subscribing witnesses.

JOHN CUTHBERT.

In the presence of—
FORÉE BAIN,
MARY F. ALLEN.