C. D. PLATT.

ELECTRICAL RECEPTACLE.

APPLICATION FILED FEB. 15, 1917.

1,231,063.

Patented June 26, 1917.

2 SHEETS—SHEET 1.

Fig 1

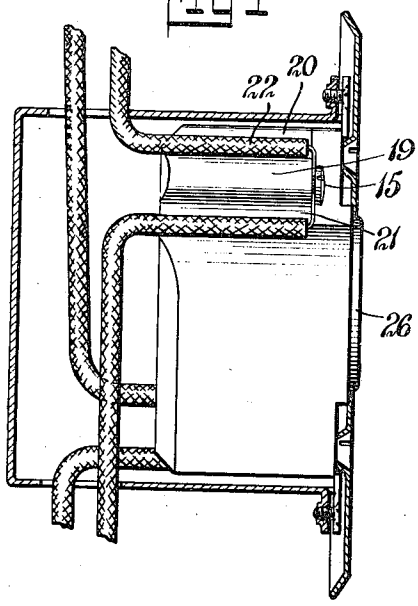


Fig 2

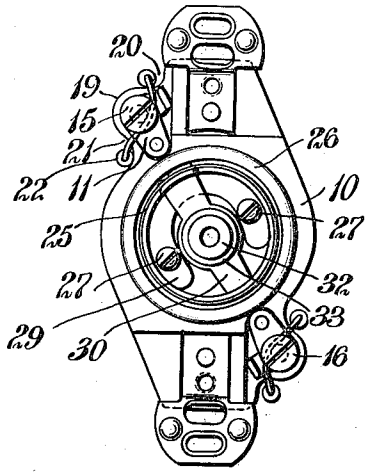


Fig 3

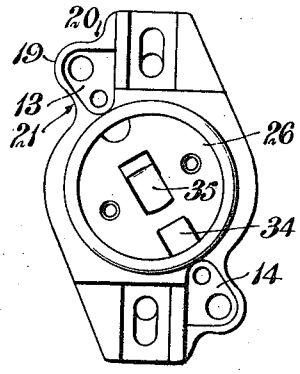
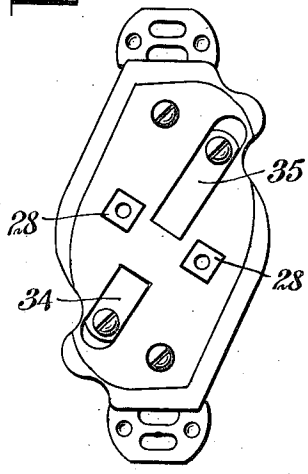


Fig 4



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2 SHEETS—SHEET 2.

Fig 5

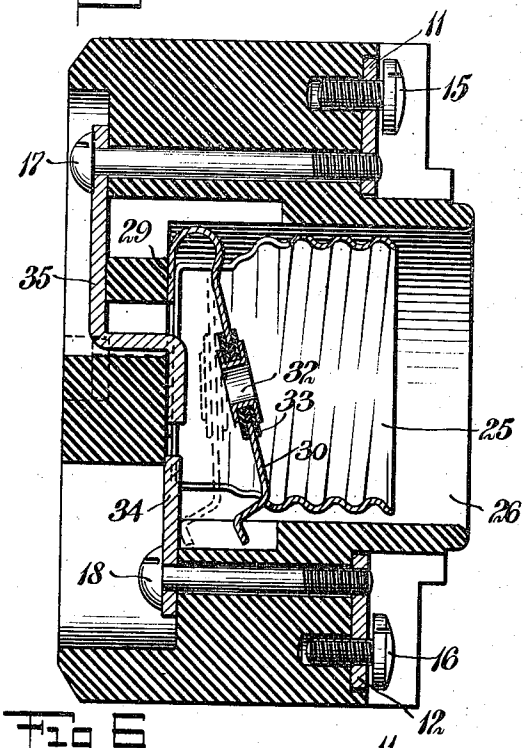


Fig 7

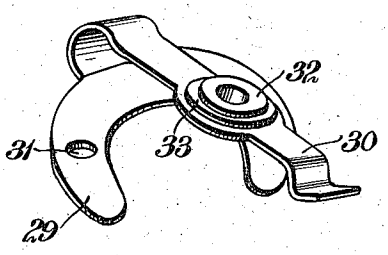
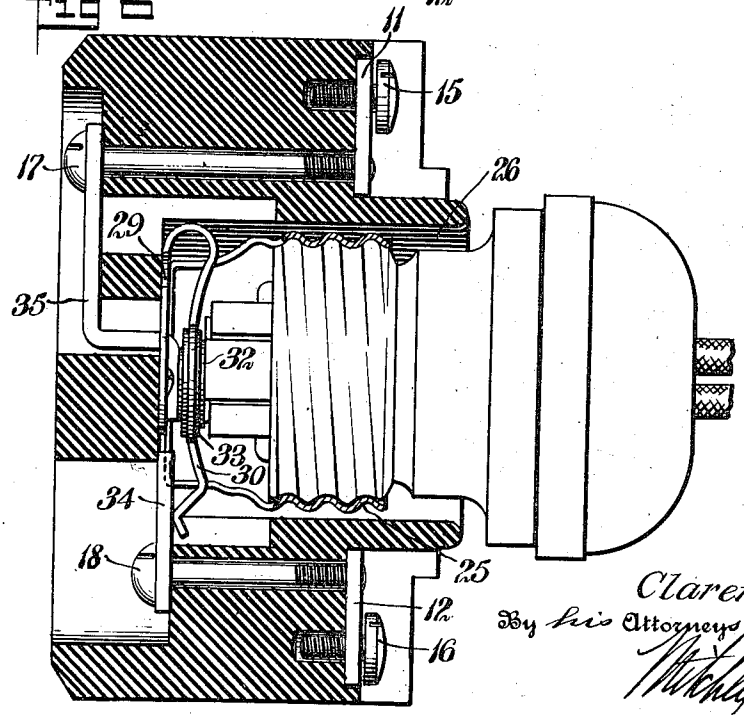


Fig 6



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ELECTRICAL RECEPTACLE.

1,231,063. Specification of Letters Patent. Patented June 26, 1917.

Application filed February 15, 1917. Serial No. 148,785.

To all whom it may concern:

Be it known that I, CLARENCE D. PLATT, a citizen of the United States of America, residing at Bridgeport, Conn., have invented a new and useful Electrical Receptacle, of which the following is a specification.

The main object of my invention is to provide a receptacle in which it is impossible to accidentally short circuit the screw socket and the center contact, either with the hand or with a tool. Another object is to facilitate connection of wires to the terminals or binding posts so that it will not be necessary to cut the wires for the purpose of attachment.

The first object is attained by a special construction of a center contact and the arrangement of connections leading thereto. The other object is attained by a special construction of the body of the receptacle in relation to the terminals.

Figure 1, is a side view of a receptacle embodying the improvements of my invention as shown in an outlet box, and with a cover plate shown in section.

Fig. 2, is a front view of a receptacle embodying the improvements of my invention.

Fig. 3, is a front view of the insulating body of the receptacle, the metal parts being removed.

Fig. 4, is a rear view of the receptacle.

Fig. 5, is a longitudinal sectional view on an enlarged scale showing a center contact in the position which it occupies when no plug or socket is in place and also showing in dotted lines one of the intermediate positions taken by the contact when inserting a plug or lamp.

Fig. 6, is a similar sectional view showing an attachment plug in place with the circuit completed.

Fig. 7, is a perspective view of the center contact member and its support.

The main body 10 of the receptacle is preferably formed of a suitable insulating material.

The terminal plates 11 and 12 are located in recesses 13 and 14 and provided with binding screws 15 and 16 respectively. These plates are held in place by screws 17 and 18 which pass through the body from the rear.

The body is provided with an insulating lug 19 which projects outwardly through which the connecting screw 17 passes and the grooves 20 and 21 at each side of the lug afford passages for the conductor 22 so that the conductor may be readily attached by simply looping it over the lug and under the head of the binding screw 15. Continuous wires may thus be attached readily to the terminals without the necessity of cutting them so as to provide ends.

The screw socket 25 or shell, as it is sometimes called, is mounted in a recess 26 in the front of the base and secured in place by screws such as 27, 27 which pass through into nuts 28, 28 in the recesses in the rear of the base.

The yoke 29 carrying the spring arm 30 has openings 31 for the screws 27 and thus is clamped against the bottom of the screw shell 25 by these screws. The center contact 32 is in the form of a hollow rivet or eyelet which is insulated from the arm 30 by an insulating bushing 33.

The contact plate 34 is secured to the base by the screw 18 and has one end extended into the recess 26 beneath the end of the arm 30. Another contact plate 35 is secured to the base by the screw 17 and has one end offset from it and located beneath the center contact 32 and is substantially the same plane as the contact plate 34. It will thus be seen that normally when there is no plug in the receptacle the screw shell 25 and the center contact 32 are both "dead" as neither is connected to a live part of the circuit.

When a plug or socket is screwed in as shown in Fig. 6, the center contact is forced down so that the contact of the arm 30 contacts with plate 34 as shown dotted in Fig. 5 and then as the plug is forced to its seat the lower face of the contact 32 engages the tip of the contact plate 35. The circuit then extends from the terminal plate 11 through the screw 17, the contact plate 35, the center contact 32 and through the plug. The other side of the circuit passes through terminal plate 12, screw 18, contact plate 34, spring arm 30 and its base 29 to the screw shell 25 and thence through the plug. As it requires considerable pressure to force the center contact 32 against the tip of the plate 35, it is practically impossible to make connection with the finger and it is therefore impossible to get a shock from either side of the line and it is practically impossible to short circuit the contacts with the screwdriver or other ordinary tool.

I claim:—

1. An electrical receptacle comprising an

insulating body having a recess, a screw shell mounted therein, a spring contact connected with the screw shell and carrying an insulated center contact, a center contact plate, circuit terminals, said insulated center contact and screw shell being normally "dead," and means for automatically connecting the insulated center contact, the contact plate and screw shell in circuit when a plug is screwed into the screw shell.

2. In an electrical receptacle, a screw shell, a spring arm electrically connected therewith, a center contact carried by said arm but insulated therefrom, and two stationary contact plates adapted to be engaged by said arm and by said center contact when said center contact is depressed in said screw shell.

3. In an electrical receptacle, an insulating base, a screw shell carried thereby, a center contact, an arm movable with but insulated from said center contact and electrically connected with said screw shell, a contact plate adapted to be engaged by said arm, and circuit terminals connected to said contact plates.

4. In an electrical receptacle, a screw shell, an arm having one end electrically connected with said screw shell, a stationary contact plate adapted to be engaged by the opposite end of said arm, a centrally located stationary contact plate and a center contact carried by said arm but insulated therefrom and adapted to engage said centrally located contact plate.

5. In an electrical receptacle, an insulating body having a recess opening toward the front and having diametrically opposite terminals adjacent the front, a contact plate at the rear connected to one of said terminals and having a tip portion extending into the bottom of said recess, a second contact plate at the rear having one end extending into one side of said recess and connected to the other terminal, a screw shell mounted in said recess, a contact making arm connected to said screw shell and adapted to engage one of said plates at the side of said recess, a contact member carried by said arm but insulated therefrom, adapted to engage the tip of the other contact plate in the bottom of said recess.

6. In an electrical receptacle, an annular conducting member, a contact plate at one side of the base thereof, an arched spring arm connected at one end of said annular member and having its other end adapted to engage said contact plate, a centrally located contact plate beneath said arm and a center contact carried by said arm but insulated therefrom and adapted to be forced into engagement with said center contact plate after the end of said arm engages the other contact plate.

CLARENCE D. PLATT.