

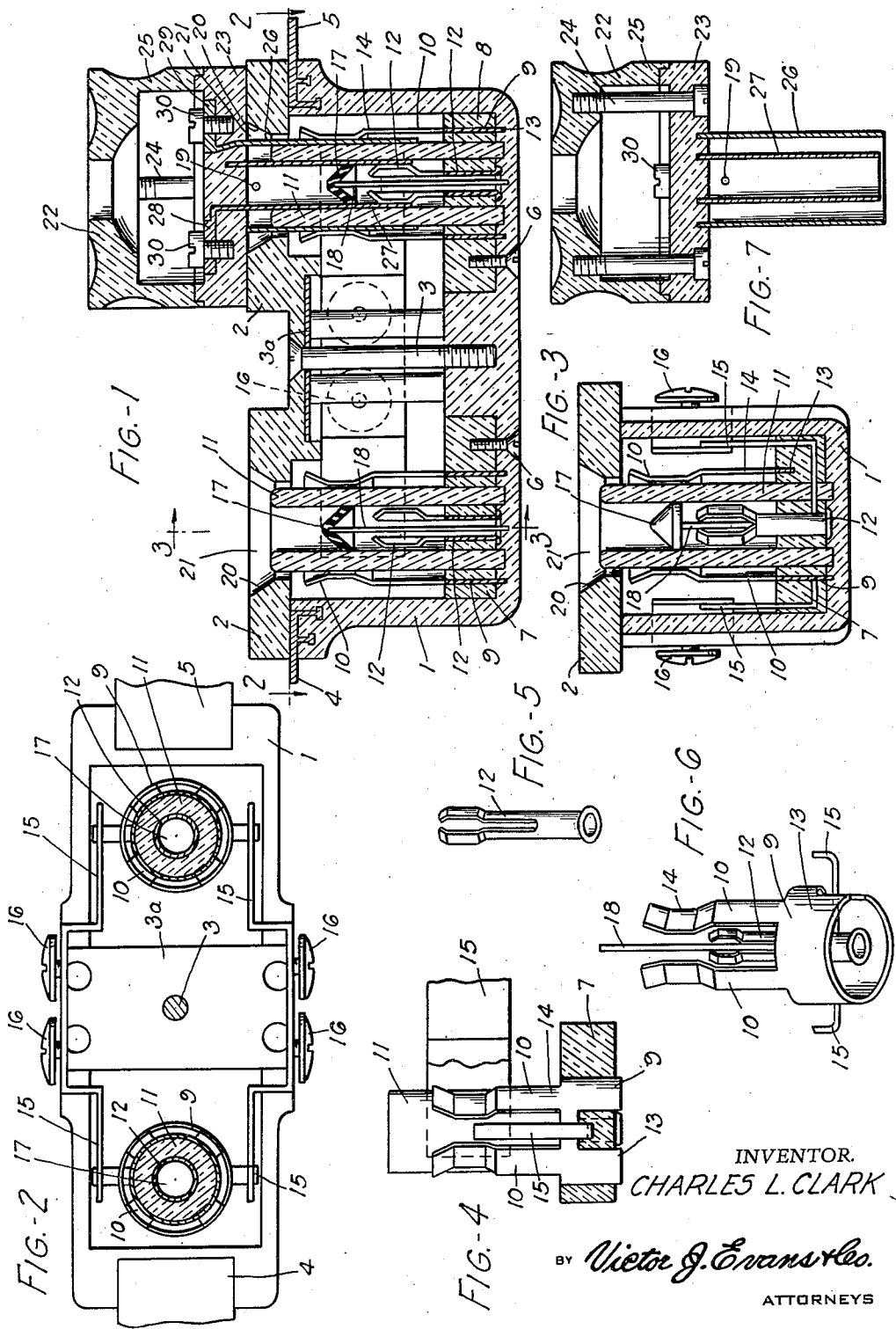
Oct. 5, 1948.

C. L. CLARK

2,450,467

POLARIZED HOUSE WIRING RECEPTACLE AND PLUG

Filed Oct. 26, 1945



INVENTOR.
CHARLES L. CLARK

BY *Victor J. Evans & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE

2,450,467

POLARIZED HOUSE WIRING RECEPTACLE
AND PLUG

Charles L. Clark, Brockway, Pa.

Application October 26, 1945, Serial No. 624,642

5 Claims. (Cl. 178-330)

1

My present invention, in its broad aspect, has reference to improvements in polarized house wiring receptacles and plugs, and more particularly, it is my purpose to provide an improved and unique receptacle to be attached to any outlet box, or wall plate, or the like, and which will prevent possibility of shocks and eliminate fire hazards, and which embodies improved connections for plugs and wires leading to electrically operated appliances. In attaining the above and other objects and advantages of my invention, I provide, among other things, an improved insulating tube, and electric terminals, including both negative and positive bus bars and connections thereto, and an improved means for preventing ignition of gas, air and gas when electric circuits are broken, whereby a safe article of household equipment is provided which may be attached to a wall plate or outlet box merely by screwing the same in place. My device is sturdy, practical and efficient, and has no parts likely to get out of order or become broken or deranged. My invention has the distinct advantage of permitting the plug to be inserted into the receptacle in the dark, an important improvement over the ones now in use and should prove of great assistance and convenience to the present day users of articles of this type.

Another important advantage of my invention is the carrying capacity of the conductors, their larger contact surfaces when the plug is inserted allowing the device to be used where heavier loads exist or liable to occur which eliminates fire hazards to a much greater extent than the ones in use at the present time. Since the grounded side of the circuit is always in contact before and after the live side of the circuit is in contact, my device is safe to use and eliminates fires caused by short circuits.

Then the advantage my plug has of concealing or insulating the electric arc from coming in contact with explosive mixtures of air and gases of all kinds provides a device which has long been needed, and the concealing of the electric arc when necessary to break electric connections in devices of all kinds necessary for this purpose adds a further distinctive advantage to my invention.

Other and equally important objects and advantages of my invention will be apparent from the following specification and drawings, and it is pointed out that changes in form, size, shape, materials, and construction and arrangement of parts is permissible and fall within the purview of my broad inventive concept, and the scope of the appended claims.

2

In the drawings, wherein I have illustrated a preferred form of my invention—

Figure 1 is a vertical longitudinal section;

Figure 2 is a transverse section on the line 2—2 of Figure 1;

Figure 3 is a vertical section on the line 3—3 of Figure 1;

Figure 4 is a detail view showing my insulating tube and bus bar and the manner of insulating the terminals;

Figure 5 is a perspective view showing my metal tube terminal;

Figure 6 is a perspective view showing the assembly of the bus bar and metal tube terminal, and

Figure 7 is a vertical section through my improved plug.

In the drawings, wherein like characters of reference are used to designate like or similar parts throughout the several views:

The numeral 1 designates my receptacle which is preferably elongated and rectangular, and has a cover 2 held in place by screw 3 through plate 3a and hangers 4 and 5 at the ends. Attached by screws 6 adjacent the ends of the receptacle are blocks 7 and 8 each carrying a metal tube terminal 9—see Figures 4 and 6—the terminal connections 10 of each of which are separated by one of my cylindrical, hollow, elongated insulating tubes 11, within each of which is one of my improved split terminals 12—see Figure 5. The metal tube terminal 9 is in effect a bus bar having a cylindrical base section 13 from which lead vertical terminals 14. The tubes 11 are within the vertical terminals and seat in the blocks. The split terminals 12 also seat in the blocks 7 and have lateral lead off connections 15 to screws 16 for attachment to wires leading to appliances. Within each split terminal 12 is a conical rubber member 17 supported on a standard or pin 18 attached on the block to prevent explosion of air and gas in case an electric circuit is broken by removing a plug. There is a small hole 19 in the connection of my improved plug to release air. As shown in Figure 1, the insulating tubes 11 rise above the terminals 14 from the bus bars or cylindrical tube terminals 9 to the mouth 20 of the sockets 21 in the cover 2. My plug 22—see Figures 1 and 7—combines a two-part body including a base 23 to which is attached by screws 24 the cylindrical body 25 and two cylindrical connections 26 and 27 one within and spaced from and concentric with the other. In operation, the spaced cylindrical connections are simply pressed, one on the inside and one on the

3

4

outside, of each cylindrical insulating tube contacting respectively the terminals 14 of the cylindrical of the tube terminals 9 or bus bars and the split terminals 12. Each cylindrical connection is attached by lead off wires 28 and 29 respectively to positive and negative contact screws 30 in the plug.

From the foregoing, it is believed that the operation and advantages of my invention will be apparent, but it is again pointed out that interpretation of the scope of my invention should only be conclusive when made in the light of the subjoined claims.

I claim:

1. A polarized house wiring receptacle for use with wall plates and outlet boxes, comprising a body and a cover for the body, the cover formed with plug sockets, plugs to be fitted in said sockets, a pair of spaced concentric cylindrical conductors in each plug, terminal blocks in said body adjacent the lower inner ends thereof, positive and negative terminals in said blocks adapted to receive and engage the cylindrical conductors on the plugs, a cylindrical tubular insulating tube set in each block intermediate of said positive and negative terminals, wiring contact posts connected with the positive and negative terminals, the cylindrical conductors of each plug fitting respectively inside and outside of the insulating tube and between tube and the positive and negative terminals, a conical rubber member over the terminal within the tube to prevent explosion of air and gas when an electric circuit is broken by withdrawing a plug and a pin carried by each terminal block for mounting said rubber member within said insulating tube in spaced relation thereto.

2. A polarized house wiring receptacle for use with wall plates and outlet boxes, comprising a body and a cover for the body, the cover formed with plug sockets, plugs to be fitted in said sockets, a pair of spaced concentric cylindrical conductors in each plug, terminal blocks in said body adjacent the lower inner ends thereof, a cylindrical tubular terminal set in each block, a cylindrical hollow vertical insulating tube set in each block inside of the tubular terminal, a split

terminal set in each block within each cylindrical insulating tube, wiring contact posts connected with the terminals in the blocks, the cylindrical conductors of each plug fitting respectively inside and outside of the insulating tube and between the tube and the tubular terminal and the split terminal set, a conical rubber member over each split terminal to prevent explosion of air and gas when an electric circuit is broken by withdrawing a plug and a pin carried by each terminal block for mounting said rubber members within said insulating tube in spaced relation thereto.

3. The invention as defined in claim 2 wherein each tubular terminal has vertical terminals, bent outwardly at the upper ends to permit easy entrance of the cylindrical connections of the plugs.

4. The invention as defined in claim 2 wherein the receptacle has a plate embedded therein and a screw connection is provided which extends through the cover to be received in said plate, and wherein the cylindrical insulating tubes extend to the mouths of the sockets and above the open ends of the tubular terminals and the split terminals.

5. The invention as defined in claim 2 wherein the wiring receptacle is elongated and rectangular, and hangers are located between the cover and the receptacle and extend out from the ends.

CHARLES L. CLARK.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,362,992	Haywood	Dec. 21, 1920
1,933,592	Hubbell	Nov. 7, 1933
2,002,177	Hastings	May 21, 1935
2,013,142	Gaynor	Sept. 3, 1935
2,075,794	Allabach	Apr. 6, 1937

FOREIGN PATENTS

Number	Country	Date
522,261	Germany	Feb. 3, 1926