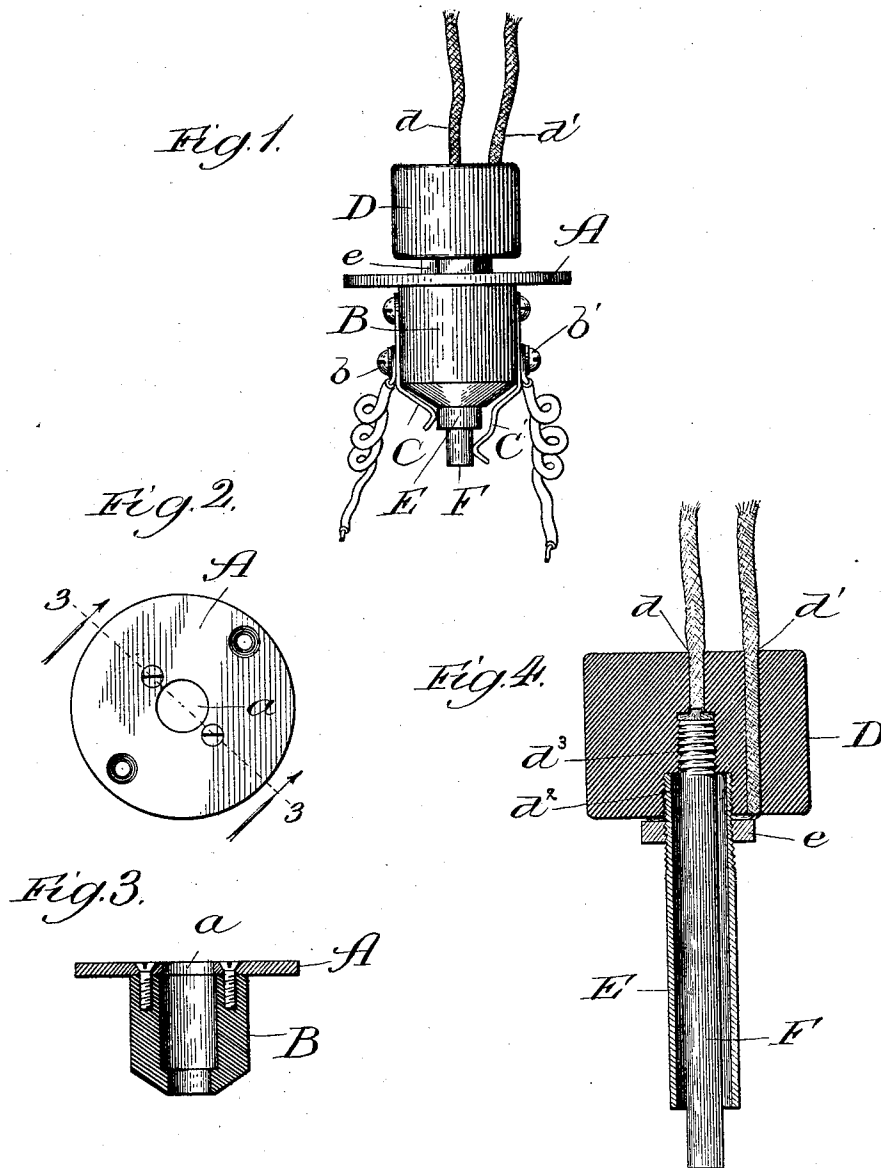


(No Model.)

W. E. GILL.
CONNECTOR FOR ELECTRIC CIRCUITS.

No. 479,325.

Patented July 19, 1892.



Witnesses:
Carl Gaylord,
Clifford White.

Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM E. GILL, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN F. WOLLENSAK,
OF SAME PLACE.

CONNECTOR FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 479,325, dated July 19, 1892.

Application filed April 26, 1892. Serial No. 430,735. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. GILL, residing at Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Electric Flexible-Cord and Circuit Connectors, of which the following is a specification.

The object of my invention is to make a simple, convenient, and reliable connection for the ends of flexible electric cords and circuit-wires, especially when designed for electric bells where a table or desk push is used, and which is also applicable to incandescent electric-light lamps, as generally used on desks, tables, pianos, and elsewhere; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings; Figure 1 is a side elevation of my connecting device; Fig. 2, a detail view of the face-plate of the stationary terminal, showing the manner of attachment to a floor, wall, &c.; Fig. 3, a cross-section taken through line 3 of Fig. 2, and Fig. 4 is an enlarged cross-section of the portable terminal.

My improved connecting device consists of a stationary terminal to receive the ends of one set of cords or wires and a portable terminal to receive the other set of cords, which form a circuit. The stationary terminal is secured to a floor, wall, or other place of attachment by screwing the face-plate A thereto. This plate is provided with a suitable hole *a* to admit the stem of the portable terminal, as hereinafter described. A knob or block B, of suitable insulating material, is securely attached to the under side of this plate A and carries the usual binding-screws *b b'* for the circuit. As shown in Fig. 3, the hole *a*, admitting the portable terminal stems, is continued through the block B. Connected to the binding-screws *b b'* are two metallic springs C C'. The spring C' is preferably made somewhat longer than the spring C, for a purpose hereinafter described. The one set of binding-screws and springs is of course insulated from the other by means of the insulating-block B.

The portable stem-terminal consists of a

knob D, of convenient dimensions and composed of any suitable insulating material. This knob has two holes *d* and *d'*, adapted to receive the cords and ends of the metallic stems, which consist of two distinct insulated parts, as hereinafter explained. The center hole *d* is double counterbored, forming a large bore *d²* and a smaller bore *d³*, each of which is screw-threaded at the inner side. The bore *d²* receives the threaded end of a hollow metallic stem or sleeve E. Within this hollow stem is another stem F, which forms no electric connection with the stem E and which is insulated therefrom. The end of this stem F is also provided with external screw-threading, so as to screw into the smaller bore *d³* in the knob. When the stems are screwed in place, the stem F will protrude beyond the stem E.

The cords are connected as follows: One of the cords is passed down through the center hole *d* before the stem F is screwed into position. The end of the cord is bared and bunched and then drawn up tight in the upper end of the bore *d³*. The stem F is then screwed into the knob until it presses tightly against the bared and bunched end of this cord, which is thereby firmly secured within the knob D at the end of the bore *d³*. A positive metallic connection between the cord and the stem is thus established. The hollow stem E is then screwed into the knob and the other cord of the circuit is inserted through the hole *d'*, the end of the cord bared and wound around the outside of the hollow stem E, after which a nut *e*, turning upon the stem next to the knob, is screwed tight against the knob, thus firmly binding the cord and forming a metallic connection between the cord and the hollow stem.

A circuit can be established, when desired, by inserting the stems of the portable terminal through the aperture *a* in the face-plate A, when the stem E will contact with the metallic spring C and the stem F with the spring C'. These two springs are of unequal lengths, and each is thus enabled to contact with its proper stem to complete the circuit. I thus secure a firm and positive binding of the ends

of the cords in the portable terminal and a convenient means for completing the circuit in the stationary terminal.

Although I have shown and described specific forms and details of construction, I do not wish to be understood as limiting myself to details further than I may make them the subject of claims.

What I regard as new, and desire to secure by Letters Patent, is—

1. In electric-circuit connectors, the combination of a plate provided with a hole there-through, a stationary block of insulating material attached to the plate and provided with a hole registering with the hole in the plate, and springs of unequal lengths projecting beyond the end of the block and forming stationary terminals for the ends of the circuit-wires, substantially as described.

2. In electric-circuit connectors, the combination of a portable block into which the ends of circuit-wires are led, and stems, one within the other, fastening the ends of the circuit-

wires in the block, with the inner stem projecting beyond the outer and forming portable terminals, substantially as described.

3. In electric-circuit connectors, the combination of a plate provided with a hole there-through, a stationary block of insulating material attached to the plate and provided with a hole registering with the hole in the plate, springs of unequal lengths projecting beyond the end of the block and forming stationary terminals for the ends of circuit-wires, a portable block into which the ends of circuit-wires are led, and stems, one within the other, fastening the ends of the circuit-wires in the block, with the inner stem projecting beyond the outer and forming portable terminals contacting with the stationary terminals when the stems are inserted in the plate and stationary block, substantially as described.

WILLIAM E. GILL.

Witnesses:

J. F. WOLLENSAK,
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