Mar. 3, 1925. 1,528,681

E. F. MARTH

LOCK SWITCH CONNECTING PLUG

Filed May 21. 1923

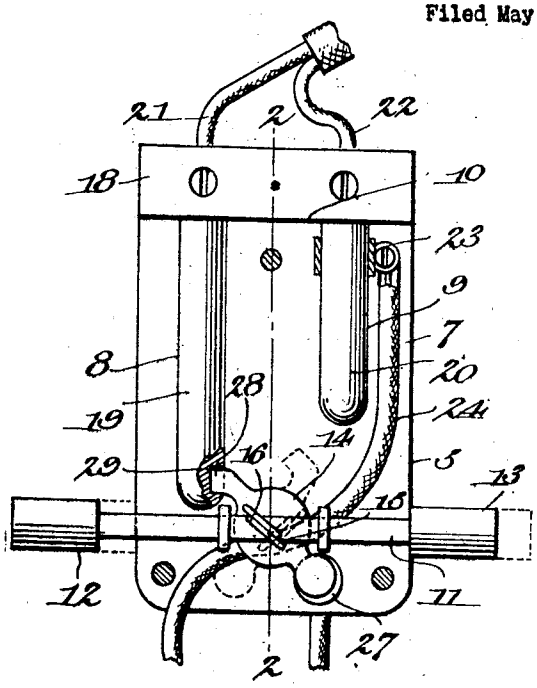


Fig. 1.

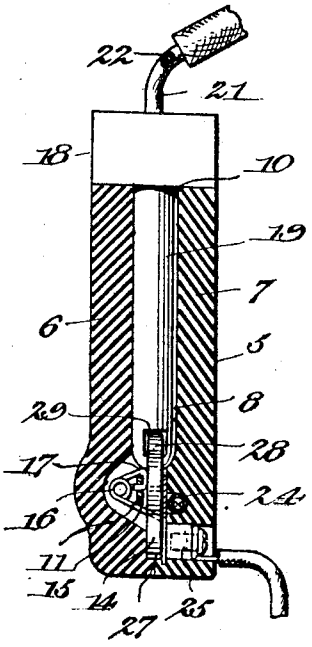


Fig. 2.

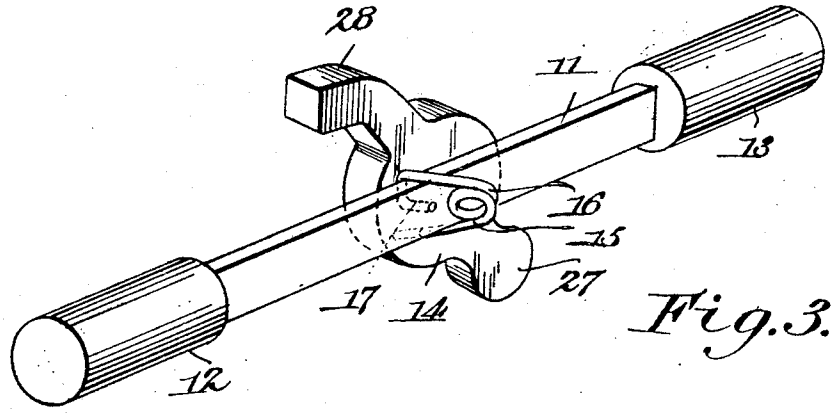


Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD F. MARTH, OF BROOKLYN, NEW YORK.

LOCK-SWITCH CONNECTING PLUG.

Application filed May 21, 1923. Serial No. 640,510.

To all whom it may concern:

Be it known that I, EDWARD F. MARTH, a citizen of the United States of America, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Lock-Switch Connecting Plugs, of which the following is a specification.

This invention relates to plugs for electrical work and has for its primary object the provision of a device of this character including separable sections and a switch carried by one of said sections and acting to bridge and complete the circuit through said sections and lock the sections together.

Plugs of this character are employed to a very large extent in theatrical work where scenery must be quickly shifted and set up as desired and illuminated electrically. Heretofore, these plugs embodied separable sections adapted to complete a circuit through mating contact devices. Due to the dispatch required in shifting and setting up stage scenery, the plug sections are accidentally deranged and are frequently entirely separated. This resulted chiefly from scene shifters or stage hands stumbling over the wires leading to the plug which caused an exertion of force against the wire and an immediate separation of the plug sections and a consequent delay in re-establishing proper electrical connection through the agency of the plug.

My improved plug embodies a switch which is adapted to positively complete the circuit through the respective sections of the plug, and lock the sections together against possible accidental separation in the manner aforesaid.

A further essential object of the invention is to provide a plug of this character which shall be simple of construction, positive of action and of a design that will permit the circuit connections to be respectively connected and disconnected with dispatch.

With these and other objects in view, the invention resides in the certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described in the specification, are particularly pointed out in the appended claims and illustrated in the accompanying drawing, in which:

In the drawing, Figure 1 is a vertical section through the plug with parts in elevation.

Figure 2 is a section taken approximately on line 2—2 of Figure 1.

Figure 3 is a detail perspective view of the switch.

In carrying the invention into practice, I provide a receptacle which preferably consists of a body 5 formed of insulating materials 6 and 7. The respective materials are suitably grooved longitudinally to provide ways 8 and 9. These ways extend in the length of the body and open upon the end 10 thereof. The way 8 is somewhat longer than the way 9 and the purpose thereof will be fully explained hereinafter.

Movable between the materials 6 and 7 is an actuating bar 11 having knobs 12 and 13 at its ends. These knobs may be pressed by the finger so as to change the position of the bar 11 and consequently shift the position of a metallic switch piece or bridge member 14. This bridge member is pivoted to the material 6 and as illustrated it is connected with one leg 15 of a spring 16. The other leg of the spring is connected at 17 to the slidable bar 11. The spring, through the manner of its connections with the bar 11 and bridge member 14 serves to positively hold the latter in its position of adjustment when the bar 11 is manually moved to a desired position.

The section 18 of the plug is provided with metallic pins 19 and 20 respectively connected to terminal wires 21 and 22. Located in the way 9 is a metallic contact device 23 and connected thereto is a lead wire 24 of an electric circuit. Carried by the material 7 of the body 5 is a contact device 25 and leading thereto is a second wire of the circuit. The bridge member 14 is provided with a tail piece 27 and in full line position of said member, as shown in Figure 1, it is observed that this tail piece is engaged with the contact device 25. The said bridge member is provided with a lug 28 engageable in a notch 29 in the pin 19, as shown in Figure 1. Incident to the respective circuit connections provided for herein it follows that when the bridge member 14 is in full line position shown in Figure 1, the detachable section 8 of the plug is firmly locked in position and the circuit is bridged and completed by the member 14 engaging respectively with the pin 19 and contact device 25. Pulling upon the wires 21 and 22 cannot cause accidental separation of the respective plug sections. The full line posi-

tion of the bridge member 14 is secured by shifting the bar 11 from right to left. When this bar is shifted from left to right the bridge member 14 is moved to the dotted line position shown in Figure 1 and in the consequence thereof the circuit is broken and the respective sections of the plug can be separated quickly and with convenience.

What I claim as new is:

1. A combined switch and locking device for electric plugs, comprising a plug formed of separable sections, circuit connections carried by each section, and means for locking the sections together and for effectively bridging the connections of one section with the mating connections of the other of said sections, said means including a pin on one section, a notch formed in said pin, a contact device on the other section, and a movable bridge member, a lug formed on said bridge member for co-action with said notch for connecting said contact device with said pin.

2. A combined switch and locking device for electric plugs, comprising a plug formed of separable sections, circuit connections carried by each section, and means for locking the section together and for effectively bridging the connections of one section with the mating connections of the other of said sections, said means including a pin on one section, a contact device on the other section, and a movable bridge member for connecting said contact device with said pin, and slidable actuating means for moving said bridge member to shift the position thereof with respect to said pin and said contact device.

3. A plug having separable sections and means for locking said sections together and for simultaneously establishing operative circuit connections therebetween, said means consisting of pins on one section, a contact device engageable with one pin and carried by the other section, a second contact device carried by said other section, and a metallic bridge member carried by said other section and movable to connect said second contact device with said other pin, said first pin provided with a notch for the reception of a lug on said bridge member.

4. A plug having separable sections and means for locking said sections together and for simultaneously establishing operative circuit connections therebetween, said means consisting of pins on one section, a contact device engageable with one pin and carried by the other section, a second contact device carried by said other section, and a metallic bridge member carried by said other section and movable to connect said second contact device with said other pin, and co-acting therewith to positively lock the plug sections together.

5. A plug consisting of separable sections, and a switch for locking the sections together and for completing a circuit through the respective wires of said sections, the switch comprising a swinging member having portions respectively connecting one contact device of one plug section with one contact device of the other plug section after both sections are joined together, the contact device of the plug section being formed with a notch for the reception of one portion of the swinging member.

6. A plug having slidably connected sections, contact pins on one section fitting in the other of said sections, and a bridge member for operatively arranging both sections in a circuit and for locking said sections together through engagement of the bridge member with one of said pins.

In testimony whereof I have affixed my signature.

EDWARD F. MARTH.