G. W. GOODRIDGE.

ATTACHMENT PLUG.

APPLICATION FILED MAY 11, 1910.

1,152,170. Patented Aug. 31, 1915.

Fig. 3.

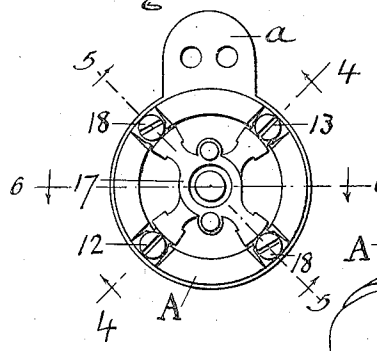
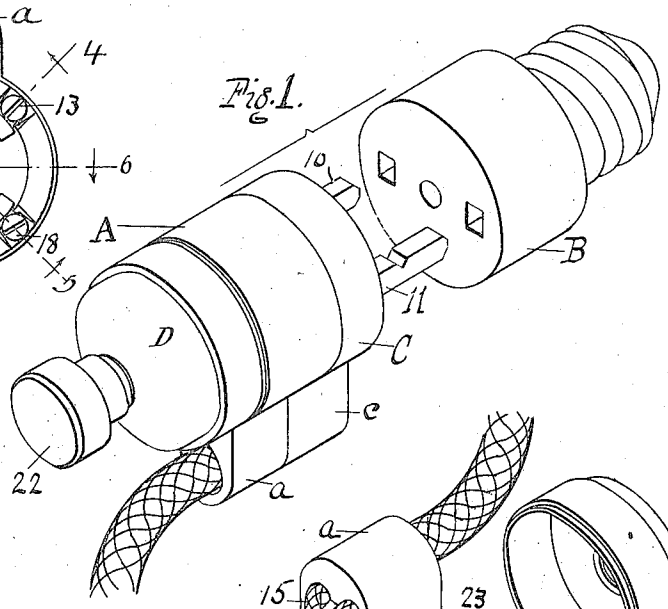


Fig. 1.



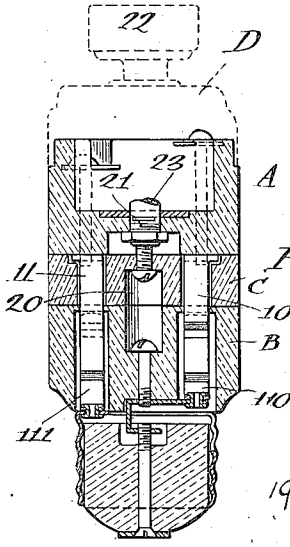


Fig. 6.

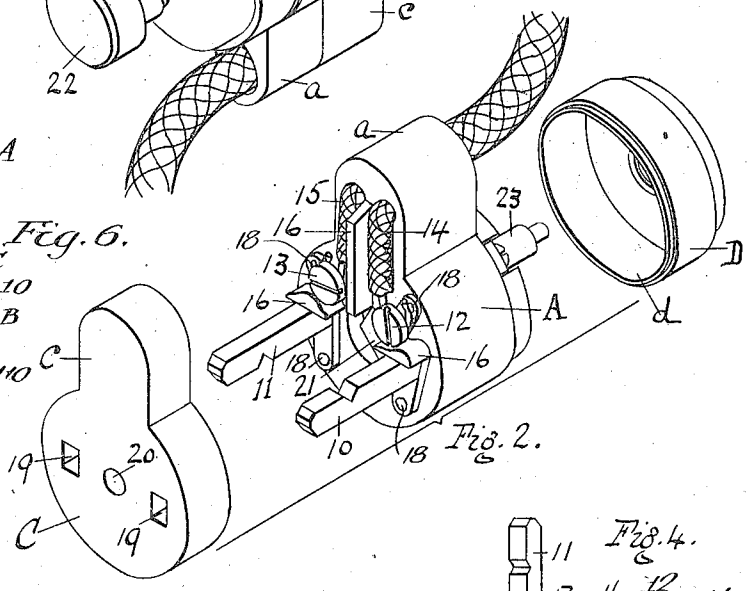


Fig. 2.

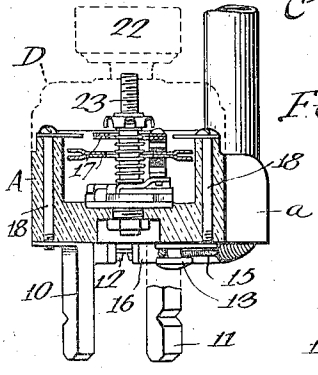


Fig. 5.

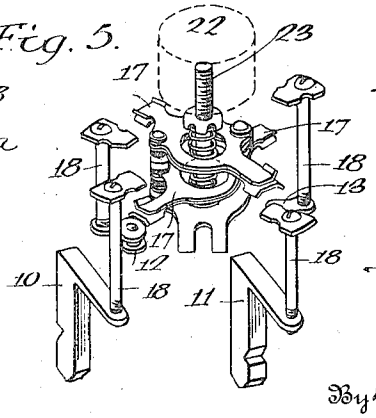


Fig. 4.

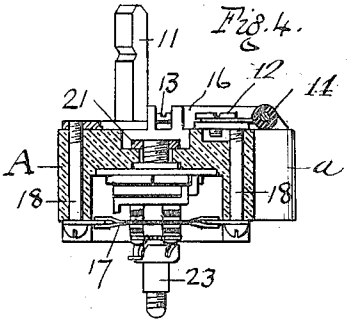


Fig. 7.

Witnesses:
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UNITED STATES PATENT OFFICE.

GILBERT W. GOODRIDGE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BRYANT ELECTRIC COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ATTACHMENT-PLUG.

1,152,170. Specification of Letters Patent. Patented Aug. 31, 1915.

Application filed May 11, 1910. Serial No. 560,639.

To all whom it may concern:

Be it known that I, GILBERT W. GOODRIDGE, a citizen of the United States of America, and residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Attachment-Plugs, of which the following is a specification.

My invention relates to attachment plugs and the particular object of my invention is to provide a plug provided with a switch mechanism at the plug whereby the current passing therethrough may be readily controlled at the plug.

Other features of novelty and utility will be apparent from reference to the drawing and the following specification.

In the accompanying drawings, Figure 1 is a perspective showing the plug detached from its receptacle; Fig. 2 is a perspective of the plug from the opposite end with the cover caps removed; Fig. 3 is a plan of the button carrying the switch; and Fig. 4 is a vertical section through this button on the line 4—4, Fig. 3. Fig. 5 is a vertical section on the line 5—5, Fig. 3; Fig. 6 is a vertical section on the line 6—6, Fig. 3, showing the attaching plug in position, and the switch mechanism omitted; Fig. 7 is a detached perspective of the switch and related portions of the plug.

In the form shown my improved plug comprises a button A of suitable insulating material carrying on one side plug contacts 10 and 11 of common form adapted to enter and make contact with suitable terminals within the plug receptacle B. On the same face of the button A I arrange binding screws 12 and 13 for the reception of the ends of the wires 14 and 15 which conduct the current passing through the attachment plug to the desired point. A shoulder *a* is formed on button A adjacent the wire terminals and is perforated to permit the passage of the wires therethrough. It will be observed that the wires emerging from these perforations take a sharp bend to the terminals and that the consequent frictional engagement of the wire with the edge of the porcelain relieves to a certain extent the strain on the terminals. Barriers 16 may be provided to prevent stray wire ends from causing a short circuit. In a recess on the opposite face of the button A I mount a switch 17, here shown as of the double pole type. Each of the plug contacts and the wire terminals is connected to a switch terminal, for instance by the screws 18 passing through the button A, so that the wire terminals are brought into the circuit through the switch when the latter is in the "on" position.

The course of the current is readily followed in Fig. 7, passing from wire terminal 12 through one of the bolts 18 to the switch terminal at the opposite end thereof, thence through the lower switch bar 17 to the opposite switch terminal, rod 18 and plug jack 11, while the returning current passes from jack 10, its bolt 18 and switch terminal through the upper switch bar 17 to the opposite switch terminal its bolt 18 and binding screw 13. In this figure the switch is shown in the "off" position, in which the switch bars while lying in the respective horizontal planes of the terminals with which they coöperate, are spaced 90° from the latter as usual in snap switches of the double pole type.

To inclose and protect the wire terminals and the connections thereto I provide a cover C of the same size as the button A and provided with a shoulder *c* which fits over the shoulder *a*. Perforations 19 are provided for the passage of the plug contacts 10 and 11 through the cover, and a central perforation 20 affords passage for a securing screw, the inner end of which engages a threaded bushing 21 beneath the switch mechanism. A cap D with insulating lining *d* of ordinary type incloses the switch mechanism which is operated by the button 22 threaded on the end of the switch spindle 23 in customary manner.

The device described is of particular utility where the plug receptacle B is inserted in keyless lamp sockets on fixtures controlled from remote wall switches, or when inserted in remotely controlled wall receptacles. For instance in connection with electrically operated cleaning apparatus, of the vacuum type for example, the considerable lengths of wire now necessary in order to enable the apparatus to be used in all parts of a chamber, may be dispensed with since it is possible to shift the attachment plug and its receptacle to various fixtures in different parts of the chamber, while the switch on the plug affords ready means for controlling the apparatus without the annoyance of having to

return to the wall switch each time the current is to be switched on or off.

Various modifications of the device which do not depart from my invention will readily suggest themselves and I do not limit myself to the precise form shown.

I claim as my invention:

1. An attachment plug comprising an insulating button, wire terminals carried thereby, plug contacts projecting from one face of said button, a switch mounted on the other face of said button and electrical connections from said plug contacts through said switch to said wire terminals.

2. An attachment plug comprising an insulating button, wire terminals, plug contacts and a switch mounted thereon, together with electrical connections through said switch to said wire terminals, in combination with a laterally projecting shoulder on said button perforated to afford a passage for the wires leading to said terminals.

3. An attachment plug comprising an insulating button, wire terminals, plug contacts and a switch mounted thereon together with electrical connections through said switch to said wire terminals, in combination with an insulating cover perforated to permit the passage of the plug contacts therethrough, substantially as described.

4. An attachment plug comprising an insulating button, wire terminals mounted on one face of said button, plug contacts projecting from said face of the button, a switch on the opposite face of the button and electrical connections from said plug contacts to said wire terminals through said switch, in combination with a cover for said wire terminals perforated to permit the passage of said plug contacts therethrough and a cover for the switch on the opposite face of said button, substantially as described.

5. An attachment plug comprising an insulating button, wire terminals mounted on one face of said button, a shoulder on said button adjacent said wire terminals perforated to permit the passage of the wires leading to said terminals, in combination with a shouldered cover inclosing said terminals and the wire ends leading thereto, substantially as described.

6. An attachment plug comprising an insulating button, wire terminals carried thereby and a shoulder on said button perforated to permit the passage therethrough of the wires leading to said terminals, said shoulder being so located with reference to said terminals as to insure a sharp bend in the wires led thereto for the purpose specified.

7. In a switch plug comprising a base, a pair of contact fingers projecting from said base and adapted to engage corresponding contact terminals in an attaching plug, a pair of binding posts mounted upon said base, and a rotary snap switch co-axially mounted upon said base for making and breaking circuit between a binding post and a contact finger.

8. The combination of an attaching plug provided with a pair of contact terminals, of a switch plug provided with a pair of contact fingers adapted to engage said terminals, a pair of binding posts to which conductors leading from the switch plug may be connected, electrical connections between each of said binding posts and corresponding contact fingers, and a rotary snap switch mounted co-axially of the plug for making and breaking the circuit between one or both of said binding posts and the corresponding fingers.

9. The combination of an attaching plug provided with a pair of contact terminals, of a switch plug having a pair of contact fingers adapted to engage said terminals, a pair of binding posts for leading-in wires and a snap switch carried by said switch plug and electrically interposed between said binding posts and contact fingers.

10. The combination of an attaching plug provided with a pair of contact terminals, of a switch plug having a base with lateral ingress for leading-in wires, binding posts for said leading-in wires, contact fingers on said base to engage said terminals on the attaching plug, and a switch carried by said base and electrically interposed to control the circuit to said contact fingers.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

GILBERT W. GOODRIDGE.

Witnesses:

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A. H. JONES.