

No. 789,508.

PATENTED MAY 9, 1905.

H. R. SARGENT.  
ATTACHING PLUG.  
APPLICATION FILED OCT. 9, 1902.

FIG. 1.

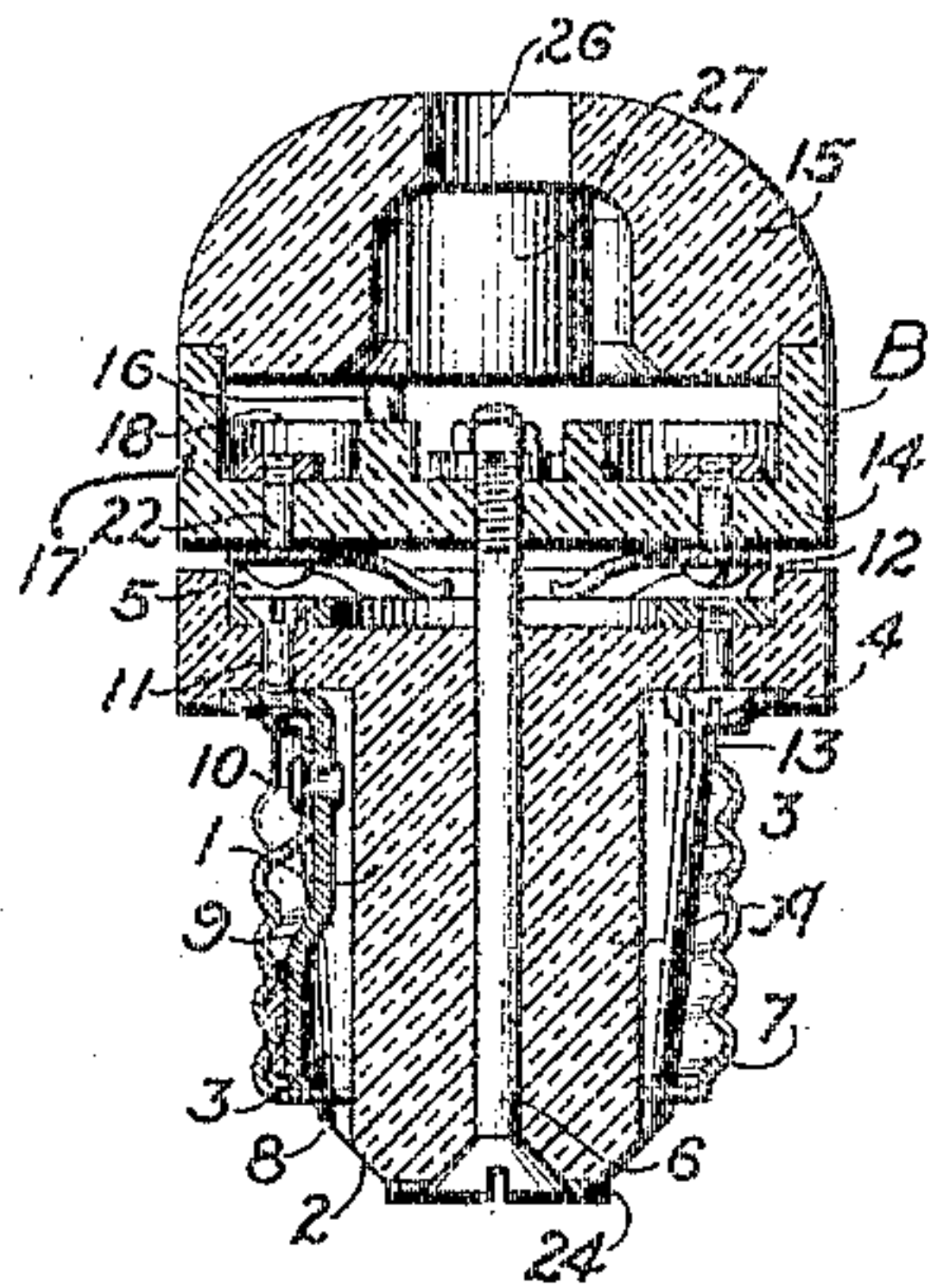


FIG. 2.

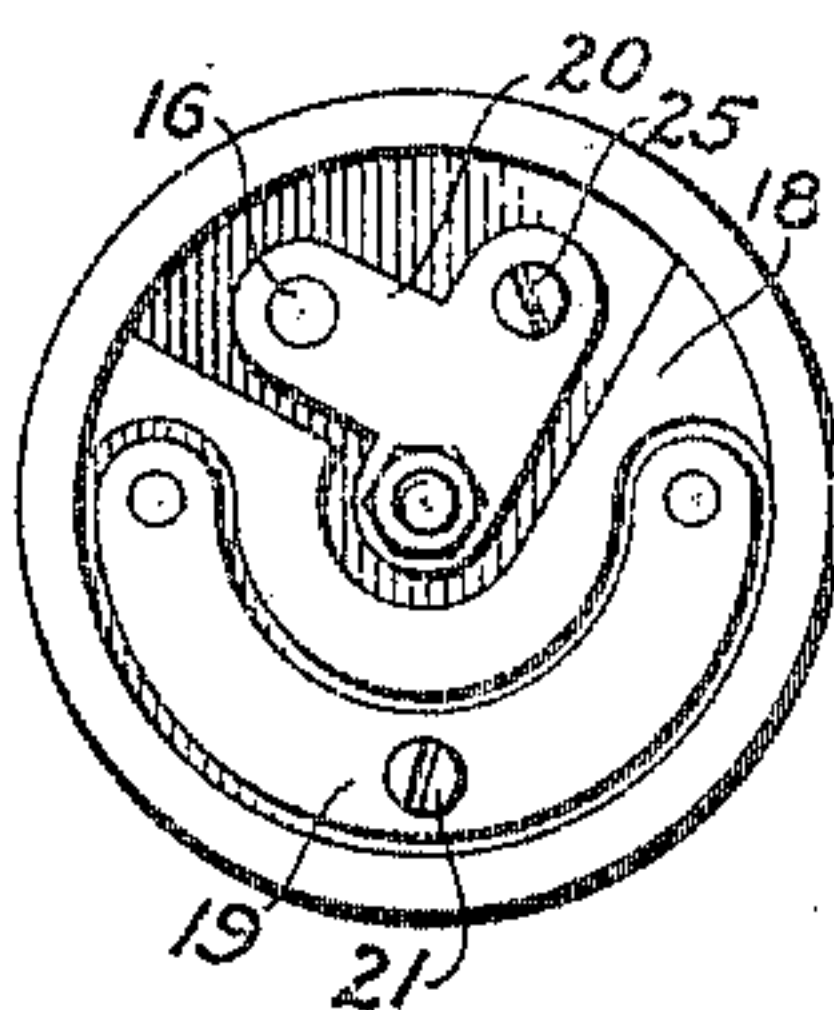


FIG. 3.

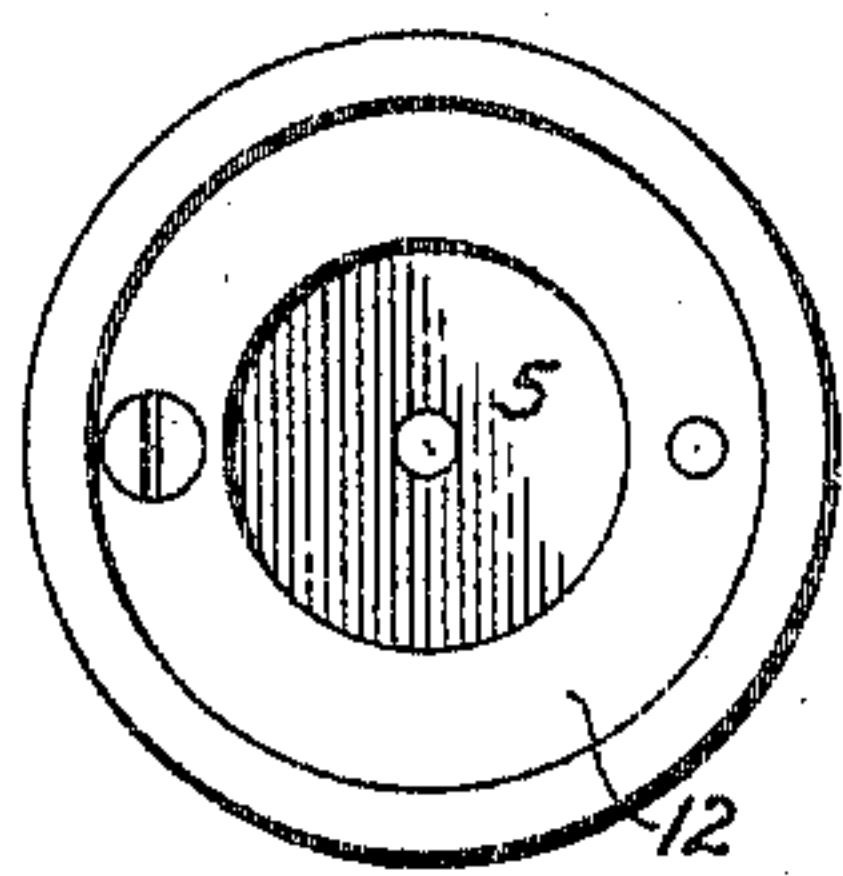
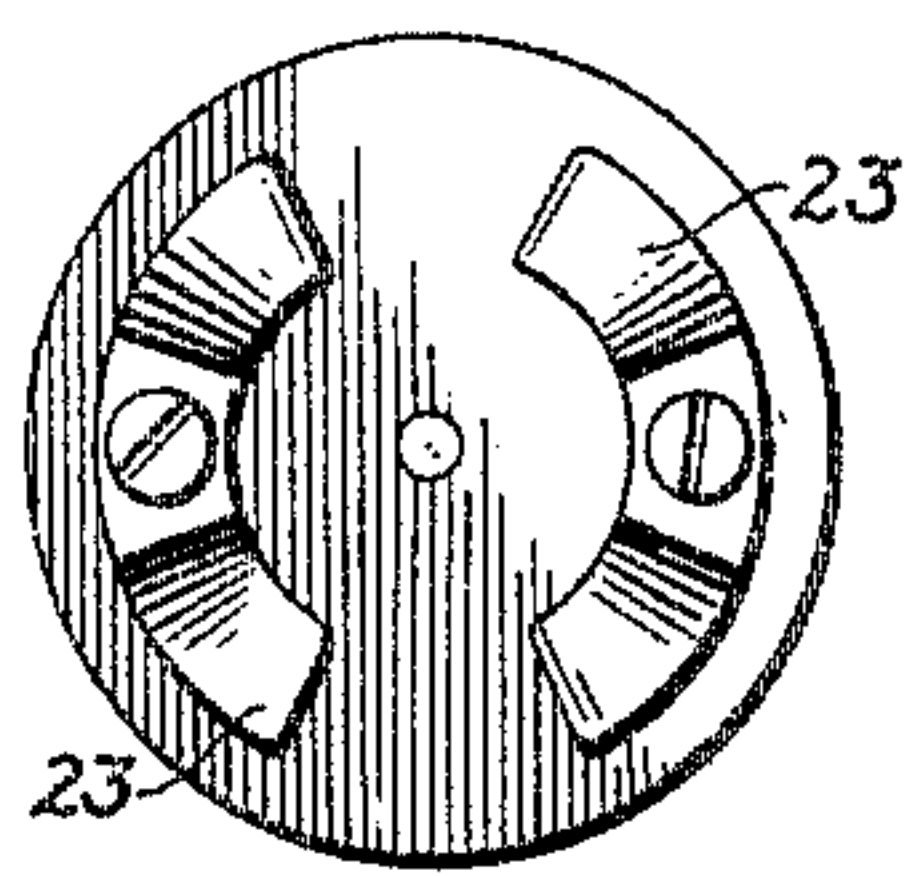


FIG. 4.



WITNESSES:

*Harry H. Tilden.*  
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INVENTOR:

Howard R. Sargent  
by *Allen B. Sargent*  
Atty



# UNITED STATES PATENT OFFICE.

HOWARD R. SARGENT, OF SCHENECTADY, NEW YORK, ASSIGNOR TO  
GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## ATTACHING-PLUG.

SPECIFICATION forming part of Letters Patent No. 789,508, dated May 9, 1905.

Application filed October 9, 1902. Serial No. 126,441.

*To all whom it may concern:*

Be it known that I, HOWARD R. SARGENT, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Attaching-Plugs, of which the following is a specification.

My invention relates to means for attaching a branch-circuit conductor to the receptacle or socket of the ordinary incandescent lamp, and has for its object to provide a compact, neat-appearing, and efficient attaching-plug having one part swiveled relative to the other, so that the plug may be screwed into engagement with the contacts in the receptacle or socket without twisting of the branch wires and without interrupting the circuit through the parts.

My invention will be understood by reference to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal section of an attaching-plug embodying one form of my invention. Fig. 2 is a top plan of the intermediate recessed disk which carries the terminals for the branch wires. Fig. 3 is a top plan of the base portion, and Fig. 4 is a bottom plan of the intermediate recessed disk.

As shown in the drawings, the attaching-plug consists of a lower part A, adapted to be screwed into the ordinary lamp socket or receptacle, and an upper part B, to which the branch wires are connected and adapted to remain stationary while the lower part B is rotated to connect or disconnect the device to the socket or receptacle.

The lower part A of the device comprises a base 1, of porcelain or other suitable insulating material, having a frusto-conical plug portion 2, with grooves 3 in diametrically opposite sides. Projecting out from the upper end of the base is a flange 4, provided with a circular recess 5 in its upper surface. At the lower end the base 1 is made in the shape of a flattened cone, and an axial hole extends through the base for the reception of the connecting-rod 6. Surrounding the plug portion 2 is a threaded metallic sleeve 7, having intumed tongues 8 at its lower end engaging the walls of the grooves 3 and secured there-

on by means of a bent strip of metal 9, lying in the groove 3 and connected to the shell at its lower end by solder and connected near the upper end of the sleeve by a rivet 10. The metallic strip 9 is in turn connected at its upper end to the flange 4 of the base by a screw 11 passing therethrough and through a contact-ring 12, located in the recess 5, making electrical connection between said ring 12 and the threaded sleeve 7. The under side of the flange 4 may be recessed at 13 for the reception of the upper bent end of the metal strip 9. The extreme lower end of the base 1 is provided with a center contact consisting of a metallic washer which is held in place by the connecting-rod 6, which passes there-through.

The upper part B comprises two disks or cup-shaped pieces 14 and 15, of porcelain or other insulating material, detachably held together by a screw 16, entering from the outside of the cap-piece 15 and engaging a metallic part secured to the other part 14. The intermediate disk 14 is made cup-shaped, being provided with a peripheral flange 17, projecting from its upper surface, and the cavity thus formed is divided by a wall 18, thereby providing a separate cavity for each of the contact-plates 19 and 20. The contact-plate 19 is semicircular and carries at its middle a binding-screw 21 for one of the branch wires, and is secured in place upon the disk 14 by a screw 22 at either end passing through the disk 14 and the spring-contacts 23, carried upon the under side of the same. The spring-contacts 23 are double-ended, thereby providing four separate points of contact with the ring 12, which, in addition to insuring perfect electrical contact, operate to yieldingly press the upper part B away from the part A at a series of points on opposite sides of the connecting-rod 6, about which the part B is pivoted. As a consequence of this distribution of yielding pressure between the parts A and B the one can be rotated relatively to the other against a friction which is uniform throughout the complete rotation, even though the surfaces of contact are out of the apparent plane of rotation, as is often the case where the support-



ing parts are molded in porcelain. The contact-plate 20 is held in the second cavity in the intermediate disk 14 by the connecting-rod 6, and thereby electrically connected with the center contact 24 at the lower end of the device. The plate is provided with a threaded hole for the screw 16 and with a binding-screw 25 for the second branch wire.

The upper portion 15 of the part B, which constitutes a cover for the terminals, is provided with a nearly-hemispherical exterior surface and a peripheral rabbet at its lower edge for the reception of the upper edge of the flange on the intermediate disk 14. An axial hole 26, opening into the chamber 27, is provided for the passage of the branch wires to the inside.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An attaching-plug comprising an insulating base part having on one end a threaded contact-sleeve and a center contact and on the other end a contact-ring electrically connected to said sleeve, a second insulating part provided on one side with two wire-terminals, an axial rod pivotally connecting said parts together and electrically connecting one of said wire-terminals and the center contact, a plurality of spring-contacts carried on the opposite side of the second insulating part operating to electrically connect the second wire-terminal with the contact-ring, and to mechanically force the insulating parts away from each other.
2. An attaching-plug comprising an insulating base part having center and side contacts at one end and a ring-contact at the other end connected to said side contact, a second insulating part having cavities in one end, a crescent-shaped wire-terminal located in one of said cavities and connected at each of its ends with spring-contacts located on the

opposite side of the insulating part and making electrical engagement with said ring-contact, a second wire-terminal located in another of said cavities, and an axial rod pivotally connecting said insulating parts together and electrically connecting said second wire-terminal and the center contact.

3. In a contact-plug, the combination of an insulating base part having a flanged end, a contact-ring on one side of said flange and a threaded contact-sleeve secured on the other and in electrical connection with said contact-ring by screws passing through said flange, a second insulating part provided with two wire-terminals on its upper surface and with double-ended spring-contacts on its lower surface connected to one of said wire-terminals, and an axial rod extending through both insulating parts and electrically connecting said center contact on the second line-terminal.

4. An attaching-plug comprising an insulating base part provided at one end with center and side contacts and at the other end with a contact-ring connected to said side contact, a second insulating part provided on one side with two double-ended contact-springs adapted to bear upon said ring and on the opposite side with a wire-terminal plate connected to both spring-contacts and a second wire-terminal plate which is connected by an axial rod with the center contact, and an insulating-cap secured to the outer end of the second insulating part by a screw extending there-through and engaging one of the wire-terminal plates.

In witness whereof I have hereunto set my hand this 6th day of October, 1902.

HOWARD R. SARGENT.

Witnesses:

BENJAMIN B. HULL,  
HELEN ORFORD.