(No Model.)

D. E. DRAKE.

ELECTRIC CIRCUIT CONNECTION.

No. 299,467. Patented May 27, 1884.

Fig. 1.

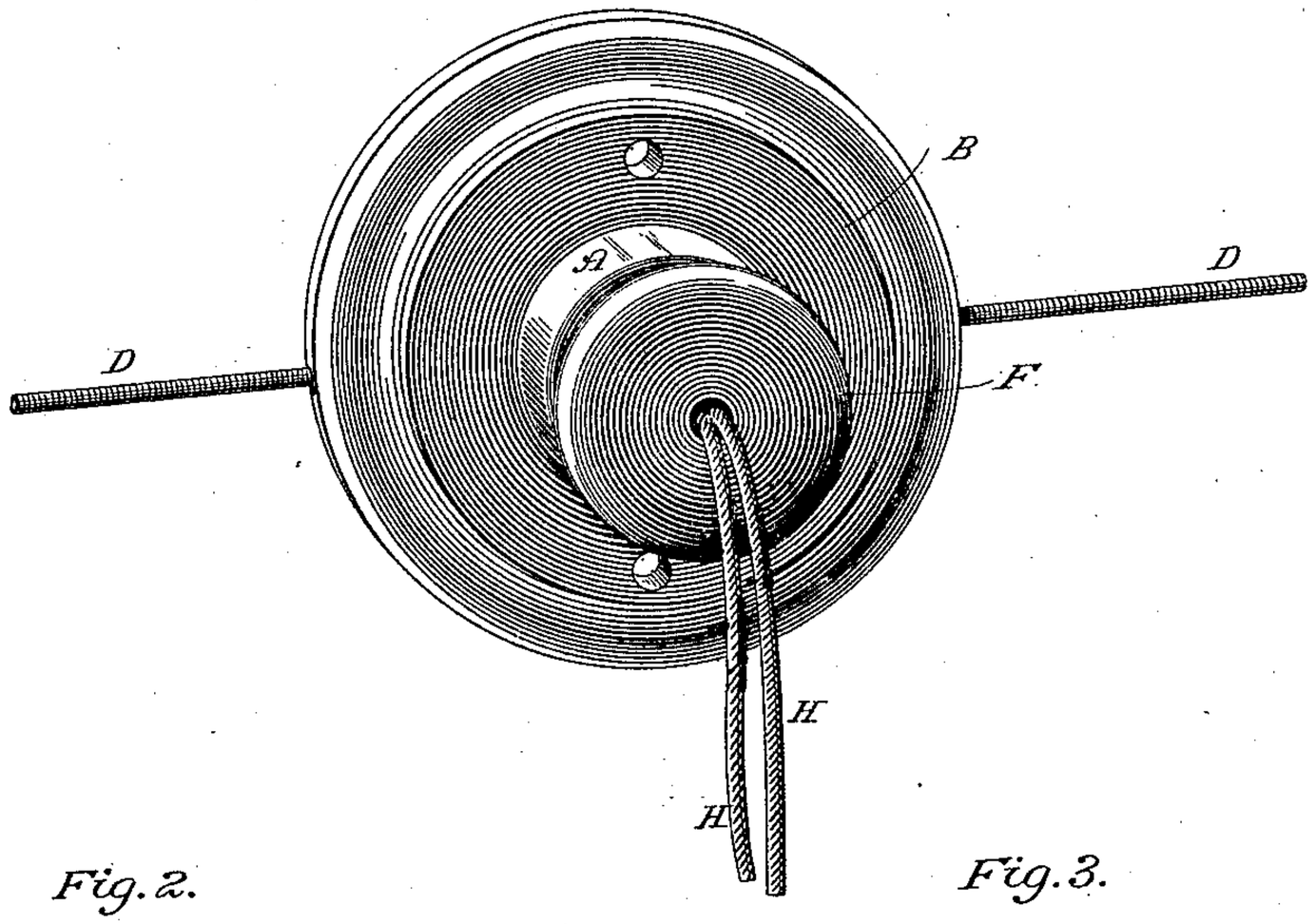


Fig. 2.

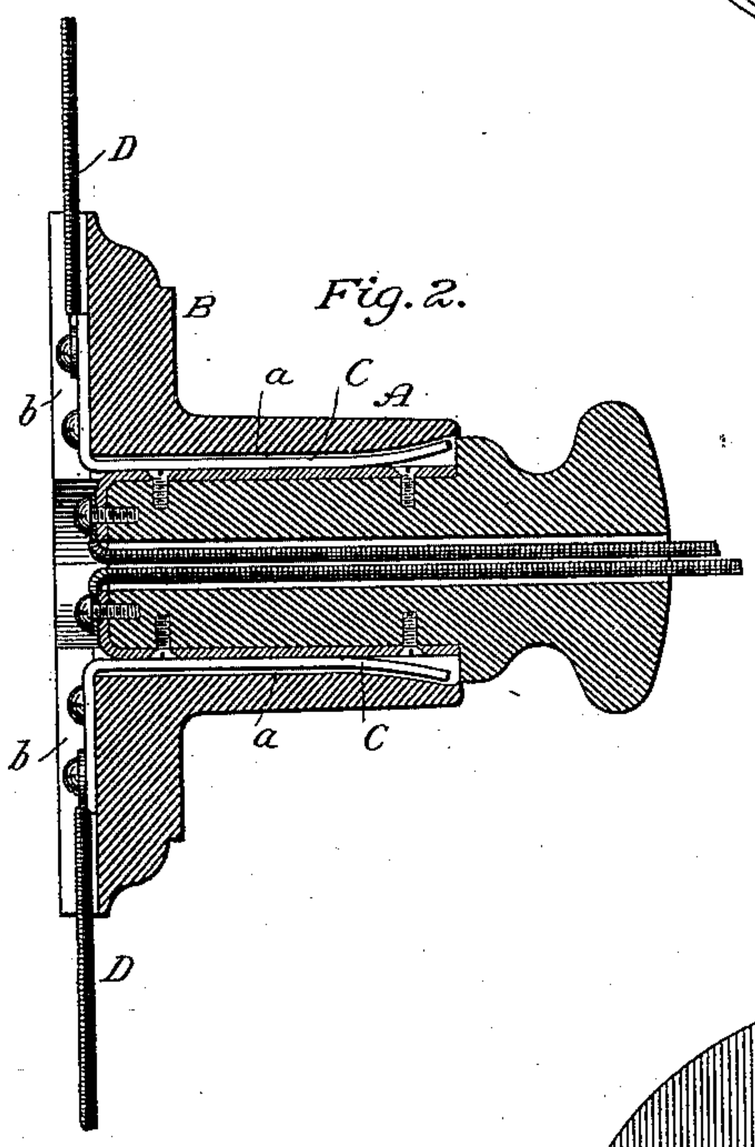


Fig. 3.

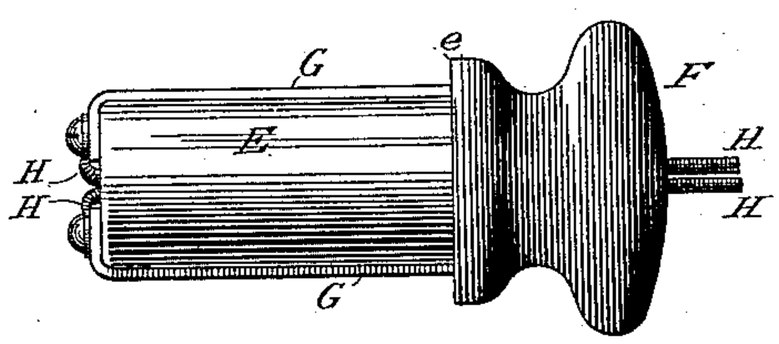
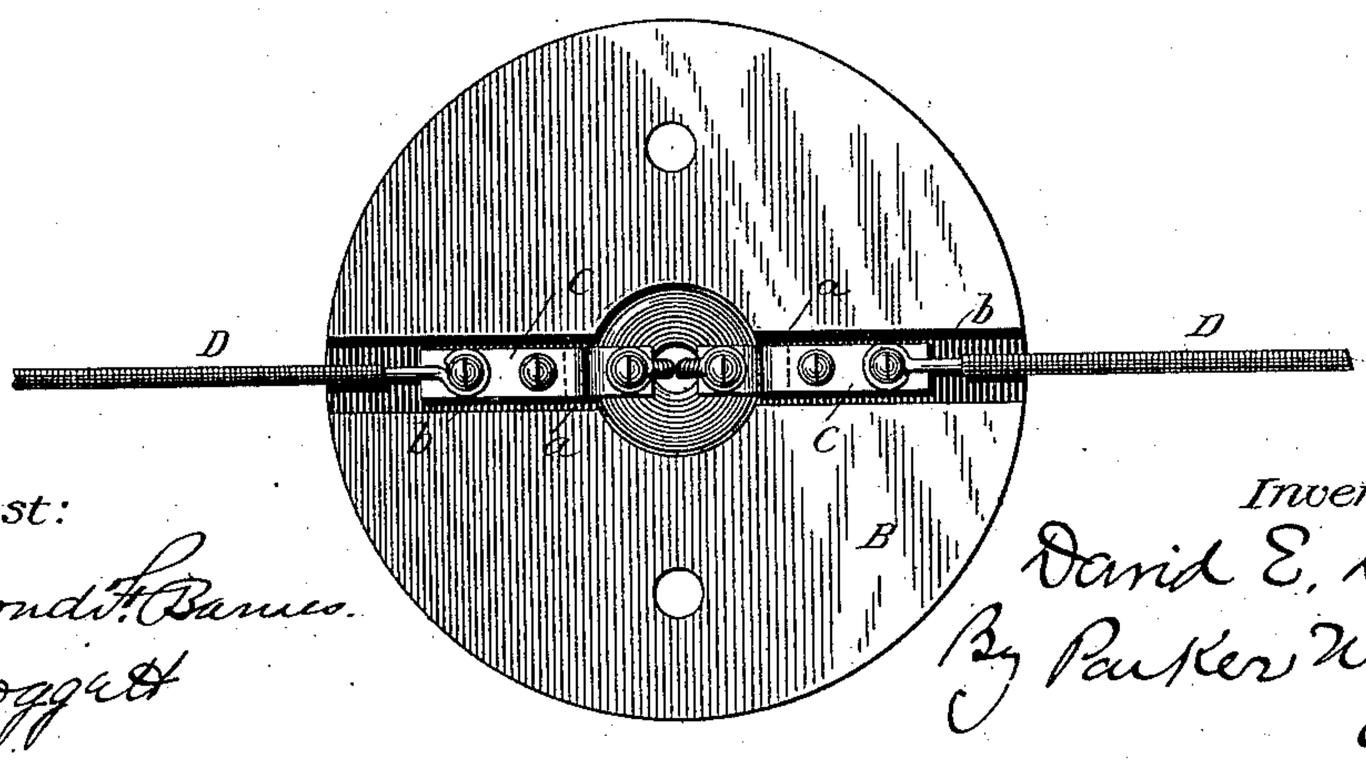


Fig. 4.



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UNITED STATES PATENT OFFICE.

DAVID E. DRAKE, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE UNITED STATES ELECTRIC LIGHTING COMPANY, OF NEW YORK, N. Y.

ELECTRIC-CIRCUIT CONNECTION.

SPECIFICATION forming part of Letters Patent No. 299,467, dated May 27, 1884.

Application filed October 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. DRAKE, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Electric-Circuit Connectors, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

My present invention relates to apparatus commonly known as "plug circuit connectors;" and it consists in a combined plug and socket of novel construction, designed for use more particularly with hand or portable electric lamps, small motors, or other electrical devices of a similar nature. Many of these devices are usually supplied with a short length of flexible cord or cable containing the conductors, and means for readily attaching the cord to the terminals of an electric circuit when it is desired to use the lamp or other device. I propose to arrange a certain number of sockets or cups containing the terminals of a severed branch or main circuit at convenient points in an apartment or building where the portable devices are to be used, and to attach to the flexible conducting-cord a plug which may be inserted in any one of the sockets desired, and I so construct the sockets and the plug that they will be held firmly when placed together, so that the circuit-connections will be kept perfect, and so that the two cannot be brought together without completing the circuit. In the details of construction by which these results are attained my invention is comprised.

The accompanying drawings are referred to for an understanding of the invention.

Figure 1 is a perspective view of the socket and plug when brought together for completing the circuit. Fig. 2 is a central vertical section of the two, with the terminals of each in contact. Fig. 3 is a side elevation of the plug, and Fig. 4 is a rear view of the socket.

The socket is made of any insulating material, preferably of hard wood, and comprises a flat base, B, and a hub, A, which is bored out, the bore extending completely through the base B. At two points on the interior of the part A grooves *a a* are formed, generally at diametrically-opposite points. The grooves are continued in grooves *b b* in the rear face of the base B. In these grooves, but only partially filling the grooves *a a*, are secured spring contact-strips C C, with which are connected the ends of wires D D, forming portions of a circuit or any branch thereof. The plug consists of an insulating-cylinder, E, with a shoulder, *e*, and suitable head or knob, F, the diameter of the cylinder being such that it may enter snugly the bore in the hub A.

On the sides of the cylinder E are secured contact-strips G, that are bent over the end of the cylinder, and then connected to the ends of the conductors H H, these latter being carried through a hole of small diameter in the plug. The contact-plates G register with the grooves *a* in the hub A, so that the plug can only be inserted in the socket by turning it until the plates register with the grooves, which thus serve as guides and permit the plug being forced in, and at the same time complete the electrical circuit.

It is evident that the cylindrical opening through the hub and the grooves or recesses in the sides or walls of the same may be modified by forming the opening and the plug of an oval or diamond shape, and placing the contact-plates on both in such position that they of necessity coincide when the plug is inserted in the socket. As stated above, I propose to place these sockets at various points at which a lamp, or motor, or other device is to be used, and the wires H H, I connect permanently to such lamp or other device, so that it may be carried from point to point where needed, and at once connected with the circuit.

The advantages of the above-described construction are, mainly, that good contact is insured, no difficulty is experienced by unskilled persons in making the connections, and the contact and conducting surfaces are completely concealed and protected.

What I now claim is—

1. The combination, with a socket contain-

ing recesses or grooves, and contact-strips, forming the terminals of a circuit secured therein, of a plug and raised contact-strips secured thereon, and arranged to register with the grooves in the socket, as and for the purpose set forth.

2. The combination, with an insulating cup or socket having grooves or recesses in its walls, and contact-strips contained therein, of a circular plug, raised contact-strips secured thereto, and conductors passing through the plug and connected to the contact-strips, as and for the purpose specified.

DAVID E. DRAKE.

Witnesses:
W. FRISBY,
W. H. HARTLEY.