

1,334,040.

T. L. LEE.
ELECTRIC CONNECTION.
APPLICATION FILED JUNE 12, 1918.

Patented Mar. 16, 1920

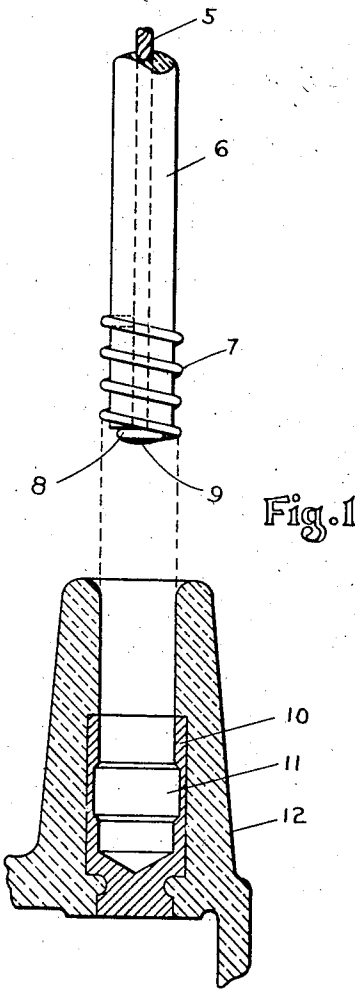


Fig. 1

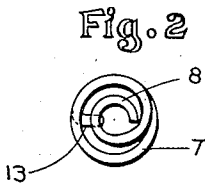


Fig. 2

Inventor:
Thomas L. Lee
by his attorney
Farnum F. Dorsey

UNITED STATES PATENT OFFICE.

THOMAS L. LEE, OF ROCHESTER, NEW YORK, ASSIGNOR TO NORTH EAST ELECTRIC COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

ELECTRIC CONNECTION.

1,334,040.

Specification of Letters Patent. Patented Mar. 16, 1920.

Application filed June 12, 1918. Serial No. 239,569.

To all whom it may concern:

Be it known that I, THOMAS L. LEE, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Electric Connections; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an electric connection of the kind in which a flexible conductor or cable is removably attached to a socket terminal-member, by means of a plug or tip on the end of the conductor.

The object of the invention is to produce an electric connection, of the type just referred to, which shall be simple and inexpensive in construction, and in which the conductor shall be securely held in contact with the socket-member.

To the foregoing end the invention resides in the use of a coil of wire attached to the end of the flexible conductor and coöperating with a socket-member of suitable form, in the manner hereinafter described.

In the accompanying drawings Figure 1 is a side-elevation of the two parts of a connection embodying the present invention, these parts being shown as disengaged, and the socket-member being shown in section. Fig. 2 is an end-view of the coiled wire tip which is attached to the flexible conductor.

The invention is illustrated as embodied in an electric connection such as is used in electric ignition-apparatus, although it is obviously applicable to various other uses. As illustrated, the flexible conductor is in the form of a cable 5 provided with an insulating sheath 6. The plug-member of the connection is formed by the use of a coil 7 of spring-wire. This coil is preferably made to fit closely upon the surface of the insulation 6. The last turn 8 of the wire is made smaller than the others, to receive the extremity of the cable 5, which may be secured in place by separating its constituent

wires and securing them with a drop of solder 9, thus forming a good electrical connection with the coil 7 and fastening the coil securely in place.

The socket-member of the connection comprises a metal sleeve 10 adapted to receive the plug-member and provided with a counterbore or recess 11. This socket-member is shown as embedded in insulating material 12, such as bakelite, although this is not an essential feature of the invention.

The coil 7 is adapted to engage resiliently the walls of the socket, and thus to retain the conductor in place therein. As a preferred means for insuring this resilient engagement, each turn of the coil 7 is made somewhat greater in external diameter than the diameter of the socket, so that the coils must be contracted in diameter when introduced into the socket. This contraction results in a slight elongation of the coil, but this is readily permitted by the elasticity of the wire and of the insulating material 6, this insulating material being of rubber or some other flexible substance. The counterbore or recess 11 is not essential, but is preferably used, as it tends to increase the tenacity with which the plug-member is retained in the socket.

The upper extremity of the coil 13 is preferably bent inwardly, so as to embed it in the insulation 6, thus retaining the upper end of the coil securely in place and preventing longitudinal distortion of the coil when the conductor is introduced into and removed from the socket.

The invention claimed is:

An electric connection comprising: a flexible conductor with an elastic insulating sheath; a wire spring, with separated coils, closely embracing said sheath adjacent the end of the conductor, one end of the spring being attached to the conductor and the other end of the spring being embedded in the sheath; and a socket-member of an internal diameter slightly smaller than the normal diameter of the spring.

THOMAS L. LEE,