

(No Model.)

J. M. FAULKNER.
COUPLING FOR ELECTRICAL CONNECTIONS.

No. 537,920.

Patented Apr. 23, 1895.

Fig. 1.

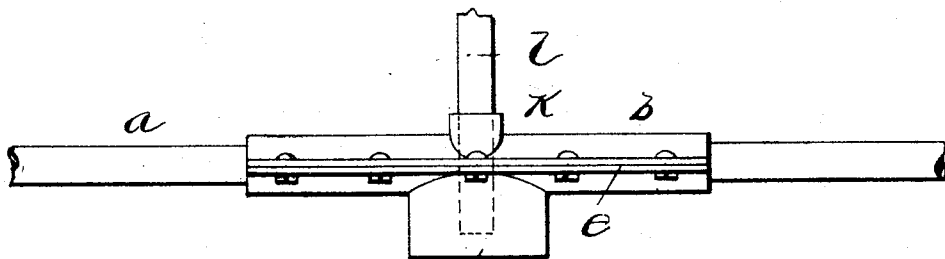


Fig. 2.

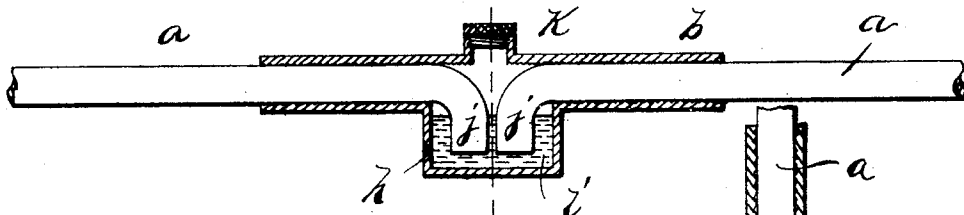


Fig. 3.

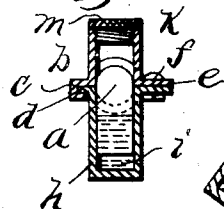


Fig. 6.

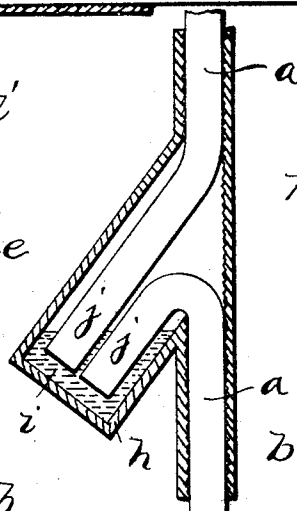


Fig. 4.

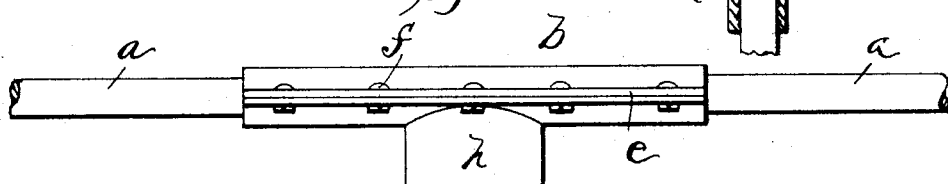
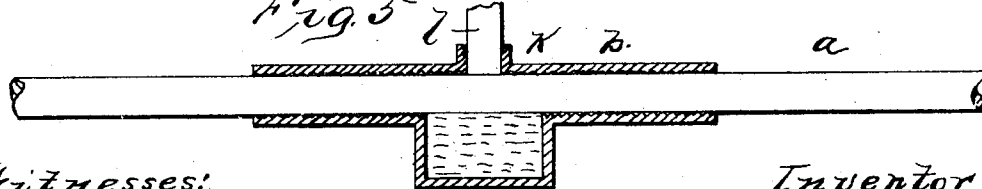


Fig. 5.



Witnesses:
E. C. Duffy
Hubert D. Bok

Inventor
J. M. Faulkner
per O. E. Duffy
Atty

UNITED STATES PATENT OFFICE.

JAMES M. FAULKNER, OF PHILADELPHIA, PENNSYLVANIA.

COUPLING FOR ELECTRICAL CONNECTIONS.

SPECIFICATION forming part of Letters Patent No. 537,920, dated April 23, 1895.

Application filed August 9, 1894. Serial No. 519,895. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. FAULKNER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Couplings for Electrical Connections; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in couplings for electrical connections.

The object of the invention is to provide an improved electrical coupling exceedingly simple, durable and economical in construction and composed of a minimum number of parts and which shall be most effective in attaining the end desired without leakage of current and forming an absolutely perfect and complete electrical coupling and contact.

The invention consists in certain novel features of construction and in combinations of parts more fully and particularly described and pointed out hereinafter.

Referring to the accompanying drawings, Figure 1 is a side elevation of a completed coupling constructed after the principle of my invention. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a cross sectional view. Fig. 4 is a side elevation of a coupling constructed in accordance with my invention without the side opening for a side connection. Fig. 5 is a longitudinal sectional view showing the coupling employed to electrically connect a side line to a continuous conductor. Fig. 6 is a longitudinal sectional view showing a form of coupling that can be employed to electrically connect vertical conductors.

In the drawings the reference letter *a*, indicates the two sections of the conductor to be electrically connected.

The coupling comprises the tube *b*, to surround the ends of the conductor sections. This tube is preferably formed in two longitudinal sections, an upper section and a lower section. These are preferably, although not necessarily divided in a horizontal plane. The sections are formed of such diameter as

to snugly fit the exterior of the conductor sections and firmly grip and hold the same against separation. To accomplish this end the inner surfaces of the sections are formed with teeth or serrations to grip into the conductor sections and thus hold the same. Also suitable means are provided to rigidly secure and clamp the sections together. For this purpose the sections are provided with the lateral flanges. One flange *c*, has a turned over edge, and the corresponding straight edge *d*, of the other section fits in the socket thus formed, while the other two flanges *e*, *e*, are drawn and secured together by bolts *f*. I merely describe this fastening means between the sections as a convenient expedient and do not limit myself to any particular means for securing the sections together. The lower section is provided with a cup, receptacle or depression *h*, in the lower portion of its inner surface containing a suitable quantity of mercury or the like, *i*, into contact with which the naked ends of all the conductor sections, to be coupled are brought. This can be accomplished by bending down the ends of the sections, see *j*, so that they will extend down into the mercury. However I do not limit myself to this as the mercury can extend up from the cup into the inner surface of the section into engagement with straight ends of the conductor sections.

If desired the upper section of the tube can have an upwardly extending tube *k*, directly above or near the mercury cup so that if side or shunt connections are desired it is merely necessary to pass the wire *l*, through said tube into the mercury cup. The device can be employed to connect a side line to a continuous line. See Fig. 5. A cap *m*, can be provided to close said tube when not in use, or if desired the coupling can be formed without this tube *k*, and I do not wish to limit myself to the same.

This coupling can be employed where the connections extend at any angle or position, and if vertically the mercury cup can extend down at an angle. See Fig. 6.

To those skilled in the art, the merit and many advantages of such an electrical connection as this must be apparent at once. There can be no leakage, and an absolutely perfect joint is assured as there is no oxida-

tion and consequent separation and insulation of the surfaces that should be in perfect electrical contact. It should also be observed that this electric coupling can be used in any
5 connection or for any purpose where it is desired to electrically connect parts, conductors or sections.

It is evident that various changes can be made, in the forms, constructions, and arrangements of the parts without departing
10 from the spirit and scope of my invention. Hence I do not wish to limit myself to the construction herein set forth.

Having thus fully described my invention, what I claim as new, and desire to secure by
15 Letters Patent of the United States, is—

1. The tubular sectional coupling, arranged to be secured on and embrace the line wire or wires one section of which has a mercury
20 cup or depression, the other section having an opening through which a side line can be inserted into said mercury as and for the purposes set forth.

2. The electrical coupling comprising the
25 tube formed of longitudinal sections arranged to tightly grip and hold the conductor, or conductors, and provided with a side cup having a body of mercury to engage and electrically connect the conductors, substantially as de-
30 scribed.

3. A coupling tube formed in longitudinal sections internally formed to rigidly grip the wire, and having fastening means, one of said sections provided with an internal mercury
35 cup or depression, substantially as set forth.

4. A coupling tube formed to embrace the conductors and having a mercury cup, substantially as set forth, and an opening opposite the mercury to receive side connections or the
40 like, said tube composed of longitudinal sections internally serrated to grip the wire and provided with means to clamp the sections together on the conductors substantially as set forth.

5. The coupling formed in two longitudinal
45 sections, each section having longitudinal side flanges, the flange of one section being doubled to overlap the straight flange of the other section, the opposite flanges being bolted together, one of said sections having an
50 internal depression containing mercury engaging the conductors, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of
55 two witnesses.

JAMES M. FAULKNER.

Witnesses:

HUBERT E. PECK,
C. M. WERLÉ.