J. J. WALSH.

ELECTRIC CONNECTOR.

APPLICATION FILED MAY 1, 1907.

918,617. Patented Apr. 20, 1909.

Fig. 1

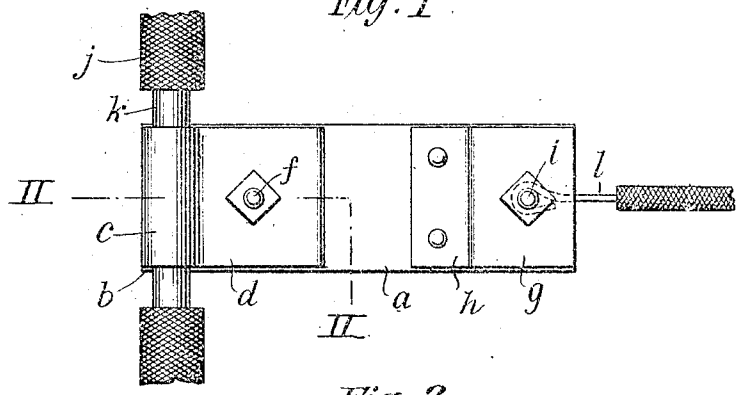


Fig. 2

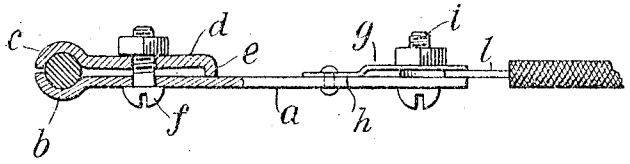


Fig. 3

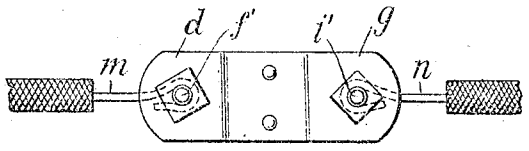
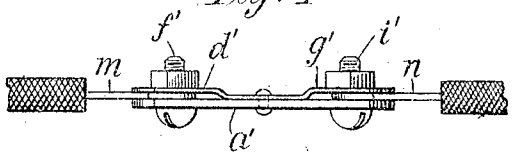


Fig. 4



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UNITED STATES PATENT OFFICE.

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ELECTRIC CONNECTOR.

No. 918,617. Specification of Letters Patent. Patented April 20, 1909.

Application filed May 1, 1907. Serial No. 371,303.

To all whom it may concern:

Be it known that I, JOHN J. WALSH, a citizen of the United States, residing at Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Electric Connectors, of which the following is a specification.

My invention relates to devices for connecting branch wires to electric mains, such as lighting mains, telephone lines, etc., and has for its object to provide an effective device for the purpose which shall be simple, effective in operation, and inexpensive to manufacture.

To these ends the invention resides in the novel features of construction and combinations of elements hereinafter described, and more particularly set forth in the appended claims.

Referring now to the drawing, Figure 1 is a plan view of the preferred form of the device for use with lighting mains or other conductors of considerable size. Fig. 2 is a side view of the same, partly in section, on line II.—II. of Fig. 1. Fig. 3 is a plan view of a simple form of the device, to be used for connecting small wires, or where a large and heavy conductor is not needed.

The base member of both forms of the invention is a strong and preferably rigid or inflexible plate of metal, for example copper or brass, of somewhat greater length than width.

In Figs. 1 and 2 the base-plate is indicated by *a*, and is of rectangular form. At one end it is formed with an upwardly concave portion *b* extending across the end and constituting a jaw to coöperate with the similar, but downwardly, concave end *c* of a clamping member *d* arranged on the base-plate as shown. The clamping member *d*, preferably of substantially the same width as the base-plate, extends to a point short of the middle of the base-plate, and is provided at its rear or inner end with a downwardly bent portion *e*, forming a lug or bead which bears on the said plate. Extending through both members *a* and *d*, at about the center of the latter, is a short bolt *f*. The clamping member *d* is of metal, and though thick and heavy, possesses some degree of resiliency. At the other end of the base-plate is another clamping member of the same size, indicated by *g*, also of spring metal but preferably considerably thinner than the corresponding member *d*. The member *g* has a downwardly bent portion *h* which is riveted or otherwise rigidly secured to the base-plate, as shown, leaving the rest of the said member normally spaced a slight distance from the base-plate. Passing through the plate *a* and member *g* is a bolt *i*. It is clear that both members *d* and *g* are capable of movement to and from the base-plate on the points of engagement therewith as fulcrums.

In using the connector, the conductor *j* to be tapped, say a lighting main, is bared of its insulation for a distance equal to or a little greater than the width of the connector, as at *k*. On this bared portion the curved jaws *b*, *c*, of the connector are placed and the bolt *f* is then tightened, binding the clamping member and the base plate firmly on the wire with good electrical contact. The bared tap or branch wire *l* is then, or has already been, placed around the bolt *i* between the member *g* and base *a*, and the bolt tightened, binding the two firmly on the wire. The pressure exerted by the clamping members *d* and *g* is of course yielding, by reason of the resiliency of these parts, thus putting a constant strain on the bolt-nuts and preventing the same from loosening.

The form illustrated in Figs. 3 and 4 is designed for lighter work, such as in telephone circuits, but consists of essentially the same elements as the other. The device of Figs. 3 and 4, however, does not have the curved clamping jaws of Figs. 1 and 2, both clamping members *d'* and *g'* being alike and preferably integral with each other. The two are conveniently made by striking down the central portion of a flat, relatively thin strip of spring metal, as shown, which central part is then riveted or otherwise rigidly fastened to the base member *a'*. In using this device the wires *m* and *n*, which are to be connected, are arranged between the base and the respective clamping members *d'*, *g'* like the wire *l* in Figs. 1 and 2, and the bolts *f'*, *i'*, are tightened up, binding the parts together with yielding pressure.

It will be seen that both devices are effective for the purpose in hand, and at the same time are simple in construction and use.

The devices described are of course merely illustrative of the invention, which may be

embodied in various forms without departing from its proper scope as defined by the following claims.

What I claim is:

1. A connector for electric conductors, comprising a substantially flat, rigid plate, a spring metal plate substantially coextensive with the rigid plate and secured thereto at a point intermediate its ends, the opposite end portions of the spring plate being spaced from the rigid plate, the end portions of said plates being formed with alining apertures, and fastening devices extending through said apertures to draw the said end portions toward each other.

2. A connector for electric conductors, comprising a rigid plate, a spring metal plate substantially coextensive with the rigid plate and laid in facial contact therewith at their intermediate portions, means for securing said plates together at said contacting portions, the end portions of one of said plates being flexed away from the other plate so as to be in substantially parallel spaced relation thereto, alining apertures in said end portions, and fastening devices extending through said apertures.

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