J. G. ELKIN.

CONNECTING CLIP FOR ELECTRICAL CONDUCTORS.

APPLICATION FILED JUNE 11, 1913.

1,096,699. Patented May 12, 1914.

Fig. 1,

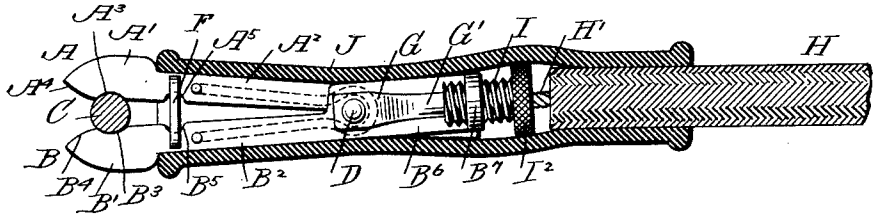


Fig. 2,

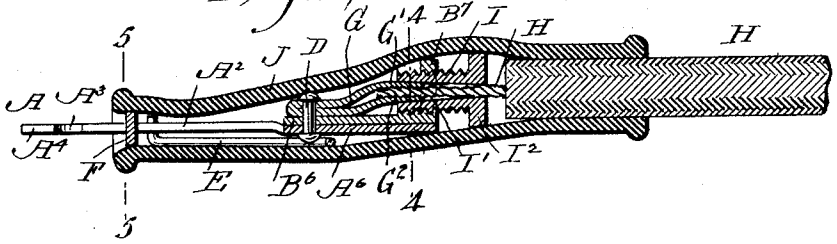


Fig. 3,

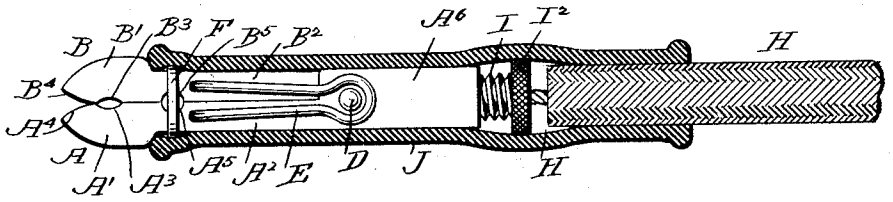


Fig. 4,

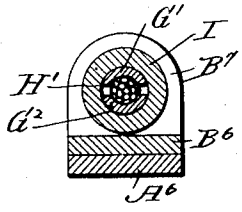


Fig. 5,

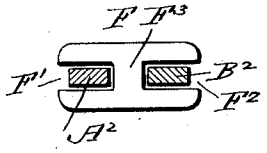
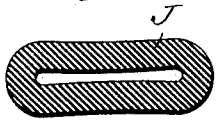


Fig. 6.



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CONNECTING-CLIP FOR ELECTRICAL CONDUCTORS.

1,096,699. Specification of Letters Patent. Patented May 12, 1914.

Application filed June 11, 1913. Serial No. 773,009.

To all whom it may concern:

Be it known that I, JACOB G. ELKIN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Connecting-Clip for Electrical Conductors, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved connecting clip for electrical conductors to permit the operator to securely fasten the clip to insulating conductor wire, and to allow of the clip being conveniently and quickly attached to or detached from a binding post or the like.

In order to accomplish the desired result, use is made of a pair of spring-pressed jaws pivotally connected with each other and adapted to engage a binding post or the like, a clamp held on the pivots of the jaws and adapted to engage the bare end of the wire conductor, and means for closing or opening the said clamp. Use is also made of a piece of rubber tubing inclosing the jaws except the heads thereof, and pressing the jaws inwardly toward each other to assist the spring of the jaws to hold the latter closed, the said piece of tubing also inclosing the said clamp and closing means for the same and extending onto the insulation of the conducting wire.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional plan view of the clip as applied; Fig. 2 is a longitudinal central section of the same; Fig. 3 is an inverted sectional plan view of the same; Fig. 4 is an enlarged cross section of the same on the line 4—4 of Fig. 2; Fig. 5 is a similar view of the same on the line 5—5 of Fig. 2; and Fig. 6 is a cross section of the rubber tubing.

The jaws A and B of the connecting clip are provided with heads A′, B′ adapted to clampingly engage a binding post C or the like, and the shanks A^2, B^2 of the jaws A and B are pivotally connected with each other by a pivot D and are pressed toward each other by a spring E having its ends attached to the shanks A^2, B^2 of the jaws A and B. The heads A′ and B′ of the jaws are arranged in the same plane and have their inner or opposite edges provided with recesses A^3, B^3 for engagement with the binding post C so as to insure a firm conduct with the peripheral face of the binding post. The forward inner edges A^4, B^4 of the heads A′, B′ are beveled in an outward direction so as to form an open mouth for readily engaging the heads A′, B′ with the binding post C with a view to spread the heads A′, B′ apart against the tension of the spring E until the recesses A^3, B^3 engage the peripheral face of the binding post C as plainly indicated in Fig. 1. In order to hold the jaws A and B in the same plane while opening and closing the jaws use is made of a retainer F provided with forks F′, F^2 straddling the shanks A^2, B^2 (see Fig. 5). The central bar F^3 of the retainer F extends between the shanks A^2, B^2 and the latter are provided at their inner edges with recesses A^5, B^5 in register with the central bar F^3 so as to allow the heads A′, B′ to close completely, as indicated in Fig. 3.

The heels A^6, B^6 of the shanks A^2, B^2 overlie one the other and are engaged by the pivot D so as to allow the jaws to swing laterally into an open or a closed position. On the pivot D is secured a clamp G having clamping members G′, G^2 adapted to engage between them the bare end H′ of the insulated conducting wire H. The free ends of the clamping members G′, G^2 of the clamp G extend into the base end of a conical bore I′ formed centrally in a bolt I screwing into an angular lug B^7 integrally formed on the rear end of the heel B^6 of the jaw B. The bare end H′ of the conducting wire H extends through the bore I′ to finally pass between the clamping members G′, G^2 which are pressed in firm contact with the said bare end H′ on screwing the bolt I forwardly in the lug B^7. The rear end of the bolt I is provided with a head I^2 adapted to be taken hold of by the operator for screwing up the bolt whenever it is desired to clamp the bare end H′ in position between the clamping members G′, G^2. By the arrangement described a very firm connection is had between the bare end H′ of the conducting wire H and the clip proper so as to insure a proper passage of the electrical energy.

A tube J, of rubber or similar material, and preferably flat in cross section, as indicated in Fig. 6, is stretched over the shanks

A², B² so as to assist the spring E in pressing the jaws A and B toward each other, and the said tube J also incloses the clamp G, the bolt I and the end portion of the insulation of the conducting wire H so that the several parts are well protected with the heads A′ and B′ only exposed at the front end of the tube for making connection with the binding post C.

The connecting clip for the electrical conductor shown and described is very simple in construction and can be readily attached to or detached from a binding post C or the like, and the bare end H′ of the conducting wire can be quickly and securely attached to the clamp G held on the clip proper.

The tube J by bearing on the head I² of the bolt I prevents accidental turning of the bolt, and by the use of the tube J the clip can be safely handled with the full current.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A connecting clip for electrical conductors, comprising a pair of spring pressed jaws adapted to engage a binding post, one of the jaws being provided with an angular extension, a clamp formed of two members carried by the jaws and adapted to receive the bare end of an insulated wire between them, and means mounted in the said angular extension and engaging the clamping members for closing them to clamp the wire therebetween.

2. A connecting clip for electrical conductors, comprising a pair of spring-pressed jaws adapted to embrace a binding post, a pivot connecting the shanks of the said jaws with each other, one of the shanks having a rearward extension provided with a flange having a threaded aperture, a sectional clamp held on the said pivot and adapted to engage the bare end of an insulated conductor, and a bolt screwing in the said flange and engaging the said clamp to close or open the latter.

3. A connecting clip for electrical conductors, comprising a pair of spring-pressed jaws adapted to embrace a binding post, a pivot connecting the shanks of the said jaws with each other, one of the shanks having a rearward extension provided with a flange having a threaded aperture, a sectional clamp held on the said pivot and adapted to clampingly engage the bare end of an insulated conductor, and a bolt screwing in the said flange and engaging the said clamp to close or open the latter, the said bolt having a bore for the passage of the said bare end.

4. A connecting clip for electrical conductors, comprising a pair of jaws arranged one alongside the other and provided with shanks having heels overlying one the other, a pivot connecting the said heels with each other, a spring having its ends connected with the said shanks to move the jaws toward each other, and a retaining member straddling both shanks in a transverse direction.

5. In combination, an insulated conductor having a bare end, a pair of jaws having heads, shanks, and a pivot connecting the said shanks with each other, one of the shanks having a rearward extension provided with a lug having a threaded aperture, a spring having its ends connected with the said shanks to close the jaws, a clamp held on the said pivot and engaging the said bare end, and a bolt screwing in the said threaded aperture and having a conical bore for the passage of the said bare end and for engaging the clamp to close the same on the bare end.

6. A connecting clip for electrical conductors, provided with an apertured member, a sectional clamp for engagement with the bare end of a conductor, and a bolt screwing in the apertured member of the clip and provided with a conical bore for the passage of the said bare end and for receiving the free ends of the sections of the said clamp to move the sections in clamping engagement with the said bare end.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB G. ELKIN.

Witnesses:
THEO. G. HOSTER,
PHILIP D. ROLLHAUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."