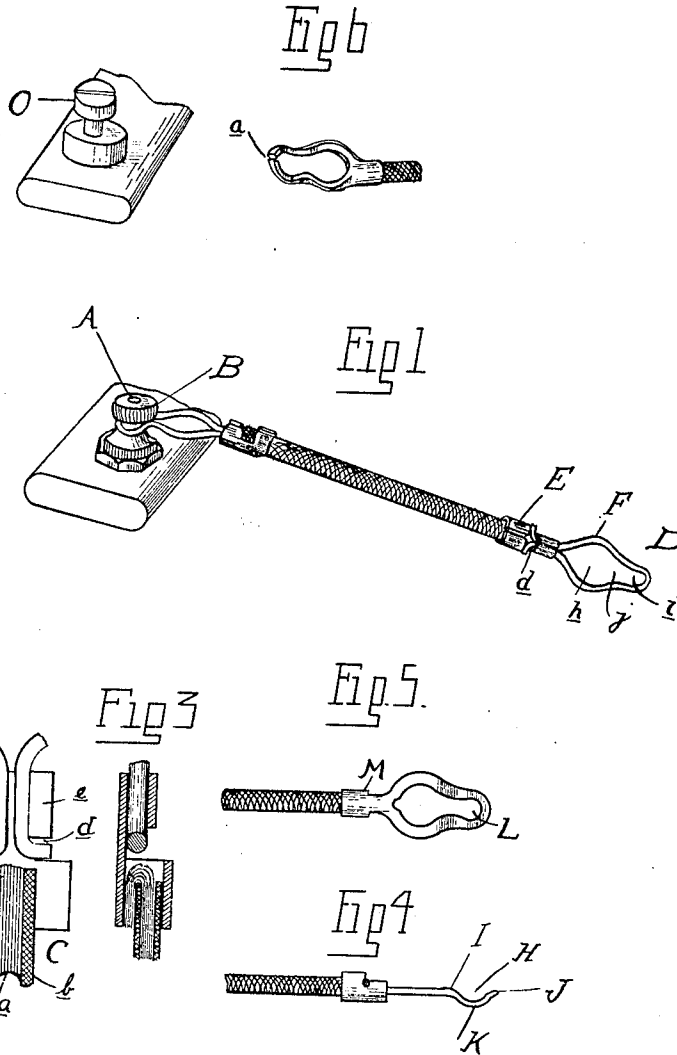


918,501.

Patented Apr. 20, 1909.



Witnesses
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UNITED STATES PATENT OFFICE

GEORGE W. BOLTON, JR., OF DETROIT, MICHIGAN.

CONDUCTOR.

No. 918,501.

Specification of Letters Patent.

Patented April 20, 1909.

Application filed October 15, 1907. Serial No. 397,486.

To all whom it may concern:

Be it known that I, GEORGE W. BOLTON, Jr., a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Conductors, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates particularly to a conductor tip especially designed in this instance for engagement with a binding post, such as a battery terminal, and it consists in the novel and peculiar construction of the tip and in the particular arrangement and combination of the various parts, as more fully hereinafter set forth.

In the drawings,—Figure 1 is a perspective view of the conductor tip applied to a battery terminal; Fig. 2 is an enlarged plan view of the attaching section blank and a portion of the body member of the tip; Fig. 3 is a vertical central section through the formed blank, showing the connection with the conductor; Fig. 4 is a side elevation of the tip; Fig. 5 is a modification; and Fig. 6 is a further modification, illustrating a different type of binding post.

For the purpose of illustrating the invention I have shown the conductor of a length to connect two adjoining battery terminals, the terminal being of the usual form, consisting of a threaded shank, as A, and the binding post head B in the form of a thumb-nut.

C represents a conductor, comprising the wire or conductor proper *a* and the insulation *b*, and D indicates the tip.

In construction, the tip comprises an attaching section E, preferably in the form of a tubular shank adapted to engage over the conductor end and have a suitable connection with the conductor proper, and a body section F, preferably loop-shaped in configuration.

In Figs. 1 to 3 I have shown the body and attaching section as formed in separate parts, the attaching member being formed from a blank, as *c*, notched transversely on opposite sides, as at *d*. The body member when used in connection with the attaching section described may be made of spring wire, bent into form as shown in the figures referred to and the ends secured by means of the lips *e*, which are bent upwardly and about the adjoining ends *f* of the body, as

plainly shown in Fig. 3. The marginal portions *g* of the body blank are adapted to be bent upwardly and over the conductor C, the conductor wire being first folded inwardly and rearwardly so as to contact with the attaching section in the manner indicated in Fig. 3. As thus constructed, the attached member not only forms a means for holding the body ends together in their proper position, but also the connection between the body and the insulated conductor.

In construction, the tip body is so fashioned as to form an opening *h* of a size to receive the head of the binding post or battery terminal, a smaller opening *i* beyond the opening *h*, and a restricted passage *j*, uniting the two openings, formed by converging the opposite sides of the body at opposite points intermediate the body ends. As thus constructed, the body may be placed directly over the head of the nut B, and then by drawing the tip the neck or shank of the nut may be brought within the opening *i*, the sides of the body being necessarily sprung apart as the neck of the nut passes through the restricted opening or passage. Thus, the body automatically clamps the battery terminal, and in addition to permitting a ready engagement between the parts forms an effective electrical contact.

For the purpose of effecting a still better engagement between the parts, I so fashion the body that it will be provided with a plurality of contacting portions lying substantially in the same plane, adapted preferably to engage the under side of the nut head, and similar contacting portions lying in a different plane from the first-mentioned contacts, but in substantial parallelism therewith, adapted to engage the lower portion of the nut, as hereinafter set forth.

The several contacts described are made preferably by forming in the end of the tip body distant from the shank a transverse trough-shaped depression, as H (Fig. 4). As thus fashioned, contacting portions I and J are formed in substantially the plane of the body, as indicated, and similar contacting portions K in a different plane, substantially in parallelism with the body.

The portions I and J, as shown in Fig. 1, engage beneath the nut head and contact therewith, while the contacting portions K extend below the other contacts in engagement with the neck portion of the nut, the several contacts coöperating to hold the head

members of the tip tightly in engagement with the binding post, thus forming the desired contact and at the same time permitting the ready disengagement of the parts.

5 In Fig. 5 I have shown a modified form of tip, in which the attaching section L and body member M are formed from a single piece of metal. With this difference, the tip is practically of the same construction as
10 that heretofore described.

While I have shown the tip as adapted to be looped over the nut of the battery terminal, or the head portion, of any binding post, thus permitting ready contact to be made; it
15 is to be understood that if desired the body portion of the tip may be so proportioned as to engage the stem or threaded shank of the battery terminal in the same manner as the nut proper, the converging of the body sides
20 causing the tip to clamp the shank and form the desired contact.

In the modification illustrated in Fig. 6, the tip is shown as formed of a heavier metal and the body sides made independent of one
25 another by cutting the loop or body portion at its extremity, as indicated at *a*. In this form of tip, the sides are sprung apart as the neck or shank of the binding post passes through the restricted passage, and automatically spring together, as the neck enters the
30 lesser opening in the body, thus clamping about the binding post and forming the contact in the same manner as previously described. The binding post is also of a
35 different type, but one in common use, the head O being in the form of a screw engaging the binding post proper. The manner of engaging the tip, however, is practically the same, the body being looped over the
40 head of the screw and contact made with the screw shank in the manner previously set forth.

What I claim as my invention is,—

1. In a conductor tip, an open-centered
45 body having longitudinally disposed contacting portions lying in substantially the same plane, and a contacting portion intermediate the first-mentioned contacts and lying in a different and substantially parallel
50 plane therewith.

2. A conductor tip, comprising an attaching section and an open-centered body of spring metal having spaced longitudinally-disposed contacting portions in a plane of
55 the body, and a contacting portion intermediate

the spaced portions and lying in a different plane parallel with the body.

3. A conductor tip, comprising an attaching section adapted to be secured to the conductor, and a substantially flat loop-shaped
60 body member having a transverse trough-shaped depression formed in its end portion distant from the attaching section.

4. A conductor tip, comprising an attaching section and a loop-shaped body of spring
65 metal, the body sides at opposite points intermediate the ends converging, and the loop end distant from the attaching section and beyond the diverging portion having a transverse trough-shaped depression formed
70 therein.

5. A conductor tip, comprising a tubular shank section and an open-centered body alining with the shank, and having a
75 trough-shaped depression formed transversely therein.

6. A conductor tip, comprising a tubular shank section adapted to receive the conductor, and a loop-shaped body member of
80 spring metal, the loop sides at opposite points intermediate the ends converging, and the portions of the sides therebeyond having each a trough-shaped depression formed transversely therein, for the purpose described.
85

7. A conductor tip, comprising an attaching section and an open-centered body having a trough-shaped depression formed transversely therein.

8. A conductor tip, comprising an attaching
90 section, and a body of spring metal having an elongated opening formed therein and its end distant from the attaching section upturned.

9. A conductor tip, comprising an attaching
95 section, and a body of spring metal provided with an opening adjoining the attaching section, and a communicating opening beyond and of less size than the first-mentioned opening, the body having an upwardly
100 extending contacting portion formed therein beyond said first-mentioned opening.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. BOLTON, Jr.

Witnesses:

AMELIA WILLIAMS,
JAMES P. BARRY.