J. SCHADE, JR.
SPRING FASTENING DEVICE.
APPLICATION FILED APR. 18, 1908.

1,049,609.

Patented Jan. 7, 1913.

Fig. 1

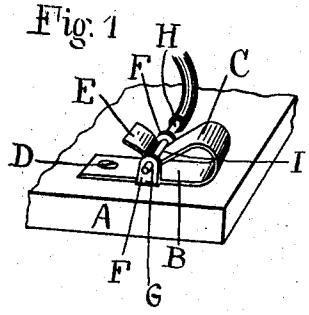


Fig. 2

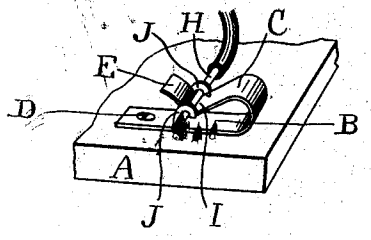


Fig. 3

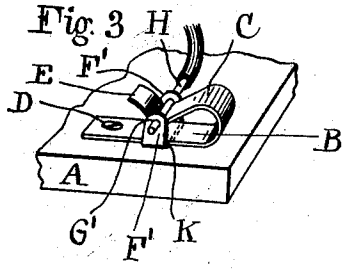


Fig. 4

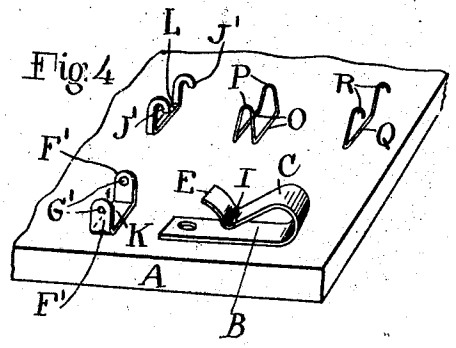


Fig. 5

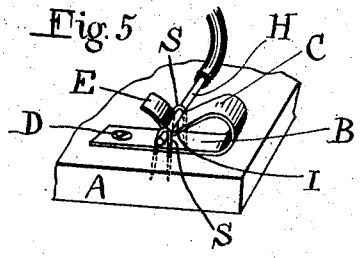


Fig. 6

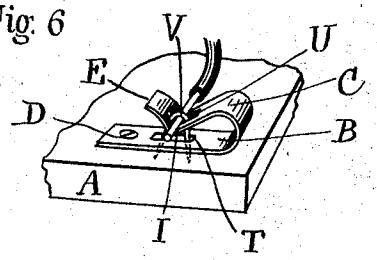


Fig. 7.

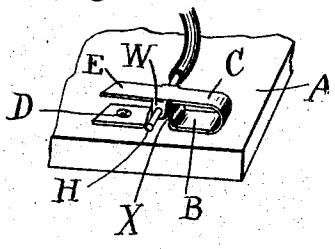
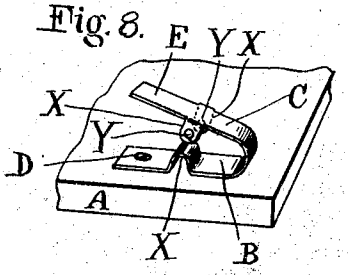


Fig. 8.



Witnesses
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By his Attorneys Bacon & Ogden

UNITED STATES PATENT OFFICE.

JOHN SCHADE, JR., OF NEW YORK, N. Y., ASSIGNOR TO FAHNESTOCK ELECTRIC COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF WEST VIRGINIA.

SPRING FASTENING DEVICE.

1,049,609. Specification of Letters Patent. Patented Jan. 7, 1913.

Application filed April 18, 1908. Serial No. 427,903.

To all whom it may concern:

Be it known that I, JOHN SCHADE, Jr., a citizen of the United States, and resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Spring Fastening Devices, of which the following is a specification, accompanied by drawings.

This invention relates to spring terminal clips or fastening devices for the terminals of the electrical conductors, and the objects of the invention are to enable the conductor to be firmly gripped and clamped in defined position, permit the ready insertion and removal of the conductor, and insure good electrical contact at all times between the conductor and the fastening device.

This application is in part for matter shown and described but not claimed in my Reissue Patent No. 12642, granted April 28, 1907, with additional features.

Further objects of the invention will hereinafter appear, and to these ends the invention consists of a fastening device for carrying out all of the above objects embodying the features of construction, combinations of elements, and arrangement of parts, having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a fastening device embodying the invention; Fig. 2 is a perspective view of a modification of the same; Fig. 3 is a perspective view of another modification; Fig. 4 is a view in perspective of several different forms of elements which may be combined to make the fastening device; Figs. 5 and 6 are perspective views of modifications; Fig. 7 is a perspective view of another modification; and Fig. 8 is a perspective view of the modification shown in Fig. 7 with the parts in a different position.

In the preferred form of the invention, the fastening device is adapted to be secured to a base or support A, although the invention may be used in any connection in which it is found applicable. The main portion of the device, comprising the body member B and the spring member C is preferably made from a single piece of resilient material as for instance metallic ribbon.

Referring more particularly to Fig. 1, the metallic ribbon is bent into substantially U-shaped form as indicated, thus forming the flat body member B adapted to be secured to the base or support, as by means of the bolt or screw D, and the spring member C which is normally separated from the body member and adapted to be pressed toward the body member by means of the thumb piece E. The body member is provided in Fig. 1 with integral ears or tabs F, extending in longitudinal planes at each side of the body member, which together form the stationary resistant member. These ears F as shown are provided with apertures G for the insertion of a conductor H. The ears F are substantially parallel to the longitudinal axis of the body member and bent upwardly at an angle to the body member B, so that the conductor may be thrust through the apertures G from side to side. The spring member C is preferably bent intermediate its length at I to form an angular wire retaining portion.

In the operation of the device, the spring member C is forced toward the body member B until the bend I of the body member is below the apertures G, then the conductor H is inserted through said apertures as indicated, and the spring member is released, thereby securely clamping the conductor in position. The other terminal of the circuit is connected in any suitable manner to the bolt or screw D.

In Fig. 2, instead of providing the ears or tabs with apertures, portions of the tabs are removed or cut away leaving hook shaped resistant members J under which the conductor is placed and clamped in position by the retractive force of the spring. In Fig. 2 these hooks are shown integral with the body member B. Both the forms of device shown in Figs. 1 and 2 may be stamped or otherwise cut out of sheet metal and bent into the desired form.

In Figs. 3 and 4 modifications of the device are shown in which the tabs or ears are separate and independent from a main portion of the device. The ears F′ provided with the apertures G′ are shown formed out of a separate strip of metal K bent into U-shaped form and adapted to be slipped under the body member B as indicated in Fig. 3. A separate strip of metal L may also be provided with the hooks J′ or else the resistant member may be formed out of wire as indicated in Fig. 4 wherein a piece of wire is doubled and bent into U-shaped

form, comprising the body portions O and the loops P. The body portions O are adapted to be slipped under the body member B, with the loops P projecting upwardly at each side of the spring member C. A single piece of wire Q may also be used provided with the hooks R as indicated in Fig. 4.

In Fig. 5 separate loops or staples S are driven into the base or support A at each side of the body member B to form the resistant member through which the conductor H is inserted.

In Fig. 6 the body and spring members of the device are provided with the slots T and U respectively and a single wire staple or loop V is driven into the base or support A and adapted to lie in the slots T and U.

In Fig. 7 the ears or tabs W are provided on the spring member C instead of on the body member, while the body member is provided with the bent portion X forming the resistant member. In this latter form of the device shown in Figs. 7 and 8 the spring member is pressed toward the body member in order to insert the wire through the apertures Y in the ears, and beneath the bent portion X of the body member as indicated in Fig. 7.

I am not to be understood as limiting the invention to the forms of device shown in the drawings, for the device may obviously be made in many varying forms without departing from the spirit of the invention as defined by the appended claims.

I claim and desire to obtain by Letters Patent the following:

1. A fastening device for electrical conductors, comprising a piece of resilient metal bent into U-shaped form, one leg of the U-shaped piece forming a body member, and the other leg forming an opposing spring member normally separated from the body member, one member being bent to form a V-shaped retaining portion, the apex of which extends toward the opposing member, and resistant members extending in longitudinal planes at each side of the fastening device and lying opposite to each other in a transverse plane, the said resistant members lying outside of the said V-shaped retaining portion and being constructed to receive and hold a conductor thrust transversely through the retaining portion and through said resistant members.

2. A fastening device for electrical conductors, comprising a piece of resilient metal bent into U-shaped form, one leg forming a body member and the other leg forming a spring member opposed to the body member, and a separate U-shaped resistant member adapted to embrace the body and spring members and having means for retaining a conductor.

3. A fastening device for electrical conductors, comprising a piece of resilient metal bent into U-shaped form, one leg forming a body member and the other leg forming a spring member opposed to the body member, and a separate U-shaped resistant member, adapted to be secured to the body member, the legs of said resistant member extending toward the spring member and having means for retaining a conductor.

4. A fastening device for electrical conductors, comprising a piece of resilient metal looped on itself to form a spring and having one end bent in a reverse direction to the loop to form with the bend of the loop an angular wire-engaging portion, and a resistant member formed of wire located at the opposite end of the loop and having an aperture for receiving a conductor, whereby when the spring is forced toward the resistant member, a conductor may be inserted in the said wire-engaging portion and through the aperture in the resistant member and be firmly gripped in defined position by the retractive force of the spring.

5. A fastening device for electrical conductors, comprising a body member, a resistant member formed of wire projecting upward from the body member and having an aperture to receive a conductor, and an opposing spring member projecting upwardly from the body member at the forward end of the body member, then downwardly toward the resistant member and in proximity thereto, then upwardly away from the body member, thereby forming a wire-engaging portion adapted to coöperate with the apertured resistant member to firmly grip and hold a conductor in defined position by the retractive force of the spring.

6. A fastening device for electrical conductors, comprising a piece of resilient metal bent into U-shaped form, one leg of the U-shaped piece forming a body member, and the other leg forming an opposing spring member normally separated from the body member, one member being bent to form an angular retaining portion extending toward the opposing member, and a resistant member extending in a longitudinal plane at one side of the fastening device, the said resistant member lying outside of the said angular retaining portion and being constructed to receive and hold a conductor thrust transversely through the retaining portion and through said resistant member.

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

JOHN SCHADE, JR.

Witnesses:
HENRY A. ROBERTS,
ERNEST B. FAHNESTOCK.