March 26, 1929. A. P. FAHNESTOCK 1,706,659

WIRE TERMINAL

Filed Aug. 9, 1924

Fig. 1.

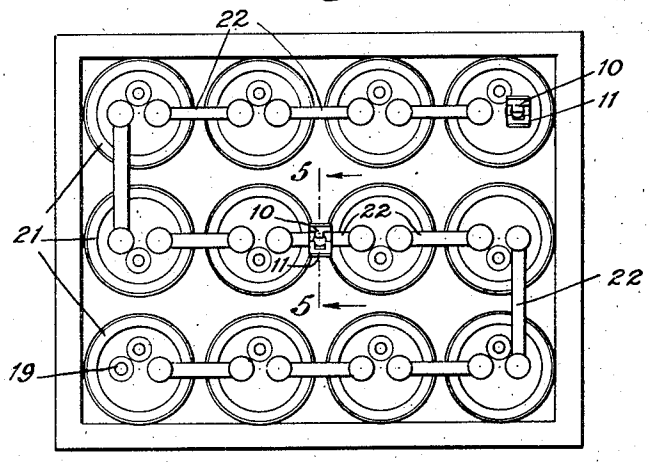


Fig. 2.

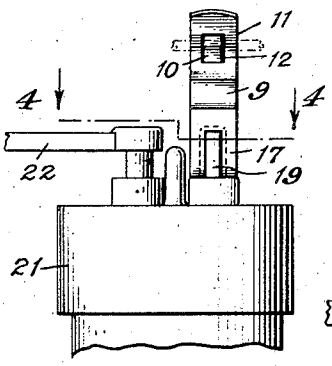


Fig. 3.

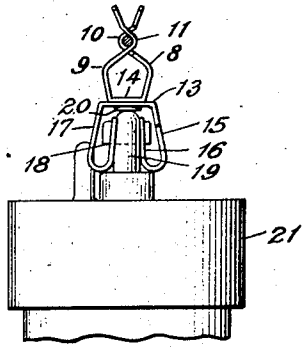


Fig. 4.

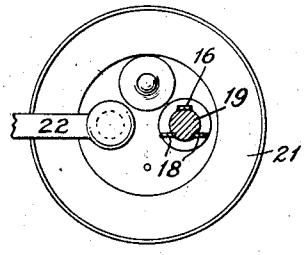


Fig. 5

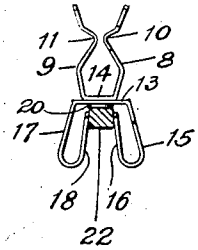


Fig. 7.

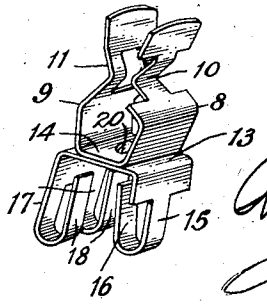
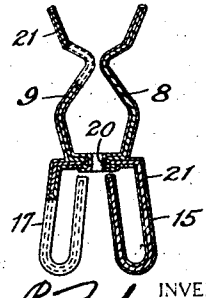


Fig. 6.



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Patented Mar. 26, 1929. 1,706,659

UNITED STATES PATENT OFFICE.

ARCHER PLEASANT FAHNESTOCK, OF PLANDOME, NEW YORK, ASSIGNOR TO FAHNESTOCK ELECTRIC COMPANY, OF LONG ISLAND CITY, NEW YORK, A CORPORATION OF WEST VIRGINIA.

WIRE TERMINAL.

Application filed August 9, 1924. Serial No. 731,009.

The present invention relates to wire terminals.

In addition to the general objects of this invention, which are to provide a particularly simple, practical, inexpensive and efficient wiring terminal, special objects of the invention are to provide a terminal which can be quickly applied to the wet cell type of "B" batteries now used in radio work and which while readily detachable will make positive and secure electrical connection in any one of many possible adjustable engagements.

Other objects and the novel features of construction, combination and relations of parts by which such objects are attained will be set forth in the following specification.

In the drawing accompanying and comprising part of this specification the invention is illustrated embodied in only one form but it should be understood that the structure may be changed and modified in various ways without departure from the spirit and scope of the invention, as hereinafter described and broadly claimed.

In said drawing:

Fig. 1 is a plan view of a multiple cell battery with two applications of the terminal clip shown.

Fig. 2 is an enlarged broken view of the cell shown in the upper right hand corner of Fig. 1 with the clip on the free terminal of the same.

Fig. 3 is a side elevation of the structure of Fig. 2 as viewed from the right.

Fig. 4 is a horizontal section on the line 4—4 of Fig. 2.

Fig. 5 is an enlarged transverse section on the line 5—5 of Fig. 1.

Fig. 6 is a further enlarged vertical central section of the clip covered with a lead coating.

Fig. 7 is a perspective view of the clip.

The wire receiving portion of the terminal is illustrated as of the well known "Fahnestock" type, embodying a pair of spring jaws 8, 9, having transversely indented wire gripping portions 10, 11, the first of which extends through an opening 12 in the second when the two are pinched together into the overlapping wire gripping relation pictured in Figure 3.

The battery terminal engaging portion is shown in the form of a flat base part 13, secured in back-to-back relation to the flat base 14 of the wire gripping portion, having dependent from one side of the same a relatively narrow spring strip 15, doubled back upon itself to form an introverted spring contact finger 15 and from the opposite side a pair of spring strips 17, doubled back toward the base in the form of introverted tongues or fingers 18. This entire portion is usually made of a single piece of spring sheet metal with the parts cut so that the single finger 16 stands opposite the space between the pair of fingers 18, providing the triangular relation shown in Figure 4, whereby a battery pole 19, or the like, engaged by the device will be gripped between the two cut edges of fingers 18 and the flat face of finger 16. Also preferably the space between fingers 18 is at least as great as the width of finger 16 so that to increase the gripping force the opposed gripping fingers may be squeezed together, past the center line until the single finger passes in between the other two.

The wire gripping section of the device also is usually formed of a single piece of spring strip stock and the two parts are conveniently secured in their back-to-back relation by a single tubular rivet extension 20 on one, engaged through an opening provided in the other.

Some of the uses of the clip are illustrated in Figure 1, where a wet cell "B" battery is shown made up of cell units 21, joined by connector bars 22, the end cells having the cylindrical terminal posts or pins 19. In this view one of the clips is shown forced down over the terminal post of the end cell in the upper right hand corner and a second clip is shown forced down over the connector bar at the middle of the battery. In forcing the clip down over the post, the sharp edges, of the two fingers 18, held by the tension of finger 16, cut into the material of the post as in Figure 4, and make clean solid contact and Figure 5 shows how in the second case a three point engagement is effected with the opposite sides of the connector strips, establishing a flat firm full-areal contact. In both instances, it is simply necessary to push the clip down over the part which is to be wired. Disconnection is effected just as easily by simply pulling the

clip straight off, but the grip of the three fingers is sufficient to prevent any accidental disengagement.

The introversion of the spring fingers provides length and resiliency enabling the fingers to adapt and fit themselves to the shape of the battery post or other conductor. Thus these fingers stand parallel in gripping a parallel-sided object or turn at various angles to take firm hold of angular, curved or irregular shaped bodies.

If desired, the clip may be sheathed with a non-corrosive cover 21, of lead or the like, such as indicated in Figure 6. This sheath, in the case of a two-part clip, such as illustrated, has the further effect of unifying the parts both in an electrical and a mechanical sense and overcomes the possibility of one part twisting with respect to the other about the center provided by the rivet connections between the two.

The triangularly related and relatively long spring attaching fingers on the base of the clip support the wire gripping head of the clip in elevated position where it can be readily manipulated for attachment and detachment of the wire. The push and pull attachability and detachability of the clip make it particularly desirable for testing purposes when quick changes of connections are required and the structure assures that good contact will be made without requiring the user to exercise any special care.

What is claimed, is:

A wire terminal having a lower post engaging portion comprising a flat rectangular plate provided with downwardly extending flanged ends of the same width as the plate, a pair of spaced fingers extending downwardly from one end flange, and a single finger extending downwardly from the middle of the other end flange opposite the space between the pair of fingers, said fingers being each bent inwardly and upwardly to lie parallel to the downwardly extending portions; in combination with an upper wire clamping member comprising a flat rectangular plate fixed to the first plate and having upturned end flanges at the ends adjacent the first mentioned flanges, said last flanges having their middle portions of V-shape with the points of the V's directed toward each other, the V-shaped portion of one flange having a rectangular opening therein and the V-shaped portion of the other flange being of a width to pass through said opening.

In testimony whereof I affix my signature.

ARCHER PLEASANT FAHNESTOCK.