

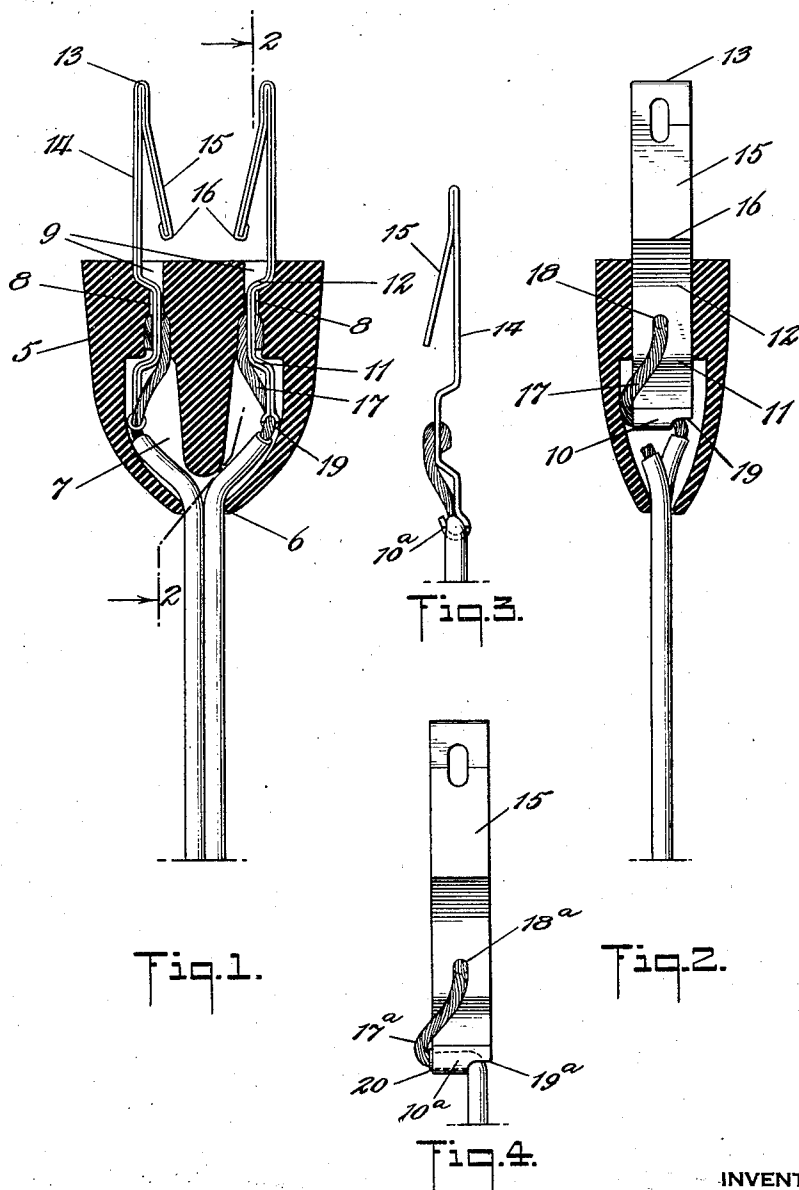
Nov. 2, 1943.

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2,333,152

ATTACHMENT PLUG

Filed May 21, 1942



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2,333,152

ATTACHMENT PLUG

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Application May 21, 1942, Serial No. 443,989

2 Claims. (Cl. 173—361)

The invention here disclosed relates to electric attachment plugs and the present application is a continuation-in-part of application for patent Ser. No. 394,069 filed May 19, 1941, Patent 2,292,049 issued August 4, 1942.

Special objects of this invention are to enable use of particularly light and inexpensive strip metal for the contact blades, without sacrificing strength or stability and to enable easy and secure fastening and connection of the wires to the blades, without soldering or requiring other fastening means.

These and other desirable objects are attained by the novel features of construction, combinations and relations of parts hereinafter described, illustrated in the accompanying drawing and broadly covered in the claims.

The drawing illustrates certain practical commercial embodiments of the invention, it being appreciated that structure may be further modified and changed in various ways, all within the intent and broad scope of the invention as hereinafter defined and claimed.

Fig. 1 is a broken sectional view of an attachment plug embodying features of the invention.

Fig. 2 is a sectional view as on substantially the plane of line 2—2 of Fig. 1.

Figs. 3 and 4 are detail views of a modification.

In the drawing, the plug base or plug cap 5, is shown as of the soft rubber type having a cord passage 6, at the back, opening into a terminal chamber 7, and narrow blade passages 8, extending through from said chamber to blade seats 9, at the front.

The contact blades are shown in Figs. 1 and 2, as consisting each of a strip of quite thin metal doubled upon itself at the inner or terminal end to form a loop 10, for receiving the wire and the doubled portions bent to provide the two offsets 11, 12, for disposition at opposite ends of the blade passage to anchor the blade in place and doubled back as at 13, to form the stem 14, and divergent spring branch 15.

To avoid sharp exposed edges, the end of the inner layer at the tip of the spring branch may be bent inwardly and upwardly over the edge of the other layer, substantially as indicated at 16.

The wires may be engaged and held in the terminal loops 10, in various ways. For example, the two layers may be sprung apart as by means of an inserted edged tool and the wire simply entered in between the layers and the

loop allowed to close upon the inserted wire. In such case, parts of the wire could be first scraped bare, so that good electrical contact would be effected upon the closing of the loop upon the inserted wire.

In the first illustration, the bared portion 17, of the wire is shown extended through the loop and brought up over the inner face of the contact and passed through an opening 18, through to the outer side of the contact, thus to locate bared portions of the wire at opposite sides of the contact, where it will be clamped by the resiliency of the plug material against opposite faces and hence against both the layers of the two ply contact.

To facilitate entry of the wire between the spring layers of the contact, one or both layers of the doubled portions may be notched at one or more points as indicated at 19. When these notches are located at the terminal loops, the wires may be used as wedges to assist in spreading the layers apart for receiving the wires.

Because of the fact that the two layers are in flat face to face engagement their full extent, except for the loop left at the terminal end to receive the wire, they fully reinforce each other and this enables a very light, thin, flexible and inexpensive form of metal strip to be used.

In the modified form of the invention illustrated in Figs. 3 and 4, the contact blade is made of a single thickness of material, but provided with a terminal loop 10a at the inner end of the same, similar to the loop 10 in the first illustrated form of the invention.

Figs. 3 and 4 further show how the wire may be held by engaging an insulated portion 20, of the wire in the loop. The holding loop then provides a very effective strain relief. The insulated portion of the wire is squeezed and frictionally held in the spring loop, this insulated gripped portion of the wire extending transversely across the width of the blade and the wire leaving the loop through the notch 19a, at a sharp substantially right angle bend. The bared end portion 17a of the wire likewise is sharply bent at the opposite edge of the blade and may be there left free to engage one side of the blade or be passed through an opening 18a, to engage both sides of the blades when the blade is seated in its final position in the rubber cap.

Instead of a notch at only one end, the terminal loop may be notched at both ends to accommodate the wire and avoid increasing the overall width of the blade. Also, if desired, the end of

the loop in the single thickness form of the blade may be curled back somewhat to provide a tapered entrance into the loop, enabling the insulated portion of the wire to be pulled into the loop with a wedging action.

What is claimed is:

1. An attachment plug comprising a plug base and contacts having terminal portions seated in said base and spring blade portions projecting from the base, said contacts consisting each of thin strip metal folded on itself midlength into a wire receiving loop and having the folded portions extending continuously in flat contacting relation from said wire receiving loop and said flat engaging portions sharply folded back upon themselves into a double layer spring branch, the ends of the strip being located in said double layer spring branch and the doubled midlength portion of the strip which forms the wire receiving loop constituting the wire terminal portion of the contact and being located wholly within the plug base.

2. An attachment plug comprising a plug base and contacts having terminal portions seated in said base and spring blade portions projecting from the base, said contacts consisting each of thin strip metal folded on itself midlength into a wire receiving loop and having the folded portions extending continuously in flat contacting relation from said wire receiving loop and said flat engaging portions sharply folded back upon themselves into a double layer spring branch, the ends of the strip being located in said double layer spring branch, with the end which is outermost, extended and doubled around the other, underlying end to form a guard and the doubled midlength portion of the strip which forms the wire receiving loop constituting the wire terminal portion of the contact and being located wholly within the plug base.

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