

Oct. 10, 1950

S. M. DEL CAMP

2,525,210

SOCKET CONTACT

Original Filed May 4, 1946

FIG. 1.

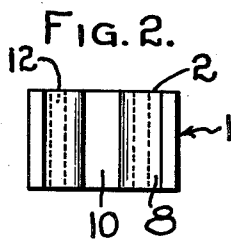
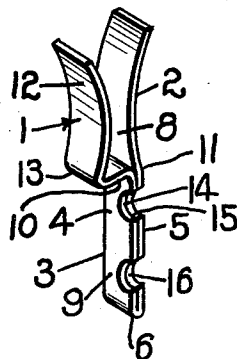


FIG. 3.

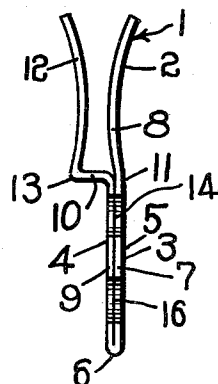


FIG. 4.

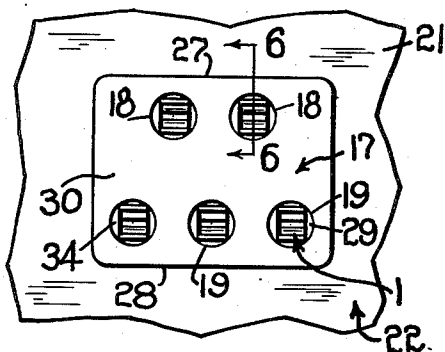
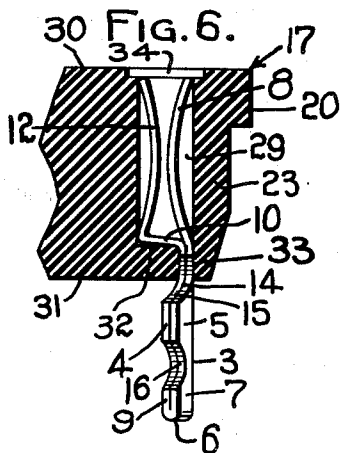
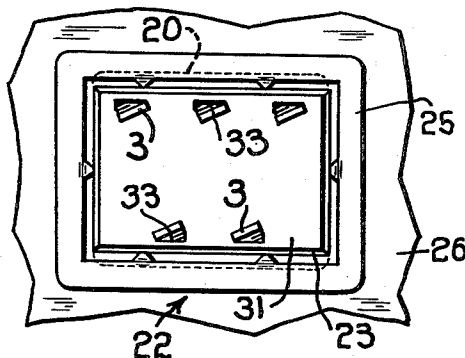


FIG. 5.



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2,525,210

SOCKET CONTACT

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Continuation of application Serial No. 667,427,
May 4, 1946. This application January 16, 1948,
Serial No. 2,610

1 Claim. (Cl. 173—328)

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The present invention relates to improvements in socket members of the type assembled with an insulating body member and adapted to receive and make an electrical connection with a pronged electronic tube.

This application is a continuation of pending application, Serial No. 667,427, filed May 4, 1946.

One object of my invention is the provision of a socket contact constructed in a novel manner enabling it to be used with miniature socket members such as are now used in hearing aid apparatus. Thus, the socket contact of my present invention is shaped in a novel manner permitting the wiring terminals thereof to be disposed at maximum distances apart when a plurality of the socket contacts are assembled with a socket body.

Other objects and uses of my invention will be apparent from an inspection of the accompanying drawing and annexed specification in which I have illustrated and described a preferred embodiment of my invention.

In the drawings:

Fig. 1 is a perspective view of my improved socket contact;

Fig. 2 is a top view of the contact shown in Fig. 1;

Fig. 3 is a side view of the contact shown in Fig. 1;

Fig. 4 is a top view of a socket body member secured to a support and carrying a plurality of my improved socket contacts;

Fig. 5 is a bottom view of the installation shown in Fig. 4; and

Fig. 6 is an enlarged section taken along the line 6—6 of Fig. 4.

Referring to the drawings, I have shown in Figs. 1 to 3 my preferred socket contact member 1, having a prong receiving portion 2 at one end for receiving a prong (not shown) of a cooperating electronic tube and a terminal portion 3 at an opposite end for attachment of a lead wire to the contact member. The socket contact member 1, in my preferred form, is formed of a single piece of ribbon-like metal folded intermediate its ends to provide a pair of legs 4 and 5 having their broad surfaces in opposed relation. The leg portions 4 and 5 are joined together by a bight element 6 which effects, as will be understood by those skilled in the art, the necessary resilience for causing an efficient electrical connection.

With reference to the detailed construction of the socket contact member 1, the leg 5 has a relatively straight portion 7 adjacent the bight 6

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and extending for approximately one-half the length of the contact member. An element 8 which may normally be slightly bowed is integrally joined to the straight element 7 and extends therefrom to the opposite end of the contact member from the bight 6. The leg element 4 has a substantially straight element 9 adjacent the bight 6 and extending from the bight, in my preferred form, in abutting relation to the straight element 7 of the leg 5. The leg 4 has a shoulder portion 10 extending laterally outwardly from the leg 5 at a point intermediate the ends of the leg 4 substantially opposite the point 11 of the leg 5 at which the element 8 is joined to the straight element 7. The leg 4 has an element 12, which may normally be slightly bowed, integrally joined to the outermost end 13 of the shoulder 10 and extending to the opposite end of the contact member from the bight 6. The elements 8 and 12 are arranged to engage between them a prong of a cooperating electronic tube (not shown) and are constructed to effect a flared opening at the end of the contact member opposed to the bight 6 providing a lead for receiving a tube prong therebetween. The terminal portion 3 of the contact member preferably has a notch 14 extending into the outer edges of the abutting straight elements 4 and 5 and providing a shoulder 15 for a purpose to be described. The terminal portion 3 may also have a similar notch 16 providing a recess into which a lead wire (not shown) may be wrapped and soldered. The inventive feature of the present contact member is considered to be embodied primarily in the construction of the contact member wherein the shoulder 10 is formed on one side only of the member.

Referring to Figs. 4 to 6, I have illustrated my improved socket contact members assembled with a socket body 17 which is preferably formed from one piece of insulating material. In the form of socket body in which I have chosen to illustrate my invention, the body provides a pair of contact-receiving apertures 18 on one side and a row of three contact apertures 19 on the opposite side. The socket body 17 has a support-engaging bead 20 (Fig. 6) adjacent one end of the body for engagement with the upper surface 21 of a supporting plate 22 and a portion 23 of reduced diameter adapted to extend through an opening 24 of the plate 22 in a manner well-known in the art. The socket body 17 may be secured to the support 22 by any suitable means such as the attaching member 25 forced over the portion 23 of the socket body preferably into

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engagement with the lower surface 28 of the support 22 as described in detail in my aforementioned copending application, Serial No. 667,427. The series of openings 18 and 19 are disposed as closely as possible to the respective sides 27 and 28 of the socket body and are formed preferably identically to provide a rectangular main opening 29 extending from the upper face 30 of the body toward the lower face 31 and terminating short of the lower face to form an abutment 32 as shown in Fig. 6. A narrow slot 33 (Fig. 6) forms a continuation of the main opening 29 and extends through the body to intersect the lower surface thereof. The slot 33 is provided as a continuation of the plane of that side of the main opening 29 nearest the outer side of the socket body, as shown in Fig. 6. Each of the main openings 29 may terminate adjacent the face 30 of the socket body in a circular recess 34 for facilitating entrance of the tube prongs into the rectangular main openings.

In assembling a socket contact member within an opening 18 or 19, the terminal portion 3 of the contact member is moved into the rectangular opening 29 from the upper side of the socket body to engage the shoulder 10 with the abutment 32 of the socket body. At the conclusion of this action, the terminal portion 3 will extend through the slot 33 and beyond the lower surface 31 of the socket body. As a result of the construction of the contact wherein the distance between the elements 8 and 12 of the contact member is greater than the length of the opening 29 the prong-engaging elements 8 and 12 are contracted slightly to assume in assembled position a more bowed formation. The contact member may be secured in fixed attachment to the socket body by twisting the terminal portion 3 to engage the shoulder 15 thereof behind the lower surface 31 of the socket body as shown in Fig. 6.

The feature of my present invention resides primarily in the construction of the contact member wherein the shoulder element 10 adapted to be supported by the abutment 32 of the socket body is disposed on one side only of the contact member. As a result of this construction, the contact members can be assembled with the socket body so as to space the terminal portions of the contact members disposed in the apertures 18 and 19 at maximum distances from each other as most clearly shown in Fig. 5. This arrangement not only reduces the opportunity for leakage between the terminal portions, but also effects, by the greater spacing provided between the rows of terminal portions, greater work space during the operation in which the lead wires are attached to the terminal portions.

Although I have illustrated and described a pre-

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ferred embodiment of my invention, I do not wish to be limited thereby, as the scope of my invention is best defined in the following claim.

I claim:

- 5 A contact member for an electrical socket comprising a single strip of ribbon stock reversely bent upon itself to form opposed leg portions having their broad surfaces in face-to-face relationship and connected by an intermediate bight portion, one of said leg portions having a substantially straight element adjacent said bight portion and a terminal-engaging element spaced from said bight portion and extending outwardly from said straight element in substantial alignment therewith, the other of said leg portions having a substantially straight element adjacent said bight portion disposed in substantially abutting relation with the straight element of said one leg portion and forming therewith a soldering tail adapted to extend beyond the edge of a socket base, said other leg portion having a socket-engaging shoulder element extending laterally from the straight element thereof substantially opposite the point on said one leg portion at which the straight element thereof joins the terminal-engaging element, said other leg portion having a terminal-engaging element integrally joined to the outer end of said shoulder element and cooperating with said terminal-engaging element of said one leg portion to electrically engage a terminal prong, and a notch in said soldering tail forming a shoulder positioned thereon for engagement with the outer edge of a socket base when the protruding portion of the soldering tail is twisted.

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