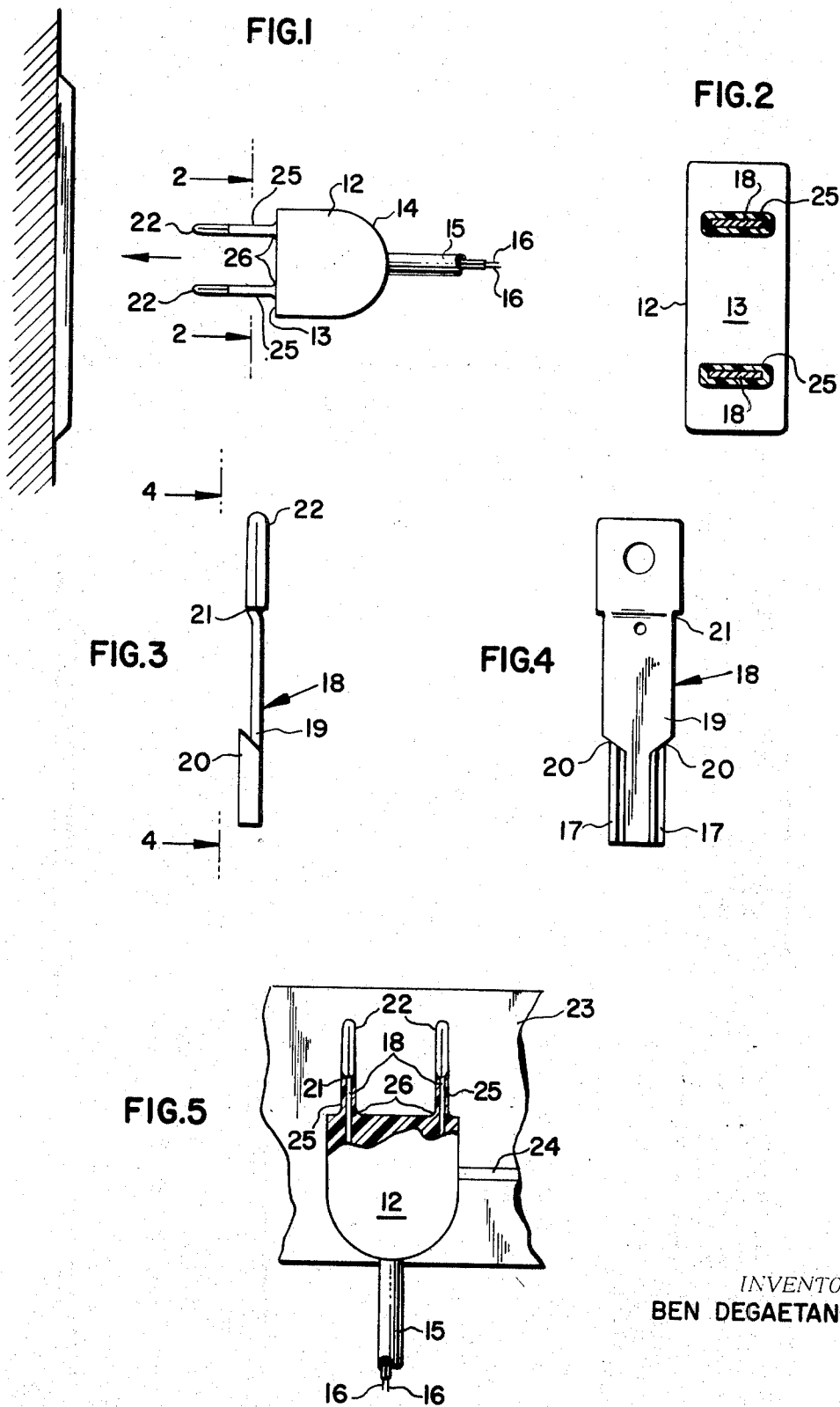


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B. DEGAETANO
ELECTRICAL CORD PLUGS
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ELECTRICAL CORD PLUGS

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1 Claim

ABSTRACT OF THE DISCLOSURE

An electrical cord plug or molded plastic having parallel metallic terminals projecting therefrom for connection with corresponding terminals of a mating socket, the plug being made safe for handling by children by the provision of an insulating sheath on a portion of each terminal adjacent the plug body with which the sheaths are integral formations.

The present invention relates to the plug-and-socket type of electrical cord connections and more particularly to terminals anchored in and projecting from the plug.

Of late, manufacturers have been incorporating various and sundry devices in toys which are electrically operated, chiefly by flashlight batteries. However, as these toys have grown in popularity so have their structure and operating mechanisms developed to such an extent that battery power does not suffice and is now being supplemented by plug-and-socket connection to the household power line circuit. This has resulted in shock and accident to many children innocent of the danger involved in handling such connections and which it is the main objective of the instant invention to prevent.

In the accomplishment of the aforesaid objective the projecting prong of each terminal is enclosed for substantially half its length within a sheath of electrical insulating material and it is another object of the invention that these sheaths be extensions from and an integral part of the plug body.

Another object of the invention is the provision of shoulders on the terminals, these shoulders functioning as stops to limit flow of plastic forming the sheaths.

A further and important object of the invention is to provide a plug-and-socket connection of the character described whereby contact of a child's fingers will not be made with the outer uninsulated ends of the plug terminals during insertion of the latter into or their withdrawal from the socket.

And, a still further object of the invention is the provision whereby the outer surface of the sheaths is flush with the uninsulated portions of the terminals.

Other objects and advantages of the invention will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein a satisfactory embodiment of the invention is shown. However it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit and scope of the invention and its appended claim.

In the drawings:

FIG. 1 is a plan view of the invention shown in association with the escutcheon plate of a wall socket.

FIG. 2 is an enlarged sectional view on line 2—2 of FIG. 1 looking in the direction of the arrows.

FIG. 3 is a detail showing in edge view the metallic member of one of the plug terminals.

FIG. 4 is a face view of the terminal, as seen in FIG. 3, looking in the direction of the arrows in FIG. 3, and

FIG. 5 is a plan view of the invention shown in the bottom position of the mold in which it is formed.

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In the drawing similar numerals refer to similar parts throughout the different views.

Numeral 10 represents the escutcheon plate of the ordinary electrical wall socket, not shown, the plate in this instance being seen as mounted on a wall 11.

The plug body 12 of molded plastic may be of any preferred configuration, the illustrated embodiment of the invention showing it symbolically as of generally rectangular shape with a flat surface 13 at one end and with its outer end 14 rounded.

Extending from the rounded end 14 of the plug body 12 is the cord 15 which provides the insulated covering for the separately insulatingly wrapped conductor wires 16, 16 the ends of which are stripped, clamped and soldered in the usual manner to overlapping flanges 17, 17 formed on the inner ends of a pair of parallel terminals indicated at 18, 18, the flanges being chamfered as shown at 20 in FIGS. 3 and 4.

These terminals 18 are thin metal stampings, each of which also includes an elongated intermediate portion 19. At substantially midway of its length the portion 19 is widened and offset transversely to provide a shoulder 21, the part extending beyond the shoulder, prong contact portion, being doubled upon itself to form a return bend 22. The thus reinforced ends of the terminal portions 19, with a part of the unreinforced portion, as will be explained, form the socket engaging prongs projecting in parallel relation from the flat end face 13 of the plug body 12.

With reference now to FIG. 5 wherein a completely molded plastic plug, a fragmentary portion of which is shown in section, is shown in the lower portion 23 of the mold, the material intake sprug being indicated at 24. Sufficient clearance is provided around that section of the terminal portions 19 between the shoulders 21 and the end face 13 of the plug body to permit a thin flow of plastic which ends at the shoulders 21. In this manner an insulating sheath 25 integral with the body 12 of the plug encases each terminal 18 between its respective shoulder 21 and the plug's end face.

It will be observed that the longitudinal center axis, of the folded prong ends of the terminals 18 is coincident with that of the terminal portions 19, that the said folded ends and the sheaths 25 are flush with each other and that their cross-sectional areas are consequently the same. As a reinforcement to the sheaths they are formed with fillets 26 at their juncture with the body 12 of the plug.

The proportions of the prong ends of the plug terminals are such that, with the incorporation of the sheaths 25, a simple, practical and valuable safety plug for the purpose set forth has been provided, both the plug and method of forming the sheaths being new and novel.

It shall also be noted that the terminals 18 may be provided with openings or dimples in the covered area in order that a better bonding may be effected between the sheath portions 25 and the terminals 18.

What I claim is:

1. An electrical cord plug comprising, in combination, a molded plastic body portion, at least two elongated metallic terminals projecting in parallel relation from said body portion, each of said terminals having a width greater than its thickness and comprising an intermediate portion of reduced width and a contact portion at the free end of said terminal, said contact portion being of greater width than said intermediate portion and being doubled over upon itself and transversely offset for longitudinal axial alignment with the intermediate portion to form a shoulder spaced from said free end, and an insulating sheath formed integral with the plug body encasing the said terminal intermediate portion and abutting said

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shoulder, said sheath being substantially flush with the terminal contact portion.

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KENNETH DOWNEY, Primary Examiner

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