

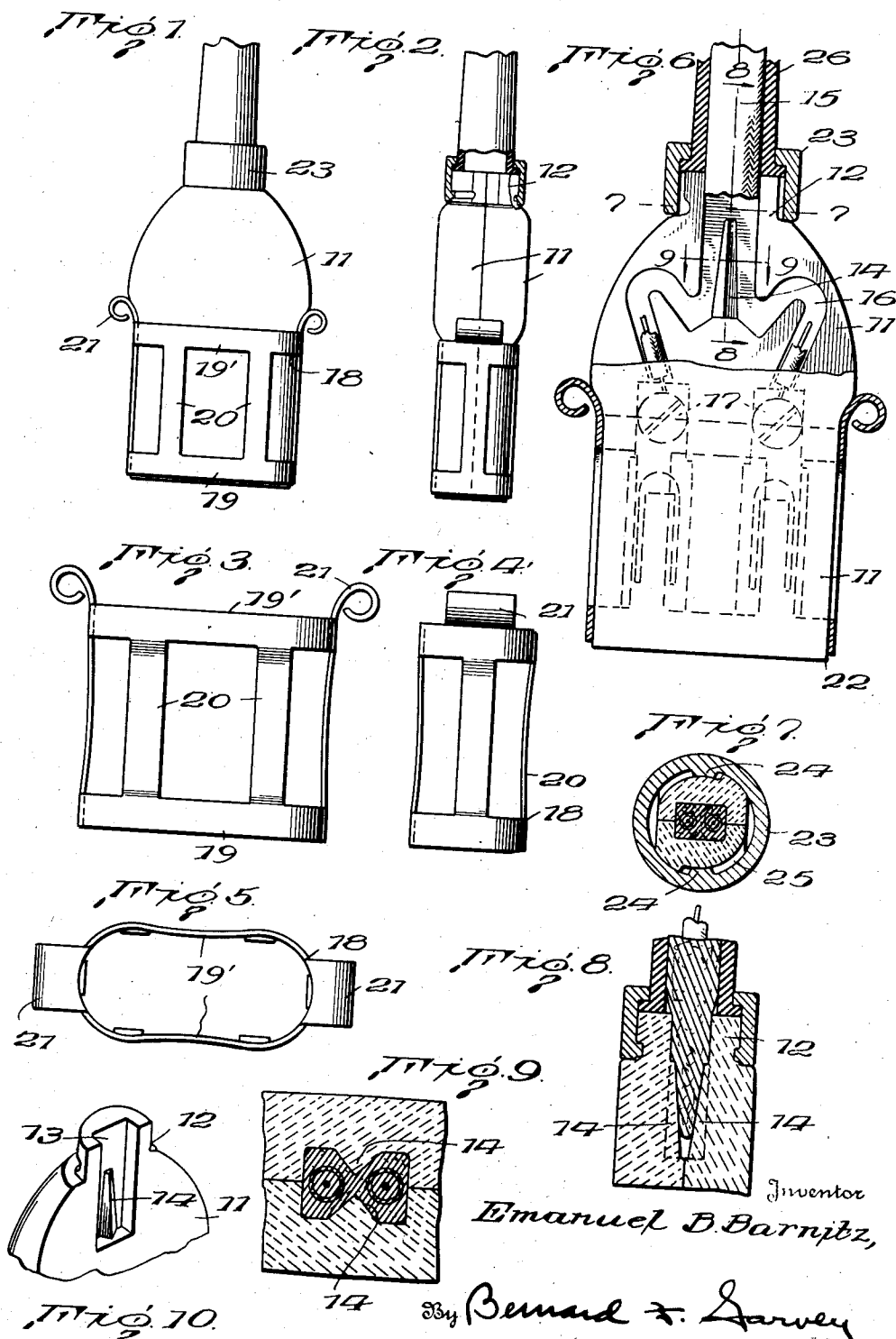
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UTENSIL PLUG

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UTENSIL PLUG

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2 Claims. (Cl. 173-332)

The present invention is designed as an improvement over the Electric plug of my pending application, Serial Number 65,514, filed February 24, 1936, and has for an object the provision of a utensil plug which eliminates screw fastening means and substitutes a clamping frame which not only positively holds the parts of the plug together but is composed of a single unit which reinforces the plug throughout, without retaining the heat of the plug, and is manually engageable with and disengageable from the plug without the use of tools.

A further object of the invention is to provide a plug in which the cord or cable is automatically secured, from any movement independently of the plug, when the parts of the plug are engaged.

It is of course old in the art to provide detachable clips and the like for securing together the parts of a utensil plug and the present invention is designed as an improvement thereover to provide a unitary structure which will not augment the heat of the plug yet will not unduly encumber the same and may be expeditiously attached to and removed from the plug.

Other objects of the invention will be apparent from the following description taken in connection with the accompanying drawing, wherein:

Fig. 1 is a side elevational view of a plug constructed in accordance with the present invention illustrating the application of a portion of a cable casing,

Fig. 2 is a similar view looking at one edge of the plug, a portion of the plug locking nut and cable casing being shown fragmentarily,

Fig. 3 is an elevational view of the plug clamping frame constructed in accordance with the present invention,

Fig. 4 is an end elevational view of the same,

Fig. 5 is a top plan view of the frame,

Fig. 6 is a side elevational view of the plug of the present invention, a portion of which is broken away to disclose details,

Fig. 7 is a sectional view taken on the line 7-7 of Fig. 6, looking in the direction of the arrows, showing to advantage the manner of clamping the electric cord or cable in the neck of the plug,

Fig. 8 is a fragmentary vertical sectional view taken on the line 8-8 of Fig. 6 looking in the direction of the arrows likewise illustrating the manner of clamping the cord or cable in the plug neck,

Fig. 9 is a cross sectional view taken on the line 9-9 of Fig. 6 looking in the direction of the arrows showing the manner in which the

protuberances of the plug neck bite into the electric cord or cable, and

Fig. 10 is a detail fragmentary prospective view looking at the inside of one part of the utensil plug showing the manner of forming the protuberance in the cable recess in the neck of the plug.

The plug consists of twin parts 11, the interior of the utensil engaging ends of which are of conventional design for the reception of the contact sockets in a manner well known in the art. The neck 12 of each of the parts 11 is provided with a cable or cord receiving recess 13 which extends inwardly into the body of the plug, the recess being preferably of U-shape in cross section to provide flat side walls against which the cable is adapted to be urged in a manner more fully hereinafter set forth. Each of the recesses 13 is provided on one of the walls thereof with a protuberance 14 which in the present instance consists of a rib, triangular in cross section, the rib tapering from its point of jointure with the body of the plug and terminating at the juncture of the neck 12, the smaller end of the rib terminating at approximately the inner end of said neck. When the parts 11 are engaged the adjacent sharp edges of the ribs are in relatively close proximity and are adapted to bite into the electric cord or cable 15, as shown to advantage in Figs. 8 and 9. The cable may be of conventional design having the wires 16 thereof branched off into recesses which communicate with the recesses 13 and are engaged with contact screws 17 in a manner well known in the art.

To secure the parts of the plug together, I employ a perforate frame 18, one end 19 of which consists of a relatively narrow band which completely encircles the utensil engaging end of the plug, a similar band 19' encircling the plug approximately midway its ends, the bands being connected together by stays or strips 20. The stays or strips at each end of the frame are extended to provide finger loops 21 to facilitate engagement and disengagement of the frame. The utensil engaging end of the plug may be tapered, as indicated at 22, to facilitate engagement of the frame with the plug. The plug may be made of metal, if desired, since because of its perforate construction there will be little absorption of heat. However, if preferred the frame may be insulated or may be made of suitable non-conducting or absorbing material. I prefer, however, that the construction be substantially as shown herein, since I have found from experiment that it is desirable and conducive to the

best performance of the plug that the parts of the latter be completely encircled not only to positively retain the parts of the plug from displacement under pressure of the cable within the latter and under pressure of the pintle contacts or the like with which the plug is engaged, but additionally to reinforce the plug. As is well known plugs are usually made of material high in shear especially when heated and are frequently broken in being disengaged from a utensil by the exertion of lateral pressure on the plug. Possibility of breakage with the present clamping frame is reduced to an absolute minimum.

I also prefer to employ a detachable securing means for the neck of the plug and for this purpose I have in the drawing shown a nut 23. A quarter turn nut I have found to be sufficient and preferable for use in this connection. The nut 23 shown advantageously in Fig. 7 includes lugs 24 on the inner periphery thereof which are adapted to engage complementary recesses 25 formed in the outer periphery of the plug neck 12. Preferably a conventional cable casing 26 is sleeved over the cable or cord 15, the inner end thereof being clamped between the nut 23 and the plug neck 12, as illustrated to advantage in Fig. 6.

I have found that in use of a plug of this character the cable or cord 15 is positively held from any movement independent of the plug since the ribs 14 bite into the cable fabric without of course penetrating the wire insulation. By making the walls of the recess 13 square possibility of rotation of the cable or cord is reduced to a minimum, since the pressure exerted by the ribs 14 effects a spreading of the cable against the walls of the recess. When the cable 15 is mounted in the recess 13, it tends to flex the parts 11 of the plug apart consequently an outward pressure is being constantly exerted on the clamping frame 13, which prevents casual displacement of the latter. It will also be noted, upon reference to Fig. 5 of the drawing, that the bands 19 are slightly bowed

inwardly to effect yieldable engagement with the walls of the plug; and the stays 20, as shown in Figs. 3 and 4, are of similar construction for the same purpose. When the clamping frame is to be removed pressure on the plug parts with the thumb and fore finger permits facile removal of the frame. Preferably a shoulder is formed around the plug against which the inner end of the frame abuts to limit the movement of the frame on the plug.

The plug is relatively small and of the modern streamlined design not only for its esthetic appeal, but likewise to make the plug less cumbersome and to reduce the heating area to a minimum.

Although I have herein shown and described a preferred form of my invention, it is nevertheless to be understood that various changes may be made in the details of construction, proportion and arrangement of parts within the scope of the claims hereto appended.

What is claimed is:

1. A utensil plug including a multi-part cord engaging plug body, a unit clamping frame slidably engageable with said body and embodying a pair of space bands, one of which encircles an intermediate part of the plug body, the other band encircling the utensil engaging end of the body, said bands being connected by strips both of said bands being bowed inwardly for flexing engagement with the opposite sides of the plug.

2. A utensil plug including a multi-part body, and a clamping frame for holding said parts together, the frame comprising bands, one of which encircles the plug at the utensil engaging end of the latter, the other band encircling an intermediate part of the plug, said bands being connected by strips, the bands and strips being bowed inwardly for flexing engagement with the outer wall of the plug body.

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