

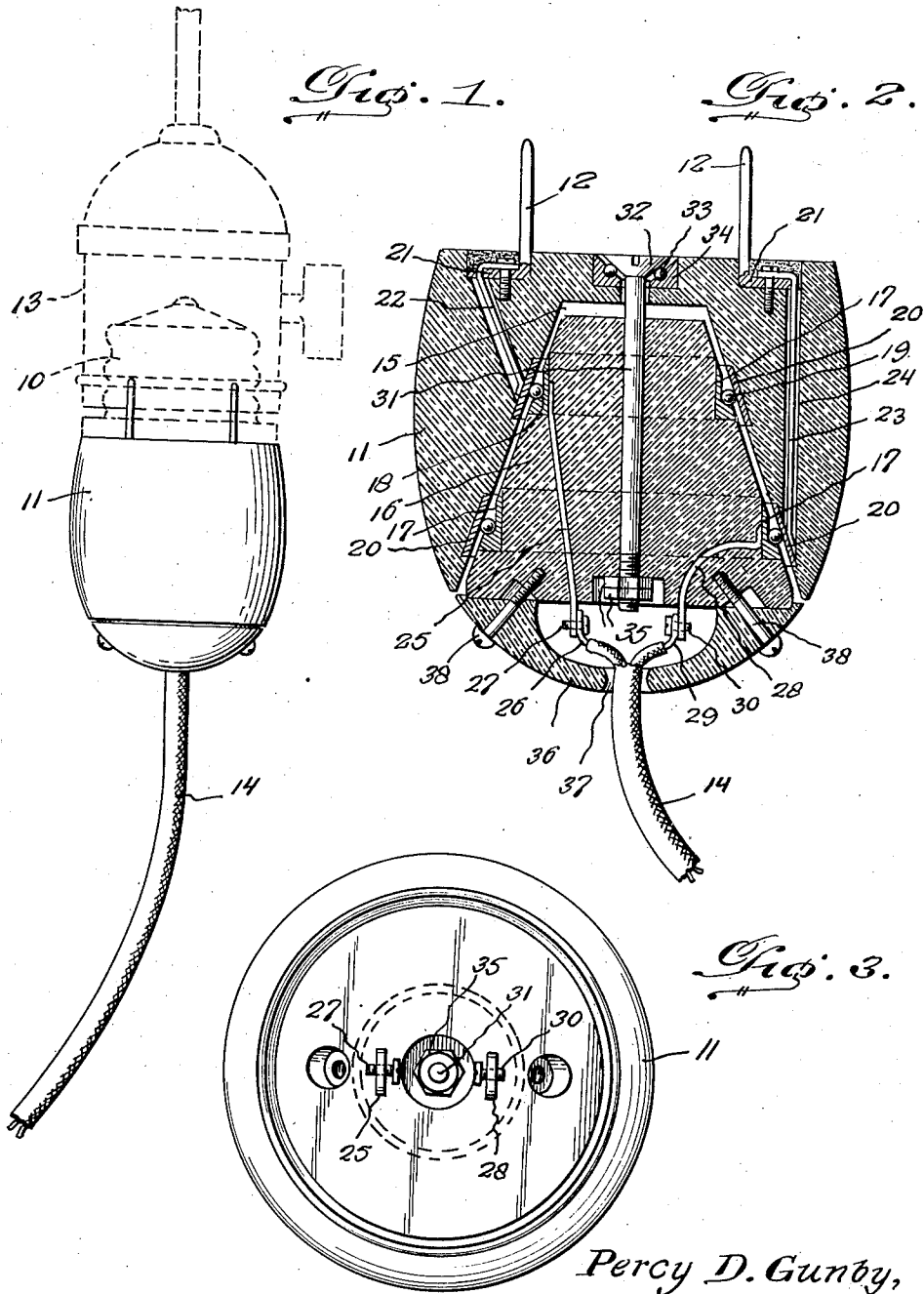
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ELECTRIC CORD PLUG

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ELECTRIC CORD PLUG

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1 Claim. (Cl. 173—324)

The present invention has for its object the provision of a socket plug primarily intended for use in connection with the cord of an electric iron, so that the latter can be more conveniently used, and without twisting or knotting of the cord.

In carrying out my invention, I provide a swivel connection between the cord of the iron, and the particular part of the plug associated with the cord, so that the latter can turn freely in any direction incident to the use or movements of the iron.

In this connection, the invention embodies a plug of the character above-mentioned, including a hollow section in which is rotatably mounted a suitable core to which the wires of the cord are secured, the core being provided with anti-friction bearings so that it can be easily rotated in any direction by the cord, incident to the movements of the iron.

Another object of the invention resides in the provision of means whereby the cord can be adjusted to take up play as the occasion might require.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawing forming part of this application like numerals of reference indicate similar parts in the several views and wherein:

Figure 1 is a view in elevation showing the plug connected with a socket.

Figure 2 is an enlarged vertical sectional view through the improved part of the plug.

Figure 3 is a bottom plan view of Figure 2 with the bottom plate removed.

As hereinabove stated, the present invention has reference to an electric socket plug including the complementary sections 10 and 11 respectively. The section 10 is of ordinary well known construction, designed to receive the prongs 12 carried by the section 11 to provide electrical connection between the respective sections of the plug. The plug is adapted to be arranged in any character of electric light socket indicated generally at 13. The section 11 has associated therewith an electric cord 14, and the present invention resides in the construction of the section 11, whereby the cord is permitted to turn freely in any direction, so that it may not become twisted, knotted or in any other way interfere with the use of an electrical appliance with

which the cord is attached, such as for instance, an electric iron not shown.

In carrying out my invention I therefore provide the section 11 with a tapered bore or recess 15, the smaller end of which is closed and located adjacent the upper end of the section 11, while the larger end of this bore opens at the bottom of the section as clearly illustrated in Figure 2. The bore 15 is adapted to receive a core 16 of similar contour or outline, and which core is mounted for free rotation within the section 11 of the plug, and has connected thereto the wires of the cord 14. Surrounding the core 16 at spaced points are metallic bands 17, each of which is formed with an annular shoulder 18 upon which reposes ball bearings 19 as clearly illustrated in Figure 2. Each band 17 is arranged in spaced relation to a similar metallic band 20 embedded in the section 11 of the plug and exposed to the interior surface of the bore 15. Manifestly, the bands 17 and 20 define a race for the ball bearings 19, which support the core 16 in a manner, whereby it is very sensitive to rotation, and can therefore be very easily and freely turned in either direction incident to the movement of the cord 14 and its associated electrical appliance.

Each prong 12 of this section of the plug has an offset extremity 21 embedded in the upper surface of the section, and a metallic strip 22 is connected with one of the offset extremities of one of these prongs and the upper band 20 of the plug section, to provide an electrical connection between these parts. Electrically connecting the offset extremity of the other prong 12 and the lowermost band 20 of the plug section 11 is a metallic strip 23 clearly illustrated in Figure 2, and which strip passes through a bore 24 formed in the plug section as shown.

The core 16 is also provided with a bore or passage for the reception of a metallic element 25 terminally connected with the uppermost band 17 of the core and one of the wires 26 of the cord 14, the connection between these parts being indicated at 27 in Figure 2. The core 16 is further provided with a passage for the reception of a metallic element 28 terminally connecting the lower band 17 of the core with the other wire 29 of the core, which connection is indicated at 30 in Figure 2. The core 16 is mounted on a centrally located rod 31 having a tapered head 32 arranged in a recess formed in the upper end of the plug section 11. This head 32 rotates on ball bearings 33 seated in a suitable race 34 located in the recess just mentioned. The rod 31 projects beneath the lower end of the core

and is threaded for a portion of its length to accommodate suitable nuts 35, by means of which the core 16 can be adjusted on the rod to take up play as the occasion may require.

- 5 The lower end of the bore 15 of the plug section is closed by a removable cap or plate 36, which may vary in shape or contour, but which is provided with a central opening 37 through which the electric cord 14 passes. This cap or plate 36 is preferably secured to the core 16 by
10 suitable fastening elements 38 which are threaded into the adjacent end of the core 16 as clearly illustrated in Figure 2.

- In practice, when the prongs 12 of the plug section 11 are inserted in the plug section 10, and the plug in its entirety arranged within a suitable electric socket 13, the current passes through the metallic bands 17, the ball bearings 19 and the metallic bands 20 carried by the core, and thence
20 through the metallic elements 25 and 28 respectively to the wires of the electric cord 14. Manifestly, by reason of the fact that the core 16 is mounted for rotation within the plug section 11, and supported by the ball bearings 19, the core
25 can be very easily rotated in either direction, incident to any turning or twisting movements of the cord 14, incident to the use of the electrical appliance with which the cord is attached. Therefore, the electrical appliance, as for in-
30 stance, an electric iron, can be more conveniently used, without the trouble or inconvenience usually experienced with the electric cord becoming twisted or knotted under such conditions. Should any play develop in the core 16, incident
35 to wear of any of the parts, this play can be

eliminated by simply turning the nuts 35, to effect an adjustment of the core within its socket, as will be readily understood.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein illustrated or described, and that such changes may be resorted to when desired as fall within the scope of what is claimed. 80 85

What I claim as new is:

An electric swivel connection of the character described, comprising a base member having a tapered bore therein opening at its lower end, spaced metallic bands supported by the wall of said bore, a rod mounted centrally within the bore and including a head seated in a recess in one end of the member, ball bearings arranged beneath said head and supporting the rod for rotation, a tapered core mounted in the bore and adjustably supported on said rod, spaced metallic bands supported by the core and mounted in confronting relation to the aforementioned bands, an annular shoulder mounted on each band of said core, ball bearings supported by said shoulders between each pair of adjacent bands, a cap closing the lower end of the bore and carried by the core and having a central opening therein, electric wires passed through said openings, and elements embedded in said core and providing electrical connections between the adjacent end of each wire and one of the bands carried by each core. 90 95 100 105

PERCY D. GUNBY.

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