

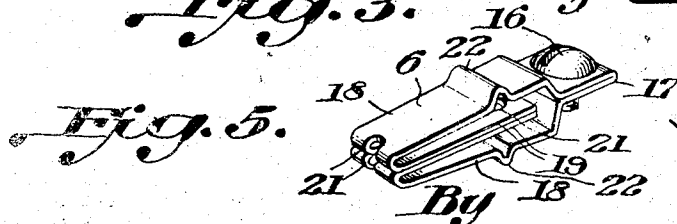
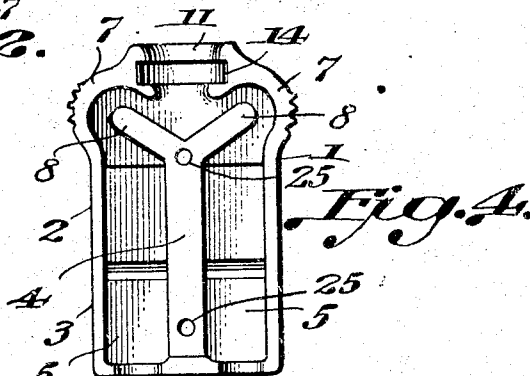
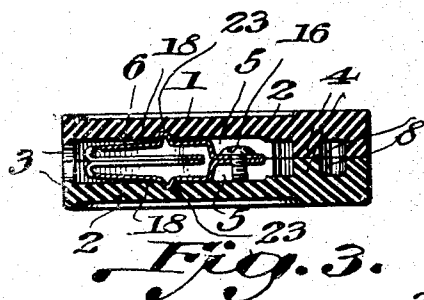
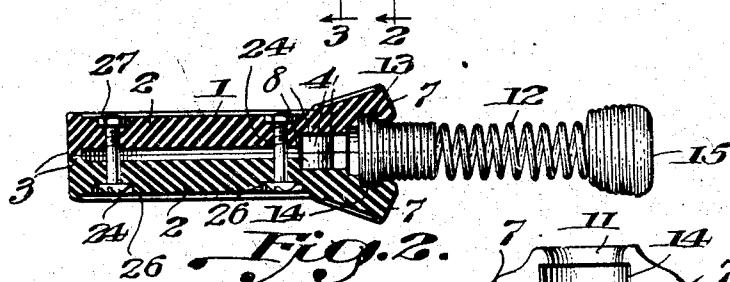
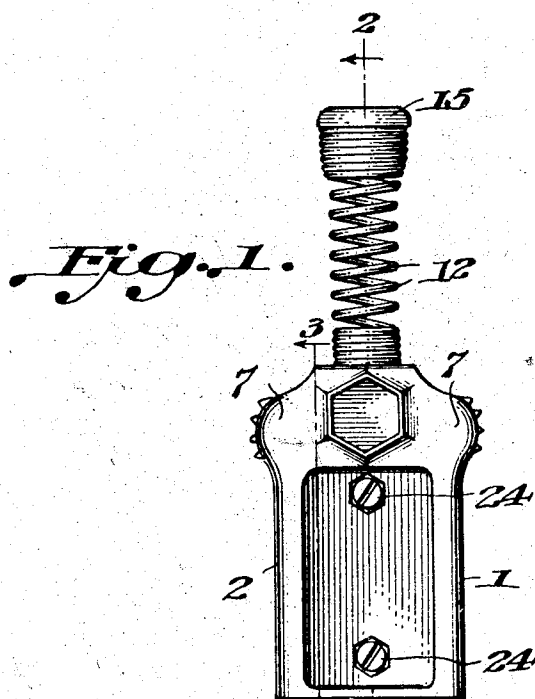
May 11, 1926.

1,583,884

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ATTACHMENT PLUG FOR ELECTRIC HEATING DEVICES

Filed June 11, 1925



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Patented May 11, 1926.

1,583,884

UNITED STATES PATENT OFFICE.

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ATTACHMENT PLUG FOR ELECTRIC HEATING DEVICES.

Application filed June 11, 1925. Serial No. 36,505.

The invention relates to an attachment plug for electric heating devices.

The object of the present invention is to improve the construction of electric heater plugs and to provide a simple, practical heater plug of strong, durable and comparatively inexpensive construction adapted to fit standard heating devices and equipped with grips adapted to enable the plug to be readily engaged with and removed from a heating device and formed by opposite enlargements of the insulating body which enlargements also serve to receive the ends of the wires of a cord and assist in securely holding the same in the heater plug.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described illustrated in the accompanying drawings and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Figure 1 is a side elevation of a heater plug constructed in accordance with this invention.

Fig. 2 is a central longitudinal sectional view of the same.

Fig. 3 is an elevation of the heater plug, one of the sections of the insulating body being removed.

Fig. 4 is a longitudinal sectional view through one of the contacts.

Fig. 5 is a detail perspective view of one of the contacts.

In the accompanying drawings in which is illustrated the preferred embodiment of the invention, the attachment plug comprises in its construction a hollow insulating body 1 composed of two sections 2 of molded insulating material of approximately oblong form and provided with a marginal rib 3 and having centrally arranged forked ribs 4 fitted together and forming a brace and division member. The forked ribs consist of a central longitudinal portion arranged in spaced relation with the marginal ribs 3 of the side edges of the sections to provide side recesses 5 for the reception of contacts 6. The upper portions of the sections are laterally enlarged to form similar slightly projecting

segments 7 which are serrated exteriorly to provide convenient grips for the easy removing of the heater plug from an electric heating device. The forked ribs are provided at the said enlarged portions 7 with diverging arms 8 constituting the fork of the ribs and arranged in approximately parallelism with the inner faces of the marginal rib at the segmental portion 7 to provide passages around the fork of the ribs for the end portions of the wires of an electric cord for connecting the heater plug with an electric fixture or other suitable source of current supply. The insulating body is provided at its upper end with a circular opening 11 through which the electric cord passes and the electric cord is led through a coil spring 12 having an inner enlarged portion 13 which fits within an annular groove 14 in the wall of the circular or cylindrical opening 11. The groove 14 is formed in the sections which when assembled securely clamp the coiled spring in the end of the heater plug. The coiled spring is provided at its outer end with a bushing 15 of suitable insulating material. The wires of the electric cord are spread at the top of the forked division member and the ends are extended laterally around the arms of the forked division member and are secured by binding screws 16 of the contacts of the heater plug.

The contacts of the heater plug which fit snugly within the recesses 5 at opposite sides of the longitudinal portion of the forked rib of each section are constructed of a single strip of copper, bronze or other suitable conducting material which strip is bent at its center to form two sides which are in contact adjacent to the band to form a shank 17 and the side portions of the strip are bent outwardly in opposite directions at the inner end of the shank 17 to form offset side portions 18 which are spaced apart to receive inwardly extending contact tongues 19. The spaced side portions of the contact are resilient and form a spring clip for engaging the terminals of a heating device which are inserted in the usual manner within the attachment plug through end openings 20 into engagement with the contacts 6. The outer end portions of the spaced sides 18 and the directed tongues are provided with slots 21 which terminates short of the inner ends of the tongues 19 and which provide openings for the terminals of the heating device. The

spaced sides are provided with outwardly projecting transverse ribs 22 formed by grooving or bending the sides 18 from the inner faces thereof and the said transverse ribs 22 are arranged in transverse recesses 23 or seats formed in the longitudinal recesses 5 of the sections of the insulating body. When the sections of the insulating body are assembled and the transverse ribs are fitted 10 in the recesses 23, the contacts are firmly maintained in proper position and are prevented from slipping endwise in the longitudinal recesses when the attachment plug is engaged with and removed from the heating device. The binding screws 16 are mounted 15 in threaded openings of the shank portions of the contacts and there will be no strain on the attached terminals of the wire of the electric cord in engaging the attachment 20 plug with and removing the same from the terminals of an electric heater. The longitudinal openings in the contacts formed by the slots 21 are in alinement with the end openings 20 which are formed by aligned recesses in the marginal flange at the lower 25 ends of the sections of the insulating body.

The sections of the insulating body are secured together in assembled relation by screws 24 which pass through registering 30 perforations 25 of the sections of the insulating body. The perforations pass through the longitudinal portions of the forked ribs and the perforations are enlarged at their outer ends in one of the sections at 26 to receive the heads of the screws 23 and the threaded portions of the screws 35 engage nuts 27, molded in the other section of the insulating body at the other ends of the said perforations. The nuts are suitably anchored within the section in which 40 they are molded as inserts and may be of any desired construction. The screws permit the sections to be readily assembled and when the parts are assembled there is no liability of the contacts having movement relative to the insulating body and thereby loosening the attached ends of the wire. Also the forked dividing member maintains the 45 attached ends of the wires of the electric cord entirely separate from each other when the parts are assembled.

What is claimed is:

1. An attachment plug for electric heating devices including an insulating body 55 provided at its opposite sides with longitudinal recesses and having an opening at one end communicating with said recesses and at its opposite end having openings communicating with said recesses, said body being 60 also provided at opposite interior walls of the longitudinal recesses with transverse seats, and contacts arranged within said recesses and having spaced, resilient, side portions, each provided with an exterior transverse rib fitting in the respective seat to in-

terlock the contacts with the insulating body.

2. A contact member comprising a single piece of metal bent upon itself to form two side portions which are arranged in contact at the bend to form a shank, said side portions at their free ends being turned back 70 upon themselves into abutting relation forming contacting tongues spaced from the inner faces of the side portions, the sides being spaced and resilient and the tongues 75 having registering longitudinal slots terminating short of the inner ends of the tongues and forming openings to receive the terminals of electric appliances, and wire attaching means carried by the shank of the con- 80 tact.

3. An attachment plug for electric heating devices including a hollow insulating body provided with longitudinal recesses and having an opening at one end communicating 85 with the recesses and contacts located in the said recesses, each contact consisting of a single strip of metal bent to form two side portions which are arranged in contact at the bend to form a shank, said side portions being provided with outwardly extend- 90 ing offset bends and forming spaced sides, the end portions of the strip being bent inwardly between the sides to form contacting tongues located between the inner faces of and spaced from said sides, and means carried by the shanks of the contacts for the at- 95 tachment of the wires of an electric cord.

4. An attachment plug for electric heating devices including a hollow insulating 100 body provided with longitudinal recesses and having an opening at one end communicating with the recesses and contacts located in the said recesses, each contact consisting of a single strip of metal bent to form two 105 side portions which are arranged in contact at the bend to form a shank, said side portions being provided with outwardly extending offset bends and forming spaced sides, the end portions of the strip being bent inwardly between the sides to form contacting 110 tongues located between the inner faces of and spaced from said sides, said tongues being provided with longitudinal slots forming openings to receive the terminals of the heating device, and wire attaching means 115 carried by the shanks of the contacts.

5. An attachment plug for electric heating devices including a hollow insulating 120 body provided with longitudinal recesses and having an opening at one end communicating with the recesses and contacts located in the said recesses, each contact consisting of a single strip of metal bent to form two 125 side portions which are arranged in contact at the bend to form a shank, said side portions being provided with outwardly extending offset bends and forming spaced sides, the end portions of the strip being bent inwardly between the sides to form contacting 130

tongues located between the inner faces of said spaced sides and spaced therefrom, said tongues being provided with registering longitudinal slots terminating short of the inner ends of the tongues and forming openings to receive the terminals of the heating device, and wire attaching means carried by the shanks of the contacts.

6. An attachment plug for electric heating devices including a hollow insulating body provided with longitudinal recesses and having an opening at one end communicating with the recesses, said body being also provided in the walls of the longitudinal recesses with transverse seats and contacts arranged in the longitudinal recesses and each constructed of a single strip of

metal and comprising a shank portion, spaced sides connected with the shank portion and tongues extending inwardly from the spaced sides and located therebetween and having longitudinal slots terminating short of the inner ends of the tongues and forming openings to receive the terminals of a heating device, said spaced sides being provided with transverse ribs fitting in the said seats of the body and interlocking the contacts with the latter, and wire attaching means carried by the shanks of the contacts.

In testimony whereof I have hereunto set my hand.

WILLIAM FLE.