Dec. 16, 1941. R. J. THERIAULT 2,266,130

ELECTRICAL CONNECTOR

Filed May 1, 1941 2 Sheets-Sheet 1

Fig. 1.

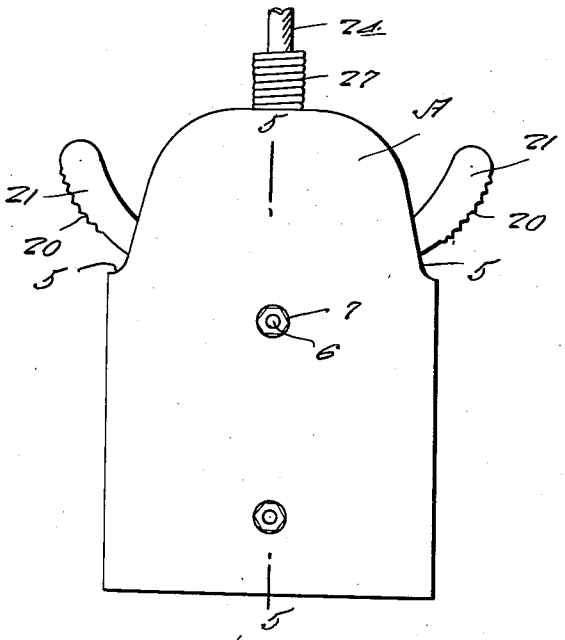


Fig. 2.

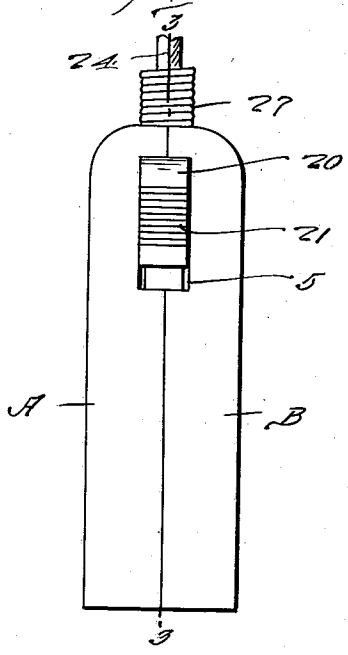


Fig. 5.

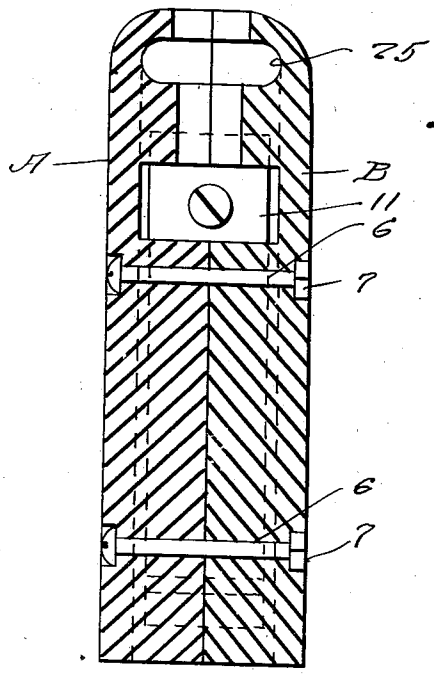
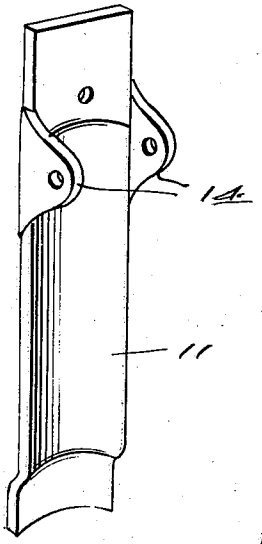


Fig. 6.



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Dec. 16, 1941. R. J. THERIAULT 2,266,130

ELECTRICAL CONNECTOR

Filed May 1, 1941 2 Sheets-Sheet 2

Fig. 3.

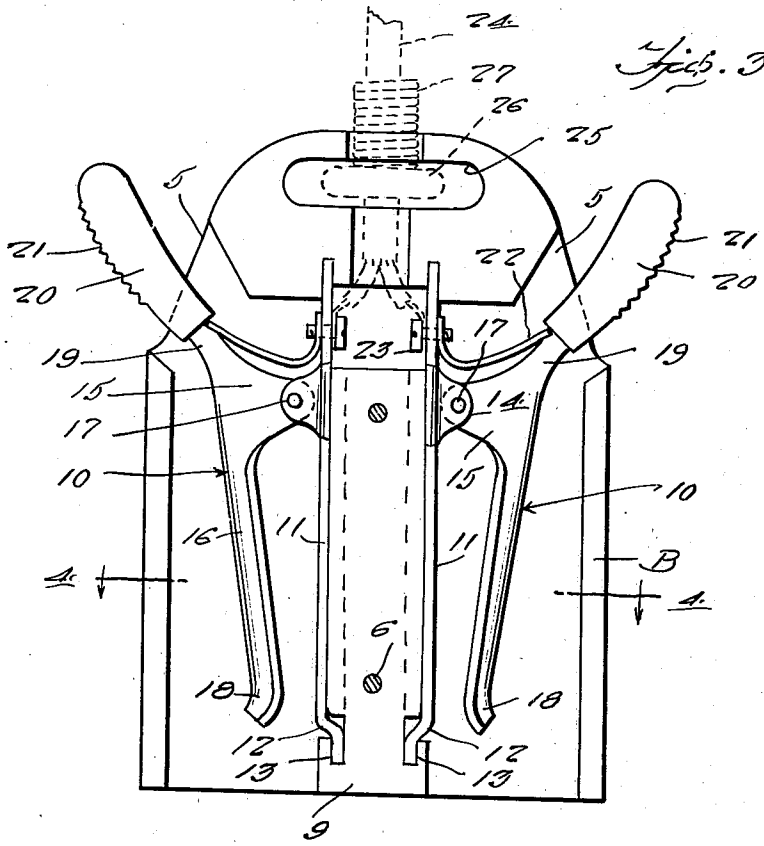
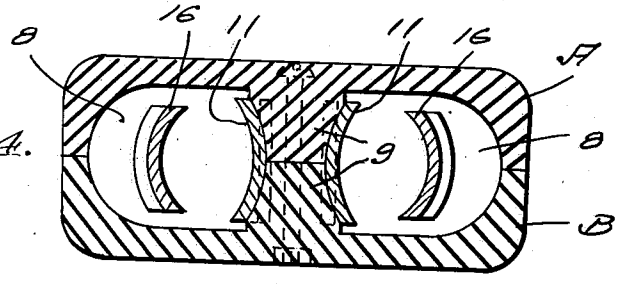


Fig. 4.



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UNITED STATES PATENT OFFICE

2,266,130

ELECTRICAL CONNECTOR

Ralph J. Theriault, Hadlock, Wash.

Application May 1, 1941, Serial No. 391,400

1 Claim. (Cl. 173—332)

This invention relates to new and useful improvements in electrical connectors and more particularly to a plug such as used in conjunction with electric irons, toasters and various other household appliances.

The principal object of the present invention is to provide a connector which is quickly detachable requiring substantially no effort on the part of the operator.

Another important object of the invention is to provide a quickly detachable electric connector which will alleviate strain on the usual conductor now occasioned by pulling on the conductor when disconnection of the connector is desired.

Other objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 is a side elevational view.

Figure 2 is an edge elevational view.

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 2.

Figure 4 is a cross sectional view on the line 4—4 of Figure 3.

Figure 5 is a section on the line 5—5 of Figure 1.

Figure 6 is a perspective view of one of the stationary jaw elements.

Referring to the drawings wherein like numerals designate like parts, it can be seen that a case is provided and constructed of some suitable insulation and consists of substantially flat sections A and B. Each of these sections A and B has a channel extending therethrough and opening through the butt end as at 5. When the sections A, B are placed together and secured by bolts 6 and nuts 7, these channels define passageways 8, 8 for the reception of electric appliance connector prongs (not shown). The material between the said channels which form the passageways 8, 8 define islands 9 which abut as shown in Figure 4, the bolts 6 extending through these abutting islands when the case sections are in assembled relation.

In each of the passageways 8 is a clamp structure generally referred to by numeral 10. Each of these clamp structures consists of an elongated jaw plate 11 having an offset end portion 12 fitting into an offset slot or pocket 13 in the outermost ends of the islands 9. The inner end portions of the plate 11 are provided with ears 14 on which ear portions 15 of pivotal jaw elements 16 are pivotally secured as at 17. The pivotal jaw elements 16 are elongated and each at one end has a laterally curved portion 18 to facilitate reception of an appliance connector prong between itself and the adjacent end portion of a jaw plate 11. The other end portion of the pivotal jaw 16 is in the form of a shank 19 provided with a handle 20 which extends through the corresponding opening 5 and is suitably knurled or roughened as at 21 to facilitate gripping.

A strip spring 22 is interposed between the innermost portion of each plate 11 and the shank of the corresponding pivotal jaw 16. As can be seen in Figure 3, the spring extends to the innermost portion of the corresponding jaw plate 11 where it is secured by a binding screw 23, this screw also serving to secure a conductor of a cord 24 to the plate 11. As can be seen in Figure 3, the butt portion of the case is transversely grooved as at 25 so as to receive the cuff portion 26 of a cord protective spring 27.

It can now be seen that when removing the connector from the prongs of an electrical appliance, all that is necessary is to contract the handles 20 so as to swing the pivotal jaws 16 outwardly from the plate 11, after which an outward movement of the connector from the appliance connector prongs will completely separate the connector from the prongs without practically any effort on the part of the operator.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

An electrical connector comprising a flat casing having a square front end and a tapered rear end and including a longitudinal central partition, and a pair of longitudinal channels therein upon opposite sides of said partition, respectively, and with front ends opening onto said front end of the casing and rear ends openings onto opposite side edges of said tapered rear end of said casing, a pair of straight elongated jaw plates in said channels fixed to opposite sides of said partition, respectively, to extend longitudinally thereof and flat against the same, a pair of laterally extending ears on each jaw plate adjacent the inner ends of said channels, a pair of elongated pivoted jaw members complemental to said jaw plates, respectively, swingable on the ears of the complemental jaw plates for movement between said ears and in said channels into and from clamping relation to said jaw plates, said jaw members embodying a pair of hand grip ends extending obliquely therefrom out of said rear ends of said channels, and a pair of leaf springs interposed between said hand grip ends and said jaw plates and tensioning the jaw members against swinging from clamping relation.

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