

L. F. PARKHURST.
ELECTRIC CONNECTOR.
APPLICATION FILED NOV. 25, 1911.

1,035,227.

Patented Aug. 13, 1912.

Fig. 1.

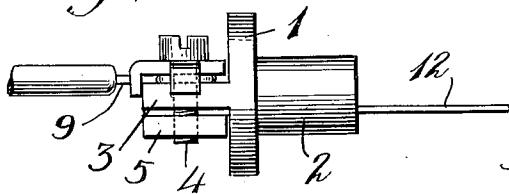


Fig. 2.

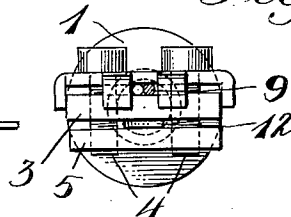


Fig. 3.

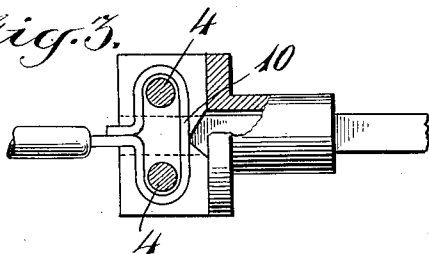


Fig. 4.

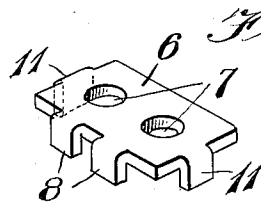


Fig. 5.

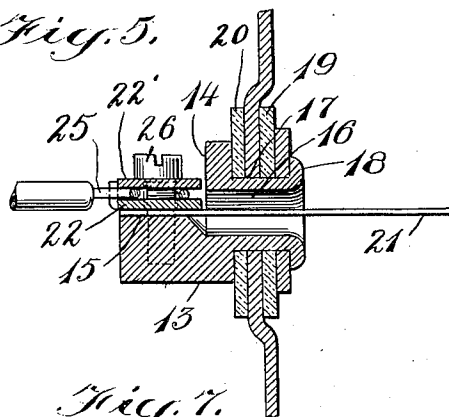


Fig. 6.

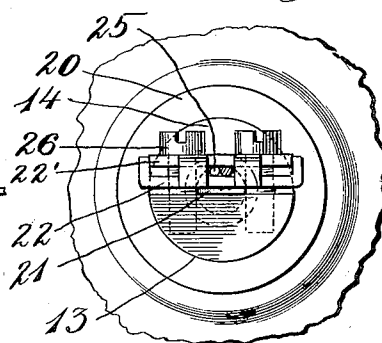


Fig. 7.

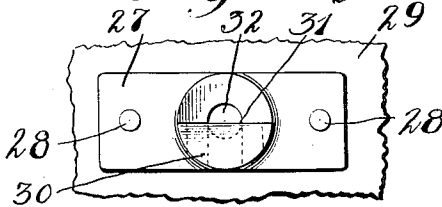


Fig. 9.

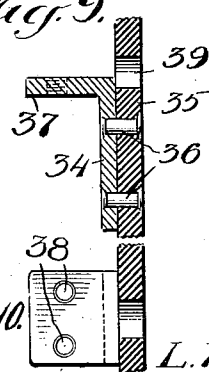


Fig. 11.

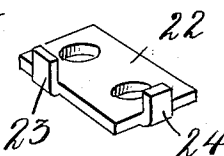


Fig. 8.

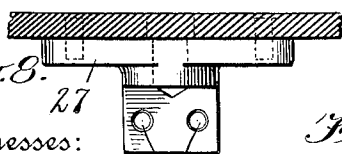
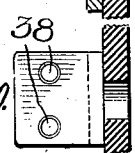


Fig. 10.



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UNITED STATES PATENT OFFICE.

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ELECTRIC CONNECTOR.

1,035,227.

Specification of Letters Patent.

Patented Aug. 13, 1912.

Application filed November 25, 1911. Serial No. 662,419.

To all whom it may concern:

Be it known that I, LEON F. PARKHURST, a citizen of the United States, residing at Binghamton, Broome county, New York, have invented certain new and useful Improvements in Electric Connectors, of which the following is a full, clear, and exact description.

My invention relates to improved forms of electrical connecting means for connecting a flat and a round or stranded conductor.

The invention is particularly useful in effecting the circuit connection with electric heating devices, in which a flat ribbon conductor of high resistance is generally used in order to obtain perfect electrical connection between said heating resistance ribbon with the circuit connecting cable.

With this object in view, the invention consists in providing the connector member with a flat surface of considerable area, to which the circuit conductor may be securely clamped, and a second flat surface, to which the resistance ribbon conductor may be clamped.

In the drawings Figure 1 is a side elevation of one form of connecting device embodying my invention. Fig. 2 is a plan view of the device shown in Fig. 1. Fig. 3 is an elevation of the said device, parts being removed for clear illustration. Fig. 4 is a perspective view of a clamping plate used with this form of construction. Fig. 5 is a central sectional view of a modified form of connector. Fig. 6 is a plan view of the device shown in Fig. 5. Fig. 7 is a plan view of a second modification. Fig. 8 is a side elevation of the device shown in Fig. 7. Fig. 9 is a sectional view and Fig. 10 an elevation of another modification. Fig. 11 is a perspective view of a clamping plate used with the devices shown in Figs. 7 to 10 inclusive.

In the first embodiment of my invention illustrated in Figs. 1 to 4 inclusive, the body portion of the connector comprises a base 1, and a hollow cylindrical fastening portion 2 which may be passed through an aperture in the particular support to which this connector is to be attached and upset upon a washer on the opposite side. The base 1 is provided with a standard 3, which, in the embodiment here shown, may be formed by milling the body portion of the device. Said projection presents flattened surfaces

on opposite sides, and may be apertured to receive clamping screws 4, which are threaded upon a clamping plate 5 at the opposite side of the projection 3. Between the heads of the screws and the opposed surfaces of the projection 3 is located a clamping plate 6 apertured at 7 to pass the screws and provided with a pair of lugs 8, between which the circuit connecting cable 9 may be passed and thence carried about the screws 4, as indicated at 10, Fig. 3. The clamping plate 6 is also provided with side lugs 11 adapted to fit over the sides of the projection 3. The flat resistance conductor 12 may be passed up through the opening in the cylindrical fastening portion 2 and clamped between the clamping plate 5 and the opposite surface of the projection 3. By this construction it will be seen that both the circuit cable and the flat resistance ribbon are clamped to the connector by the same screw, while at the same time said cable and conductor are separately held by means of clamping members on opposite sides of the projection 3. It follows, therefore, that differences in thickness between the circuit cable and the resistance ribbon will not interfere with the secure clamping of either. The security of the connection of the circuit cable is further insured by the passing of the same about the clamping screws 4. It will be seen that in this construction both the circuit cable and resistance ribbon are held and clamped between flat surfaces of considerable area, whereby the most efficient electrical connection is secured.

In the modified form of the invention illustrated in Figs. 5 and 6, the device comprises a body portion 13 milled at 14 to form a flat clamping face 15. A cylindrical portion 16 of this body portion may be passed through an aperture 17 in the wall of the device to which the connector is to be attached and may be upset at 18 upon an insulating washer 19, there being a second insulating washer 20 upon the opposite side of the apertured wall. The resistance ribbon 21 is passed up through the cylindrical fastening member 16 and is clamped against the flat surface 15 of the head by means of a clamping plate 22 (see Fig. 11) having a lug 23 at its upper edge and a second lug 24 at one end. The circuit cable 25 is passed about the clamping screws 26 and a second plate 22' is interposed between the head of

the screw and said cable. With this form of device also the flat resistance ribbon and the round circuit cable are clamped between separate flat surfaces and by the same screw, whereby, as in the case of the first form described, perfect contact is secured and the secure holding of the cable and flat resistance member is insured.

In the form shown in Figs. 7 and 8, the body of the connector comprises a base 27, which may be secured by suitable rivets or screws 28 to an insulating plate 29. This base plate is provided with a milled head 30 presenting a flat surface 31, and an aperture 32 extends through the base plate through which the flat ribbon conductor may be passed. The milled head is apertured at 33 to receive suitable clamping screws, and a pair of clamping plates such as 22 (Fig. 11) may be employed with this connector, as described in the form shown in Figs. 5 and 6.

In the modified form illustrated in Figs. 9 and 10, the body of the connector comprises simply an angle plate 34 secured to an insulating block or plate 35 by rivets 36. The upright member 37 of said angle plate is provided with threaded apertures 38 to receive clamping screws, and a pair of plates such as 22 may likewise be employed with this connector, the insulating plate 35 being apertured at 39 to receive the flat resistance ribbon.

While I have herein shown and described several embodiments of my invention, it is to be understood that the same may be altered in details and relative arrangement of parts within the scope of the appended claims.

What I claim is:

1. An electric connector for heating or other devices, comprising a base having attaching means, a member projecting from said base presenting a flat clamping surface, clamping plates adapted to clamp a circuit connector and a flat ribbon conductor to said member, and a clamping screw or screws adapted to hold said circuit connector and ribbon conductor in electrical connection on said member.

2. An electrical connector for heating or

other devices, comprising a base having attaching means, a member projecting from said base and having two flat clamping surfaces, a pair of clamping plates adapted to clamp a circuit connector and a flat ribbon connector upon said faces respectively, and clamping screws to secure said members together whereby said circuit connector and ribbon connector will be held in electrical connection by separate flat clamping surfaces.

3. An electrical connector for heating or other devices, comprising a base, a hollow cylindrical fastening member projecting from one side of said base, a connecting member projecting from the opposite side of said base presenting two flat clamping faces, a pair of clamping plates adapted to be clamped to opposite sides of said clamping member by means of clamping screws, whereby a circuit connector may be connected to one face of said clamping member and a flat ribbon conductor may be clamped to the other face of said clamping member to effect electrical connection between said circuit connector and said flat ribbon conductor.

4. An electrical connector for connecting a round circuit conductor and a flat ribbon conductor, comprising a base having attaching means at one side thereof and a clamping member projecting from the opposite side thereof, said clamping member having a flat clamping surface, a pair of clamping plates, each having lugs projecting at right angles to the clamping face thereof, means for clamping said plates to said clamping member with one of said conductors clamped between one of said plates and said clamping member, and the other conductor between said clamping plates, a lug on each of said plates being arranged to act as a guide for the leading-in of said circuit conductor, and the other lug of each plate being arranged to hold said clamping plates in proper relative position with respect to said clamping member.

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