

M. F. FITZGERALD.
 REVOLVING CONNECTER FOR ELECTRIC CURLING IRONS.
 APPLICATION FILED JUNE 23, 1920.

1,407,937.

Patented Feb. 28, 1922.

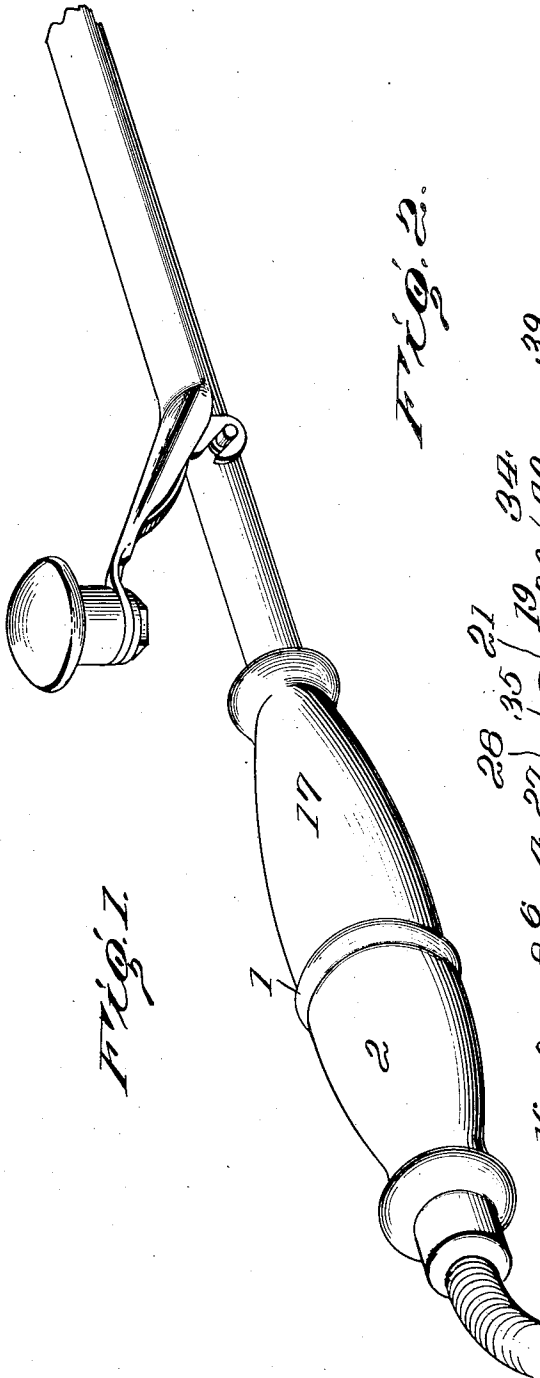
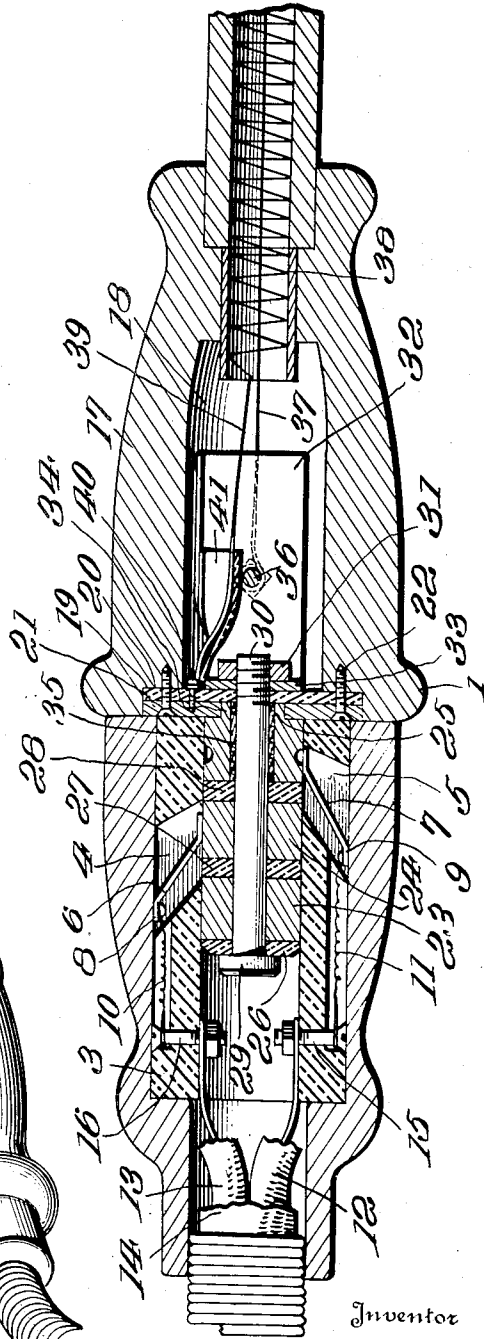


Fig. 2.



Inventor

M. F. Fitzgerald

By

Sturtevant & Mason Attorneys

UNITED STATES PATENT OFFICE.

MAURICE F. FITZGERALD, OF TORRINGTON, CONNECTICUT, ASSIGNOR TO THE FITZGERALD MFG. CO., OF WINSTED, CONNECTICUT, A CORPORATION OF CONNECTICUT.

REVOLVING CONNECTER FOR ELECTRIC CURLING IRONS.

1,407,937.

Specification of Letters Patent. Patented Feb. 28, 1922.

Application filed June 25, 1920. Serial No. 391,569.

To all whom it may concern:

Be it known that I, MAURICE F. FITZGERALD, a citizen of the United States, residing at Torrington, in the county of Litchfield, State of Connecticut, have invented certain new and useful Improvements in Revolving Connecters for Electric Curling Irons, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

This invention relates to electric curling irons, and more particularly to the construction of the detachable plug connector contained in the handle of the curling iron.

The main object of this invention is to provide such a device with a two-part handle adapted to be held in the hand and constructed so that one part thereof is held between the base of the thumb and the smaller fingers, while the other part may be revolved relatively thereto by the fore fingers and thumb of the hand to permit a turning of the heating iron without twisting the supply conductors carried by the first-mentioned handle part.

Another feature of this invention resides in providing a construction of the above character in which the detachable plug connection within the handle provides at the same time, a relatively long bearing or swivel portion about which the two parts of the handle may be turned while maintaining the electrical connection.

Still another feature of this invention resides in the simple manner of construction of such a connector whereby the above advantages are attained.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

Referring more particularly to the accompanying drawings.

Figure 1 is a perspective view of the curling iron showing the two-part handle connected to the heating iron, and

Fig. 2 is a longitudinal section bringing out clearly the various details of construction.

In general, the improved revolving handle connector comprises a handle portion, detachable preferably at its intermediate portion, wherein one-half of the handle is formed with a central bore with electrical contacts leading from the supply conduc-

tors and projecting somewhat radially into the bore. The other half of the handle includes a rigid cylindrical projection adapted to snugly fit within the bore of the first mentioned handle part. This projection is preferably made up of alternate disks of conducting material separated by disks of insulation, and the disks of conducting material are spaced longitudinally of this bearing member so as to make proper electrical contact with the set of disks in the other part of the handle. By reason of this construction, the elongated cylindrical projection on one part of the handle fitting snugly within the bore of the other handle provides a suitable bearing or pivotal axis whereby one part of the handle may be turned relatively to the other while maintaining proper electrical contact.

Referring more particularly to the accompanying drawing, the handle 1, which is of wood or any other suitable material, is preferably divided at a substantially intermediate point into two handle parts. The rearmost portion 2 is preferably recessed internally to receive a tube of insulation 3 which is provided with preferably radial openings 4 and 5, arranged in spaced relation longitudinally of the handle portion. Into these openings project a set of spring contact fingers 6 and 7, suitably attached as at 8 and 9 in any improved manner to the inner bore of the wooden handle, and at such point, are connected by means of conductors 10 and 11 in any desired manner to the electrical supply conductors 12 and 13 which enter through the open end 14 of the rear handle part 2 in the usual way. As shown in the present embodiment of the device, the conductors 12 and 13 are detachably connected to screws or bolts 15 and 16 passing through the walls of the tube. The inner faces of the contacts 6 and 7 which project into the bore of the insulation tube 3 may be formed in any approved manner. As shown in the drawing, the forward end of the insulation tube 3 terminates flush with the front end of the rear part 2 of the handle to provide an abutting wall against which the complementary face of the end of the other half of the handle snugly fits.

The forward half of the handle 17 is likewise internally recessed as at 18 for a purpose hereinafter described, and this recess at one end of the handle, terminates in an

enlarged seat 19 adapted to receive a correspondingly shaped insulation washer 20 and a correspondingly shaped disk 21 of suitable conducting material, which disks 20 and 21 are securely held in place by means of small screws 22. The insulation washer 20 is provided with a central aperture while the disk 21 of conducting material is provided with a registering aperture somewhat larger. Rigidly projecting from the end of the handle 17 is a combined cylindrical bearing and contact member comprising a series of cylindrical tubes of suitable conducting material 23, 24 and 25, spaced from one another by preferably narrower cylindrical disks of insulation 26, 27 and 28, and these disks are held in assembled position by means of a central bolt 29 of conducting material which passes through central apertures in the disks and which also passes through central apertures in the conducting disk 21 and the insulation disk 19. The end of this bolt is threaded as at 30 to receive a nut 31 for detachably clamping this rigid cylindrical bearing to the disks 20 and 21 of the handle.

In the preferred form, there is arranged within the recess 18 of the handle a bracket member 32 of suitable conducting material having an integral flange 33 which is clamped between the inner face of the insulation material 20, and the nut 31 on the bolt 30. The purpose of this bracket will be hereinafter more fully set forth. As a preferred construction, the innermost disk 25 of conducting material is formed with a boss 34 adapted to seat within an enlarged centrally located bore in the disk 21 of conducting material. This connection may be threaded if desired. In order to electrically insulate the contact 25 from the bolt 30, the tube of insulation 35 is arranged between the inner circumference of the cylindrical contact 25 and the outer periphery of the bolt.

The outer end of the bracket 32 in electrical connection with bolt 30 is provided with contact post 36 to make connection with the conductor 37 leading to one wire of the heating coil 38, while the other wire 39 of the heating coil is connected to a small screw 40 passing through the insulation disk 19 into electrical contact with the disk 21 of conducting material which connects with the contact 25.

It is of course obvious that this conductor 39 may make this contact through one of the small screws 22, if desired. In order to preclude any possibility of short circuit, any suitable sheath 41 of insulation surrounds the conductor 39 within the bracket 32.

Inasmuch as the heating iron itself forms no part of the present invention, no further mention will be made thereto except to state that it is rigidly connected to the forward

portion of the handle 17 and detachably carries thereon the thumb piece of the usual semi-cylindrical jaw.

As a result of the above described construction, the handle portion 2 may be rigidly held in the hand between the base of the thumb and the two smaller fingers, and the handle part 17 gripped between the two forefingers and revolved relatively thereto without twisting the supply conductors 12 and 13. The elongated central projection on the handle portion 17 composed of the cylindrical contacts fitting snugly within the central bore of the rear part of the handle forms a relatively long pivotal bearing which permits the proper swivelling movement of the heating iron relatively to the rear portion of the handle, while at the same time, maintaining proper electrical contact between the inwardly projecting set of contacts 6 and 7, and the corresponding contacts 24 and 25. In some cases, the cylindrical contact 23 may possibly be done away with, but the present construction is preferred, since it produces the required length of pivotal axis about which the two parts may revolve.

It is also obvious that minor changes in the details of construction and the arrangement of the parts may be made without departing from the spirit of the invention as set forth in the appended claims.

Having thus fully described the invention, what I claim as new and desire to secure by Letters-Patent, is:—

1. A revolving handle connector for an electrical curling iron comprising a handle portion adapted to fit the hand and having connections with supply conductors, a complementary separable handle portion carrying a heating iron, one of said portions having a centrally disposed bore, a set of contacts projecting there into and spaced longitudinally thereof, the other portion including a centrally arranged projection adapted to rotatably fit within said bore and including a set of cylindrical contacts spaced longitudinally thereof to make contact with said first-mentioned contacts, said sets of contacts having electrical connection with said supply conductors and the coil of said heating iron.

2. A revolving handle connector for an electrical curling iron comprising a two-part handle, one of said parts being constructed and arranged to be gripped by a portion of the hand and having a central bore, a set of contacts spaced longitudinally of said bore and connected to supply conductors carried by said part, the other handle part being constructed and arranged to be gripped by a further portion of the same hand and having a centrally disposed extension adapted to rotatably fit within said bore and including longitudinally spaced cylindrical

contacts electrically connected to the heater coil of the curling iron and making contact with the spaced contact of said first-mentioned handle part.

5 3. A revolving handle connector for an electrical curling iron comprising a two-part handle, one of said parts adapted to be gripped by the hand and having a central bore, a tube of insulation therein having
10 openings through the walls thereof, a set of contacts projecting through said openings and spaced longitudinally of said tube, said contacts making electrical connection with supply conductors, the other handle
15 part being adapted to be gripped by the same hand so as to be rotated relative to the first part and carrying a heating iron and having a cylindrical rigid bearing rotatably fitting within said tube, and a set of con-
20 tacts spaced longitudinally thereof to make

electrical connection with said first-mentioned contacts.

4. A revolving handle connector for an electrical curling iron comprising a two-part handle, one of said parts having a central 25 bore formed in an insulating medium, contacts spaced longitudinally of and projecting into said bore through openings in said medium, said contacts connecting to supply conductors, the other handle part carrying 30 a heating iron and having a cylindrical rigid bearing rotatably fitting within said bore and comprising alternate contact disks and insulation disks, said contact disks making electrical connection with the coil of said 35 heating iron and with the contacts of said other handle part.

In testimony whereof, I affix my signature.

MAURICE F. FITZGERALD.