June 7, 1927.

1,631,575

C. C. BERRY

ELECTRICAL CONNECTION

Filed Sept. 29, 1923

Fig. 1.

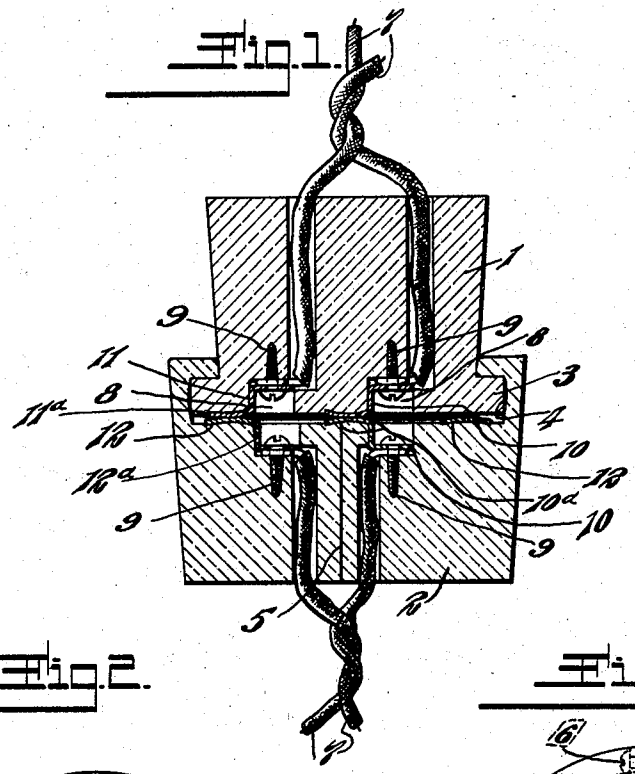


Fig. 2.

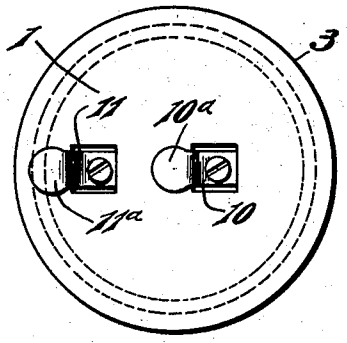


Fig. 3.

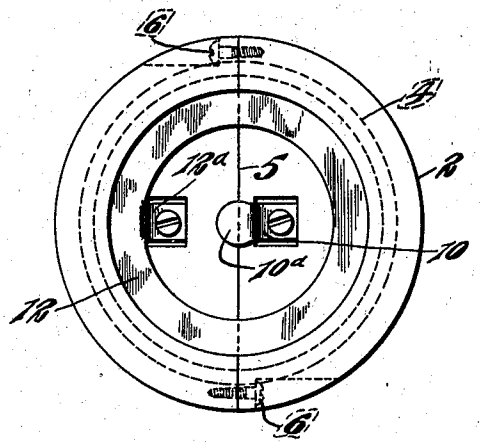
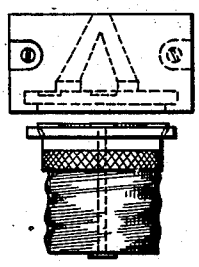


Fig. 4.



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UNITED STATES PATENT OFFICE.

CLARENCE C. BERRY, OF VALLEY PARK, MISSOURI.

ELECTRICAL CONNECTION.

Application filed September 29, 1923. Serial No. 665,585.

My invention relates to electrical apparatus and consists in an improved swiveling connection for electric wiring. As is well known, cord connections between relatively movable pieces of electrical apparatus is likely to become twisted with repeated handlings resulting in kinking or doubling of the cord, shortening its effective length, and, if carried to extremes, injuring the insulation and even severing the wires.

The object of my invention is to eliminate excess twisting of the cord by means of a comparatively simple economical swiveling connection. The device is especially adapted for the cords connecting the receiver of a telephone with the base of a transmitter or other outlet and for use in connection with electric irons, cleaners, and other household electric equipment, although it will be understood that it is not limited to such applications.

In the accompanying drawings illustrating a selected embodiment of my invention,—

Figure 1 is a vertical section through my connection.

Figure 2 is a bottom view of the top member of the connection.

Figure 3 is a top view of the bottom member of the connection.

Figure 4 is a side elevation of two members separated from each other but adapted to be assembled and form a swiveling connection, one member of which may be screwed into an ordinary electric socket.

It will be understood that the drawings are on an enlarged scale to more clearly illustrate the construction.

The body of the connection comprises two members, 1 and 2 of any insulating material. Both are cylindrical in general shape and member 1 is provided with an outer peripheral flange 3 at its lower end while member 2 is provided with an inner peripheral recess 4 near its upper end adapted to rotatably receive flange 3 on member 1.

In order to assemble members 1 and 2, the latter is split longitudinally, as indicated at 5, and the two halves of the member are held together by screws 6. This construction enables the two members to be freely rotated about their axes independently of each other. Each member is provided with longitudinal wire receiving passages parallel to the axis of the member and preferably spaced apart and from the center of the member, although this spacing is not essential. Wires 7 may enter each member through a single central or otherwise located passage.

The opposing faces of members 1 and 2 are slightly spaced from each other and each is provided with a plurality of recesses 8 into each of which the end of one of the wires 7 projects and is secured by a screw 9. One wire 7 in each member 1 and 2 is provided with a Z-shaped terminal 10, here shown as having a round portion 10^a lying in a plane parallel with the inner face of the member and just beyond the latter. These round portions are centered on the axis of the connection and obviously if the two members are rotated on each other these portions of the terminals will remain in contact with each other.

The upper member 1 is provided with a similar Z-shaped terminal 11 spaced from the center of the member and having its projecting portion 11^a located near the periphery of flange 3. This terminal is connected to the other wire 7 entering member 1. Member 2 mounts an annular terminal 12 having a depressed lip 12^a extending into a corresponding depression 8 in the body of the member. This lip is connected to the other wire 7 of member 2. If the two members are rotated upon each other, terminal 11 on member 1 travels around the annular surface of terminal 12 and is always in contact therewith. By means of this construction a bi-polar line is provided with a swiveling connection and plugs or other apparatus on the opposite ends of the wires illustrated may be rotated relative to each other without necessarily twisting the connecting wires.

Obviously the invention is not limited to the form illustrated. Where I show the terminal 12 in the form of a complete ring and terminal 11 of restricted area, it is obvious that the one could be decreased in extent and the other increased without eliminating the constant contact feature which makes the device operative.

While I show one pair of terminals lolated on the axis of the device, it is clear that they could also comprise annular members surrounding a central point if there was any advantage of keeping this central point clear of terminals. Of course, the number of wires entering the device could be increased and a three or four line connection could be provided by increasing the annular rings, as necessary.

Other modifications in the details of my device may be made without departing from the spirit of the invention as expressed in the appended claims.

I claim:

1. In an electrical connection, a cylindrical member having an external peripheral flange, a cylindrical member axially aligned with said first-mentioned member and having an internal peripheral recess adapted to rotatably receive said flange, said latter-mentioned member being divided longitudinally to permit assembly with and disassembly from said first-mentioned member, each of said members having longitudinal passageways for wires therethrough, the passageways in said divided member being spaced from the dividing surface, and individual terminal elements for said passageways providing cooperating contact surfaces on the opposing faces of said members.

2. In an electrical connection, a cylindrical member having an external peripheral flange, a cylindrical member axially aligned with said first-mentioned member and having an internal peripheral recess adapted to rotatably receive said flange, said latter-mentioned member being divided longitudinally along its axis to permit assembly with and disassembly from said first-mentioned member, each of said members having longitudinal passageways for wires therethrough, the passageways in said divided member being spaced from its axis, and individual terminal elements for said passageways providing cooperating contact surfaces on the opposing faces of said members, one of which surfaces of the element on the divided member is located on the axis of the member and is offset to be connected with the wire in its respective passageway.

In testimony whereof I hereunto affix my signature this 22nd day of September, 1923.

CLARENCE C. BERRY.