July 16, 1963 A. T. FLOWER 3,098,027

ANODE CONNECTOR

Filed Dec. 9, 1960

FIG. 1

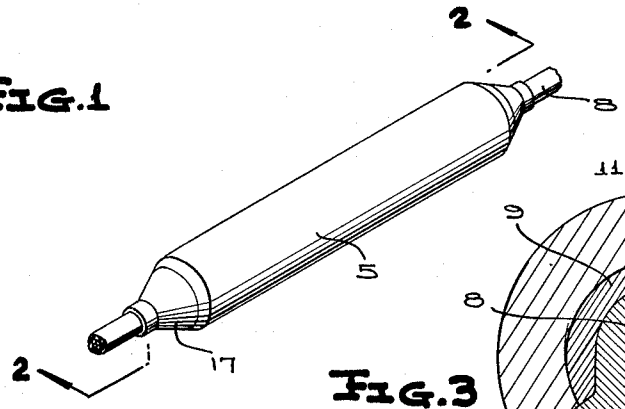


FIG. 3

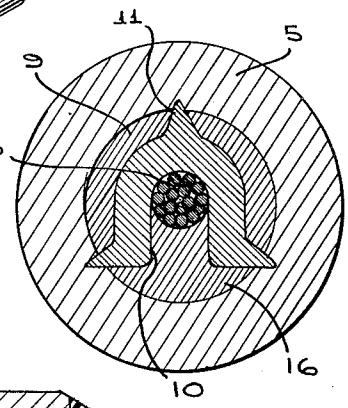


FIG. 2

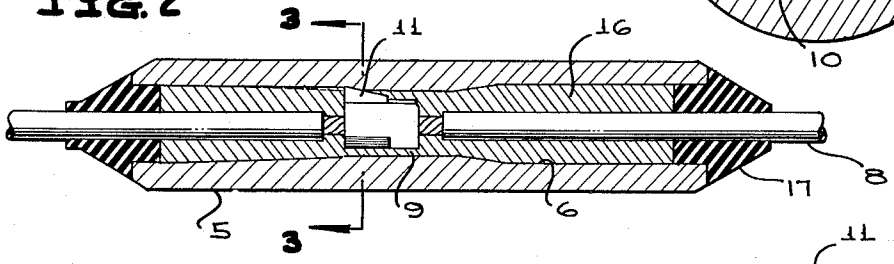


FIG. 4

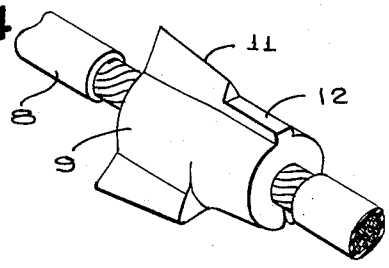


FIG. 6

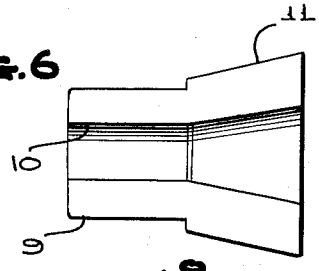


FIG. 7

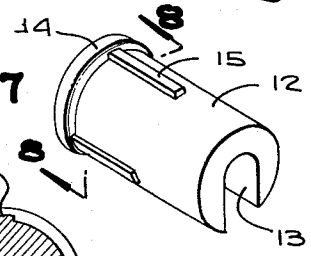


FIG. 5

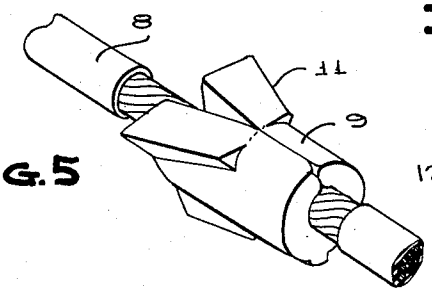
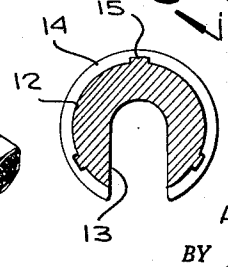


FIG. 8



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ANODE CONNECTOR

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4 Claims. (Cl. 204—196)

This invention relates to impressed current for cathodic protection anodes and more particularly to means for attaching anodes to a continuous conductor wire.

The material of choice for impressed current cathodic protection anodes is high silicon iron which is too brittle and hard to be machined, so that it is not practical to produce in such material conventional fastening and connecting means such, as threads, self-locking tapers, reamed holes and the like.

It is an object of the present invention to provide a copper or copper alloy connector which is pressed on the bared conductor wire before inserting in the anode having formed on its exterior surface fins or ribs which are tapered longitudinally so that the overall diameter is greater than that of the anode bore so that when the connector is pressed into the bore, the excess rib material is spread and pushed into intimate contact with the anode thereby providing a clean dependable bared electrical contact between the connector and anode.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

FIG. 1 is a perspective view of an anode applied to a conductor wire,

FIG. 2 is a longitudinal sectional view taken on line 2—2 of FIG. 1,

FIG. 3 is a cross section taken on line 3—3 of FIG. 2,

FIG. 4 is a perspective view of the connector applied to a conductor,

FIG. 5 is a view similar to FIG. 4 viewed from the bottom,

FIG. 6 is a bottom view of the connector before being applied to the conductor,

FIG. 7 is a perspective view of another form of connector, and,

FIG. 8 is a section taken on line 8—8 of FIG. 7.

Referring to the drawing wherein for the purpose of illustration the preferred embodiments of the invention are shown, the numeral **5** denotes an anode preferably constructed of high silicon iron. The anode is cylindrical shaped and an insulated conductor **8** extends through the bore **6** of the anode with a portion of the insulation removed to receive a connector sleeve **9** constructed of bronze or other suitable material. The connector sleeve **9** is applied to the bare wire of the conductor before being inserted in the bore of the anode and is split longitudinally to provide a groove **10** for inserting the bare wire into the bore of the sleeve which is flared outwardly at one end. After inserting the bare wire in the bore of the connector sleeve, the sleeve is compressed onto the wire establishing a close compression conductive fit between the wire and connector. The exterior surface of the connector sleeve is tapered from one end to the other and the larger end is provided with a series of circumferentially spaced fins or ribs **11** which are longitudinally

tapered from the larger end of the connector towards the middle.

In FIGS. 7 and 8 another form of connector is shown comprising a straight sleeve **12** which is split longitudinally to provide a groove **13** to receive the bare conductor wire. The exterior of the sleeve at one end is formed with a flange **14** and extending from the flange along the exterior wall of the connector are a series of spaced longitudinal ribs **15** which terminate midway the length of the connector.

In assembling the anodes on the conductor the connector sleeve **9** or **12** is compressed on the bare wire of the connector before being inserted in the bore of the anode. The connector is then press fitted into the bore of the anode which causes the fins **11** or ribs **15** to gouge against the inner wall of the anode and thus establish maximum conductance between the bared conductor and anode. After the connector is inserted into the bore of the anode, the bore on opposite ends of the connector is filled with a suitable sealing material **16** and the ends of the bore are closed by tapered polyethylene plugs **17**.

It is to be understood that the forms of the invention herein shown and described are preferred examples of the same and changes in the shape, size and materials may be made without departing from the spirit of the invention or scope of the claims.

Having thus described my invention, I claim:

1. An anode connector for conductor wires comprising an anode of high silicon iron having an axial bore throughout its length, a conductor wire extending through the bore of said anode, a compressible connector sleeve split longitudinally to allow said conductor wire to be inserted in said sleeve, said sleeve being compressed into tight contact with said conductor wire, and a series of fins formed integral with the outer surface of said sleeve, the overall diameter of said sleeve and fins being greater than the diameter of the bore of said anode, said sleeve being press fitted in the bore of said anode to cause the fins to gouge against the inner wall of the anode to establish a clean electrical contact between the sleeve and anode.

2. An anode connector for conductor wires as described in claim 1 wherein said fins extend longitudinally of said sleeve and are wedge shape in cross section.

3. An anode connector for conductor wires as described in claim 1 wherein said fins have their outer edges longitudinally inclined.

4. An anode connector for conductor wires comprising an anode of high silicon iron having an axial bore throughout its length, a conductor wire extending through the bore of said anode, a compressible split sleeve mounted on said conductor wire and compressed into tight contact with said wire, one end of said sleeve being flared outwardly and having on its outer surface a series of spaced longitudinal fins having sharp outer edges, the overall diameter of said sleeve and fins being greater than the diameter of said bore, said sleeve being press fitted in the bore of said anode to cause the fins to gouge against the inner wall of the anode to establish a clean electrical contact between the sleeve and anode.

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