

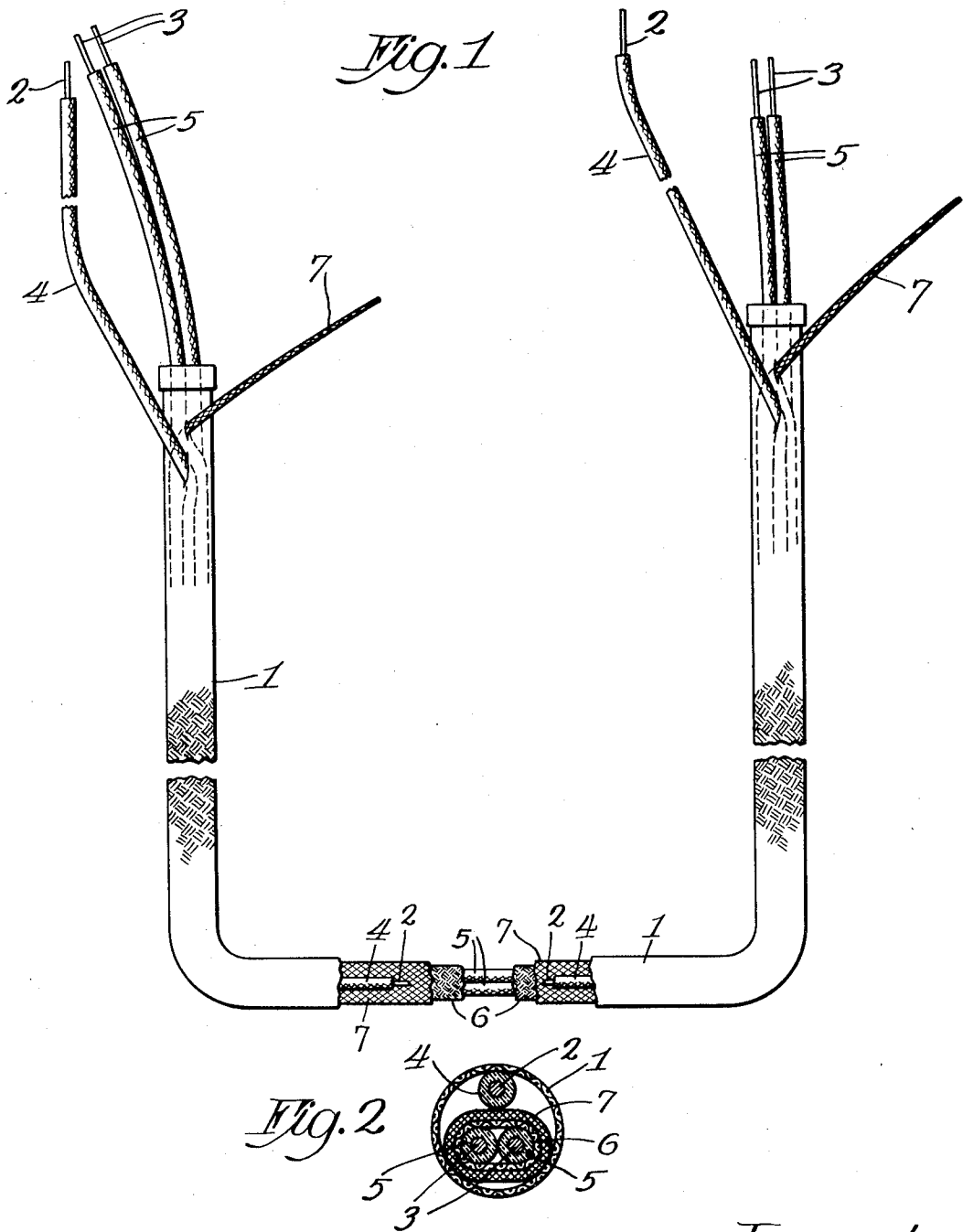
June 5, 1934.

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1,961,859

COMBINED RADIO ANTENNA, GROUND AND CURRENT SUPPLY CABLE

Original Filed Feb. 21, 1931



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UNITED STATES PATENT OFFICE

1,961,859

COMBINED RADIO ANTENNA, GROUND AND
CURRENT SUPPLY CABLEWalter H. Huth, Chicago, Ill., assignor to Story
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Application February 21, 1931, Serial No. 517,436

6 Claims. (Cl. 250—16)

This invention relates to the aerial and ground and current connections for a radio receiving set.

Generally stated, the object of the invention is to provide a novel and improved construction and arrangement whereby the aerial or antenna and the ground connection and the current connections are all combined in one flexible cable, leading from the receiving set, whereby it is only necessary to provide the other end of the cable with a plug or terminal which can be inserted in the socket or wall receptacle, which is connected in the ordinary way with the outside current mains.

It is also an object to provide certain details and features of construction tending to increase the general efficiency and desirability of a combination aerial and ground and current-supply cable of this particular character.

To the foregoing and other useful ends, the invention consists in matters hereinafter set forth and claimed, and shown in the accompanying drawing, in which—

Figure 1 is a side elevation of a cable embodying the principles of the invention, showing certain portions removed for convenience of illustration.

Figure 2 is an enlarged cross section of said cable.

As thus illustrated, the invention comprises an outside covering of cotton braid 1 which encloses the aerial or antenna wire 2, and the two current-supply wires 3, as shown. The wire 2 is covered with cotton braid 4, or suitable insulation, and the wires 3 have similar coverings 5, as shown. The two current leads are enclosed in a covering 6 of any suitable insulating material.

Outside of the covering 6, there is a copper braid 7 that entirely encloses the two current-supply leads 3, and the coverings for the latter. This braid forms the ground connection.

The three wires and the copper braid project at the opposite ends of the cable, preferably, as shown, so that at one end of the cable the four projecting ends can be secured to their proper binding posts on the receiving set. At the other end of the cable, the wires 3 will terminate in a plug or fitting (not shown) of any suitable character, that can be pushed into a socket or wall receptacle having connection with the ordinary outside current mains. At this plug end of the cable, the loose ends of the wire 2 and the copper braid 7 are left free, but the projecting end of the aerial can be of any suitable or desired length, and may be hooked up to an outside aerial or antenna, if so desired. But, ordinarily, the length

of antenna or aerial shown in the cable, which latter can be twelve feet in length, for example, is sufficient.

The copper braid from which the ground connection is made acts as a shield between the current-supply wires and the antenna or aerial, preventing any action of the current on the aerial productive of noise, which would be objectionable. It will be understood that the current in the supply wires 3 may be alternating in character, or may be a direct current, depending upon the nature of the receiving set.

It will also be seen that, while the projecting end of the braid 7, adjacent the plug end of the cord or cable, may be connected to a ground of some kind, it is not necessary to do this, inasmuch as there is a capacity coupling effect between the copper braid and the wires 3, whereby the copper braid is in effect grounded through the current-supply system.

The wires in the copper braid may be of any suitable character, but they are preferably made of tinned copper.

From the foregoing, it will be seen that a flexible cord or cable is provided, leading from the receiving set, which only needs to be plugged in at its other end to a socket or wall receptacle, or other source of current, in order to establish not only a source of current supply for operating the receiving set, but also to provide the aerial or antenna and the ground connection for the receiving set. This is done, as explained, in a manner that prevents the current supply from affecting the aerial or antenna, thereby preventing undesirable noise in the reception of the signals coming in over the aerial.

The metal braid, and other electrical conductors, can be made of copper, aluminum, or other suitable metals, it will be understood, as the invention is not limited to any particular metal.

What I claim as my invention is:

1. A flexible cord or cable having combined therein the antenna and the ground connection and the current-supply connection for a radio receiving set, said ground being in the form of a tubular metal sheath enclothing the current supply connection, forming a shield between the antenna and the current supply connection.

2. A structure as specified in claim 1, said cable having projecting ends for the current-supply connection at each end of the cable, a projecting end for the antenna, and a projecting end for the ground, these four duplicate loose ends at each end of the cable being adapted for connection to any suitable means.

3. A structure as specified in claim 1, said cable at one end having projecting ends for the antenna and current supply and ground, the current-supply end being adapted for connection to a source of current the projecting antenna end being adapted to be left loose, also to be connected to an aerial, and the projecting ground end being adapted to be left loose, also to be connected to ground, there being a capacity coupling between the tubular ground connection and the current-supply connection, whereby in effect the ground connection is grounded through the current-supply system, all within the said flexible cord or cable.
4. A structure as specified in claim 1, said tubular ground connection having a capacity coupling with the current-supply connection, whereby it is unnecessary to connect the ground connection to ground, the capacity coupling in effect forming a ground connection through the current-supply system, all within the said flexible cord or cable.
5. A structure as specified in claim 1, said current-supply connection comprising associated insulated wires, and said ground connection comprising metal braid surrounding the insulated wires, said metal braid forming a capacity coupling with the current-supply connection, whereby the ground connection is in effect grounded through the current-supply system, all within the flexible cord or cable.
6. A structure as specified in claim 1, said cord or cable having duplicate ends.
- WALTER H. HUTH.

20	95
25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150