

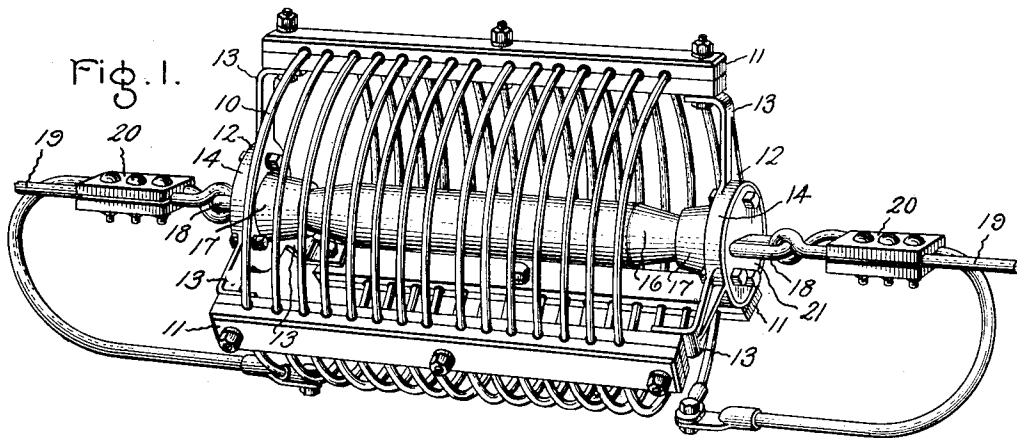
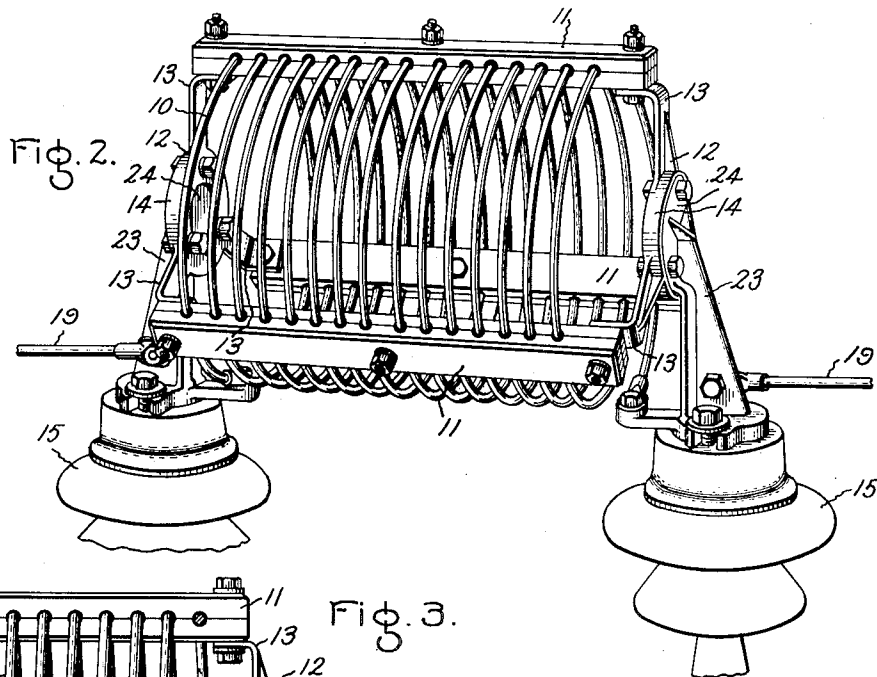
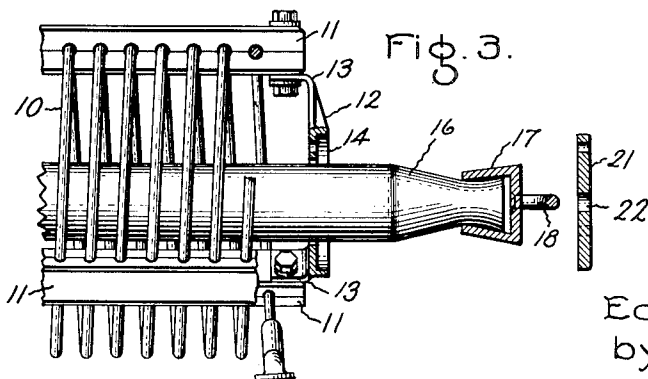
May 17, 1927.

1,629,293

E. G. NEWTON

REACTANCE COIL

Filed Oct. 21, 1925



Inventor:
Edward G. Newton,
by *Alexander S. Lane*
His Attorney.

Patented May 17, 1927.

1,629,293

UNITED STATES PATENT OFFICE.

EDWARD G. NEWTON, OF PITTSFIELD, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

REACTANCE COIL.

Application filed October 21, 1925. Serial No. 64,044.

My invention relates to reactance coils and the general object of the invention is to provide an improved construction and arrangement of parts whereby a reactance coil may be mounted on fixed insulating supports or used as a strain type coil interposed in series with and supported by an electrical conductor. By providing a reactance coil so constructed that it may be used with either type of mounting, there is a substantial reduction in the number of coils which the manufacturer must keep in stock and in the number of spare coils which the user must keep on hand for replacement of coils which may become defective while in service.

The invention will be better understood from the following description taken in connection with the accompanying drawing in which Figure 1 is a perspective view of a reactance coil with a strain type mounting as provided by the invention; Fig. 2 is a perspective view of the same reactance coil with fixed insulating supports; and Fig. 3 is a detail view showing the arrangement of the coil as used with the strain type insulator mounting.

Like reference characters indicate similar parts in the different figures of the drawing.

The reactance coil 10 comprises a conductor in the form of a helix with its turns maintained in definitely spaced relation by a series of insulating clamping strips 11. Three such clamping strips are shown, each comprising an inner and an outer insulating bar bolted together with the turns of the coil clamped between them. Each end of the coil 10 is supported by a frame 12 having three diverging arms 13 joined together by a central portion or hub 14, the outer ends of the diverging arms 13 being secured to the ends of the clamping strips 11.

The hubs 14 of the frames 12 are arranged to be supported either by insulating supports 15 of the post or pin insulator type as shown in Fig. 2 or by a strain type insulator 16 inserted between two sections of a conductor as shown in Figs. 1 and 3. The strain insulator 16 comprises a bar or rod of wood or other insulating material with a cap 17 secured to each end, each cap 17 having a loop or eye 18 for attachment of the adjacent section of the conductor 19 in which the reactance coil is interposed. Each section of the conductor 19 is looped through one of the eyes 18, secured by a clamp 20 and connected

to the adjacent end turn of the reactance coil by suitable terminals. The strain insulator 16 is assembled along the axis of the reactance coil by passing it through a central opening in one of the hubs 14 as indicated in Fig. 3 and positioning it by plates 21 with which it is provided and which are secured by bolts to the outer faces of the hubs 14. The loops or eyes 18 project through openings or slots 22 in the plates 21 to permit attachment of the conductor 19. The strain insulator 16 supports the coil and relieves it of all strain due to the pull of the two sections of the conductor 19.

The reactance coil with its supporting end frames 12 is also adapted to be mounted on insulating supports of the post type when desired as shown in Fig. 2. Two spaced post insulators 15 mounted on any suitable supporting base carry brackets 23 which terminate at their outer ends in plates 24 similar to the plates 21 of Figs. 1 and 3 and which are similarly secured by bolts to the outer faces of the hubs 14 to support the coil. Each bracket 23 is connected by suitable terminals to the adjacent end of the reactance coil and to the adjacent section of the conductor 19, thus connecting the coil electrically in series with the conductor which supports it.

The strain type insulator 16 and the post type insulators 15 are provided with plate members which fit the hubs of the end frames 12 so that the two types of insulating support may be used interchangeably with the reactance coil as desired.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. The combination with a reactance coil of end frames having hubs with diverging arms secured to said coil, and insulating supporting means including plates fitting said hubs to support the end frames and coil.

2. The combination with a reactance coil of end supports for said coil, said supports having openings, a strain type insulating support formed to extend between said end supports and with its end portions through said openings, and post type insulating supports having portions formed to fit and be secured to said end supports, whereby said reactance coil may be mounted interchangeably on said two types of insulating supports.

In witness whereof, I have hereunto set my hand this 16th day of Oct. 1925.

EDWARD G. NEWTON.