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L. WALTER
HIGH FREQUENCY CABLE

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Fig. 1

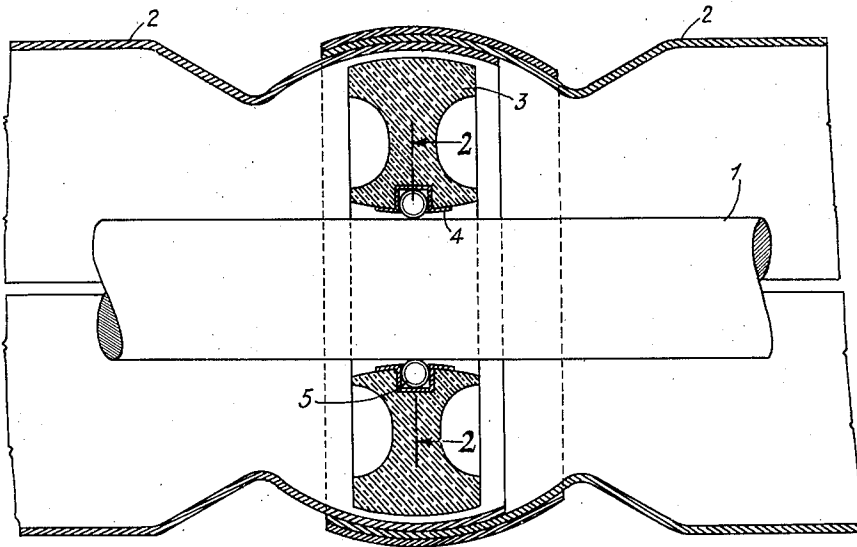
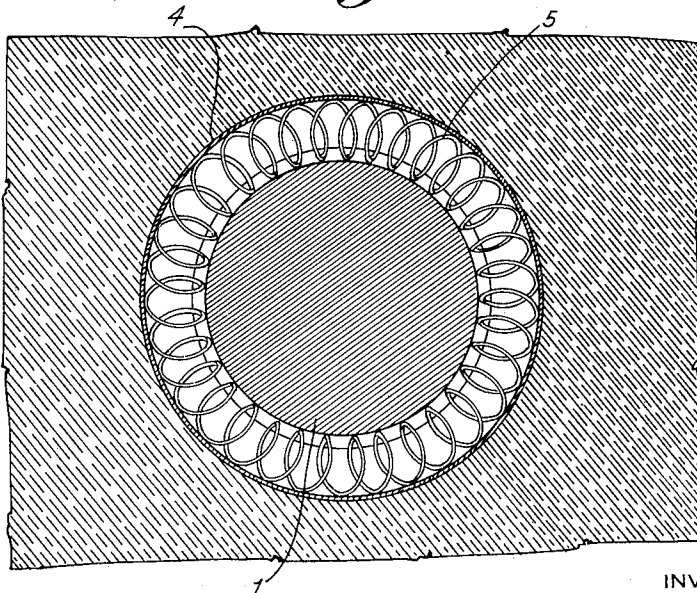


Fig. 2



INVENTOR
LUDWIG WALTER
BY *H.S. Swora*
ATTORNEY

UNITED STATES PATENT OFFICE

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HIGH FREQUENCY CABLE

Ludwig Walter, Berlin, Germany, assignor to
Telefunken Gesellschaft für Drahtlose Tele-
graphie m. b. H., Berlin, Germany, a corpora-
tion of Germany

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4 Claims. (Cl. 173—265)

This invention relates to a high-frequency cable which is especially adapted for higher potentials, comprising annular insulating spacers to support the inner conductor, with metallizing of the surface of the spacer turned towards the conductor surface.

The invention is concerned with high-frequency cables, especially of the kind adapted to fairly high voltages, in which a more or less flexible inner conductor is supported in the inside bores of the insulating annular spacer members within the outside conductor, preferably coaxially with the latter.

Fig. 1 of the attached drawing is an axial section of a portion of a cable of this kind.

Figure 2 is a view in section taken on line 2—2, Figure 1, in the direction of the arrows. 1 is the inner conductor, 2 the outer conductor, and 3 the spacer made of insulation.

It has been suggested in the prior art to metallize the inner surface of the spacer turned towards the conductor 1 for the purpose of insuring electrostatic relief in the clearance between this surface and the inside conductor by providing metallization 4.

Now, according to the present invention the protective effect of metallizing is secured by providing an elastic body between the metallized surface of the spacer and the conductor.

In this way permanent electric contact is insured between the conductor and the metallized surface of the spacer turned to the conductors under all circumstances, even if the bore or hole of the spacer should happen to be so large that no direct contact takes place between it and the conductor. To lock the elastic body 5 to be provided according to the invention, the same is preferably force-fit into an annular groove 6 of the spacer. The elastic body 5 may be designed in quite a number of different ways; for instance, as shown in Fig. 2 it may be made in the form of a wire spiral ring.

The means just described may primarily be used in connection with the inner conductor and

the bore of the spacer surrounding it; though under certain circumstances it may turn out useful to metallize the outside surface of the spacer turned towards the outer conductor, and to insure good contact between this surface and the outside conductor likewise by the intermediary of interposed spring means.

I claim:

1. A high-frequency cable, especially adapted for higher voltages, comprising an outer conductor, an inner conductor supported by insulating annular spacers which are metallized on the surface turned towards the inner conductor, with this characteristic feature that between the metallized surface of said spacer and the inner conductor there is interposed a yielding metallic body for the purpose of insuring electrical contact between said inner conductor and the metallized surface.

2. High-frequency cable according to claim 1, with this characteristic feature that the yielding metallic body is force-fit into an annular groove of said spacer.

3. A high-frequency cable comprising an inner and outer conductor, said insulating conductor spaced within said outer conductor by a plurality of insulating spacers, said spaces each having an annular groove and a metallized coating on the surface facing said inner conductor, and a spiral wire ring interposed between said annular groove and the inner conductor to insure electrical contact between said inner conductor and the metallized coating.

4. A high-frequency cable comprising an inner and outer conductor, said insulating conductor spaced within said outer conductor by a plurality of insulating spacers, said spacers each having a channel-shaped groove, a thin metallic coating located in said groove, and a spiral wire ring forced within said groove to insure electrical contact between said inner conductor and the thin metallic coating.

LUDWIG WALTER.