G. WOLFF.

PROTECTIVE DEVICE.

APPLICATION FILED JAN. 11, 1915.

1,271,407. Patented July 2, 1918.

Fig. 1.

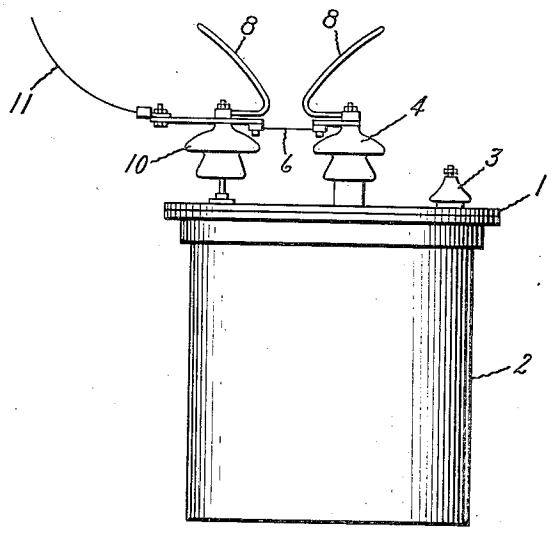
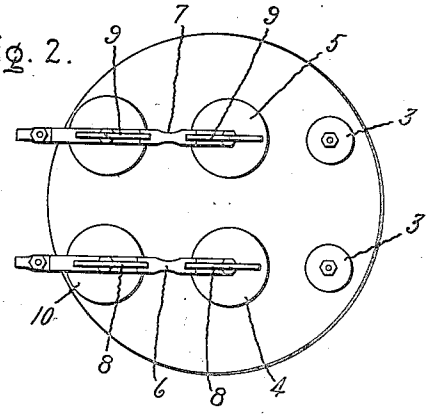


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORG WOLFF, OF HERMSDORF, NEAR BERLIN, GERMANY, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

PROTECTIVE DEVICE.

1,271,407. Specification of Letters Patent. Patented July 2, 1918.

Application filed January 11, 1915. Serial No. 1,621.

To all whom it may concern:

Be it known that I, GEORG WOLFF, a subject of the German Emperor, residing at Hermsdorf, near Berlin, Germany, have invented certain new and useful Improvements in Protective Devices, of which the following is a specification.

My invention relates to fuses and other similar protective devices for electrical apparatus which are inclosed in tanks. It is particularly applicable to fuses for transformers of considerable power. The object of my invention is to simplify and cheapen the application of such protective devices.

In carrying out my invention I locate the protective devices on the covers of the tanks containing the electrical apparatus to be protected thereby. Preferably the insulating bushings which carry the leads through the tank covers, wholly or partly support the protective devices, such other supports as the protective devices may need being also carried by the tank covers. The advantages of such arrangements are numerous. Protective devices of the kind to which my invention is applicable, must be carefully insulated from adjacent structures to which they are unrelated, and must be so segregated that their actuation entails no danger to neighboring structures. Heretofore such devices have been treated as separate units, provided with individual insulators and requiring individual segregating spaces and walls. According to my invention, the number of extra individual insulators is reduced to a minimum, and slight enlargements of the segregating spaces for the tops of the apparatus tanks, considerably less than the necessary individual spaces, are sufficient to accommodate the protective devices.

In the accompanying drawing and the following detailed description, I have illustrated and described a simple embodiment of my invention. Figure 1 is an elevation of a transformer tank to which my invention has been applied; and Fig. 2 is a plan view thereof.

The cover 1 of the transformer tank 2 carries the bushings 3 for the low tension leads and the bushings 4 and 5 for the high tension leads. The protective devices comprise the fuses 6 and 7 provided respectively with the horn gaps 8 and 9. One end of each fuse, for example fuse 6, is carried by the adjacent high tension bushing, in this case the bushing 4. One horn of the cooperating horn gap is also carried by this bushing. The other horn of the horn gap and the outer end of the fuse is carried by the insulator 10, which in its turn is carried by the cover 1. The conductors 11 from the transformer are attached to the outer ends of the fuses as indicated, the inner ends of the fuses being attached to the leads through the bushings 4 and 5.

It will be apparent from this that in a space but little larger than that required for the transformer or other apparatus alone, it is possible to locate the fuses or other analogous protective devices for that apparatus. The number of individual insulators for the protective devices is reduced to a minimum; in this case but one extra insulator is needed for each fuse although each fuse requires two insulators for supports.

While I have described the principle of my invention and the best mode I have contemplated for applying this principle, other modifications will occur to those skilled in this art and I aim in the appended claim to cover all modifications which do not involve a departure from the spirit and scope of my invention.

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

The combination of a tank for a transformer or other electrical apparatus, a cover therefor, an insulating bushing for a lead from the apparatus passing through the cover, an insulator on said cover, and a protective device comprising a fuse and an arc disrupting device of two members, one end of the fuse and one of said members being carried by said bushing and attached to the lead therethrough from the apparatus, the other end of said fuse and the other of said members being carried by said insulator, and means for connecting said last mentioned member and the adjacent fuse end to a line conductor.

In witness whereof, I have hereunto set my hand this fifth day of December, 1914.

GEORG WOLFF.

Witnesses:
HENRY HASPER,
WOLDEMAR HAUPT.