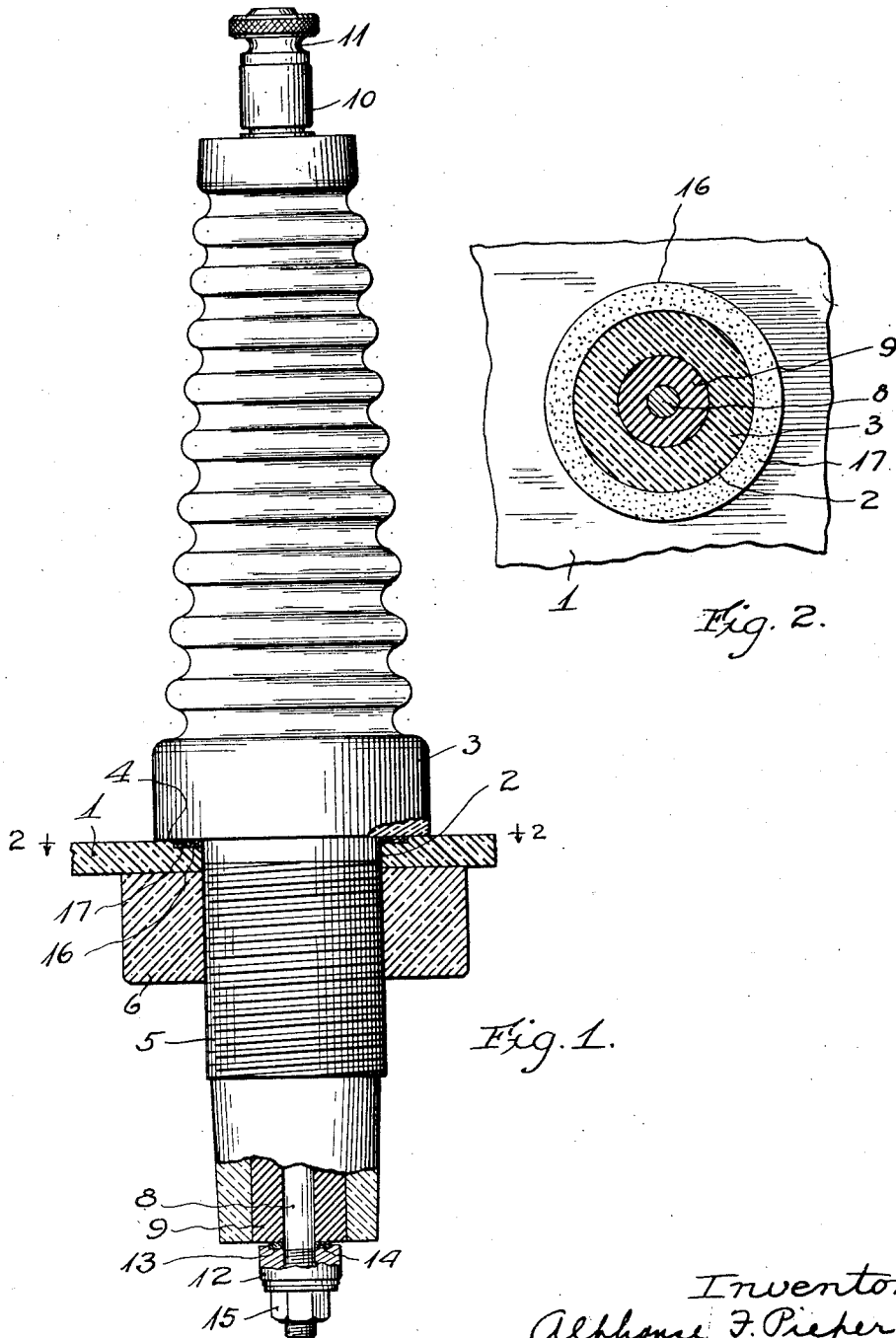


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A. F. PIEPER
TRANSFORMER CONTAINER
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UNITED STATES PATENT OFFICE

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TRANSFORMER CONTAINER

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My invention relates to X-ray transformers and is particularly concerned with the mounting of the high-tension post in the cover of the transformer box, its object being to guard against leakage of the oil in which the coils are immersed.

In the accompanying drawing, which illustrates my invention,

Figure 1 is a cross sectional view of the box upon the axis of the high-tension post, the post itself being shown mainly in elevation; and

Figure 2 is a view taken on the plane of the line 2—2.

The hard fiber cover of the box is shown at 1, it being understood that the box contains the transformer coils and is filled with oil as is well known in the art.

The cover 1 is provided with an opening 2 through which the post 3 extends, for which the cover provides a support. This post is formed of molded insulating material, the external portion, upwardly from the shoulder 4 thereon being fluted in the usual way, and the internal portion, downwardly from the shoulder 4 being relatively reduced to form the shoulder, fitting snugly in the opening 2, and being provided with screw threads 5 as indicated. A nut 6, of insulating material is threaded onto the internal portion of the post, whereby the cover 1 may be clamped between it and the shoulder 4.

The post 3 has an axial bore through which the electrode 8, bushed at 9, extends, this electrode being provided at the top with a head 10 and binding nut 11 as is well known in the art.

At its lower end the electrode 8 is screw-threaded for the reception of a steel nut 12 the upper surface of which is recessed slightly around and from its opening, as indicated at 13. A cork washer 14 of such diameter as to fit in the recess 13, but of a normal thickness greater than the depth of the recess, is clamped between the nut 12 and the lower end of the bushing 9. By tightening the nut 12 to contact with bushing 9 the cork washer 14 may be compressed to lie entirely within the recess 13 and fit tightly about the electrode 8, preventing leakage at this point, however,

whether or not so entirely compressed. The lower end of the electrode 8 also carries the nut 15 whereby the terminal of the secondary coil of the transformer may be connected to the electrode 8.

The top of the cover 1 is provided with a recess 16 around and extending from the opening 2, and a cork washer 17, of such diameter as to fit therein, but of a normal thickness greater than the depth of the recess, is clamped between the cover 1 and the shoulder 4. By tightening the nut 6 the shoulder 4 may be brought down into contact with the top of the cover 1, the cork washer 17 being entirely compressed within the recess 16 and fitting tightly about the post adjacent shoulder 4. In this way the firm mounting of the post 3 in the cover 1 is effected and leaking of oil is effectively prevented. In view of the nature of the materials employed, i. e. molded insulating material for the post and nut and hard fiber for the cover, dictated by the best practice for electrical reasons, it was impossible, prior to my invention, to secure an adequately firm and leak-proof mounting. If no compressible material was used, the mounting was firm, but not leak-proof. If compressible material was used in the old way, i. e. with the mounting entirely subject thereto, the mounting might be initially leak-proof, but it would not be adequately firm, resulting in the working of the post in the cover and consequent leaking. By my invention, the outer margin of the shoulder 4 comes into direct contact with the top of the cover, clamped thereon with the same effect as to firmness as if there were no compressible material present, while the inner margin thereof, cooperating with the floor of the recess, effects the compression of the washer 17 to pack the joint effectively against leak. Thus, by a simple device, I secure, at the same time, the desirable qualities of firmness of mounting and durable packing against leak. I have determined by experiment that cork is preferable as the material for the washer 17.

I claim:

In an oil tight mounting for a high-tension bushing of an X-ray oil transformer and like apparatus, in combination, a bushing, a cover

having an opening therethrough for reception of a portion of the bushing, said cover also being provided with a recess in its upper face extending about and from said opening, a compressible sealing gasket fitting into the recess and of a normal thickness greater than the depth of the recess, the bushing being provided with a threaded portion extending through the opening and corresponding in cross-section thereto, said bushing being also provided with a shoulder at the upper face of the cover and extending outwardly beyond the recess and the gasket therein, and a nut screwed onto the threaded portion of the bushing and bearing against the under face of the cover, the under face of the shoulder seating flat upon the upper face of the cover outwardly beyond the gasket, the cover being clamped between the nut and the shoulder and the gasket being compressed axially and expanded radially by the shoulder into sealing contact with and about said portion of the bushing, the under face of the shoulder being in sealing contact with the upper face of the gasket.

In witness whereof, I hereunto subscribe my name at Stuttgart, Germany, this 1st day of April, 1926.

ALPHONSE F. PIEPER.