June 19, 1928.

1,674,258

H. F. OBERGFELL ET AL

INSULATED SCREW

Filed June 24, 1925

Fig. 1

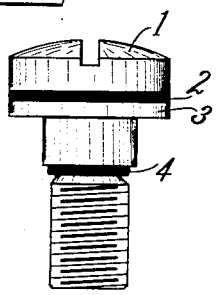


Fig. 3

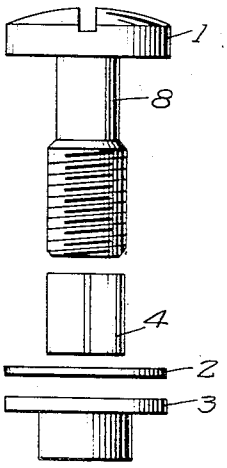
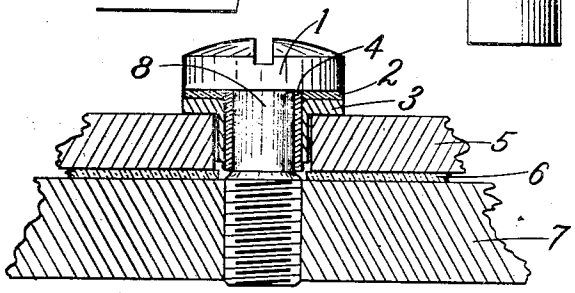


Fig. 2



Inventors

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UNITED STATES PATENT OFFICE.

HERBERT F. OBERGFELL, OF RIVER FOREST, AND JOHN ERICKSON, OF CHICAGO, ILLINOIS, ASSIGNORS, BY MESNE ASSIGNMENTS, TO AUTOMATIC ELECTRIC INC., OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE.

INSULATED SCREW.

Application filed June 24, 1925. Serial No. 39,213.

This invention relates in general to insulated screws, and has for its principal object the provision of an insulated screw in which the insulator and screw are fastened together and may be handled as an ordinary screw.

Another object of our invention is to provide a metal washer attached to a screw and insulated from it.

A further object of our invention is to provide an insulated screw in which the insulating assembly is held adjacent to the screw-head.

A still further object is to provide an insulated screw of the character set forth in the preceding objects in which the washer and insulating assembly turn fully on the screw.

In the drawings, Figs. 1 and 2 show respectively the completed assembled screw, and the sectional details of its construction, and Fig. 3 shows an exploded view of the parts of the screw. Fig. 1 shows an oval fillister head machine screw equipped with an insulating member built in accordance with the object of this invention.

Figure 2 shows the construction details of this screw. We have taken a U. S. standard oval fillister head machine screw 1 and turned down a shank 8 directly beneath the head, the diameter of the shank being approximately the root diameter of the screw thread. Around this shank we have fitted an insulating collar 4, which is made of semi-flexible material, such as fiber, hard rubber, or bakelite composition and which is slit to permit its being slipped over the shank. Over this insulating sleeve and adjacent to the head of the screw, we have placed an insulating washer 2, which may be made of fiber, hard rubber, or bakelite composition. The sleeve and washer are held on the screw by means of the eyelet 3, which is pressed on over the collar 4 and up against the washer 2. This collar 3, is not tight enough to bind the insulating sleeve 4 to the shank 8 of the machine screw, but rather leaves the sleeve free to slide over the shank, so that the screw can be tightened without turning the insulator assembly. The member 5 which is being held on the mounting plate 7 by the screw 1, is insulated therefrom by the insulating strip 6 and washer assembly of the screw.

The utility of such a screw as we have designed lies principally in the mounting of electrical equipment, when it is expedient to solidly attach such equipment to a suitable base and at the same time to insulate it therefrom.

While we have shown and described a particular form of insulated screw made in accordance with the object of our invention, we have done so merely by way of example and do not wish to limit ourselves to the specific disclosure of the drawings and specification. The principal of insulating screws in the manner we have, can be applied to a large variety of machine screws, bolts, and wood screws.

Having thus described our invention what we consider new and desire to have protected by Letters Patent is pointed out in the appended claims.

What is claimed is:

1. A screw having a threaded portion, a head, and a shank adjacent to said head, the diameter of said shank being approximately the root diameter of said threads, an insulating sleeve placed around said shank, an insulating washer around said sleeve and adjacent to said head, a metal eyelet over said sleeve and washer, said eyelet, threads and head cooperating to hold said insulating members on said screw adjacent to said head.

2. A screw having a threaded portion, a head, and a shank adjacent to said head the diameter of said shank being approximately the root diameter of said threads, an insulating sleeve placed around said shank an insulating washer around said sleeve and adjacent to said head, a metal eyelet over said sleeve and washer, said eyelet, threads and head cooperating to hold said insulating members on said screw adjacent to said head, said insulating assembly being rotatable around said shank.

3. An article of manufacture comprising a screw having a head, a shank adjacent there-

to, and a threaded portion, the diameter of the shank being approximately the root diameter of said threaded portion, an insulation assembly comprising an insulating sleeve fitting around said shank and an insulating washer fitting over said sleeve and against said screwhead, and means comprising an eyelet forced over said sleeve and against said washer for holding said screw and insulator assembly together as a unit.

In witness whereof, I hereunto subscribe my name this 17th day of June, A. D. 1925.

HERBERT F. OBERGFELL.

In witness whereof, I hereunto subscribe my name this 17th day of June, A. D. 1925.

JOHN ERICKSON.