

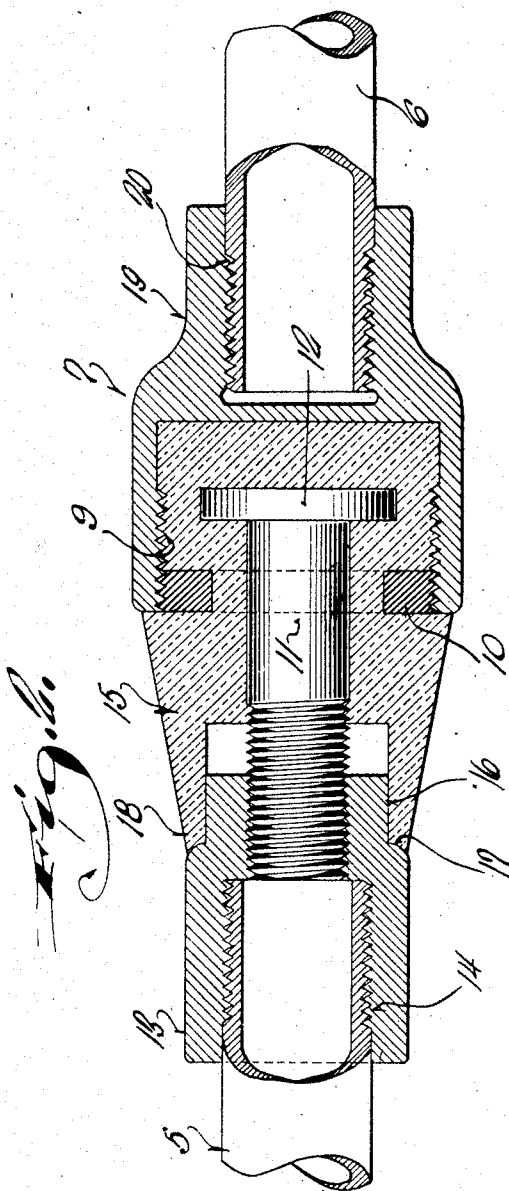
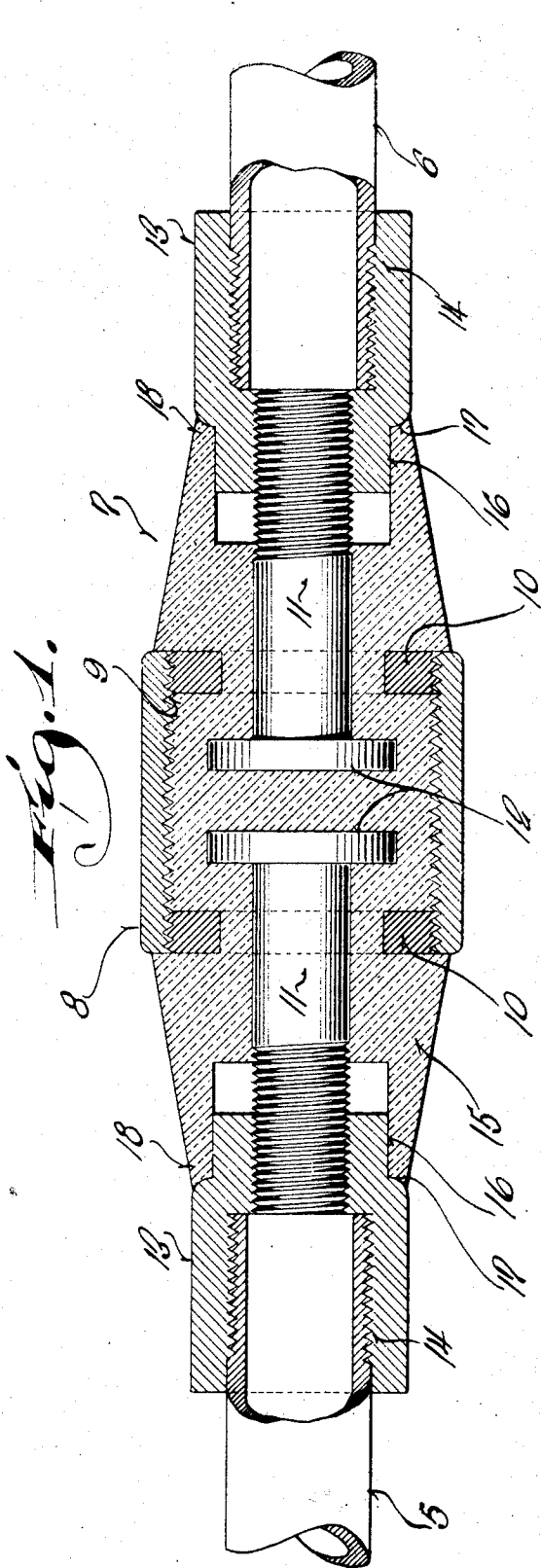
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L. E. HENDEE

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INSULATED JOINT STRUCTURE

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Inventor,

Lem. E. Hendee

By *Sra. Milton Jones*
Attorney

UNITED STATES PATENT OFFICE

LEM E. HENDÉE, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
LINE MATERIAL COMPANY, OF SOUTH MILWAUKEE, WISCONSIN, A CORPORATION
OF DELAWARE

INSULATED JOINT STRUCTURE

Application filed November 22, 1926. Serial No. 149,973.

This invention relates to certain new and useful improvements in insulated joints and refers more particularly to joints of the type utilized to connect operating levers with oil switches, pole type outdoor disconnect switches, and other similar devices.

As is customary in switches of this nature, a comparatively long operating lever or handle is desirable and, to protect the operator against any possibility of current leakage, the lever is made in two or more sections connected by insulating joints, and this invention has as one of its objects the provision of a joint which is capable of withstanding relatively large stresses.

Another object of this invention resides in the provision of an insulating joint in which the insulating material is in compression at all times, irrespective of the stress applied thereon.

A further object of this invention resides in the provision of an insulating joint so constructed that failure of the insulating material will not allow the two sections of the operating lever to become separated.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claim, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claim.

In the accompanying drawing, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof and in which:

Figure 1 is a longitudinal sectional view of my improved insulated joints, parts thereof being shown in elevation and,

Figure 2 is a view similar to Figure 1 of a modified form of my invention.

Referring now more particularly to the accompanying drawing, in which like numerals designate like parts throughout the two views, numerals 5 and 6 designate two sec-

tions of an operating lever for oil switches or other current handling devices, said sections being connected by an improved insulating joint 7, to be described. The joint 7 consists of a main or central coupling member or sleeve 8 interiorly threaded throughout its length, as at 9, and having ring members 10 threaded in each end. Tension studs 11, each having an enlarged head 12, are extended through the ring members with their heads adjacent and within the coupling member 8. The inside diameter of the ring members 10 are less than that of the heads 12 so that when secured in place the tension studs cannot be removed from the coupling 8 without first removing the ring members. The outer ends of the tension studs 11 are threaded in connecting members 13 having internally threaded enlarged outer ends 14 to receive the adjacent threaded ends of the lever sections 5 and 6. Thus the sections 5 and 6 of the operating lever are rigidly connected with their associated tension studs 11 which are insulated from each other by material 15 insulating the studs 11 from the sleeve 8 and the ring members 10.

Each member 13 has its inner end 16 reduced forming a shoulder 17 for engagement with the adjacent end 18 of the insulating material to place the same in compression. To provide the necessary space for threading the members onto the studs to secure compression on the insulating material, the members 13 are replaced by suitable plugs (not shown) having a diameter equal to that of the reduced portion 16 of the members 12 and of a length greater than the portions 16 during the formation of the insulating portion of the joint. Thus it will be seen that when the plugs are removed, space is provided for threading the members 13 inwardly on the tension studs 11 to rigidly engage the shoulders 17 of the insulation and place the same in compression between the members 13 and the heads 12.

In Figure 2, I have illustrated a slightly modified form of my invention in which the various elements are substantially identical except that the main or central coupling member 8 is replaced by a member 19 having

one end formed substantially identical with one end of the coupling member 8 and its other end 20 closed and reduced in diameter. The reduced end of the member is threaded 5 to receive the adjacent end of the operating lever section 6. The construction illustrated in Figure 2 is preferable where the voltage being handled is not excessive due to its lower cost of production.

10 It will be readily apparent to those skilled in the art to which an invention of this character appertains that I have provided an insulating joint to be used with operating levers of oil switches and other current handling devices which will in no way weaken 15 the operating lever, which affords a positive safeguard against current leakage, and one in which the insulation is at all times in compression, thereby greatly increasing the mechanical strength thereof.

20 What I claim as my invention is:

In a joint for connecting two sections of an operating lever, a sleeve member, insulating material substantially filling the interior of 25 the sleeve member, a tension stud embedded in the insulating material and secured thereby against movement with respect to the sleeve member, said insulating material projecting outwardly from the sleeve member 30 over the tension stud to form an extended end portion, a coupling member having a reduced end received in a counterbore in the projected end portion of the insulating material, and said reduced end forming a shoulder 35 to compress the end portion of the insulating material.

In testimony whereof I affix my signature.
LEM E. HENDEE.

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