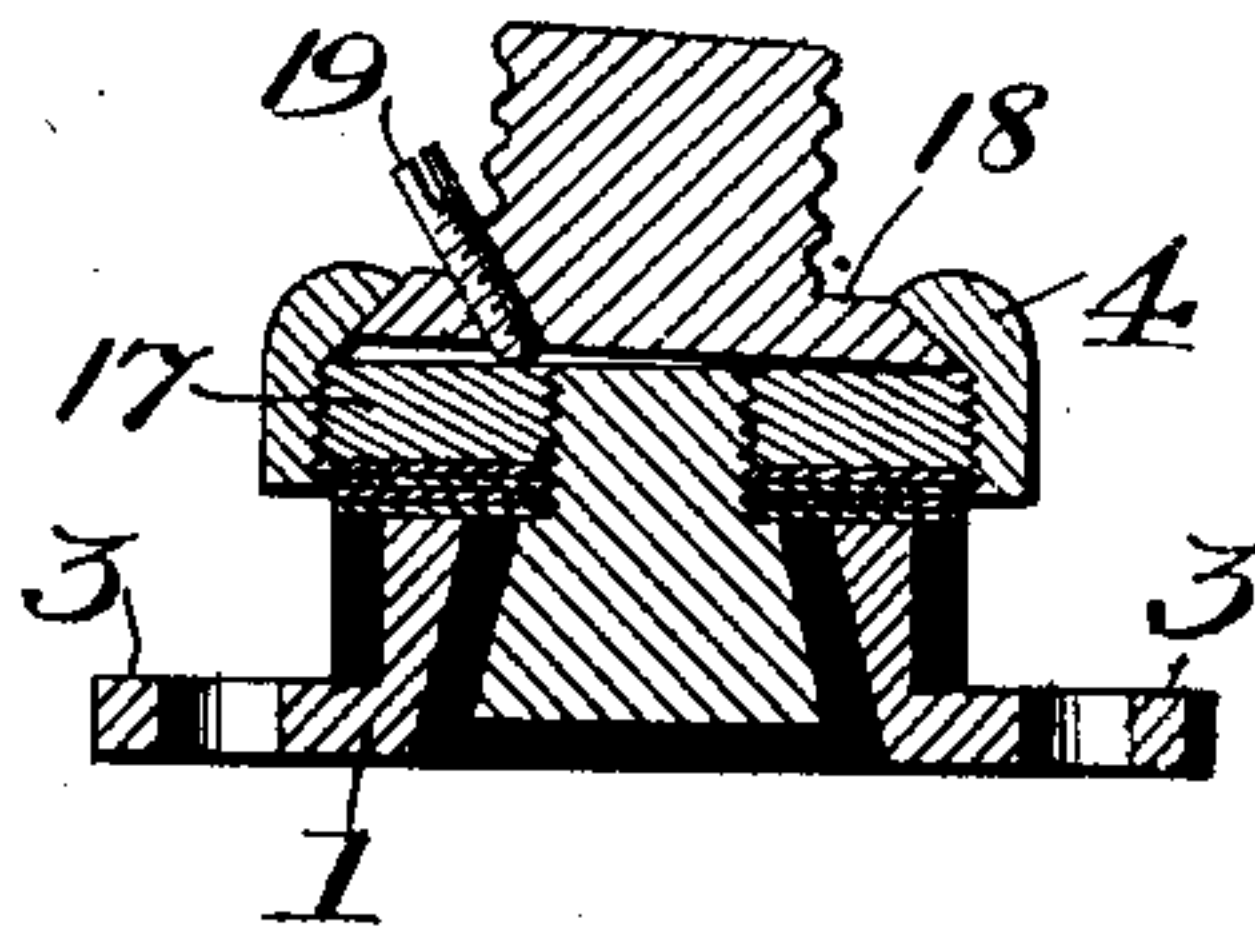
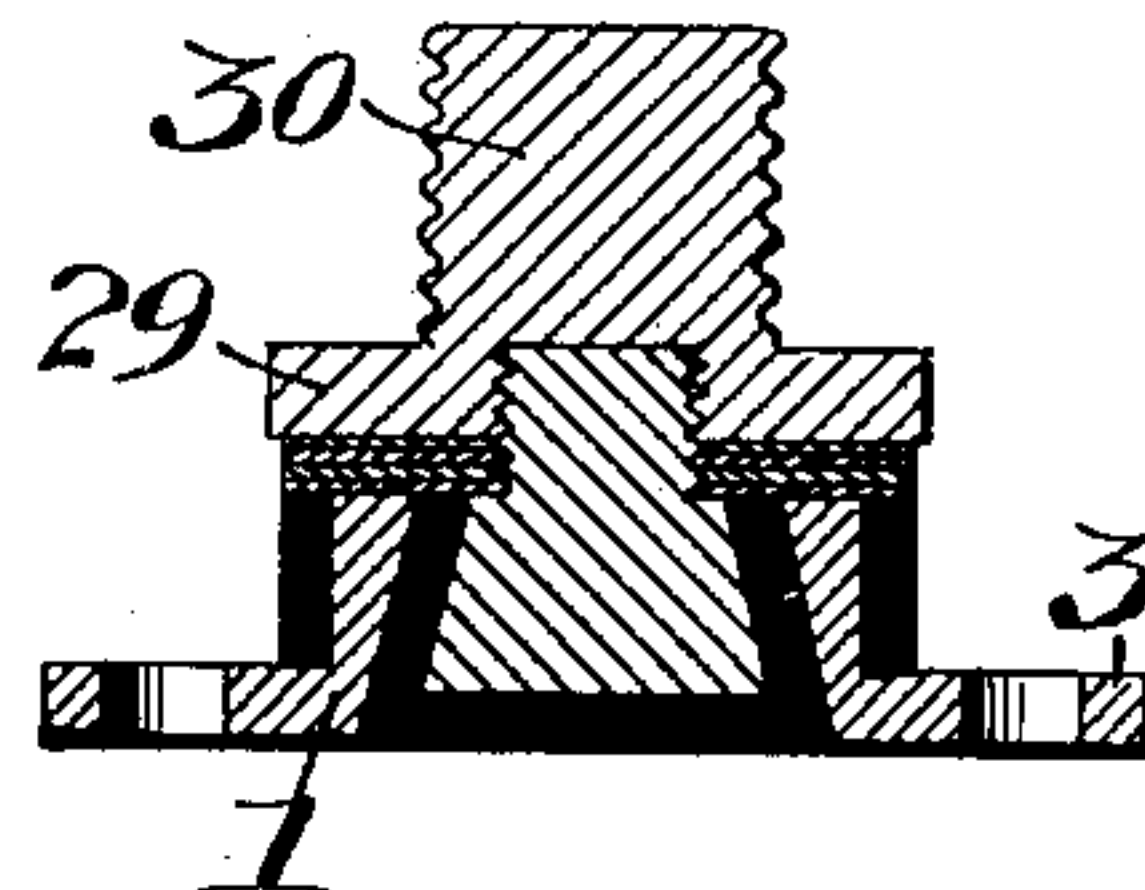
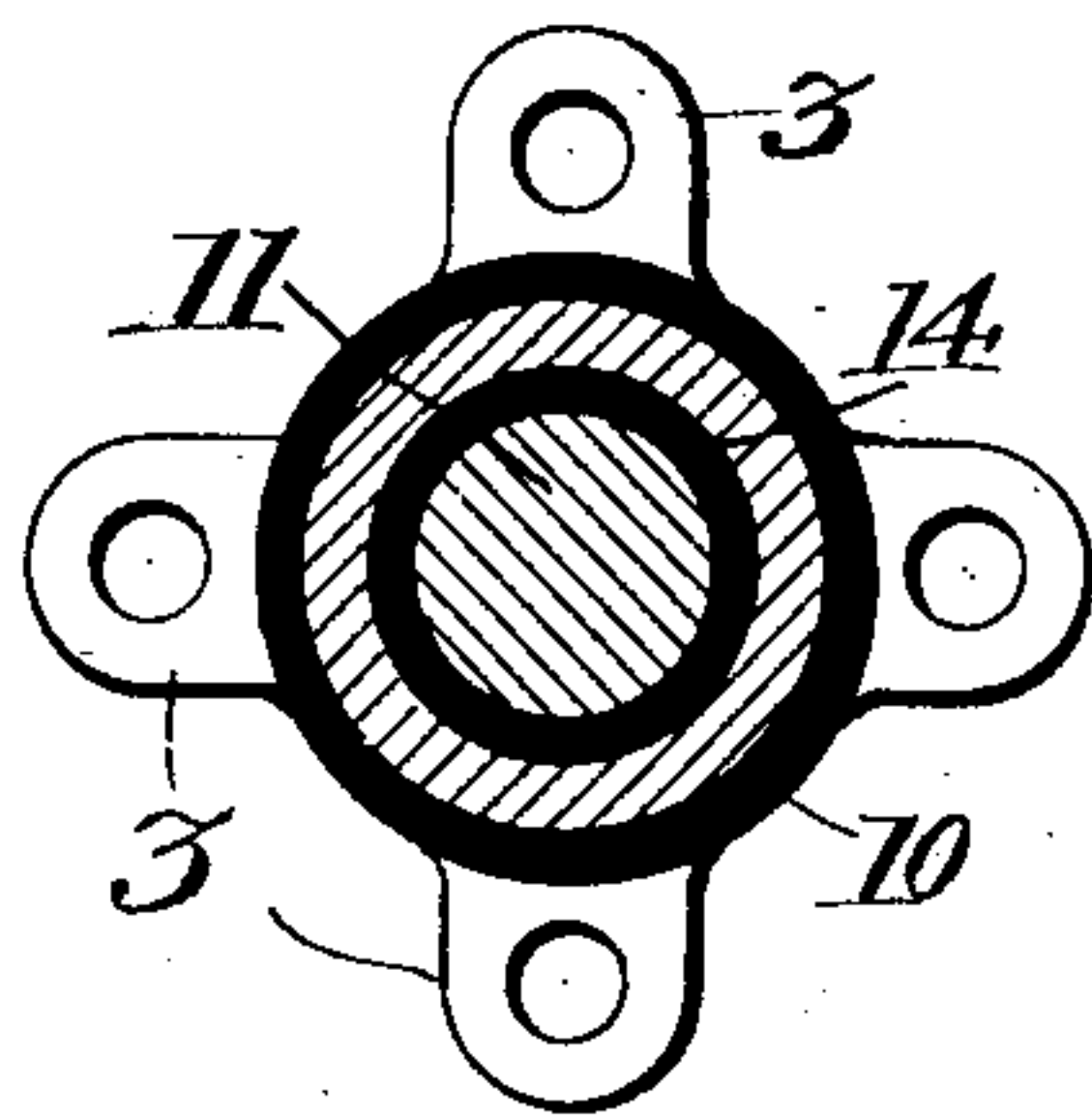
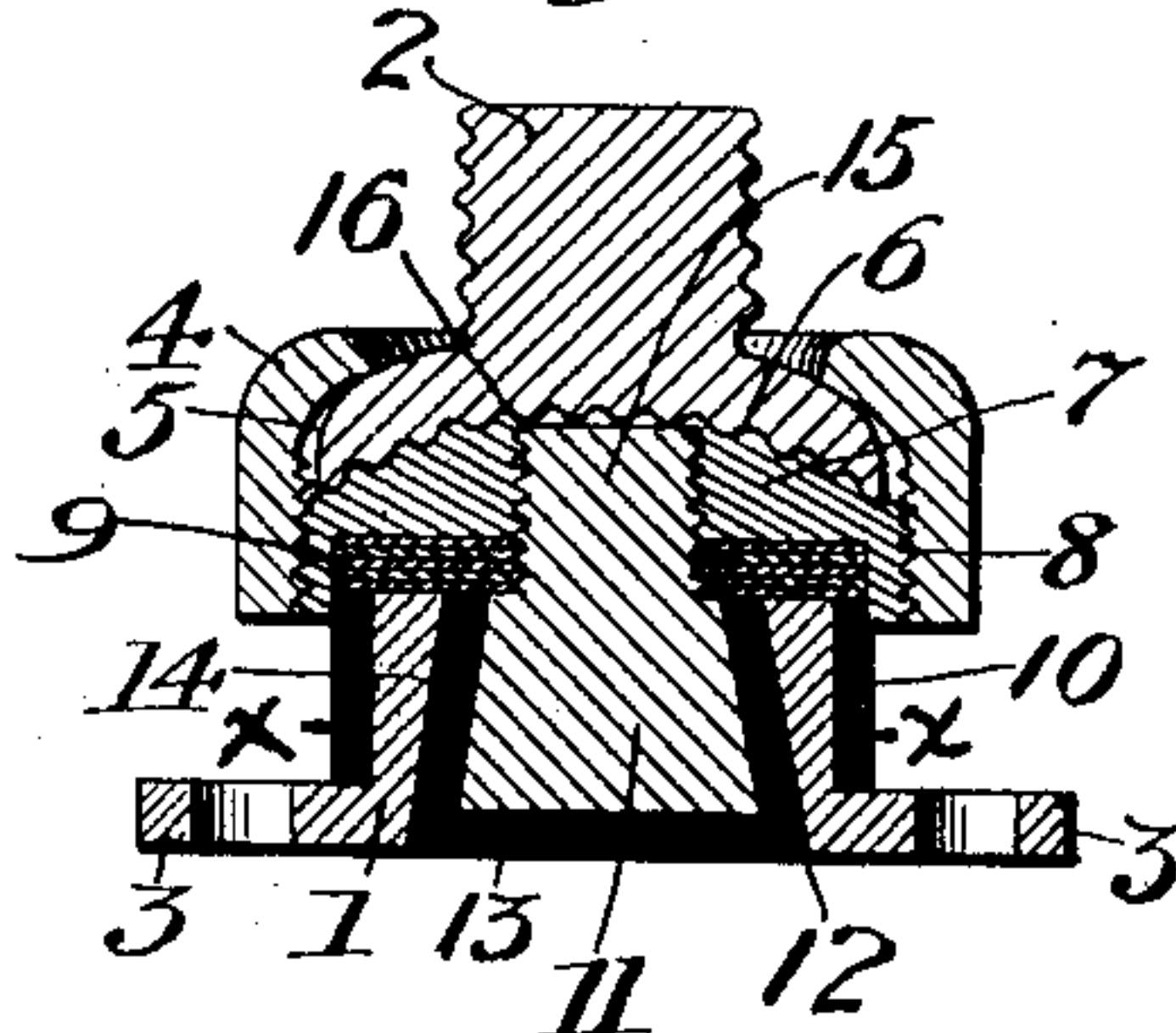
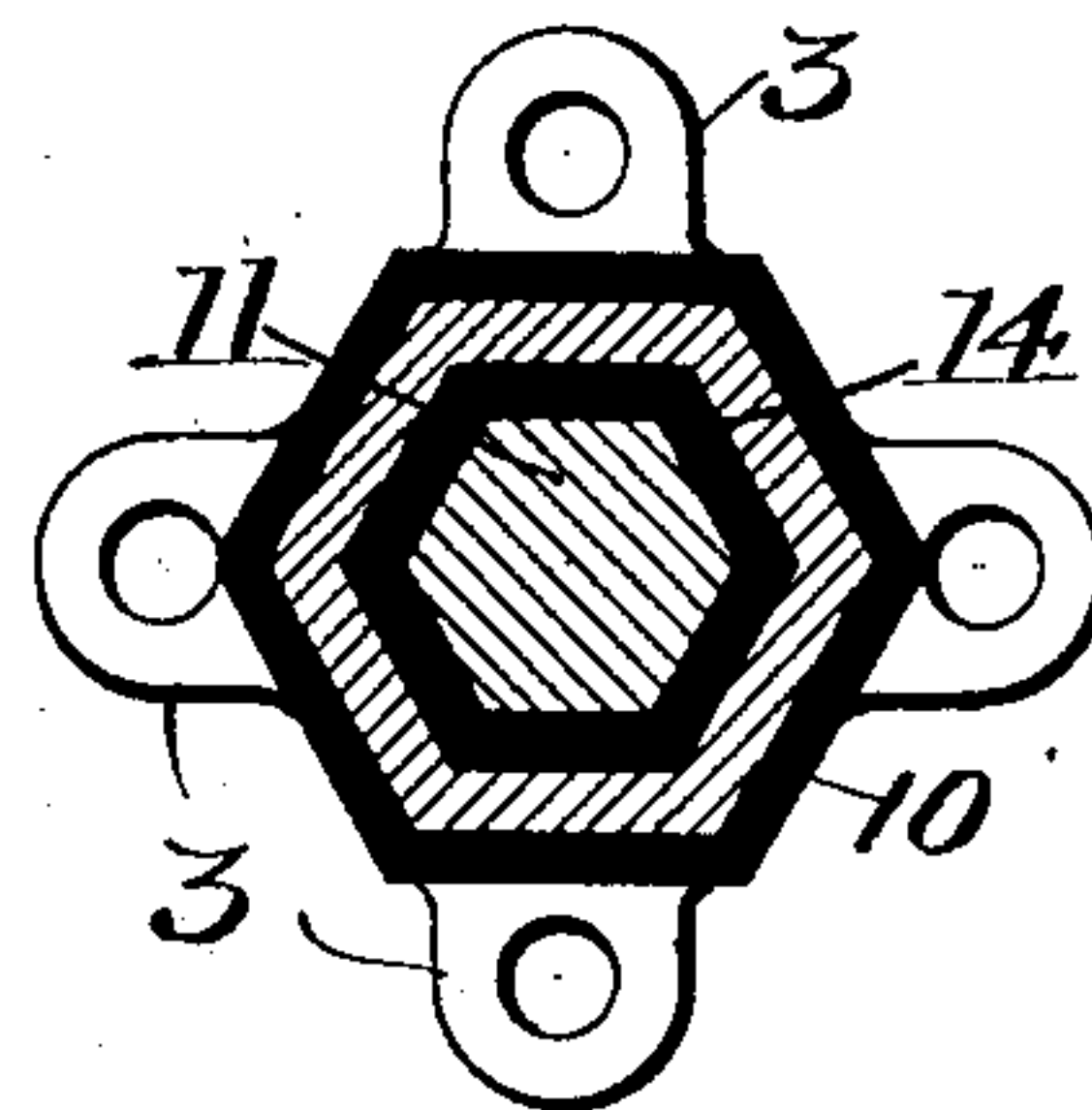
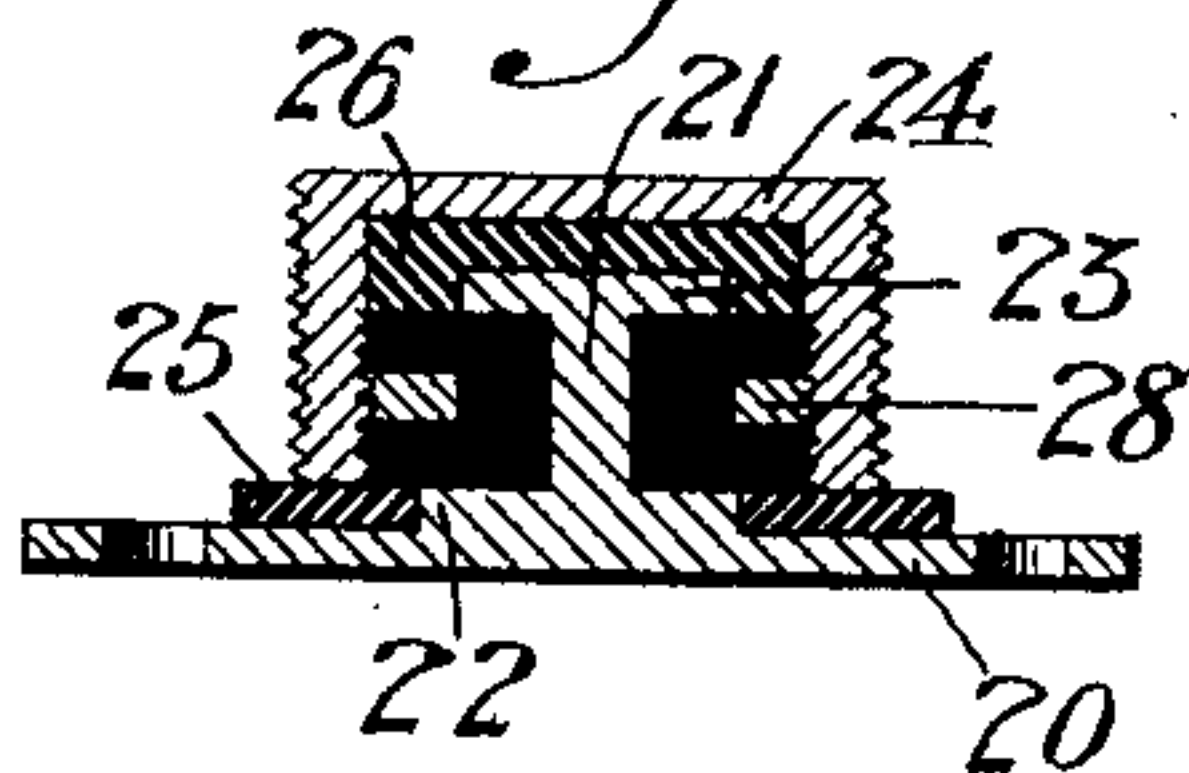
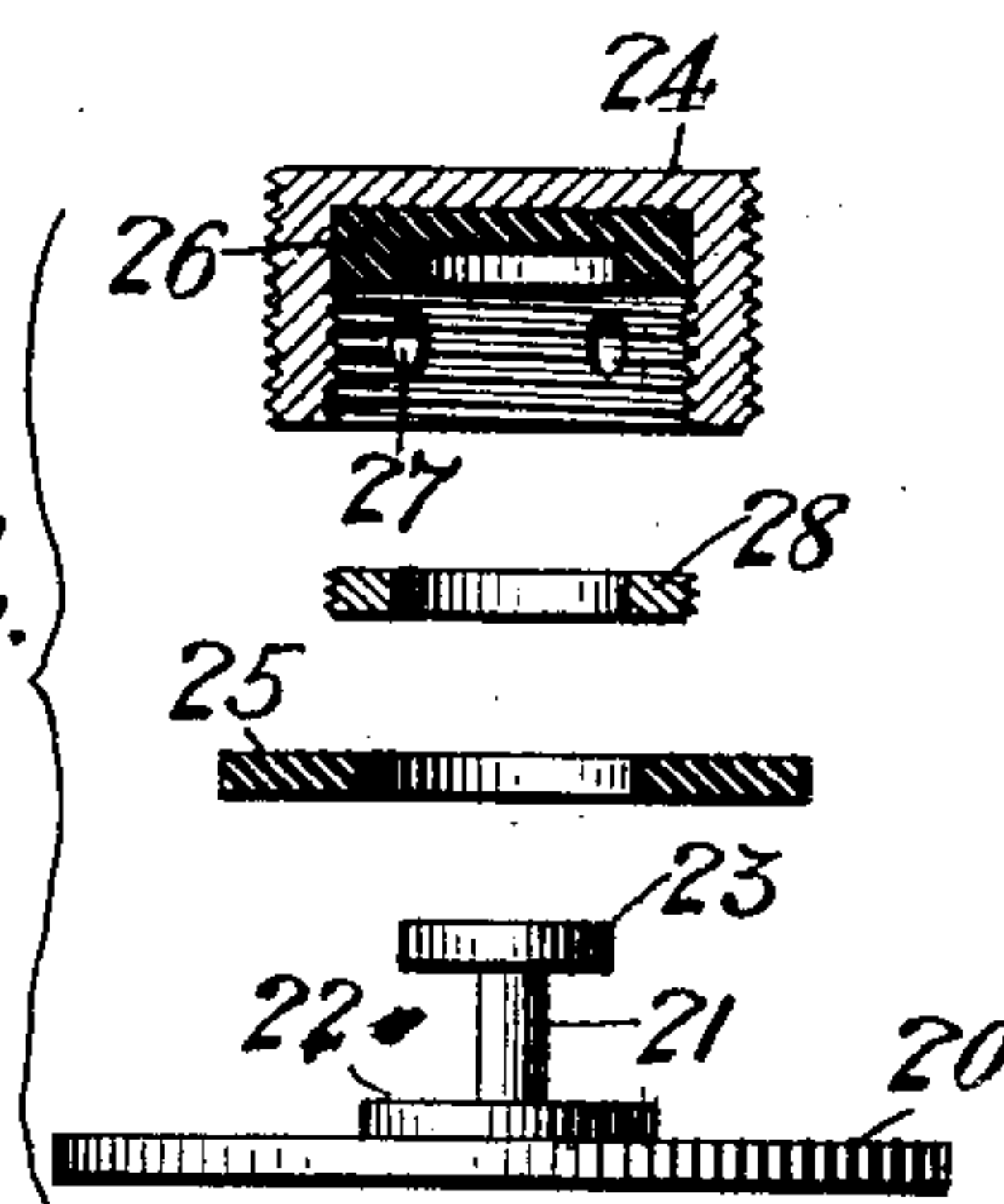


A. C. PROUDFIT.  
INSULATING FIXTURE STUD.  
APPLICATION FILED SEPT. 19, 1903.

NO MODEL.

*Fig. 2.**Fig. 5.**Fig. 6.**Fig. 1.**Fig. 7.**Fig. 3.**Fig. 4.*

Witnesses:  
Charles F. Fehrmann.  
Harry H. Walton.

Inventor:  
Alexander C. Proudfit



# UNITED STATES PATENT OFFICE.

ALEXANDER C. PROUDFIT, OF NEW YORK, N. Y., ASSIGNOR TO THOMAS & BETTS, OF NEW YORK, N. Y., A FIRM.

## INSULATING FIXTURE-STUD.

SPECIFICATION forming part of Letters Patent No. 742,098, dated October 20, 1903.

Application filed September 19, 1903. Serial No. 173,894. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER C. PROUDFIT, of New York, State of New York, have invented certain Improvements in Insulating Fixture-Studs, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings designating like parts.

This invention has for its object the provision of an insulating fixture-stud of particular advantage when used in connection with outlet-boxes for electrical conduits, although I contemplate the utilization of my improvements in any field to which they may be adapted by reason of their nature.

At the present day the ordinary "fixture-stud" is neither insulated nor is it adjustable, both of these important qualities having been found difficult to embody in a fixture-stud by reason of the fact that a standard base is required by all manufacturers of outlet-boxes and a space is left so narrow as to make it difficult to include in the stud the necessary insulating material consistent with strength of construction, although attempts have been made without success, no attempt, however, having been made, so far as I am aware, to produce a stud of standard size which will at once present features of insulation proper to withstand the high voltage of tests at present required by building departments, together with the very desirable adjustability.

Among the important features of my invention the interlocking of the parts contributes great strength, and the quality of the insulation has been carried to an extent which prevents any practical danger of short-circuiting, while a compact form of ball-joint has been used and adapted to the requirements of the confined spaces of an outlet-box, enabling a universal adjustment of the fixture attached to the stud, my invention obviating the necessity hitherto found for several devices to accomplish insulation, adjustment, and strength of attachment by combining in a single device members yielding these features.

The various features of my invention will be illustrated and described fully in the accompanying drawings and specification.

In the drawings, Figure 1 illustrates in vertical longitudinal section an insulating adjustable fixture-stud in the construction of which my invention has been embodied. Fig. 2 is a similar view of a modified form of stud, and Fig. 3 a similar view of still another modification, Fig. 4 being a view of the parts composing the stud shown in Fig. 3 separated, while Fig. 5 is a view similar to Fig. 1 of a fixture-stud insulated, but not adjustable; and Figs. 6 and 7 are views respectively in cross-section on the line  $x x$ , Fig. 1, and on a similar line of a modification thereof.

In the embodiment of my invention selected for illustration and description as a convenient form to enable ready and complete understanding of my improvements the reference-numerals 1 and 2 designate, respectively, the attaching member and supporting member of an insulating fixture-stud, the former being provided with lugs 3 to permit its attachment in the usual manner to existing outlet-boxes of standard dimensions.

To unite the attaching and supporting members in a manner permitting of angular axial adjustment relatively to each other, I have shown as one convenient form of means a collar 4 engaging a foot 5, projecting from the base of the supporting member, a roughened concavity 6 fitting upon the convex face of a head-piece 7, threaded peripherally at 8 to receive the collar 4, the collar, foot, and head-piece coöperating in a manner which will be readily understood.

The head-piece 7 is insulated by a washer 9, preferably formed of micanite or sheets of mica, and preferably a ring 10, of similar insulating material, will be placed around the boss of the attaching member, and to secure the head-piece to the attaching member firmly, but with due insulation, and preferably in interlocked relation, I have illustrated a beveled connecting-stud 11, which may be circular, as shown in Fig. 6, polygonal, as shown in Fig. 7, or of other convenient and suitable cross-section, entering a similarly-shaped recess 12 in the boss of the attaching member, micanite or similar insulation 14 being provided between the two and the stud having a projection 15 secured to the head-piece 7, preferably by threaded en-



gement with a central aperture 16 in the latter, although other means of connecting these parts may be adapted as desired or found suitable.

5 In assembling the parts the member 11 may be inserted in the recess 12, the insulation 9 and 10 put in place, and the head-piece 7 run down snugly upon the projection 15, and thereafter insulation in melted or  
10 other suitable condition may be introduced at 13 and 14 and compacted in place under pressure, the member 11 being centered within its recess by the head-piece 7, which may be tightened up after introduction of the in-  
15 sulating material to the recess 14.

I do not, of course, limit myself to the specific kind of insulation nor to the mode of applying it just described for the sake of illustration.

20 The modification shown in Fig. 2 illustrates a tilting supporting member. The head-piece 17 is flat and the foot 18 of the supporting member recessed to receive a set-screw 19, the collar 4 acting as before.

25 In the form shown in Figs. 3 and 4 the attaching member 20 has a stud 21 integral or conveniently connected thereto, preferably provided with a lower shoulder 22 and a head 23. A head member 24, similar in function  
30 to those already described, fits down over the stud against insulating means, which may take the form conveniently of a washer 25, adjacent the shoulder 22, an insulating-cap 26 between the head of the stud and the in-  
35 ner surface of the head-piece, while other insulation may be provided in the shape of micanite, enamel, or the like, which may be molded between the two parts in assembling the same or may be introduced through aper-  
40 tures 27, if it is found desirable to provide such means.

I have shown a retaining-washer 28 engaging the inner surface of the head-piece and serving to prevent displacement of the latter  
45 by being embedded in the interior insulation.

Fig. 5 is the same in every respect to Fig. 1, except that the head-piece 29 has an integral stud 30, to which direct attachment of the fixture may be made.

50 Having thus described and illustrated my invention fully and several forms in which the same may be embodied, it will be under-

stood that I do not limit myself to such specific forms, nor in general otherwise than as set forth in the specification and claims read in  
55 connection with each other.

What I claim, and desire to secure by Letters Patent, is—

1. An adjustable insulating fixture-stud for electrical outlet-boxes, comprising an attach- 60 ing member, a convex head portion insulated therefrom, a supporting member having a concave foot cooperating with said head portion to form a ball-joint, and a collar uniting said head and foot portions, said attaching and 65 supporting members being insulated from each other in their various positions of adjustment, substantially as described.

2. An adjustable fixture-stud for electrical outlet-boxes, comprising an attaching mem- 70 ber having a convex head portion threaded peripherally and presenting a large surface for frictional engagement, a supporting member having a concave bearing-surface cooperating frictionally therewith substantially 75 throughout said surface presented by said convex head portion to form a ball-and-socket joint, and a collar screwed upon the threaded periphery of said head portion to engage said supporting member and hold said parts in ad- 80 justed relation, substantially as described.

3. An insulating fixture-stud comprising an attaching member having a beveled socket, a beveled connecting-stud within said socket, a head-piece provided with a fixture-stud or 85 like fixture-supporting member, insulation between said head-piece and attaching member and between said attaching member and said connecting-stud, said head-piece and supporting member being formed separately 90 from said connecting-stud but connected to, and supported by, said connecting-stud, and secured to said attaching member by the interlocking engagement of the beveled portion of said connecting-stud member within said 95 beveled socket, substantially as described.

Signed at New York, in the county of New York and State of New York, this 17th day of September, A. D. 1903.

ALEXANDER C. PROUDFIT.

Witnesses:

CHARLES F. GEHRMANN,  
HARRY H. WALTON.