

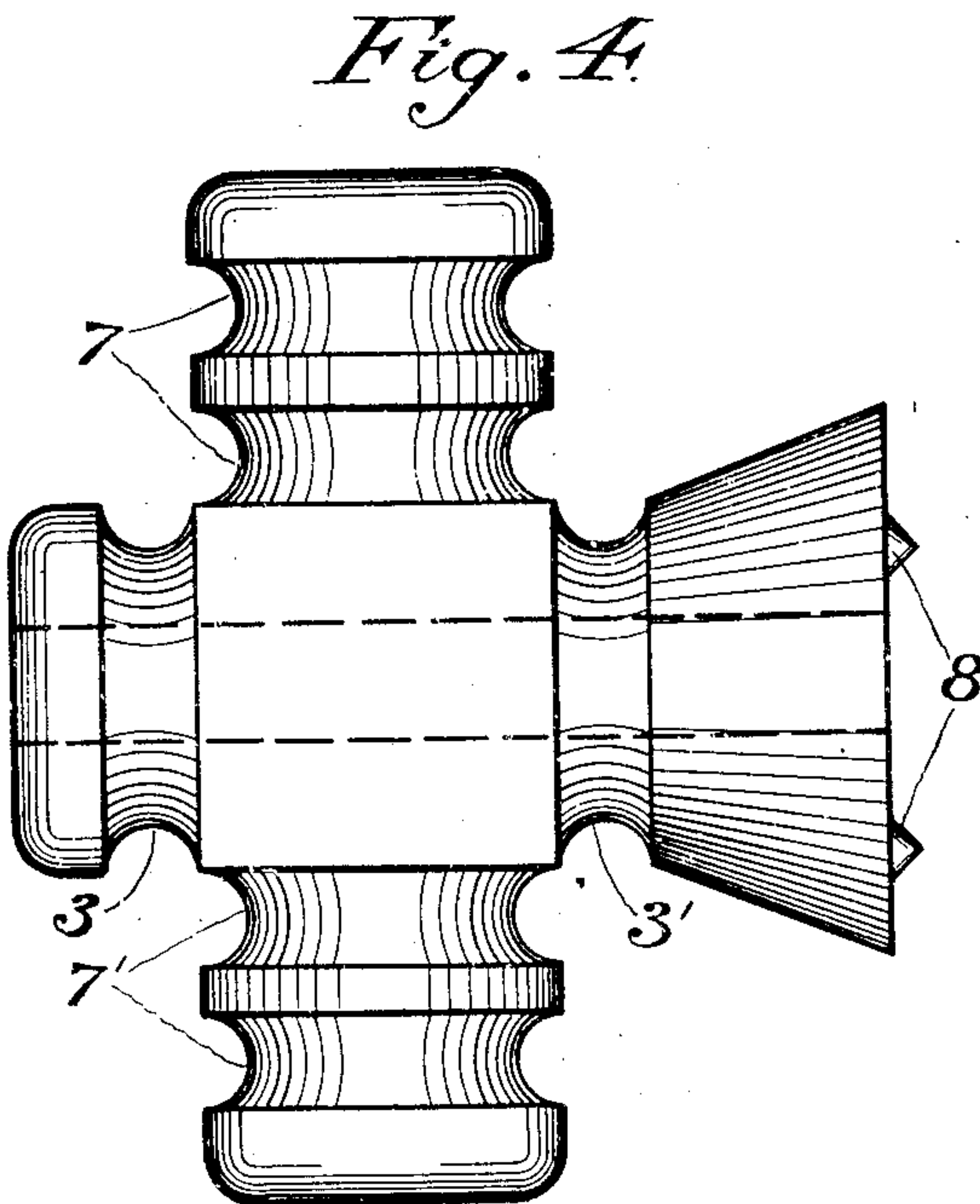
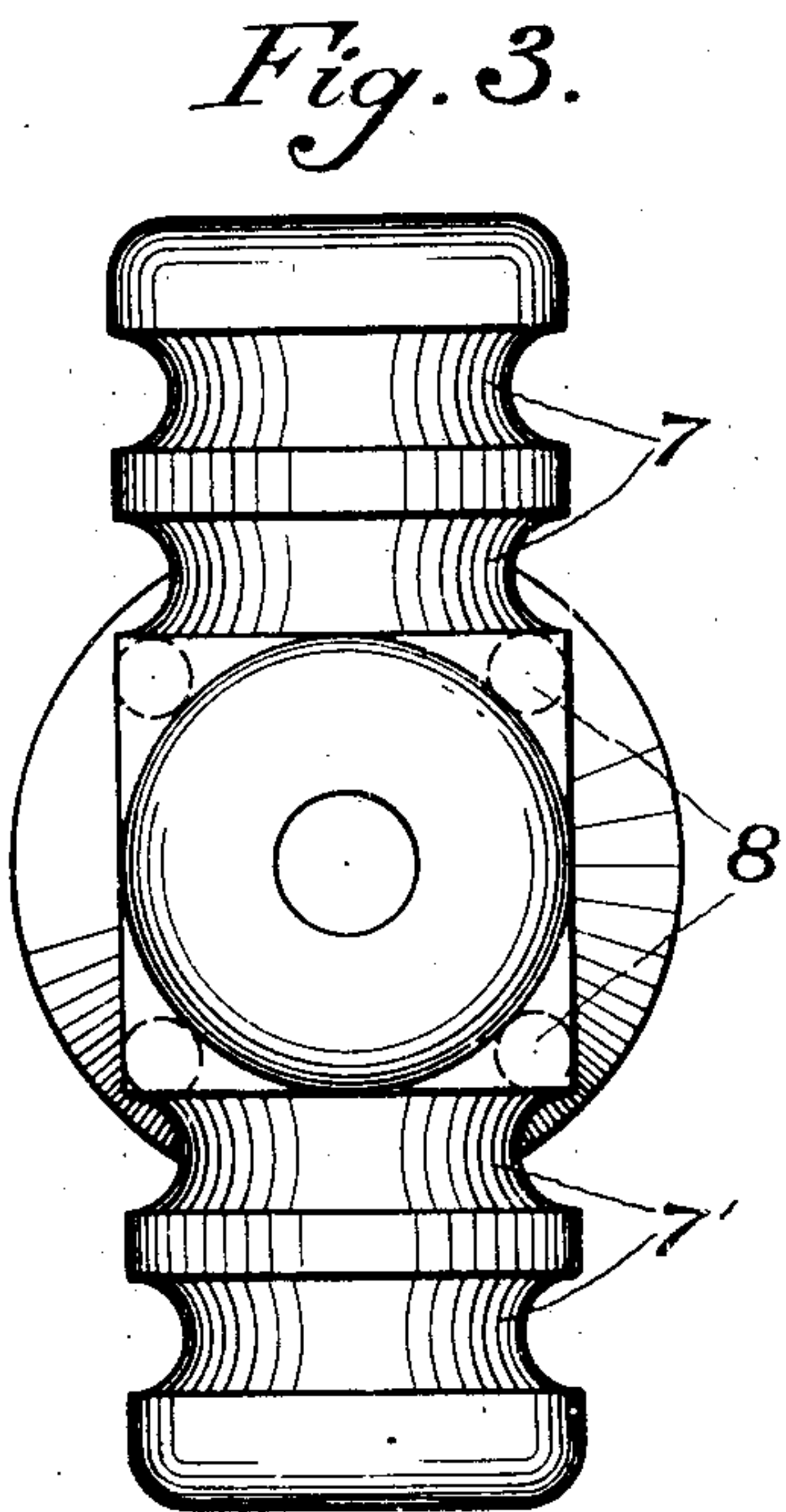
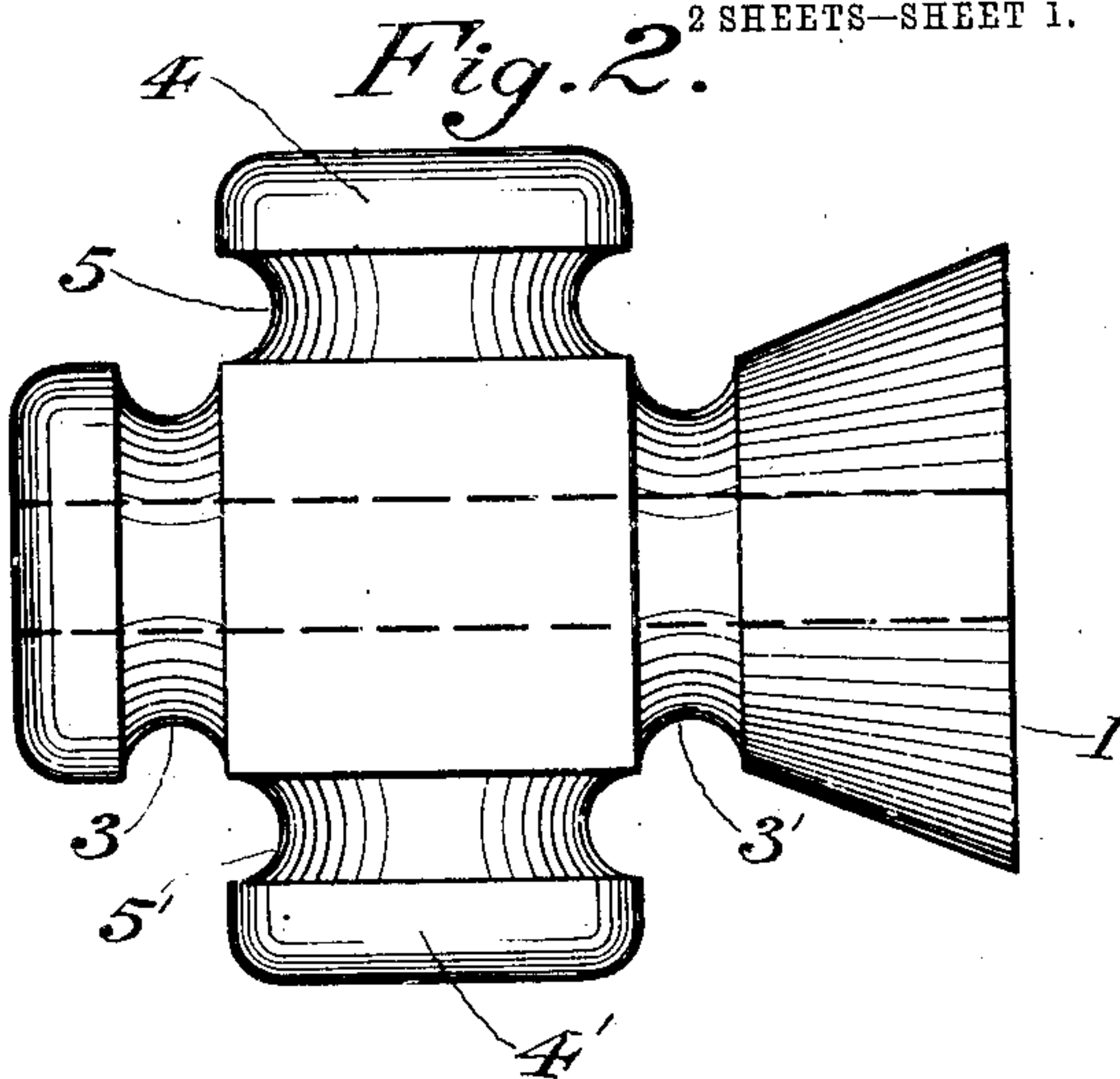
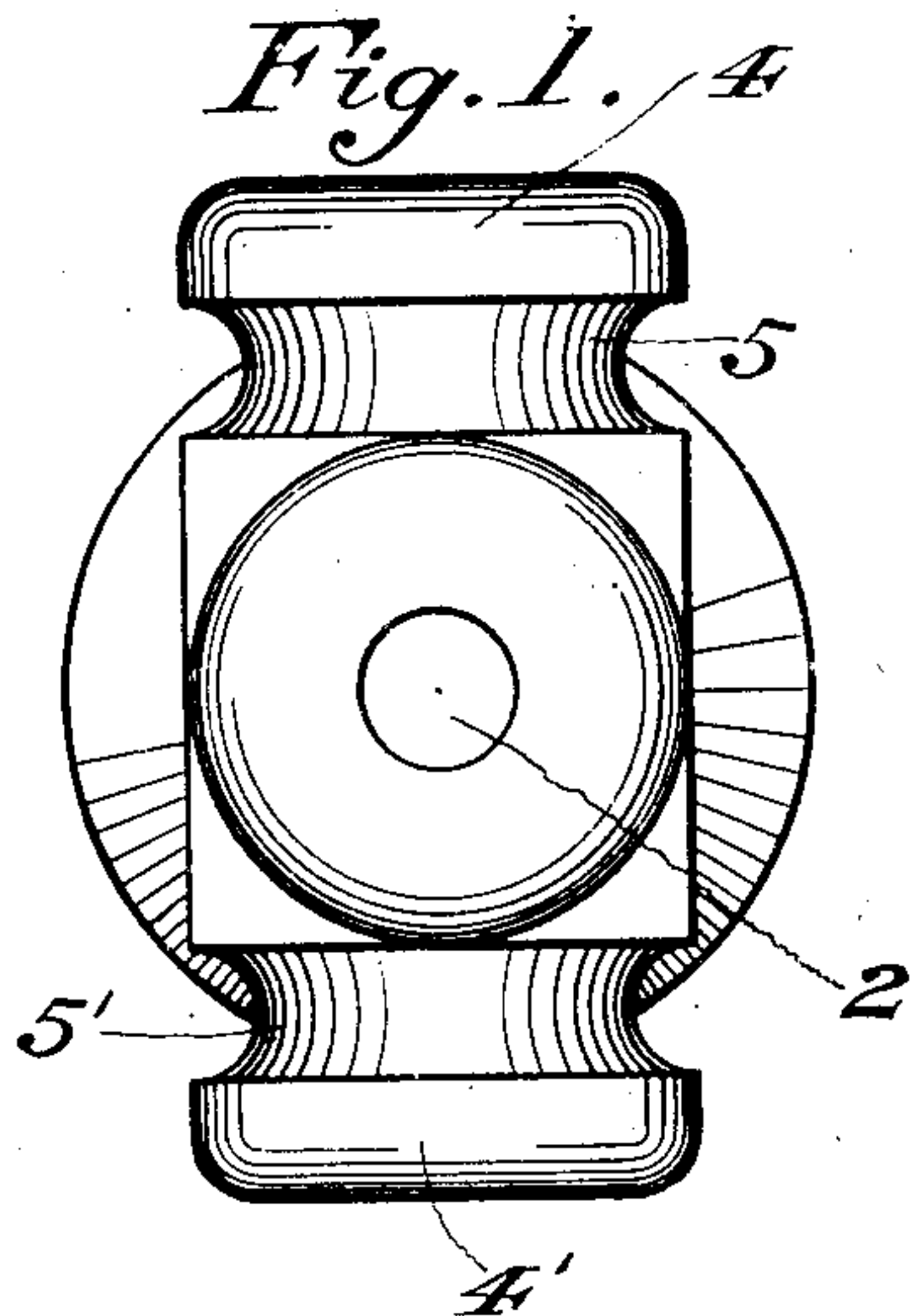
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INSULATOR.

APPLICATION FILED AUG. 19, 1907.

954,596.

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.



Witnesses:

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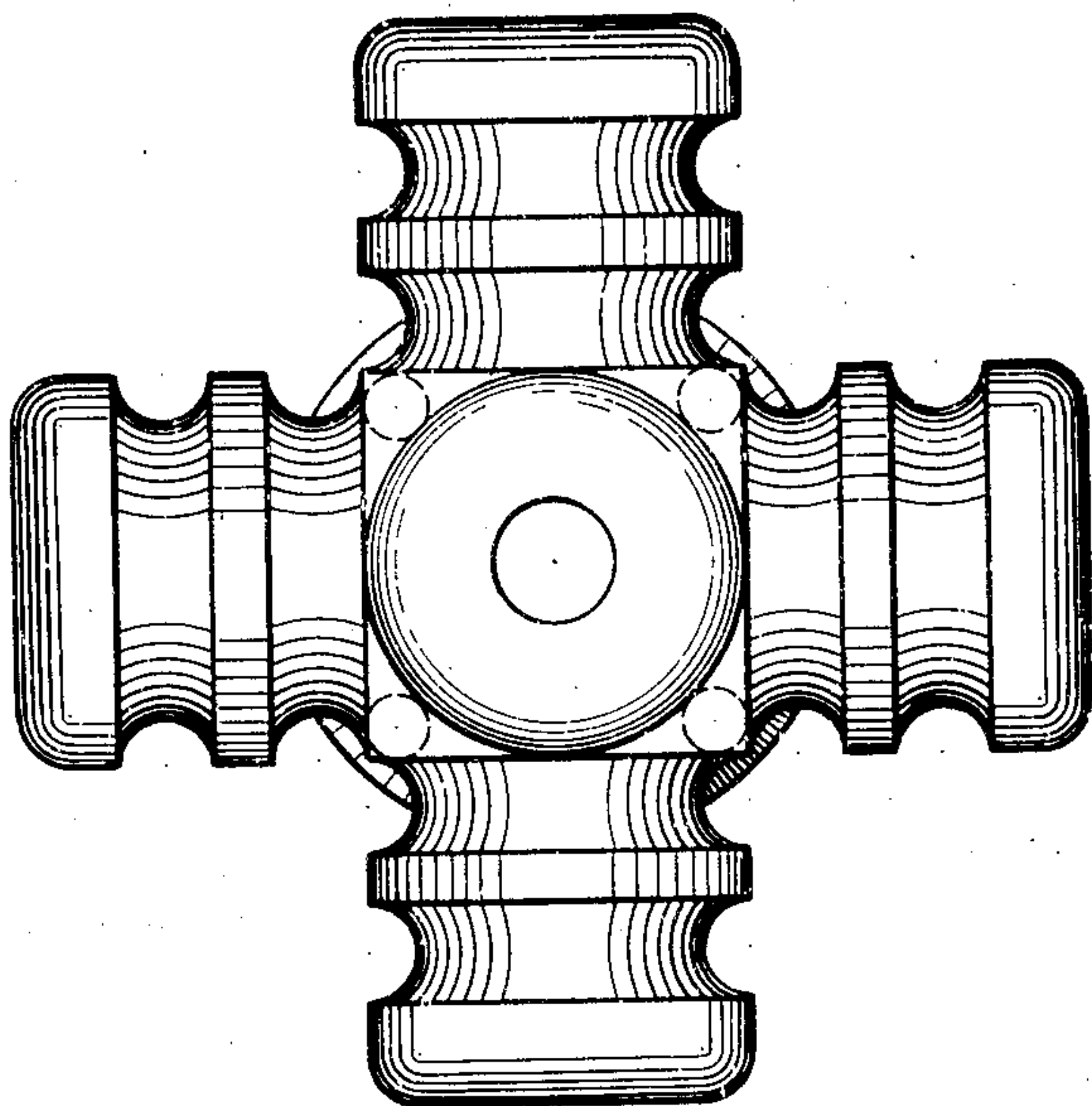
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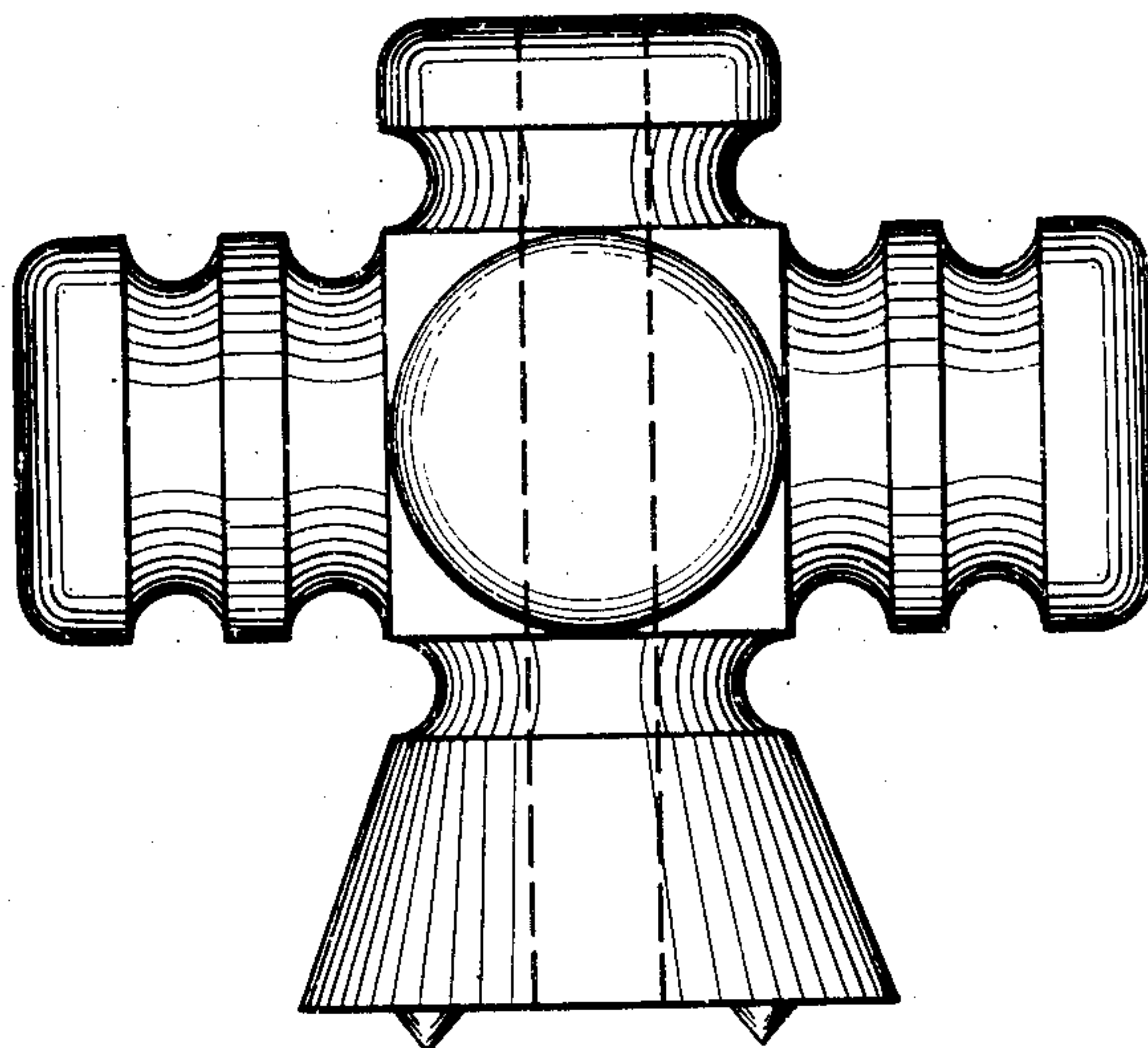
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2 SHEETS—SHEET 2.

*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

ALBERT L. STADERMANN, OF TERRE HAUTE, INDIANA.

## INSULATOR.

954,596.

Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed August 19, 1907. Serial No. 389,110.

*To all whom it may concern:*

Be it known that I, ALBERT L. STADERMANN, a citizen of the United States of America, and a resident of Terre Haute, county of Vigo, and State of Indiana, have invented a new and useful Improvement in Insulators, of which the following is a specification.

My invention pertains to insulators and particularly to knobs for running the wires upon and between houses, cross arms and poles.

My object is to provide an improved insulator for running wires, especially the kind having two or three wires twisted together, where the direction of the wire or wires is changed, or they are terminated at the insulator. I provide an insulator knob with a plurality of grooves for conductors, the grooves lying in both parallel and intersecting planes.

In the drawings Figure 1 shows top view of the knob, and Fig. 2 side view of the knob of my invention; Figs. 3 and 4 show similar views of a modified knob, having double grooves upon the transverse portions; Figs. 5 and 6 show similar views of a modified knob having two transverse portions at right angles to each other, and having either single or double grooves.

In running drop wires to telephone substations from the telephone pole, it has become common practice to use two rubber covered wires twisted together instead of two single bare or insulated wires run separately. The early practice was to fasten both wires of the twisted pair drop wire into the same groove of standard knobs or insulators. It has been found, however, that the constant strain and motion of the wire will cause the wire to cut through the insulation or wear away the insulation, thus leaving the two bare wires in close proximity if not in immediate contact. This will cause leakage of electric current, interfering with the working of the telephone or other apparatus, and it has been found also that even electrolysis sets up between the two wires corroding them and causing them to break.

To avoid the above faults, a plurality of knobs, one for each wire, have sometimes been used, or a single double grooved knob or insulator attached to an iron bracket or a block of wood, to be attached to the house. The wood of course is subject to rapid de-

terioration, and an iron bracket is expensive and difficult to apply at any desired angle resulting in the wire having sharp turns, breaking the insulation and forcing the wires together and at the best resulting in either poor or expensive construction. It happens frequently too that a span of wire or more than one span is run upon the outside of the building from the point of contact of the drop wire to the point of entrance. In such instances an insulator for tying a plurality of wires is a convenience, and such an insulator I provide. Further, the direction of the drop wires usually differs from the direction of the extension wiring along the house, and the fact that these pairs of wires lie in different planes complicates the attachment of drop wires to insulators upon the building.

It has been my endeavor to provide a knob consisting of a single part, which will provide a separate groove for each wire of one or more twisted pairs of wires, the grooves to be a liberal distance apart, and always approximately in line with the direction of the wire approaching and leaving the knob or insulator, so that the twisted pair wire can be attached readily by simply spreading the twists apart and putting each wire in a separate groove, without untwisting and re-twisting the wire, thus avoiding sharp turns in the wire and saving labor in attaching the wires, and preventing the wire from pulling off of the knob; finally a simple and strong mode of attaching the knob to its support, allowing of ready adjustment and of being placed in close quarters. To obviate all the difficulties and gain all the advantages mentioned above, I provide a cross-shaped insulator. A description of the use of the insulator will show that my design provides the desired facilities.

A cross-shaped block of porcelain has at 1 a face adapted to make contact with the house at 2. It is bored for a bolt or screw by which it may be attached to the house. When so attached, the grooves 3 3' are in a plane parallel to the surface to which the insulator is attached, and spans of wire running along that surface and parallel to the surface may be tied into the grooves 3 3' without reference to the angular position of the transverse portion of the cross-shaped insulator. A transverse portion of the insulator projects in knobs at 4 4' having grooves 5 5'. These grooves are perpendicular to



the grooves 3 3' and by turning the insulator upon its face 1 the grooves 5 5' may lie in any plane perpendicular to the plane of the surface to which the insulator is attached; thus before the insulator is locked in place upon the building it may be turned into such position that the grooves 5 5' occupy that plane which best facilitates the attachment of the drop wires from the pole. The surface 1 may be provided with spurs or teeth as shown at 8 to hold the insulator more firmly in its position after it is once fixed in place.

I have stated fully one instance where my design of insulator is desirable. Upon the pole it furnishes grooves for tying the drop wire and for tying the line or jumper wires. Its adaptability for use in general is at any point where the direction of a wire or wires changes.

In Figs. 3 and 4 a modification is shown in which a plurality of grooves are provided. At 7 the grooves of 5 5' are doubled and the grooves 3 3' may also be doubled if desired.

In Figs. 5 and 6 a modification is shown in which two transverse portions are shown at right angles to each other, each projecting knob having one or more grooves.

The insulator might be made of porcelain, glass or any insulating substance, and any changes in dimensions and proportions or

number of transverse portions or number of grooves on any of the projecting knobs may be resorted to without departing from the spirit of my invention.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A cross-shaped insulator having tying grooves upon all arms of the cross.

2. An insulator comprising a body portion and a transverse portion, said portions being intersecting and each portion extending on both sides of the other, and a plurality of grooves around each portion, the grooves of each portion being disposed on both sides of the other portion.

3. An insulator comprising a cylindrical body portion and a cylindrical transverse portion, said portions being intersecting and each portion extending on both sides of the other, and a plurality of grooves around each cylindrical portion, the grooves of each portion being disposed on both sides of the other cylindrical portion.

Signed by me at Chicago, county of Cook and State of Illinois, in the presence of two witnesses.

ALBERT L. STADERMANN.

Witnesses:

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