

No. 660,878.

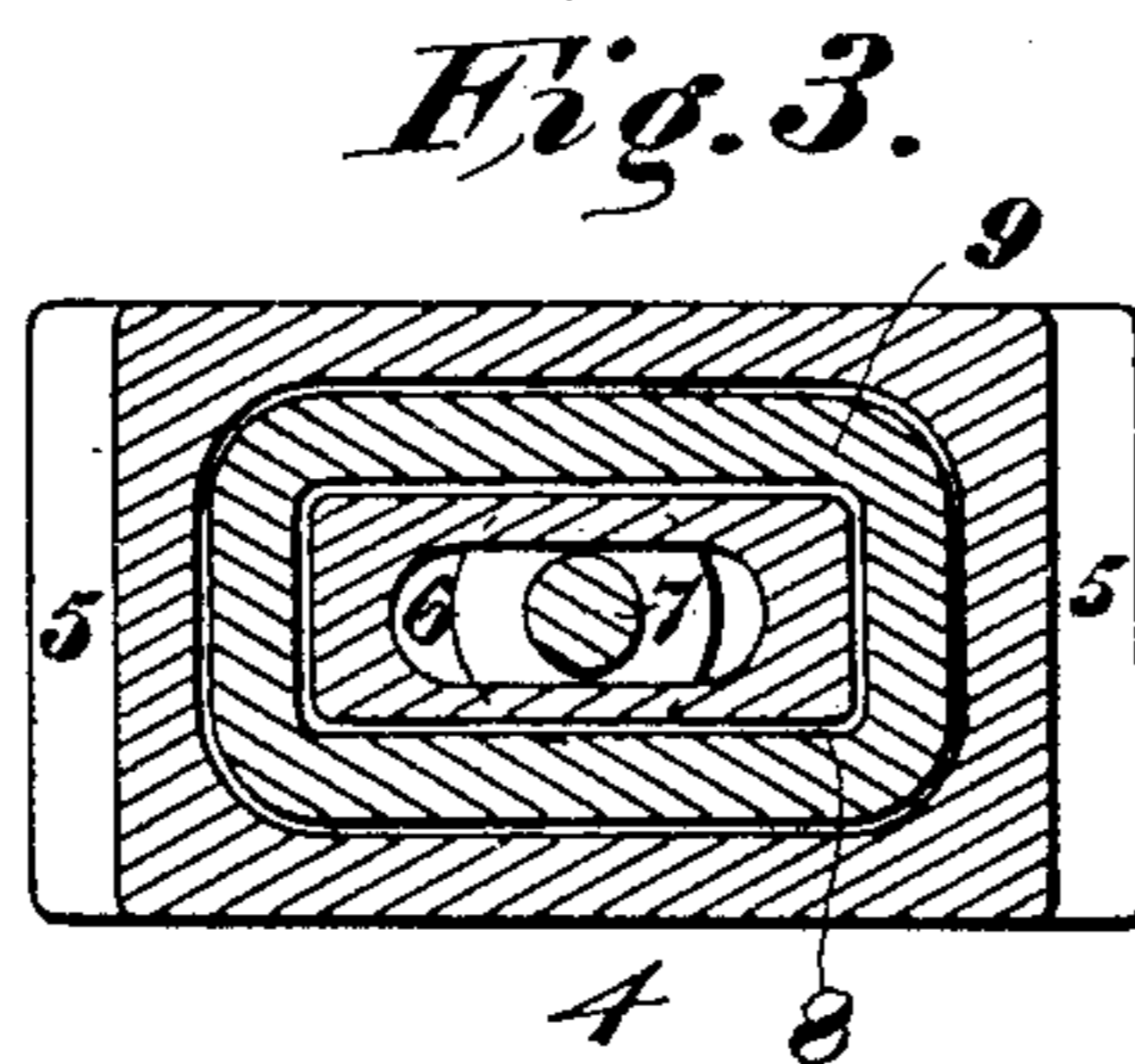
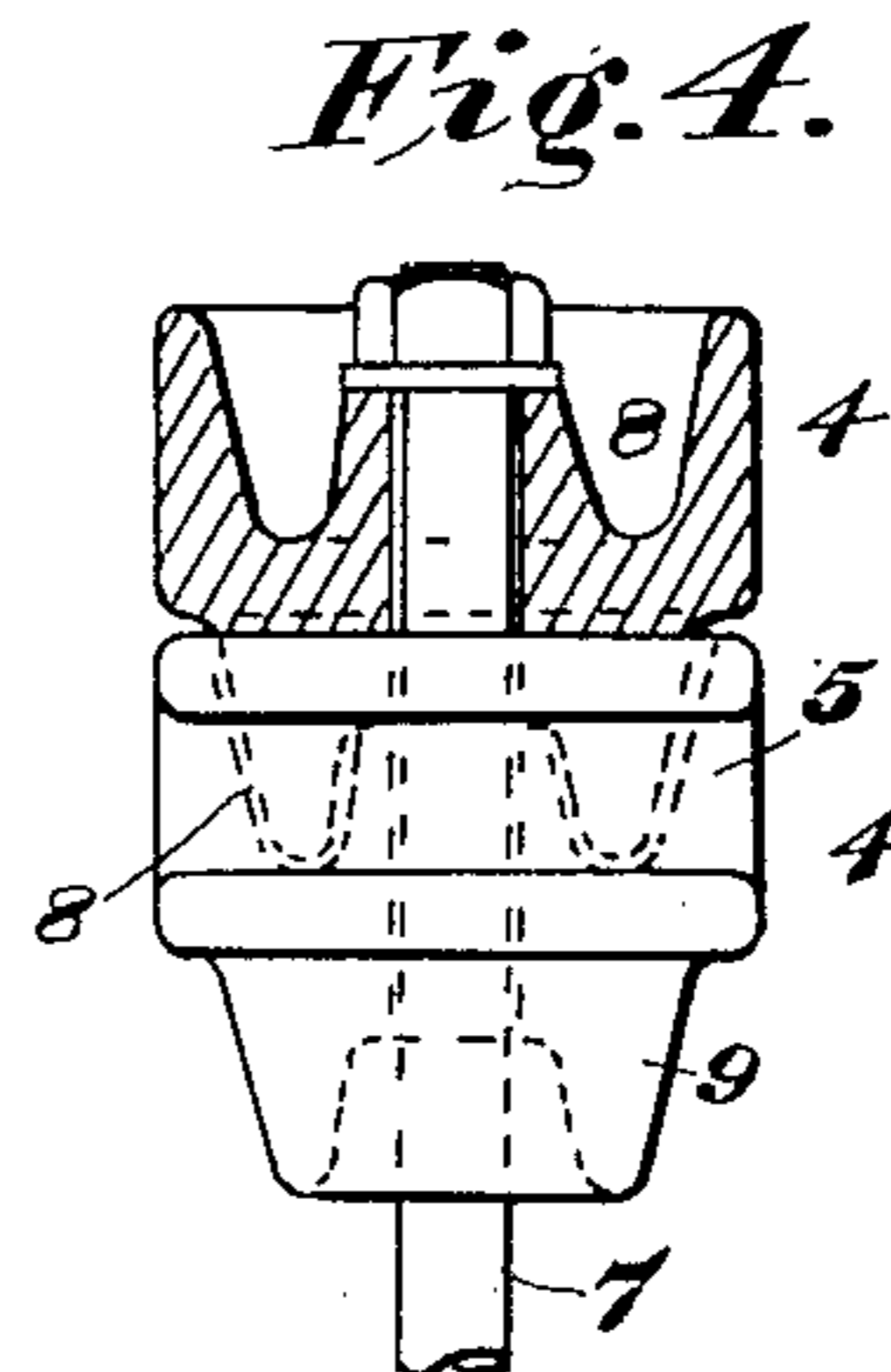
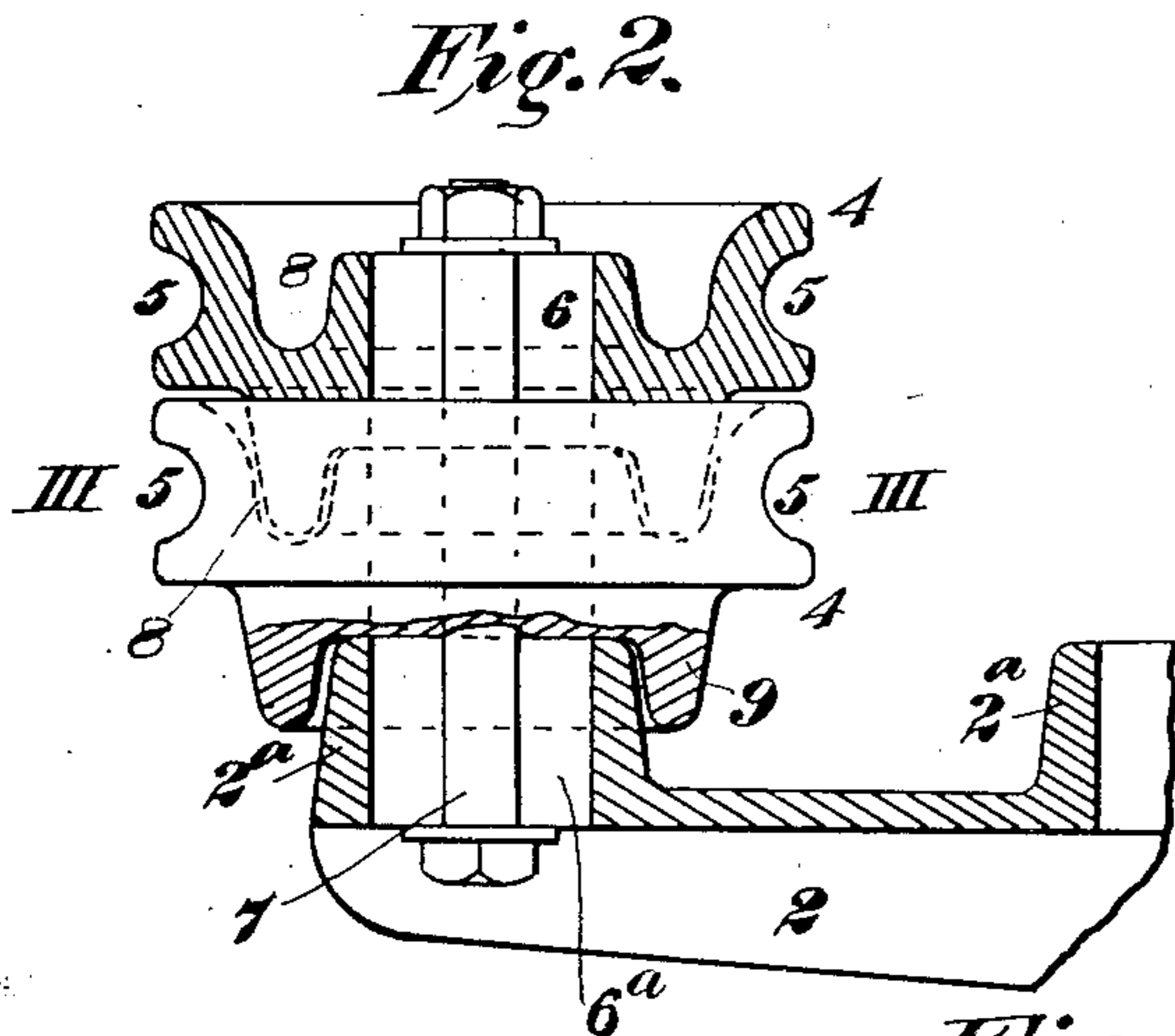
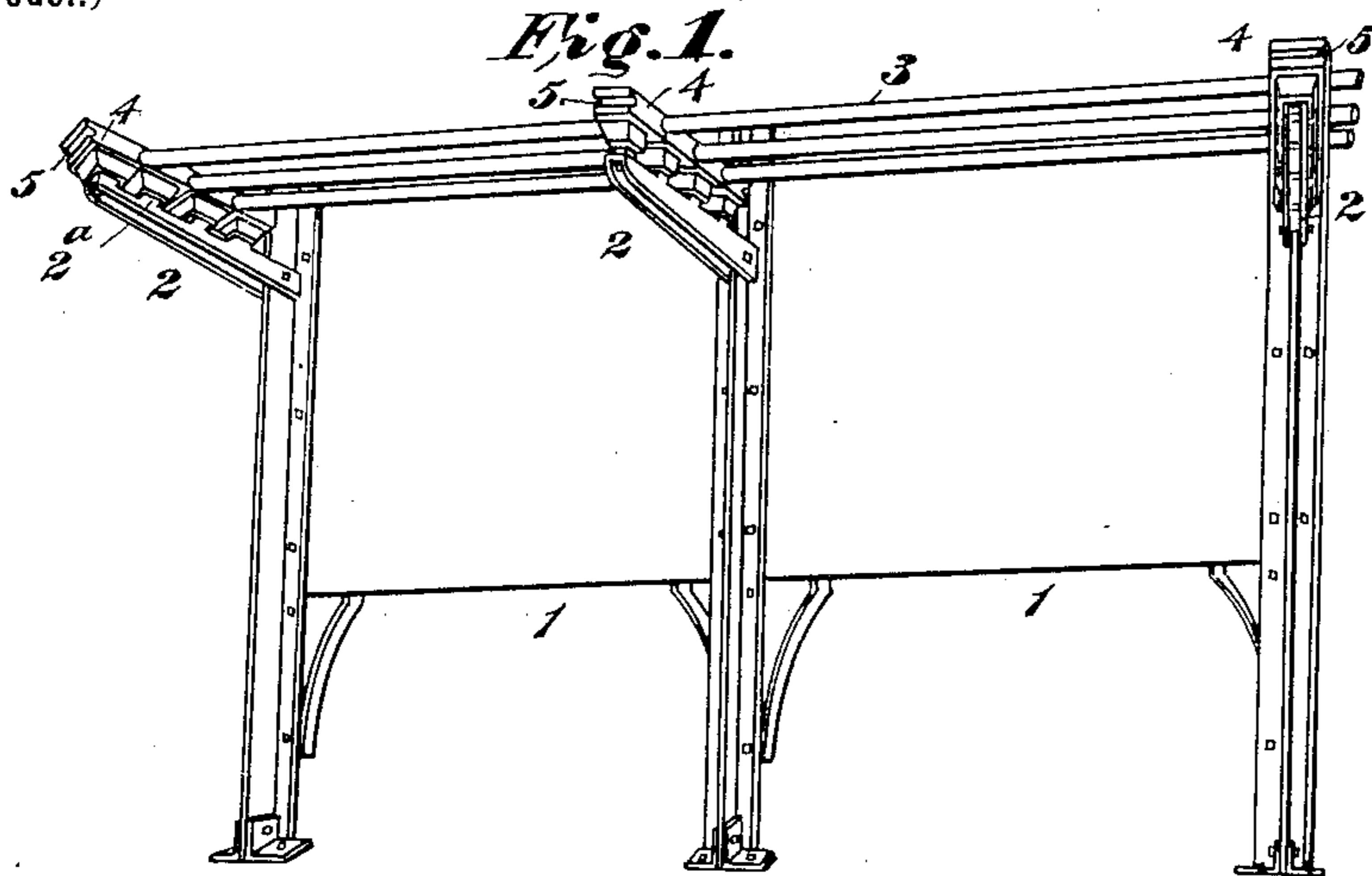
Patented Oct. 30, 1900.

G. WRIGHT & C. AALBORG.

INSULATING SUPPORT FOR SWITCHBOARD CONDUCTORS.

(Application filed Jan. 2, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

GILBERT WRIGHT AND CHRISTIAN AALBORG, OF WILKINSBURG, PENNSYLVANIA, ASSIGNORS TO THE WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, OF PENNSYLVANIA.

INSULATING-SUPPORT FOR SWITCHBOARD-CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 660,878, dated October 30, 1900.

Application filed January 2, 1900. Serial No. 12. (No model.)

To all whom it may concern:

Be it known that we, GILBERT WRIGHT and CHRISTIAN AALBORG, citizens of the United States, residing in Wilkesburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Insulating-Supports for Switchboard-Conductors, of which the following is a specification.

Our invention relates to switchboards for use in connection with systems of electrical distribution, and has particular reference to the means employed for supporting the conductors at the rear side of such switchboards.

The object of our invention is to provide a means for supporting conductors upon switchboards which is especially adapted to the support of any desired number of such conductors.

With this end in view we have devised the means shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the rear of a switchboard, showing one arrangement of our insulating conductor-supports. Fig. 2 is a view, partially in side elevation and partially in section, of two elements of our insulating device, one of which is superposed upon the other, and a portion of a supporting-bracket; and Fig. 3 is a transverse section on line III III of Fig. 2. Fig. 4 is a view, partially in front elevation and partially in section, of the insulating elements shown in Fig. 2.

The switchboard 1 may be of any desired size and suitable construction and may have upon its face any number, kind, and arrangement of switches, circuit-breakers, measuring instruments, or other devices, (not shown,) such as are ordinarily employed in such relations. The rear of the board, as shown, is provided with a suitable number of supporting-brackets 2, to which are bolted the devices for directly supporting the switchboard-conductors 3 and insulating them from each other. The means devised by us for supporting such conductors comprises any desired number of separable parts or units, each of which consists of a block 4, of suitable insulating material, such as porcelain, preferably, but

not necessarily, of oblong and substantially rectangular form and having in two of its opposite edges substantially semicircular grooves 5 for the reception of a switchboard-conductor 3. The block 4 is provided with an aperture 6, that is oblong in cross-section and extends from face to face centrally of the block, through which projects a bolt 7 for attaching one or more of such blocks to the supporting-bracket 2. The aperture through which this bolt extends is made oblong and larger than the bolt in order that the block may be adjusted laterally, as may be found necessary. Surrounding the central aperture 6 at one side of the block is a deep recess 8, preferably flaring outwardly, as indicated in Figs. 2 and 4, and the opposite face of the block is provided with a corresponding boss 9, which surrounds the central aperture. When a plurality of these block are assembled upon the supporting-bolt 7, the boss 9 on the upper block of the set projects into the corresponding recess 8 in the face of the next block and the boss on the second into the corresponding recess in the face of the third, and so on, the size of each boss being such that an air-space is left between the outer surface of the boss and the corresponding surface of the recess, as indicated in Figs. 2, 3, and 4.

Each bracket 2 is provided with as many upwardly-projecting hollow bosses 2^a as there are blocks 4, which are intended to rest directly upon the bracket. The aperture 6^a in each boss 2^a is preferably of the same size and shape as the apertures 6 in the blocks 4, and the external form and dimensions of each boss 2^a are such that its upper end will be engaged by the bottom of the recess in the block 4 that is formed by the boss 9, and an air-space will be provided between the outer wall of the boss 2^a and the inner wall of the boss 9. A considerable space is also provided between the lower edge of boss 9 and the bracket. (See Fig. 2.)

The arrangement of the blocks 4 in horizontally-disposed sets is indicated in Fig. 1 of the drawings, it being readily seen by reference to said figure that the conductors are located in the grooves 5 of adjacent blocks 4 and that the apertures 6 and 6^a permit of

lateral adjustment of the blocks to clamp the conductors securely in position, after which the blocks are clamped to the brackets by means of the bolts 7 and their nuts.

5 It will be readily seen that the construction shown and described is such that the surface distance between any two conductors and between each conductor and the supporting-bolt is very large and that by the employment
10 of units of this character, all of which are alike in form, any number may be assembled to form a vertical set which may be found necessary or desirable or that one only may be employed for each supporting-bolt, as indicated in Fig. 1. It will be further understood that the form of the grooves 5 may be varied to suit conductors of any cross-sectional form and that the form, dimensions, and arrangement of parts may be otherwise
20 varied without departing from the spirit and scope of our invention.

We claim as our invention—

1. An insulating-support for switchboard-conductors having an oblong central aperture,
25 transverse side grooves, a continuous recess surrounding the aperture at one end and a corresponding boss on the opposite end, substantially as described.

2. Supporting means for switchboard-conductors comprising a plurality of insulating-blocks each having an oblong, central aperture surrounded at one end by a recess and at the other end by a boss, the boss on each block fitting into recess of the next block in
35 the set, a bracket having a hollow boss fitting into the recess formed by the boss on the last block of the set and a bolt extending through said apertures, substantially as described.

3. Supporting means for switchboard-conductors comprising a plurality of insulating-blocks each of which has a central aperture, side grooves, a recess surrounding the aperture at one end and a corresponding hollow boss at the opposite end, the recesses and
45 bosses of adjacent blocks fitting into each other, a bracket having an apertured boss fitting into the boss on the bottom block, and a bolt extending through the apertures.

4. An insulating supporting-block for electric conductors having a central aperture and

side grooves, a recess surrounding the aperture at one end and a corresponding boss surrounding the aperture at the other end, substantially as described.

5. An insulating supporting-block for electric conductors, having an oblong central aperture, side grooves and a recess and a hollow boss respectively surrounding said aperture at opposite faces of the block. 55

6. A switchboard having a plurality of laterally-projecting brackets each of which is provided with a plurality of upwardly-projecting hollow bosses and a plurality of insulating-blocks severally fitting over said bosses and clamped thereto. 60 65

7. A switchboard having a plurality of laterally-projecting brackets, each of which is provided with a plurality of upwardly-projecting hollow bosses, and a plurality of insulating-blocks severally provided with bottom
70 recesses of greater length and width but of less depth than the bracket-bosses which are seated and clamped therein.

8. An insulating support for switchboard-conductors having a central aperture, transverse side grooves, a recess surrounding the aperture at one end and a corresponding boss on the opposite end, substantially as described. 75

9. A support for electric conductors comprising a block of non-conducting material having a central aperture, transverse side grooves, a recess around the aperture at one end and a corresponding boss on the opposite end and a supporting-arm to which said boss
85 is clamped.

10. An arm or bracket provided with a plurality of upwardly-projecting hollow bosses in combination with a plurality of insulating-blocks severally fitting over said bosses and
90 clamped thereto.

In testimony whereof we have hereunto subscribed our names this 27th day of December, 1899.

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Witnesses:

JAMES B. YOUNG,
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