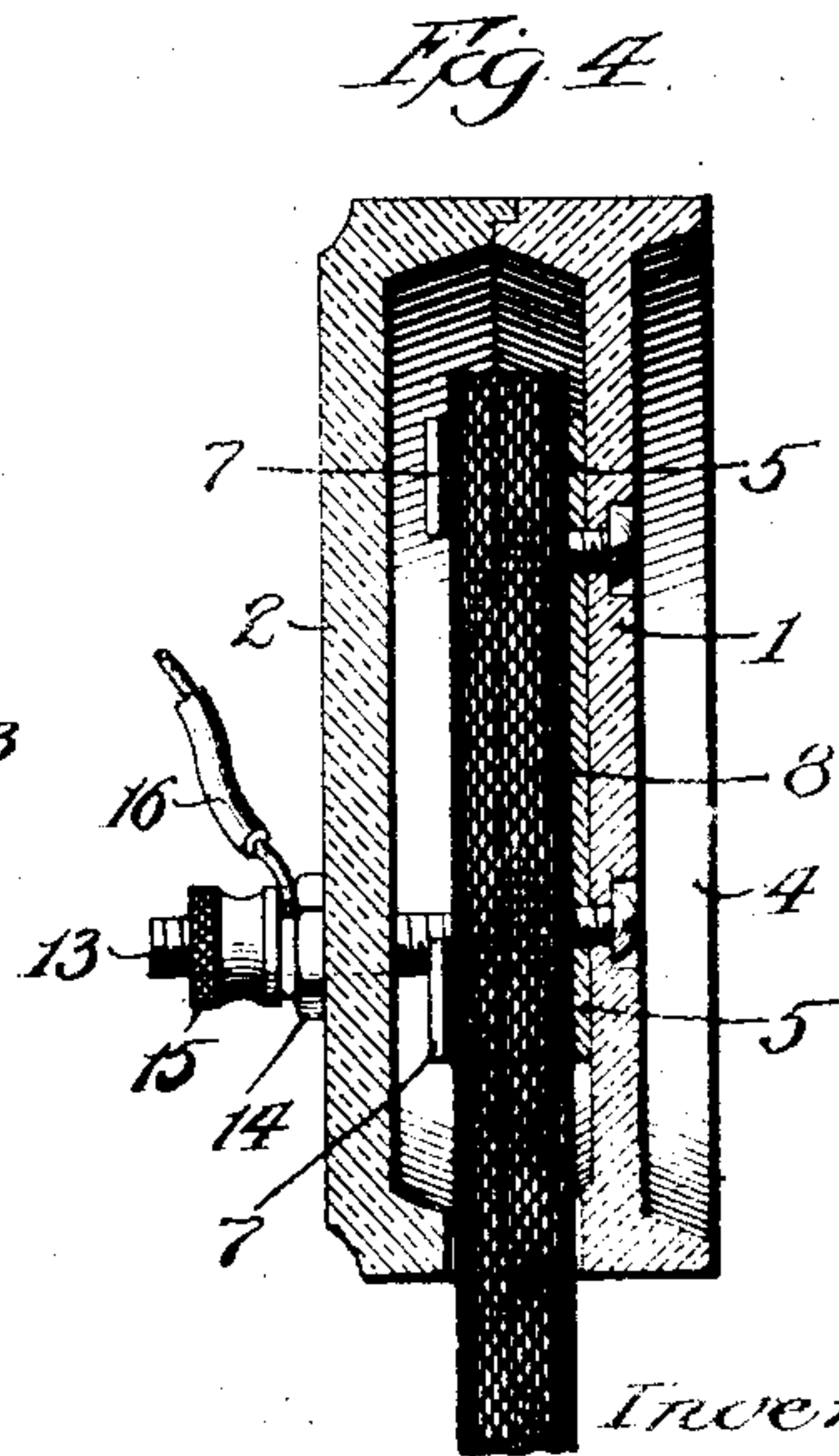
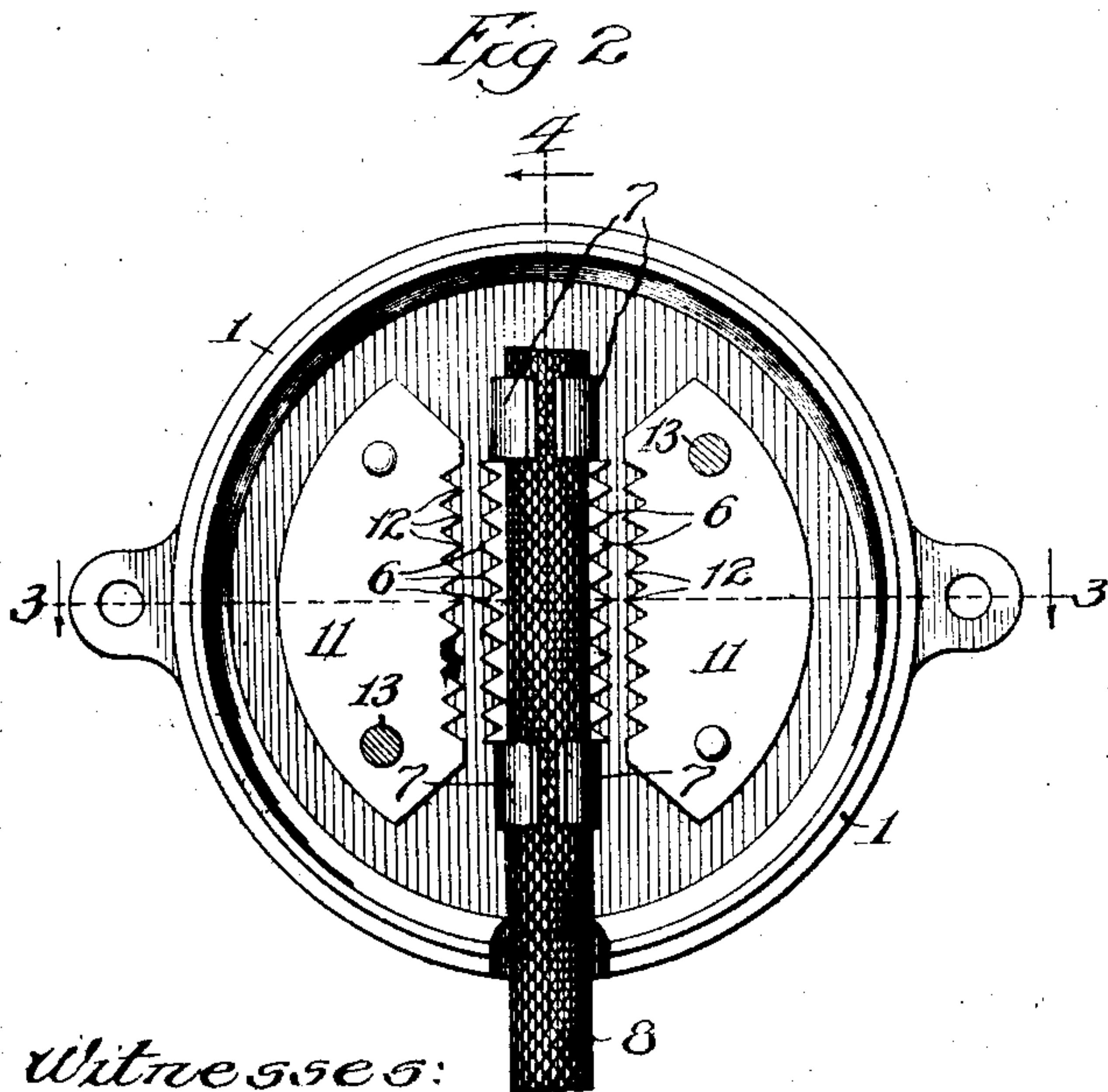
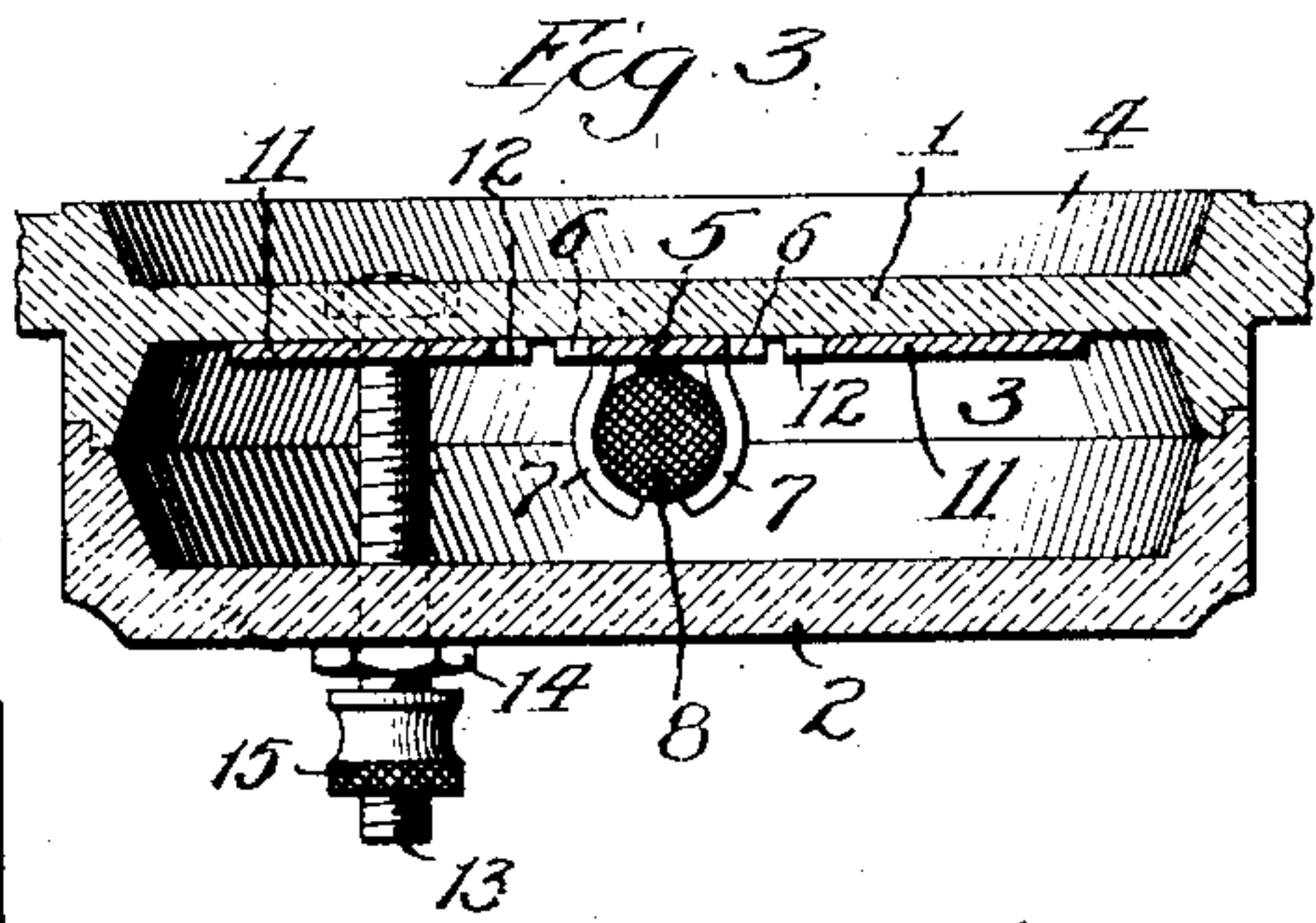
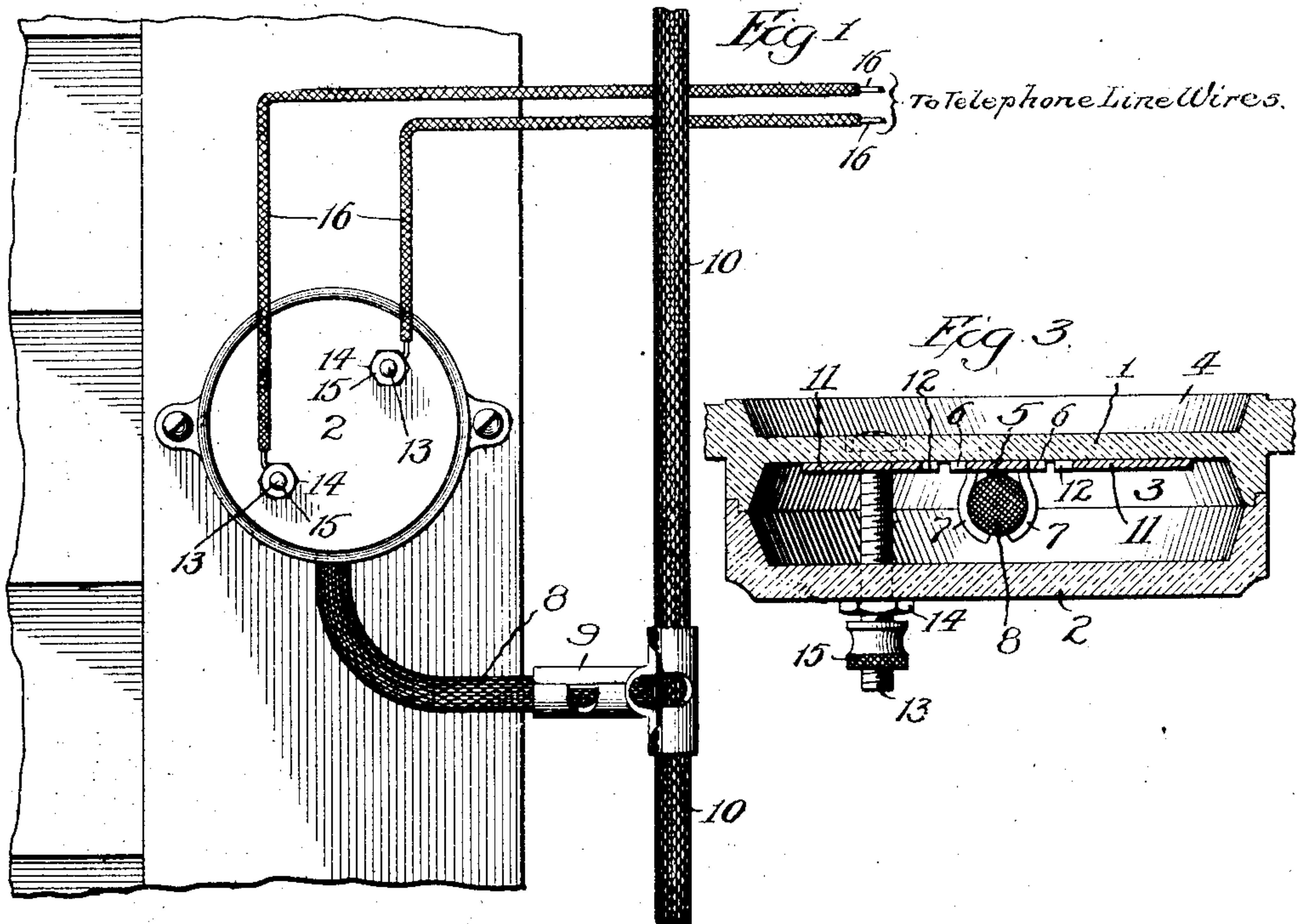


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LIGHTNING ARRESTER.
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945,293.

Patented Jan. 4, 1910.



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UNITED STATES PATENT OFFICE.

WILLIAM C. SHINN, OF LINCOLN, NEBRASKA.

LIGHTNING-ARRESTER.

945,293.

Specification of Letters Patent.

Patented Jan. 4, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM C. SHINN, citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented a certain new and useful Improvement in Lightning-Arresters, of which the following is a full, clear, concise, and exact description.

My invention relates to a lightning arrester, and more particularly an arrester adapted to connect the line wires of a telephone system with a cable of a lightning rod system.

The object of my invention is to provide a device of simple construction which is readily secured in place, and which will serve to ground through a lightning rod system any static electric discharges resulting from the telephone wires being struck by lightning.

My arrester thus provides suitable means for protecting the telephone and the user thereof as well as the house in which the telephone is located from the injury due to the wires being struck by lightning.

My invention consists of a lightning arrester equipped with means for readily connecting the same between the line wires of a telephone system and a cable of a lightning rod system, where a building is equipped with both of said systems.

The several features of my invention may be more readily understood by reference to the accompanying drawings, in which,

Figure 1 is a view in elevation showing the arrester attached in place on the side of the building; Fig. 2 is an enlarged plan view of the arrester with the cover removed; Figs. 3 and 4 are sections on the lines 3—3 and 4—4, respectively, of Fig. 2.

Similar numerals of reference refer to like parts throughout the several views.

The case of the arrester is made of any suitable insulating material, such as porcelain, and comprises a base 1 and a cover 2. The base is preferably disk-shaped and provided with peripheral flanges 3, 4 upon the upper and lower faces thereof, respectively. Mounted upon the upper face of the base 1 and extending diametrically across the same is a central arrester plate 5, which is preferably provided with the usual serrations or teeth 6 upon its edges. At each end thereof the plate 5 is provided with a pair of upstanding wings 7, 7. Lying above the plate 5 and clamped thereto by said

wings 7, 7 is one end of a short section of lightning rod cable 8. Said section of cable extends through an opening provided in the side of the case. Permanently secured upon the outer end of the section 8 is a coupling 9, preferably a T-coupling. The head of the T-coupling can readily be connected to a lightning rod 10 as shown in Fig. 1, thus grounding the plate 5 through a lightning rod system.

Mounted upon the base 1, upon opposite sides of the central plate 5 are metallic segmental plates 11, 11 which are separated from the central arrester plate by air spaces. Said plates 11, 11 are provided with the usual serrations or teeth 12, which are opposed to the teeth 6 of the plate 5.

Upon diametrically opposite sides of the base 1 and projecting up through the bottom thereof are threaded posts 13, 13. Said posts extend up through the cover 2, and passing through the plates 11 serve as screws for securing said plates to the base 1. Nuts 14 upon the end of the posts 13 serve to secure the cover 2 in position. Thumb-nuts 15 upon the outer ends of the posts 13 provide means for clamping the ends of wires 16, 16 to the posts 13. The wires 16 lead to the telephone line wires which it is desired to protect from lightning discharge. It is thus apparent that with the protector installed in place, the telephone line wires are connected through the leads 16, 16 and posts 13, 13 to the arrester plates 11, and that the arrester plate 5 is electrically connected through the cable section 8 with a lightning rod 10. The air spaces between the plate 5 and the plates 11 prevent any leakage of telephonic currents. However, as is well known, static electric discharges resulting from a stroke of lightning will find a path across said air spaces between the arrester plates rather than through the telephone, and the lightning rod will furnish a perfect ground for such discharges.

My invention therefore provides a safe and reliable means for protecting telephone or similar apparatus from disastrous effects which might otherwise result from lightning striking the line wires.

I claim:

1. A lightning arrester adapted to connect telephone line wires to a lightning rod system, said arrester comprising an inclosing case of insulating material, an arrester plate mounted within said case, said plate

- having opposed upturned wings, a section of cable overlying said plate and clamped thereto by said wings, said cable extending through the side of said case, a T-coupling
5 secured at the outer end of said section of cable and providing means for attaching the same to a lightning rod, two additional metallic plates mounted within said case and separated from said other plate by air spaces,
10 and binding post in electrical connection with each of said additional plates respectively, said binding post providing means for connecting said telephone line wires to said lightning arrester.
- 15 2. In a lightning arrester, a case of insulating material comprising a base plate having upstanding peripheral flanges and a cover therefor fitting said flanges, a central plate secured to said base, said plate having
20 a pair of opposed upturned wings at each end, a section of lightning rod cable overlying said plate and clamped thereto by said wings, said cable extending through the side of said case, two side plates mounted on said base upon the opposite sides of said central plate and separated therefrom by air spaces,
25 two threaded posts extending through said base and projecting above said cover upon opposite sides thereof, each of said posts extending through one of said side plates and
30 serving as fastening means for securing said plates to said base, nuts upon the upper ends of said posts to secure said cover in position, and thumb-nuts above said other nuts to provide means for connecting electrical leads
35 to said posts.

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