

No. 697,628.

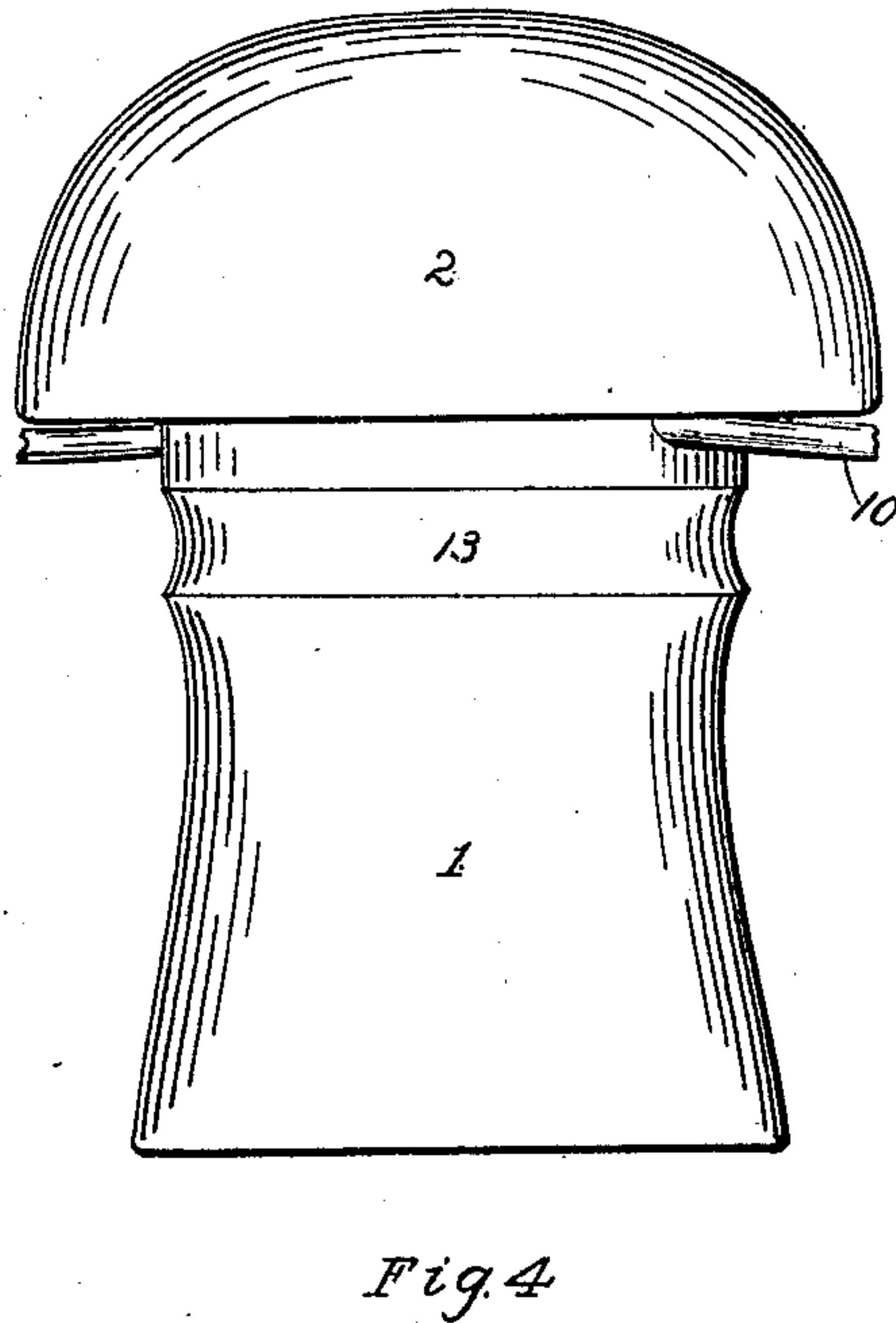
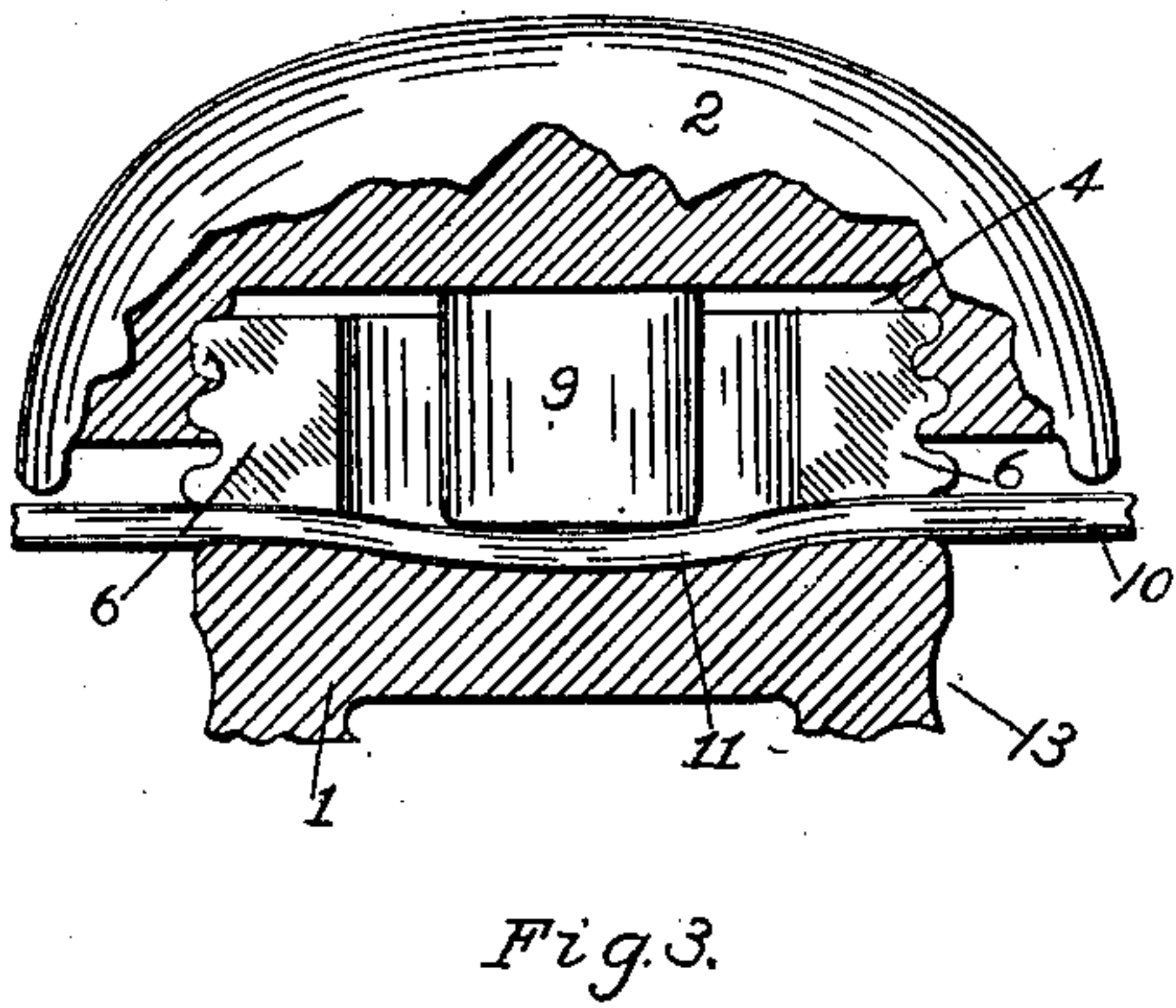
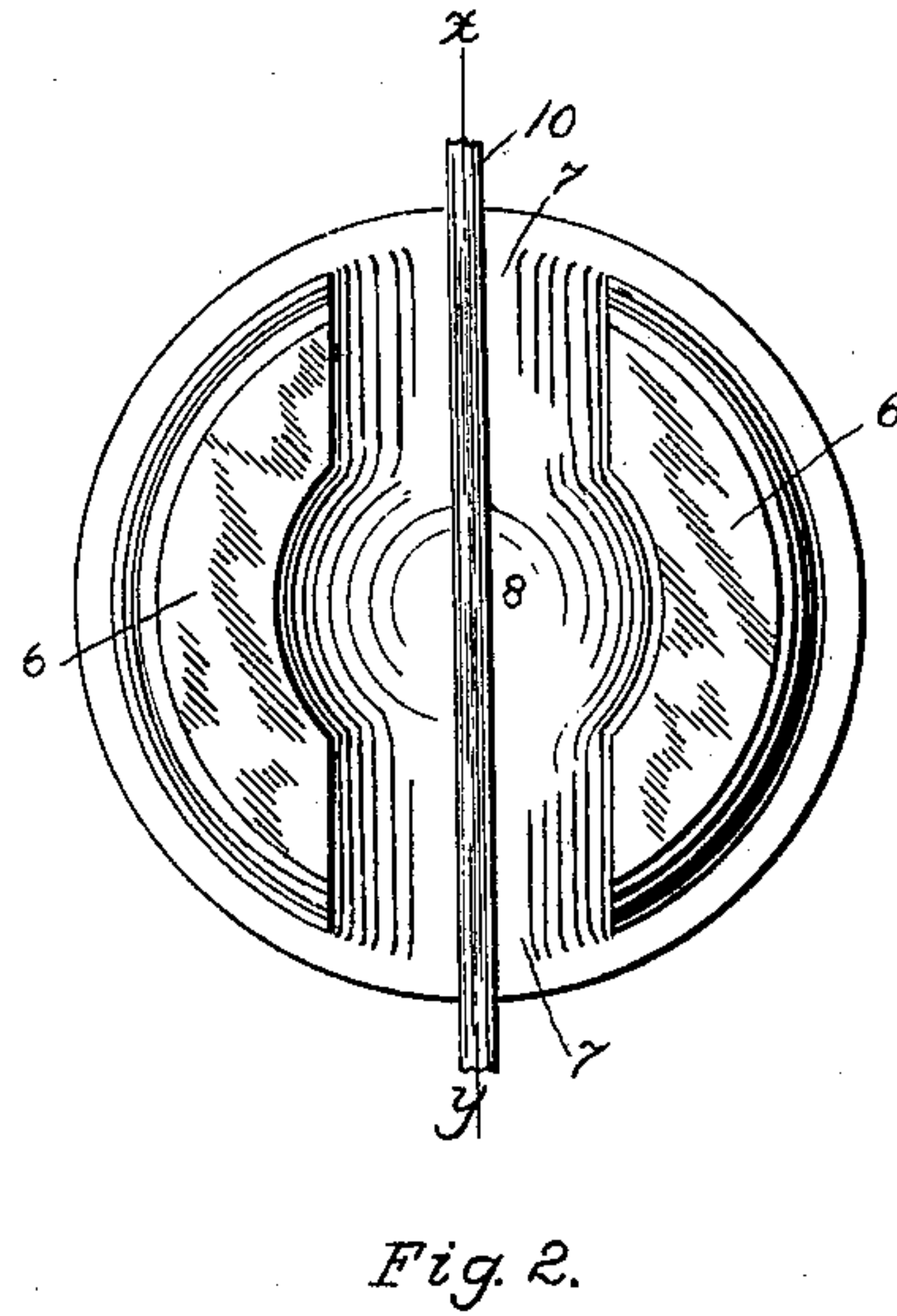
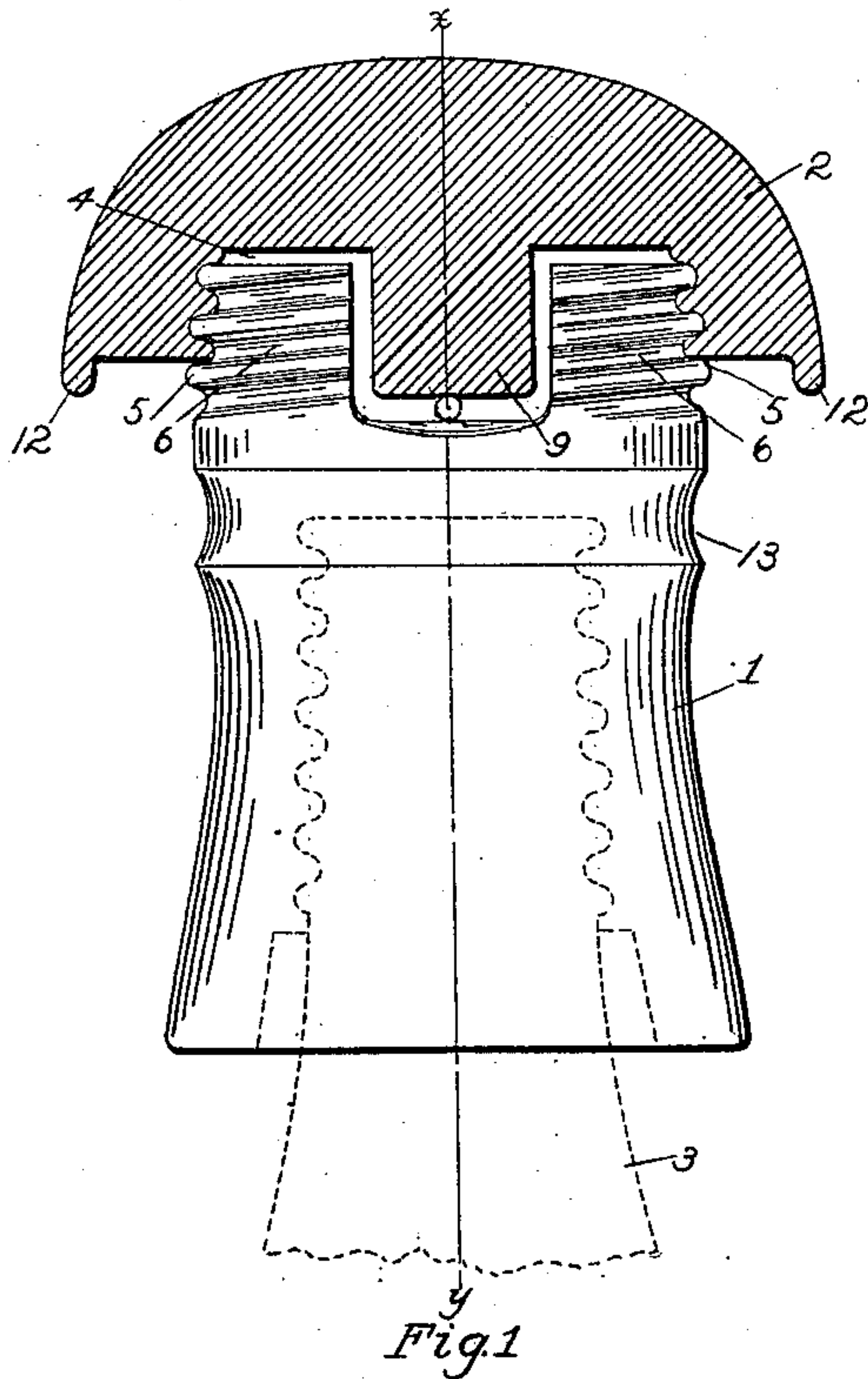
Patented Apr. 15, 1902.

C. C. JOHNSTON.

INSULATOR AND ATTACHMENT FOR ELECTRIC WIRES.

(Application filed Sept. 11, 1901.)

(No Model.)



WITNESSES:

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CHAUNCEY C. JOHNSTON, OF SCRANTON, PENNSYLVANIA.

INSULATOR AND ATTACHMENT FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 697,628, dated April 15, 1902.

Application filed September 11, 1901. Serial No. 75,029. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY C. JOHNSTON, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Insulators and Attachments for Electrical Wires, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to insulators for electrical wires, more especially such as are used for insulating telephone and telegraph lines.

The objects of the invention are to provide an insulator of the kind which will securely clamp the wire to be held without the aid of tying-wire, to provide for a ready adjustment of the wires, to provide a separable insulator, to prevent electrical leakage, and to improve the construction, form, and efficiency of such insulators in general.

To these ends the invention consists of the construction, arrangement, and combination of the several parts specified herein and illustrated in the drawings, in which—

Figure 1 is a comprehensive view, partly in cross-section and partly in dotted lines, of one of my insulators complete. Fig. 2 is a top plan view of the same when the cap is removed. Fig. 3 is a detail view showing the construction of the top of the lower member of my insulator, taken partly in cross-section on the line $x y$ of Figs. 1 and 2. Fig. 4 is a view in perspective, showing one of my insulators complete with the wire attached to it.

Similar characters of reference denote like and corresponding parts throughout the several views.

My insulator consists, essentially, of two separable members adapted to be screwed together, clamping the wire to be insulated between them. The lower or body portion 1 is constructed hollow and internally screw-threaded, adapting it to be screwed to a peg or pin 3, the peg being such as is in general use with insulators as now constructed.

The cap 2 of my insulator is provided with an annular recess 4, the outer wall of said recess being screw-threaded at 5, adapting it to engage with the screw-threaded lugs 6 6 of the body portion. A channel 7, lying between the upward-extending lugs 6 6, serves to ac-

commodate the wire, and the said channel is recessed or depressed at the middle 8, so that the central projection 9 of the cap pressing upon the wire 10 to be insulated curves the wire downward, as shown at 11. The cap 2, which is constructed dome-like, has an over-projecting lip 12, arranged to shed the water. The projection 9 of the cap is cylindrical in form and extends centrally down into the channel 7 in the vicinity of the depression 8, as is more clearly shown in Fig. 3. The body portion 1 is further provided with a neck 13, arranged for tying-wire to secure the wires to the body portion in the usual manner. This neck will especially be needed where it is desired to branch off wires from the main line. It may also be utilized where from any cause the cap may be broken, so as not to clamp the wire in the usual way in the channel above.

In using my device the body portions are screwed onto the several pegs in successive order, the channel 7 lying in line with the wires to be strung. As the wire is tightened up the caps are then successively screwed down until the wire is compressed, as shown in Fig. 3, when the pressure on the projection in the cap will prevent any looseness or shaking or tendency to become unscrewed. In this way a line may be held taut and effectually prevented from slipping through the insulator when from any accident the line has become torn between any two insulators.

My insulator may be constructed from glass, earthenware, gutta-percha, or any known insulating material.

I am aware that heretofore insulators have been made to be used without tying-wires or with tying-wires of a peculiar construction; but in every such attempt heretofore made, so far as I am able to ascertain, a considerable space of the wire to be insulated is exposed to uncovered contact with the insulator—that is, it is exposed to the insulator in such portions as will become wet and covered with rain, snow, or ice—so as to cause a tendency to leakage of the electric current. It should be noted that in the construction of my device the point of contact with the insulator is in the middle of the projection of the dome or cap 2 and that no part of the wire at

its contact part with the insulator is liable to receive any moisture; but, on the contrary, the overhanging edges of the cap 2 shed all the moisture downward at a distance of over 5 an inch from the point of contact of the wire with the insulator.

I do not wish to be confined to the exact construction as set forth in the claims, because, for example, the projection 9 of my cap 10 might be screw-threaded, so as to engage with internal screw-threads on the upwardly-extending lug 6 for the purpose of connecting the two parts, or the parts might be connected with a bayonet attachment in preference to 15 screw-threads, if desired, and many other forms of connection might be resorted to without departing from the general spirit of my invention.

What I do claim, and desire to secure by 20 Letters Patent, is—

1. The herein-described insulator consisting of a body portion adapted to be secured to a peg, and provided with a channel extending horizontally through the top of said portion, 25 and a pair of upwardly-extending lugs on opposite sides of said channel outwardly screw-threaded, in combination with a cap arranged to be screwed to said body portion, the said cap being provided with a central projection 30 arranged to grasp the wire to be insulated at a central point on the said body portion, and

the said cap provided with an overhanging flange arranged to shed water at a point distant from the point of contact of the wire, and arranged at a higher level than the wire to be insulated, substantially as and for the purpose specified. 35

2. An insulator of the kind described comprising a body portion with a grooved neck for tying-wire, and adapted to be secured to a peg, 40 the said body portion further provided with a channel extending horizontally through the top of said portion, and a pair of upwardly-extending lugs on opposite sides of said channel outwardly screw-threaded, in combination 45 with a cap arranged to be screwed to said body portion, the said cap being provided with a central projection arranged to grasp the wire to be insulated at a central point on the said body portion, and the said cap provided with 50 an overhanging flange arranged to shed water at a point distant from the point of contact of the wire, and arranged at a higher level than the wire to be insulated, substantially as and for the purpose specified. 55

In testimony whereof I affix my signature in presence of two witnesses.

CHAUNCEY C. JOHNSTON.

Witnesses:

BERT G. LA BAR,
S. S. COLEMAN.