

(No Model.)

2 Sheets—Sheet 1.

G. H. WINSLOW.  
PIN FOR INSULATORS.

No. 517,634.

Patented Apr. 3, 1894.

FIG. 2.

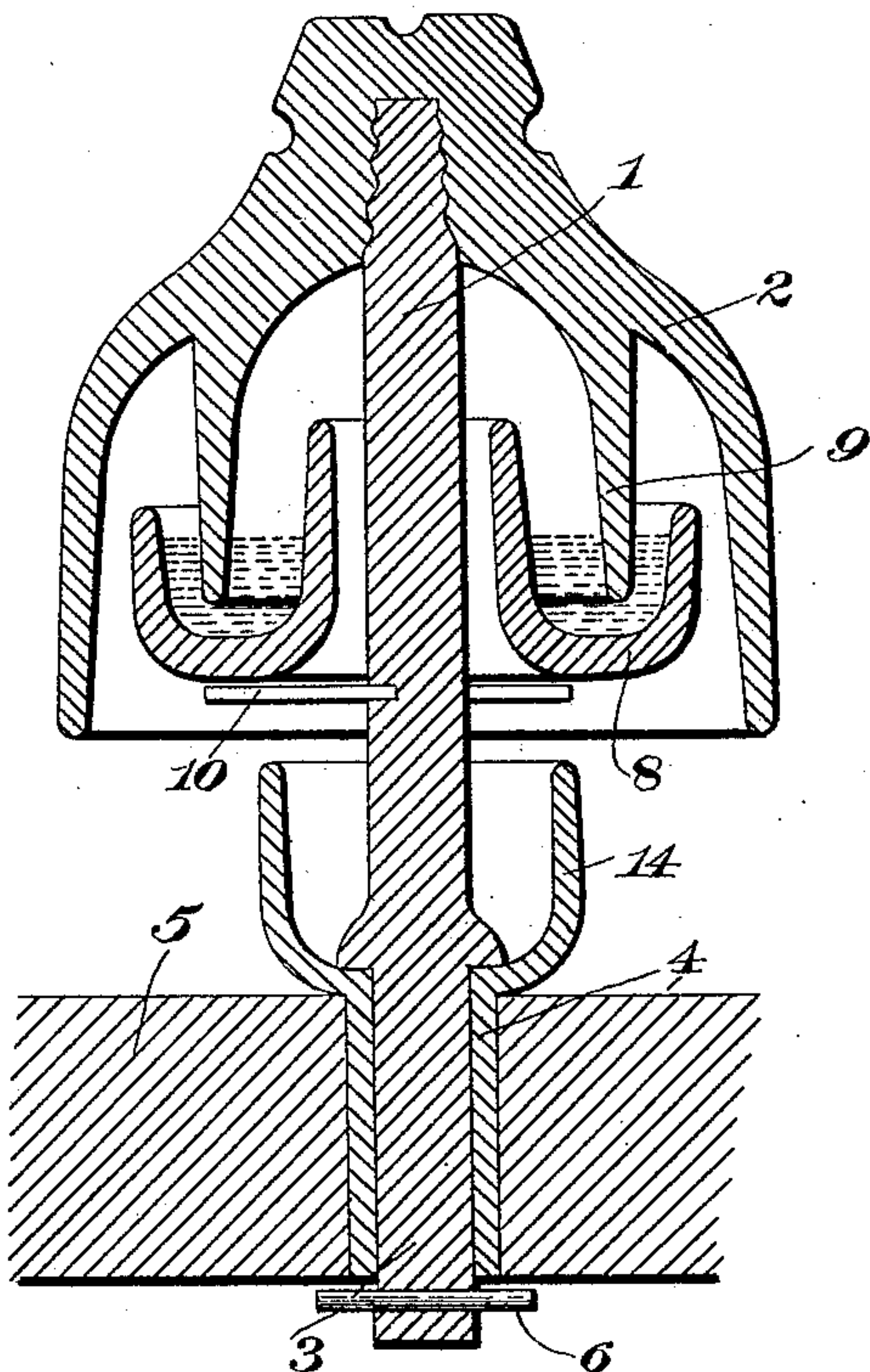


FIG. 3.

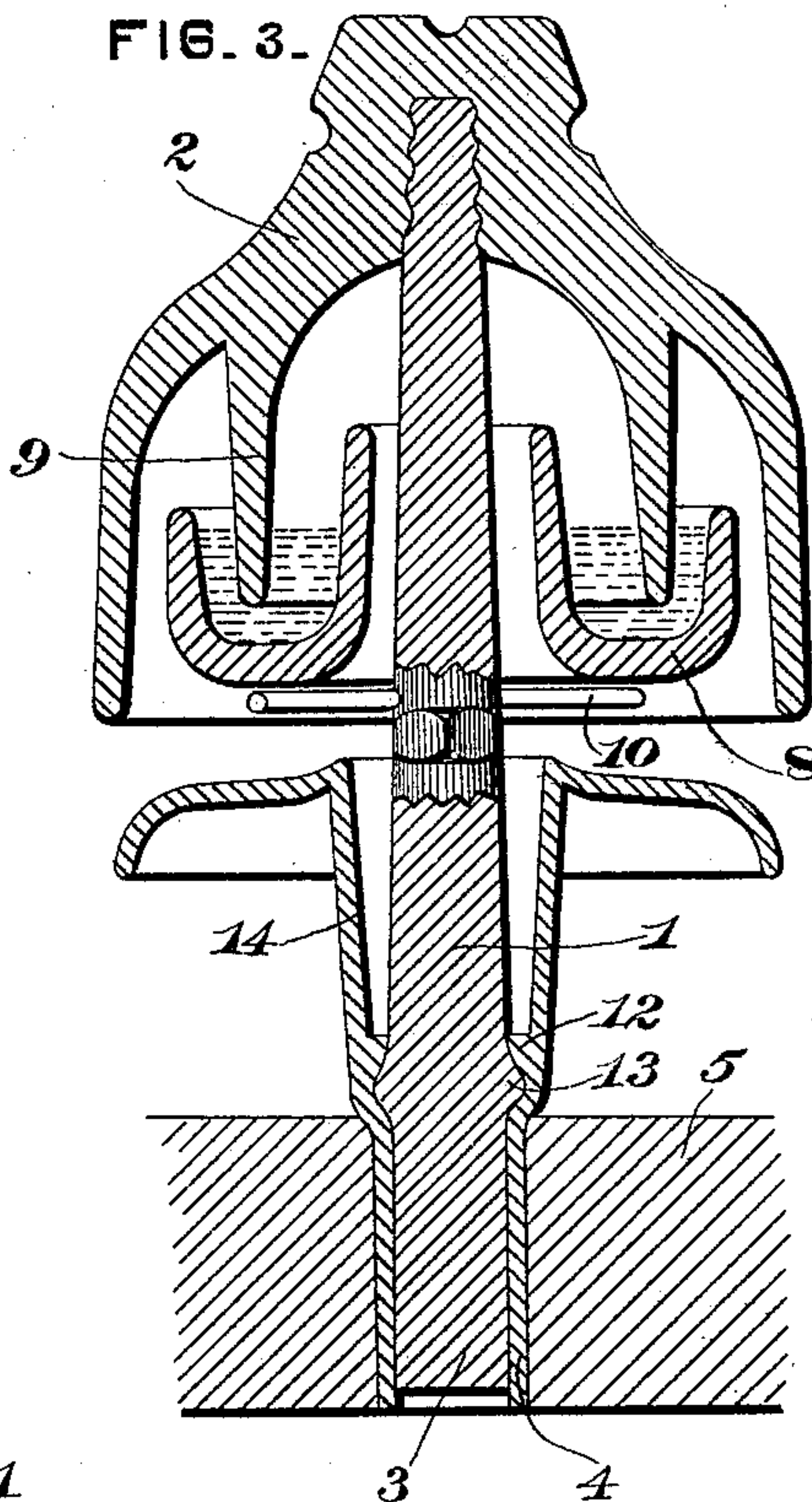


FIG. 1.

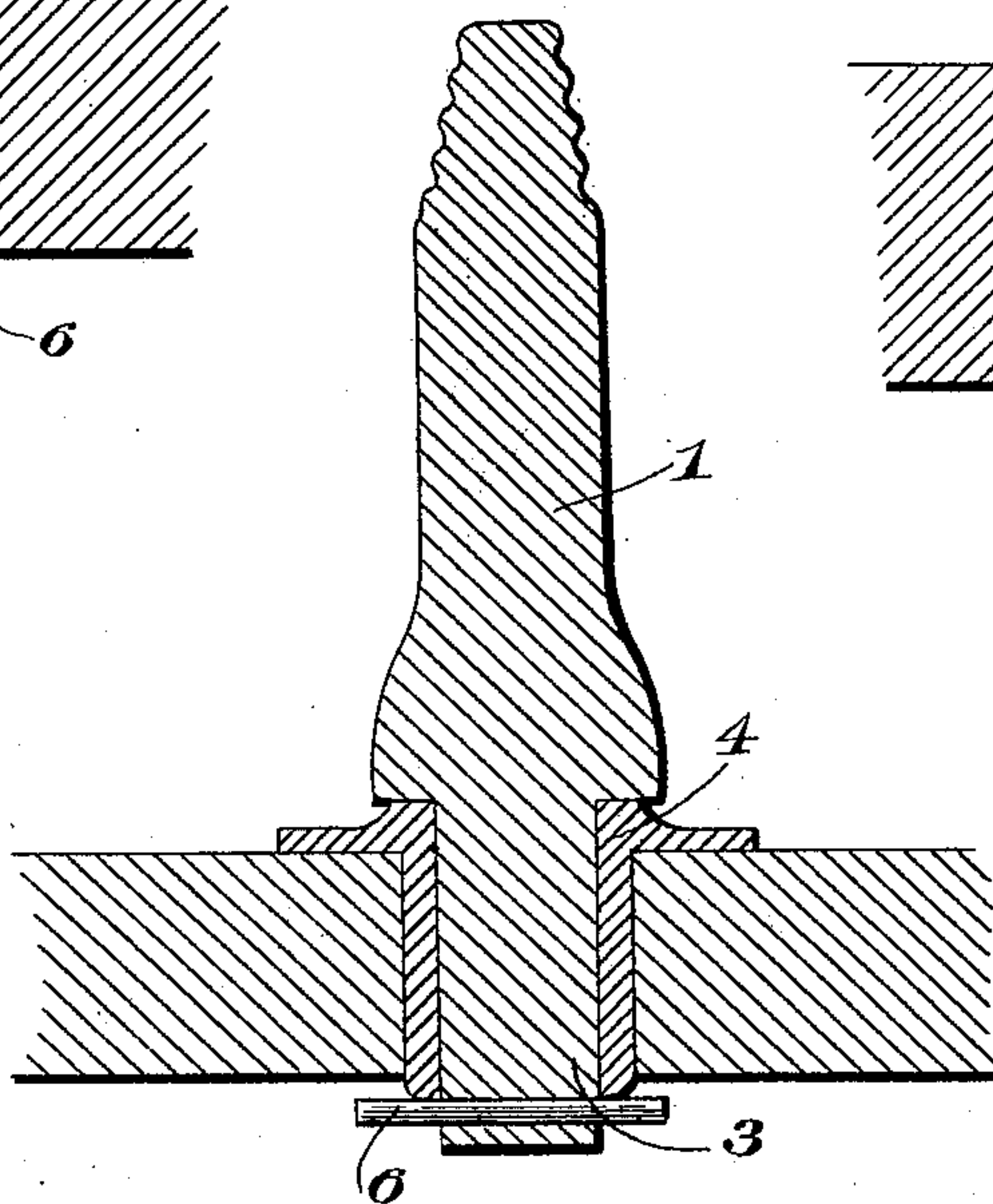
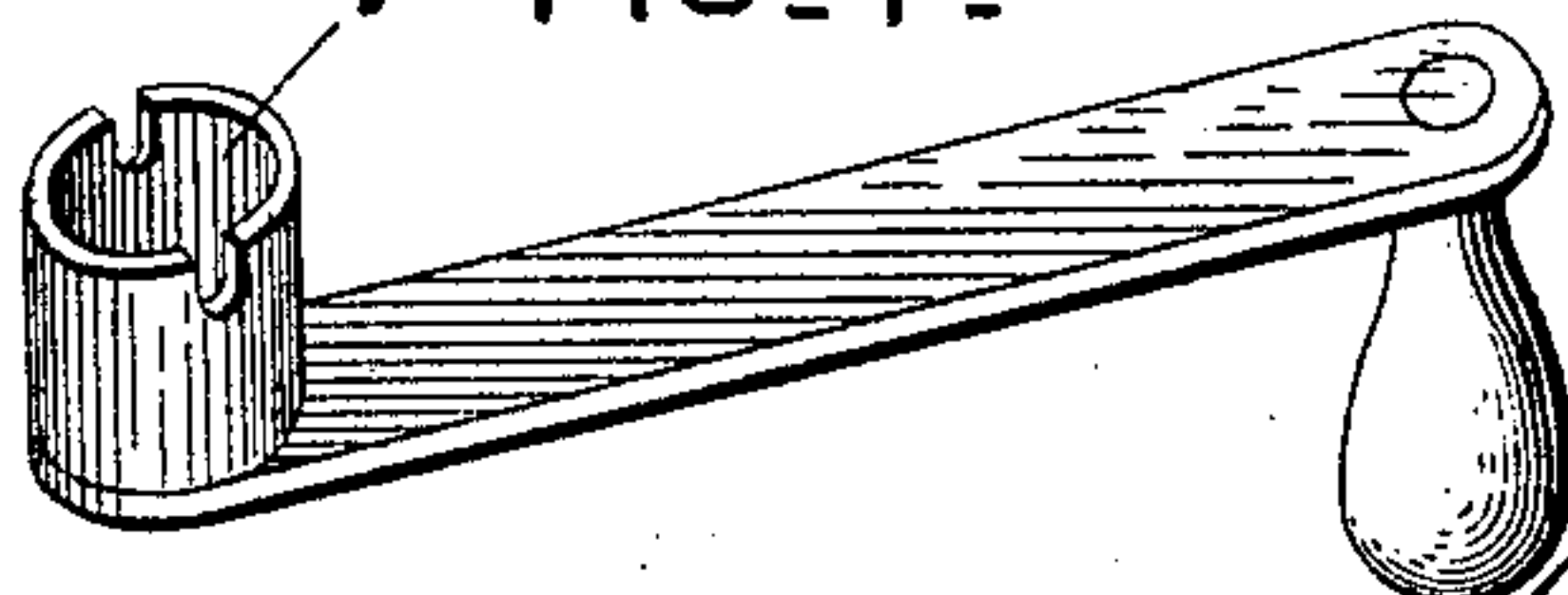


FIG. 4.



WITNESSES:

Darwin S. Wolcott  
C. E. Hunt.

INVENTOR,

George H. Winslow  
by George N. Christy  
Att'y



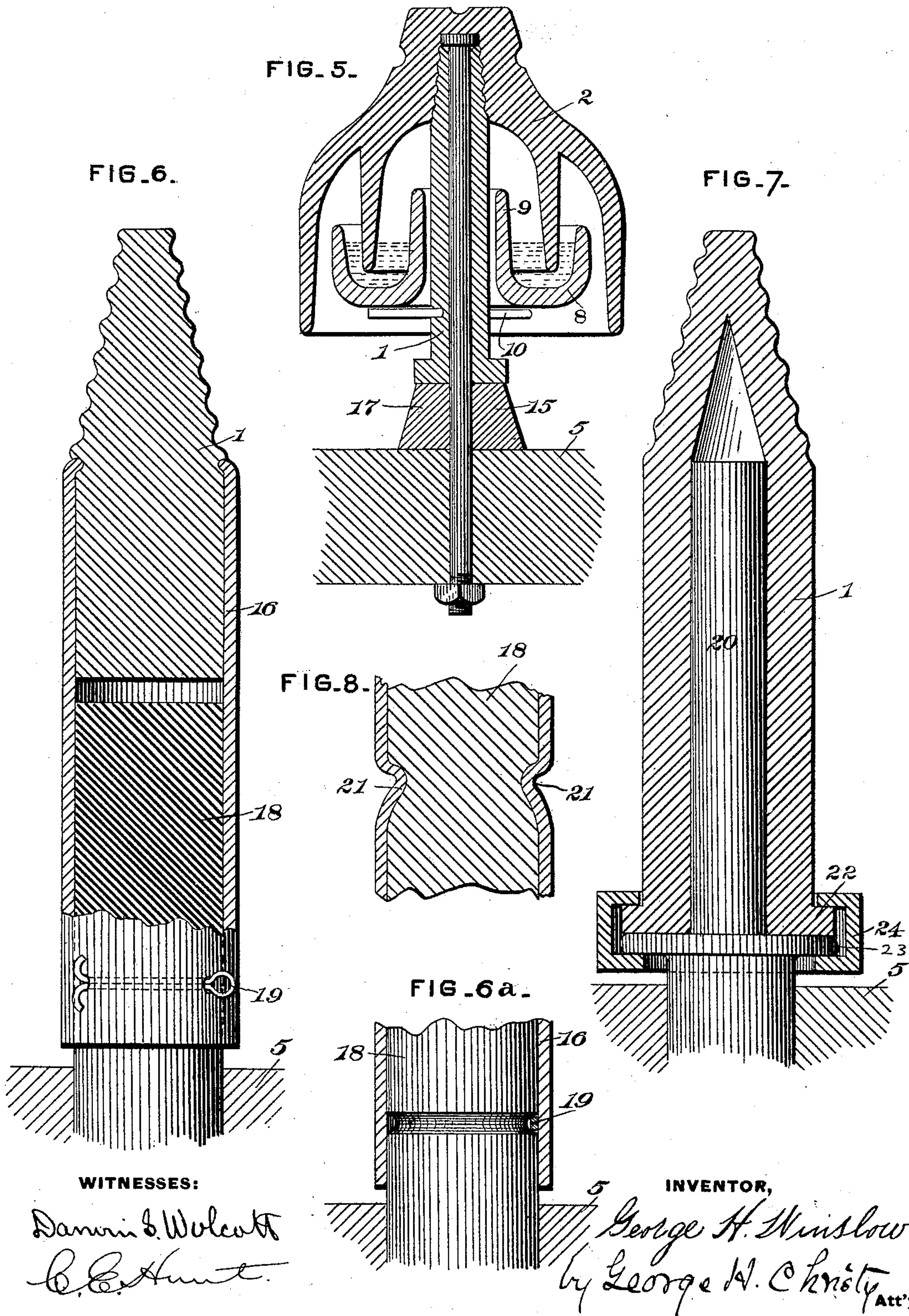
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# UNITED STATES PATENT OFFICE.

GEORGE H. WINSLOW, OF PITTSBURG, PENNSYLVANIA.

## PIN FOR INSULATORS.

SPECIFICATION forming part of Letters Patent No. 517,634, dated April 3, 1894.

Application filed October 25, 1893. Serial No. 489,095. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. WINSLOW, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Pins for Insulators, of which improvements the following is a specification.

The invention described herein relates to certain improvements in supports for insulators for aerial conductors, the improvement being more especially applicable for use in connection with such conductors as carry high tension currents and where it is desirable to employ oil cups, in order to prevent water from forming a continuous conducting film from the conductor to its support, thence to the arm of the pole and to the ground. Considerable difficulty is experienced in removing the insulator when it is desired to cleanse the insulator and the oil cup from accumulations of dust and dirt, which would form a carrier for the water, and thus provide a continuous conducting film between the conductor and the support for the insulator. It is generally customary, when it is desired to cleanse the oil cup, to lower the oil cup upon the pin which normally supports it. This gives a very limited space between the cup and the flanges of the insulator and permits of cleaning both these parts, but with considerable difficulty. Or to detach the conductor from the insulator, unscrew the insulator from its supporting pin, and after taking off the broken cup, putting on a new one, and filling it with oil, to replace these parts.

The object of the present invention is to provide for the removal of the insulator from its supporting pin without detaching the conductor therefrom.

In general terms, the invention consists in the construction and combination substantially as hereinafter described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a sectional elevation of my improved supporting pin showing the manner of mounting the same upon its supporting arm. Figs. 2 and 3 illustrate certain modifications in the manner of mounting the pin. Fig. 4 is a perspective view of the wrench employed for rotating the pin. Figs. 5, 7 and 8 are sectional elevations,

and Fig. 6 is a view, sectional and perspective, all showing certain modifications in the construction and manner of mounting the supporting pin. Fig. 6<sup>a</sup> illustrates a detail.

In the practice of my invention as illustrated in Figs. 1, 2 and 3, the supporting pin 1, which is preferably made of wood, (though it can be made of any other insulating or non-insulating material or suitable combinations of such materials possessing the requisite strength,) is tapered at its upper end and the taper portion threaded for the reception of the insulator 2. At the lower end of the pin is formed a stem 3, round in cross section, which fits within the ferrule 4, in such manner as to be free to rotate therein. This ferrule is so driven into the cross arm 5, as to fit tightly therein, and the pin is held within the ferrule by a locking pin 6, which is preferably made of such a length that it will enter the notches formed in the socket 7 of the wrench whereby the pin 1 is rotated. The insulator 2 is screwed onto the supporting pin 1, either before or after the same is inserted in its ferrule, and the conductor is attached to the insulator in the usual or any suitable manner. The oil cup 8 is supported in proper relation to the depending flange 9 of the insulator, by pins 10 passing through the pin 1, or in any other suitable manner.

In lieu of securing the supporting pin 1 in the ferrule in the manner stated, the ferrule may be made in two parts, and provided with a shoulder 12, adapted to bear upon a shoulder 13 formed on the pin, as shown in Fig. 3. In this construction, the stem 1 need not project down below the ferrule, the pin being provided at a suitable point above the ferrule with an angular portion to which a wrench may be applied, for rotating the pin.

As shown in Figs. 2 and 3, the flange portion 14 of the ferrule may be bent upward, so as to surround the lower portion of the pin 1 so as to protect the pin against the splashing up of water, and, also, form a cup to catch any drippings of oil from the oil cup. As shown in Fig. 3, the upper end of the cup-shaped flange 14 may be flared outwardly, so as to prevent water from splashing up into the interior of the insulator, and also to protect the oil cup and the flanges of the insulator from missiles. The supporting pin 1 may be rein-



forced, if desired, either by an internal shaft or rod, or by an external sleeve, as shown in Figs. 5, 6 and 7.

In the construction shown in Fig. 5, the supporting pin 1 is made hollow, and through this pin is passed the rod 15, provided at its upper end with a head, and threaded at its lower end, for the reception of a nut, whereby it is secured to the cross arm. If desired, the pin 1 may extend down and rest upon the cross arm, but it is preferred to support the same by a block or washer 17, which may be formed of metal or wood, and affords a convenient bearing place on which the pin may rotate, and at the same time keeps the wood out of any moisture which may be on the cross-arm. The lower end of the pin is provided with an angular portion for the application of a wrench thereto, for the rotation of the pin.

In the construction shown in Fig. 6, the pin 1 is inserted into the upper end of the sleeve 16, which fits tightly against the pin, so that the pin will rotate therewith. Into the lower end of the sleeve 16, is inserted the upper portion of a stud 18, the lower end of the stud being driven into the cross-arm. The sleeve is held from removal from the stud by a cotter 19 passing transversely through holes in the side of the sleeve so that the central portion of the cotter will engage the edges of a circular groove in the stud, thereby firmly locking the sleeve from movement off of the stud, while permitting the rotation of the sleeve thereon.

Fig. 8 shows another means of fastening the sleeve to the stud, in which parts 21 of the sleeve are forced into a circular groove in the stud so as to engage the upper shoulder of the groove, thereby preventing the removal of the sleeve but permitting its rotation.

In the construction shown in Fig. 7, the pin 1, preferably of metal, is made hollow for a portion of its length, so as to fit over the upper end of a rod 20, whose lower end is secured within the cross-arm. The pin 1 is provided at its lower end, with an outwardly turned flange 22. The pin 1 with its flange 22, is held against a collar 23, formed on the rod 20, by means of a split ring 24, provided with inwardly turned flanges adapted to bear upon the upper surface of the flange 22, and the lower surface of the collar 23, in such manner as to permit the rotation of the pin on the rod.

When it is desired to remove the insulator for the purpose of cleaning either it or the oil cup, or for any other purpose, a wrench is applied to the pin, and the latter rotated in such manner that the insulator, being held from rotation by the conductor, will be unscrewed from the pin, and when freed from the threads of the pin, can be pushed to one side, so as to permit of the removal of the oil

cup, all without detaching or loosening the conductor from the insulator.

It is evident that my invention is not only applicable to insulators having a regular screw thread, (such as I have shown in the accompanying drawings,) but also to all insulators which are provided with equivalent devices such as recesses in the interior of the insulator adapted to receive suitable projections formed on a supporting pin, or vice versa, of which the bayonet lock is the general type and in which it is customary to bring the insulator to its normal locked position by a movement of rotation.

While I have shown and described, with some particularity, a construction of insulator pin in which the pin proper is connected to a supporting pin by a sleeve, no claim is made herein specifically to such construction, as the same forms the subject matter of an application to be filed in due time.

I claim herein as my invention—

1. The combination of an insulator, a pin, said parts being provided with suitable devices whereby they may be secured together or detached one from the other by a rotation of one of the parts, and a support for the pin, the latter being so secured to the support as to be capable of rotation, substantially as set forth.

2. The combination of an insulator, a pin, said parts being provided with suitable devices whereby they may be secured together or detached one from the other by a rotation of one of the parts, a ferrule loosely fitting the end of the pin and adapted to be secured in a suitable support, substantially as set forth.

3. The combination of an insulator provided with an internally threaded socket, a pin threaded at one end for engagement with the insulator and a ferrule surrounding the opposite end of the pin and provided with a cup shaped flange, substantially as set forth.

4. The combination of an insulator provided with a threaded socket, and a reinforced pin threaded at one end for engagement with the insulator, and so mounted on its support as to be capable of rotation, substantially as set forth.

5. The combination of an insulator, a pin, said parts being provided with suitable devices whereby they may be secured together or detached one from the other by a rotation of one of the parts, a support for the pin, and a lock for preventing the removal of the pin from the support, substantially as set forth.

In testimony whereof I have hereunto set my hand.

GEORGE H. WINSLOW.

Witnesses:

THOS. H. LEGGETT,  
FRANK J. CORDÉ.