

No. 685,776.

Patented Nov. 5, 1901.

F. M. LOCKE.
INSULATOR SUPPORT.
(Application filed July 22, 1901.)

(No Model.)

Fig. 1.

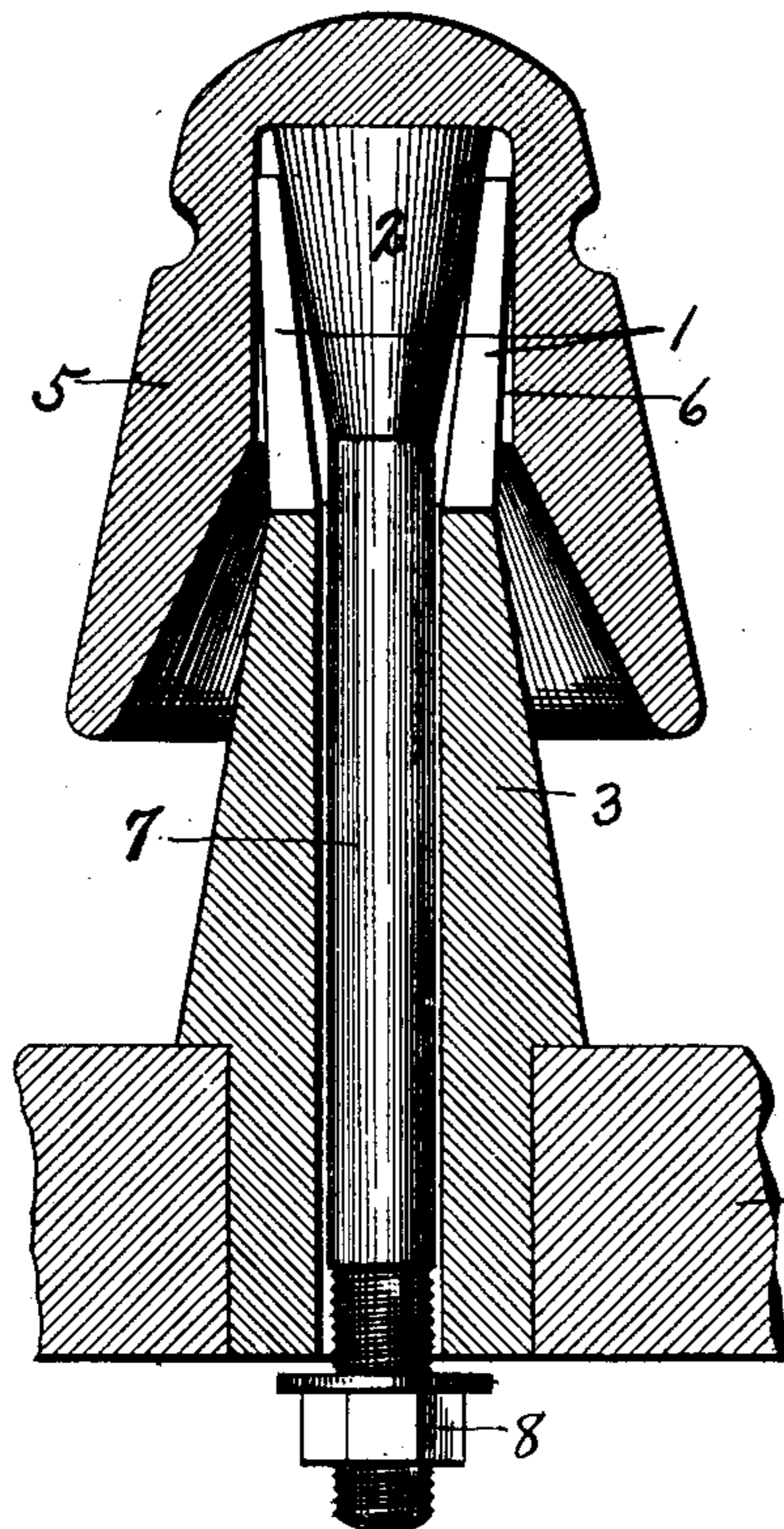


Fig. 2.

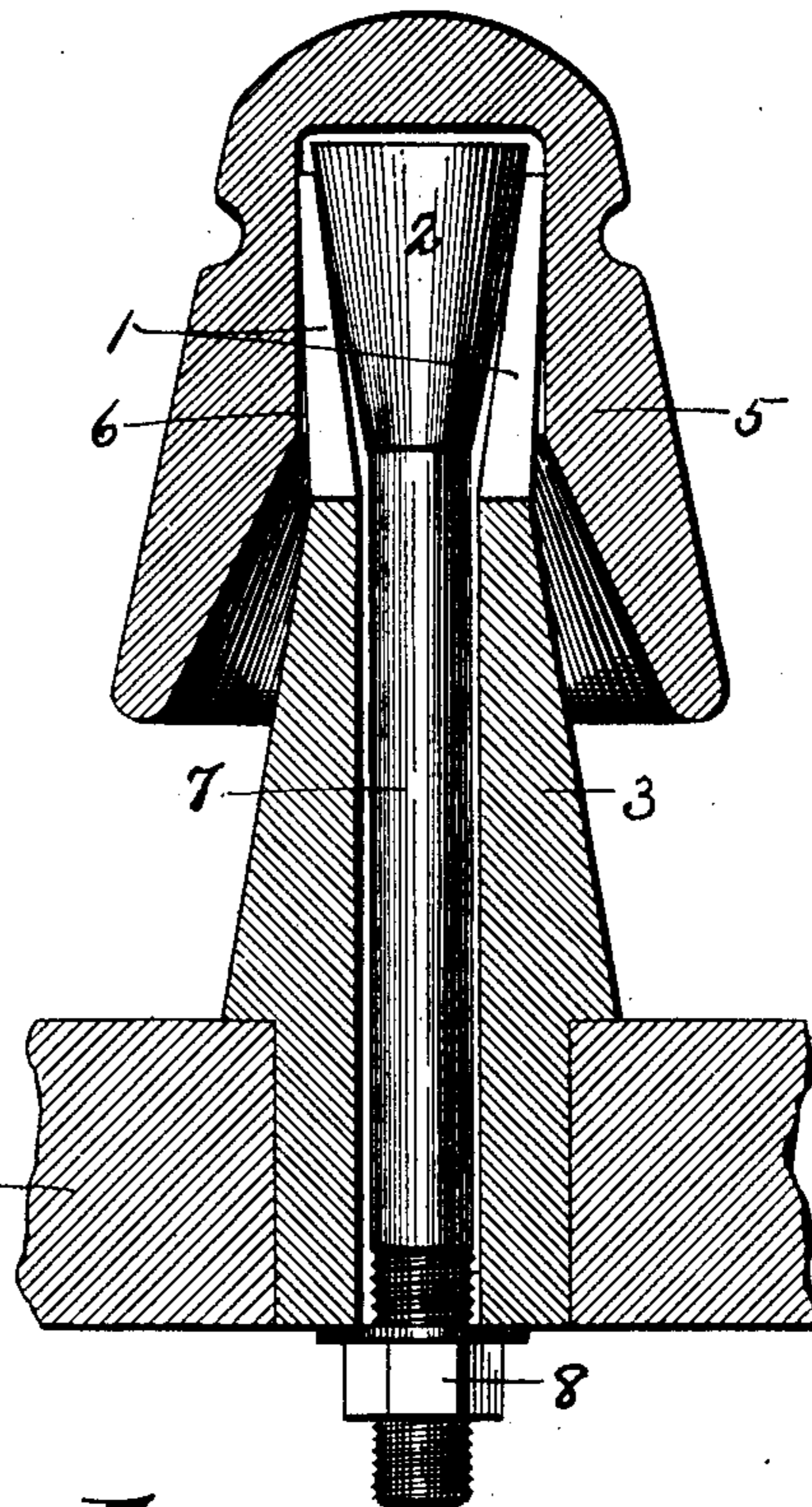


Fig. 3.

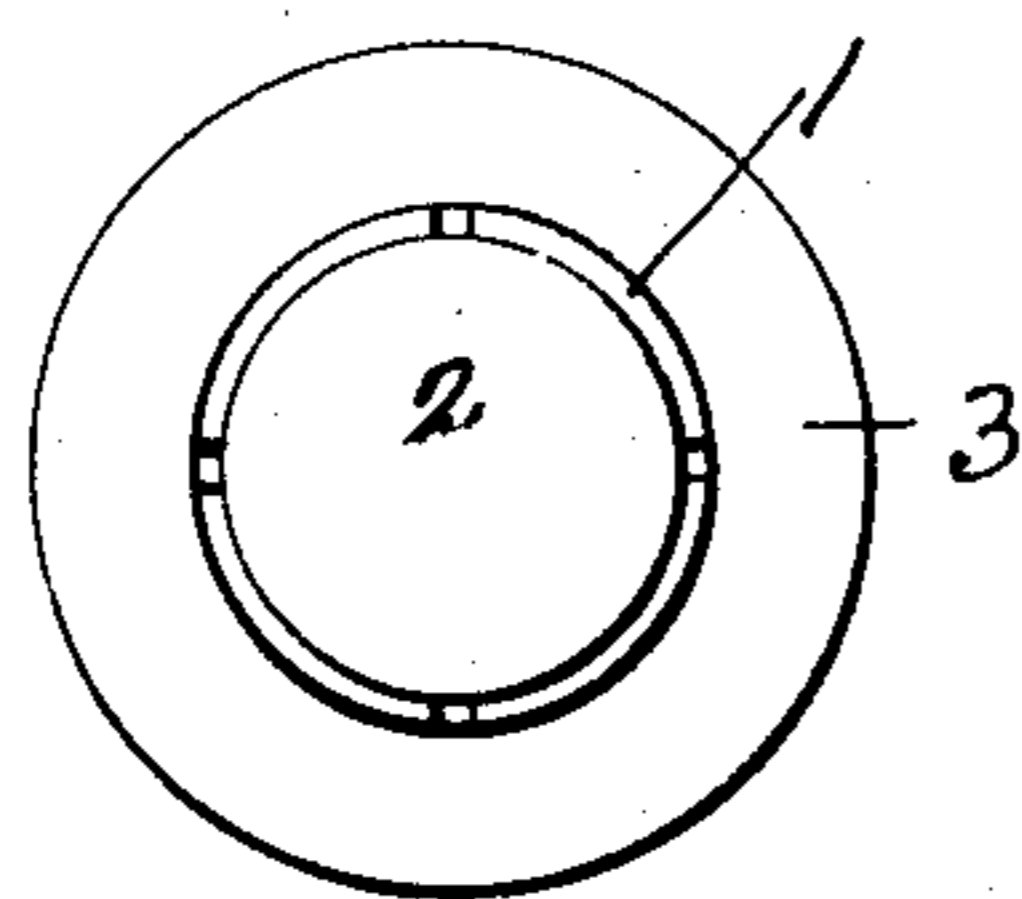
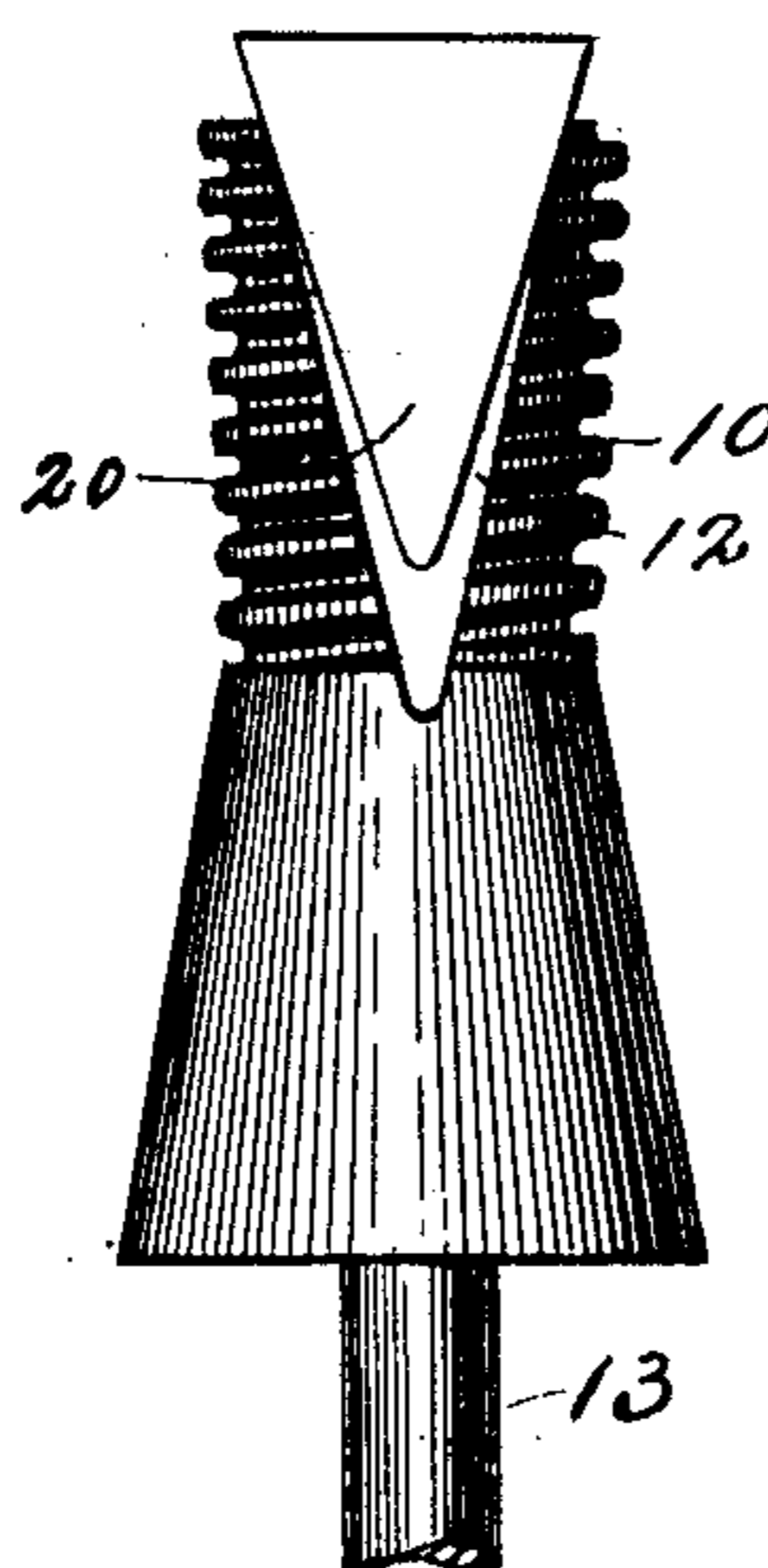


Fig. 4.



WITNESSES:

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INSULATOR-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 685,776, dated November 5, 1901.

Application filed July 22, 1901. Serial No. 69,228. (No model.)

To all whom it may concern:

Be it known that I, FRED M. LOCKE, of Victor, in the county of Ontario, in the State of New York, have invented new and useful Improvements in Insulator-Supports, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in insulator-supports, having particular reference to the means for fastening or locking the insulator thereto.

The object of this invention is to produce a simple and practical device for holding or supporting insulators in operative position without the use of threads either upon the insulator or support.

A further object is to so construct and arrange the parts of the insulator-support as to permit the insulators to be quickly and securely mounted thereon or attached thereto. It is well known that in the manufacture of threaded insulators one of the most expensive steps in the process is the formation of the internal threads, and that even when formed with considerable care the unequal shrinkage and irregularity in the formation of the threads renders it difficult to secure the insulator upon the threaded support and frequently results in either breaking the insulator or its support, and, on the other hand, it is not uncommon to find this class of insulators insecurely mounted upon their supports, owing to the imperfect mesh of the threads with the support.

My invention is designed to overcome these difficulties; and it consists in the construction, combination, and arrangement as an insulator-support, as hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figures 1 and 2 are vertical sectional views, partly in elevation, of the preferred form of my improved insulator-support, showing the method of securing the insulator thereto. Fig. 3 is a top plan view of the detached support, and Fig. 4 is an elevation of a slightly-modified form of my invention.

Similar reference characters indicate corresponding parts in all the views.

This invention consists, essentially, of an

expandible head 1 and a tapering member 2, movable in said head for the purpose of expanding the walls of the head into engagement with the insulator.

The head 1 may be of any desired size or material and is preferably of such form as to permit its walls to be expanded by the lengthwise movement of the tapering member 2, and may, if desired, be slit longitudinally for permitting the walls to readily expand. As seen in Figs. 1, 2, and 3, this expandible head forms a part of a hollow member or sleeve 3, which may be mounted upon any desired support, as an arm 4, the upper expandible end of this sleeve being adapted to receive any form of insulator, as 5, having a longitudinal socket 6, the walls of said socket being substantially smooth or unprovided with any internal projections or threads in order to simplify and cheapen the construction of said insulator.

The tapering member 2, as seen in Figs. 1, 2, and 3, is preferably formed integral with a suitable bolt 7, which is extended lengthwise through the sleeve 3, its lower end being threaded and provided with a clamping-nut 8 for engaging the adjacent end face of the sleeve, and thereby drawing the tapering head lengthwise of the yielding walls of the head 1 for the purpose of expanding said head into engagement with the walls of the socket of the insulator, whereby the insulator and the expandible head are firmly secured or locked together. It will be observed upon reference to Figs. 1 and 2 that the tapering head normally extends slightly above the upper end of the expandible head 1 in order that when the insulator is inserted over the support and forced endwise the end wall of the socket will engage the tapering member and also force the same endwise, thereby expanding the head 1 into engagement with the insulator as said insulator is placed in operative position. This is a particularly important feature of my invention, and it will be apparent that by the mere act of placing the insulator over the end of the support and forcing the same against the tapering member the head 1 will be simultaneously expanded into engagement with the walls of the insulator and that if desired to further impinge

the yielding walls of the sleeve 3 against the insulator the nut 8 may be screwed against the lower face of the sleeve, thereby drawing the tapering head inwardly and permitting the yielding walls of the head 1 to be forced into engagement with the insulator with as much force as may be desired, the nut 8 serving at the same time to hold the tapering member 2 in its adjusted position and to lock the sleeve and plate to each other.

In Fig. 4 I have shown an expansible head 10 and a tapering member 20, the head 10 being formed with a recess 12 and a depending spindle or shank 13, which is adapted to be secured to any suitable support or cross-arm. In this modified construction it is apparent that when the insulator is inserted over the support the tapering member 20 may be forced inwardly, thereby automatically expanding the walls of the head 10 into engagement with the insulator.

In the operation of my invention the insulator is first slipped over the expansible head and is forced lengthwise thereof, thereby moving the tapering head inwardly and simultaneously expanding the yielding walls into engagement with the walls of the socket of the insulator. After the head has thus been expanded as much as possible the nut 8 of the bolt 7 may be operated to additionally draw the tapering member inwardly, thereby caus-

ing the yielding walls to engage the insulator with greater force.

The operation of my invention will now be readily understood upon reference to the foregoing description and the accompanying drawings.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An insulator-support comprising a sleeve having an expansible head, and a tapering member movable in said head for expanding the same into engagement with the insulator.

2. An insulator-support comprising a sleeve having expansible walls, and a bolt movable in the sleeve and having a tapering portion for engaging the yielding walls and forcing the same into contact with the insulator.

3. An insulator-support comprising a sleeve having expansible walls, and a bolt movable in the sleeve and having a tapering portion for engaging the yielding walls and forcing the same into contact with the insulator and means for simultaneously actuating the bolt and locking the sleeve thereto.

In witness whereof I have hereunto set my hand this 29th day of May, 1901.

FRED M. LOCKE.

Witnesses:

C. A. MOORE,

W. A. HIGINBOTHAM.