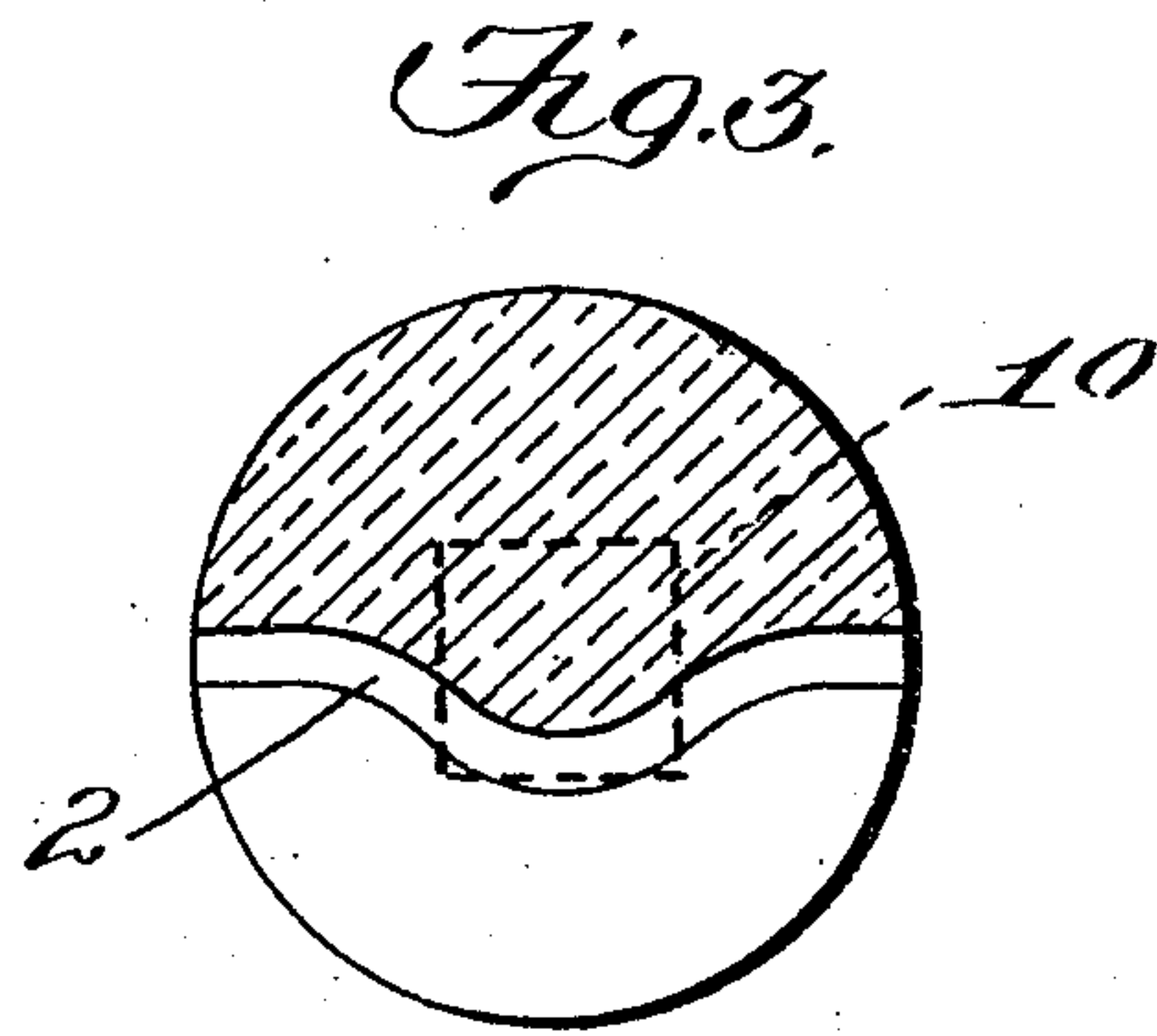
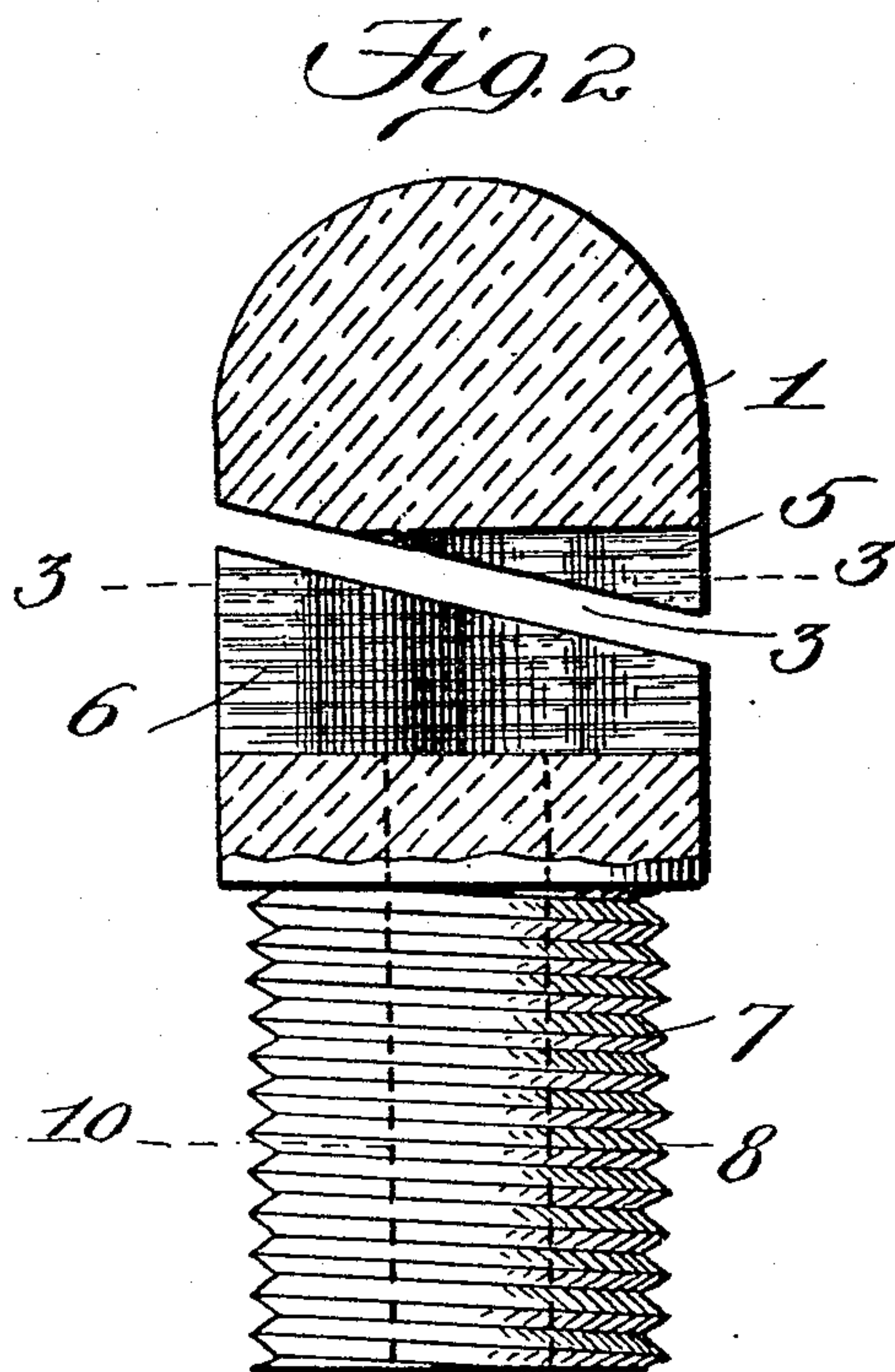
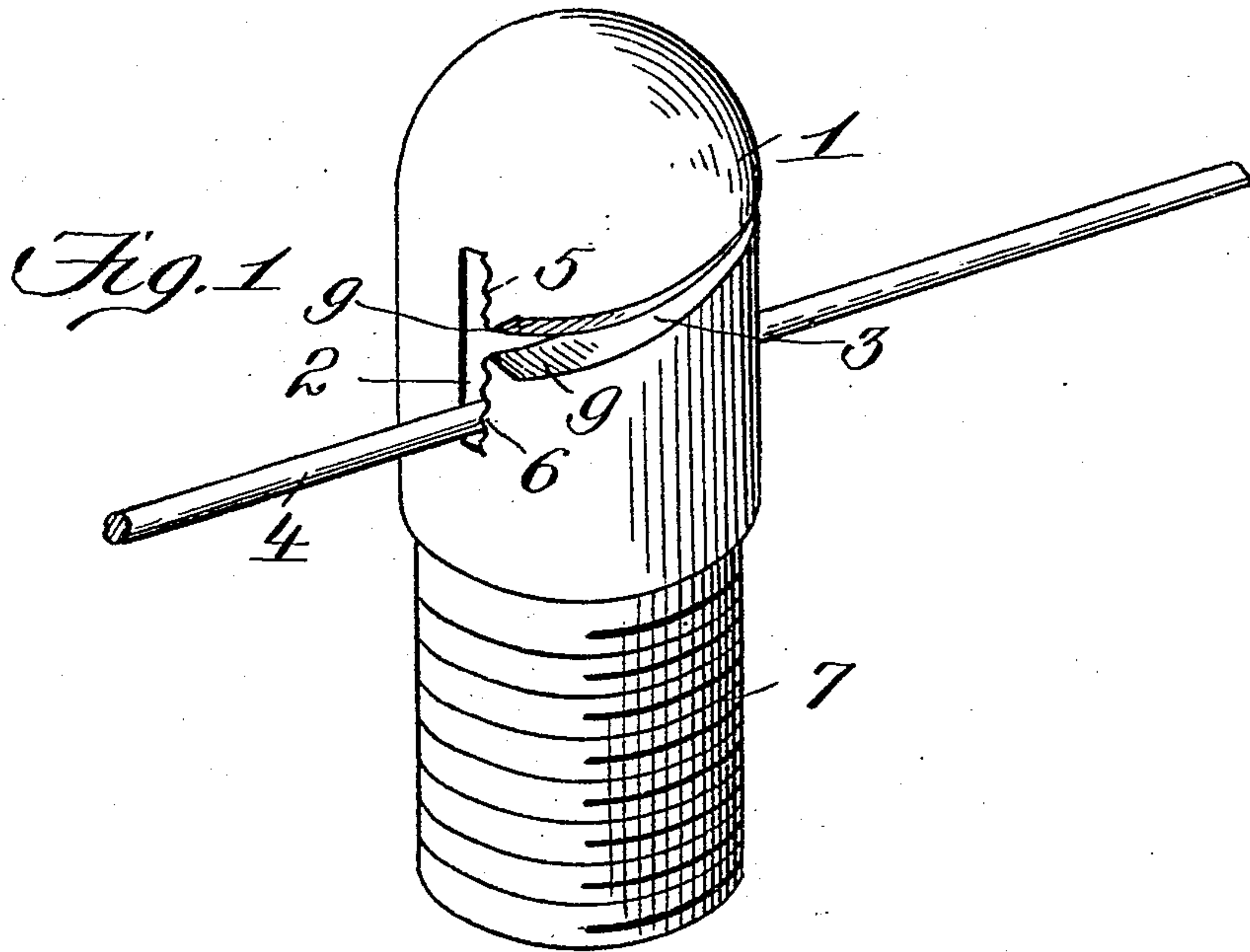


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No. 801,196.

PATENTED OCT. 3, 1905.

C. L. MATHIAS.  
SELF LOCKING INSULATOR.  
APPLICATION FILED DEC. 28, 1904.



Witnesses:  
C. J. Kessler  
J. B. Keefe

Inventor  
Charles L. Mathias  
By James L. No.



## UNITED STATES PATENT OFFICE.

CHARLES L. MATHIAS, OF CARLISLE, KENTUCKY, ASSIGNOR OF ONE-HALF TO FRANK KENNEDY, OF CARLISLE, KENTUCKY.

## SELF-LOCKING INSULATOR.

No. 801,196.

Specification of Letters Patent.

Patented Oct. 3, 1905.

Application filed December 23, 1904. Serial No. 238,582.

*To all whom it may concern:*

Be it known that I, CHARLES L. MATHIAS, a citizen of the United States, residing at Carlisle, in the county of Nicholas and State of Kentucky, have invented new and useful Improvements in Self-Locking Insulators, of which the following is a specification.

My invention relates to an improved self-locking insulator, and more particularly to that class of insulators used on telegraph-poles and general outdoor structures for supporting line-conductor wires.

The main purpose of the invention is to provide self-locking means for retaining the line-wires securely in position on the insulator.

A further purpose of the invention is to provide means to overcome the possibility of the wires slipping from position on the insulator; furthermore, sagging thereof.

Further purposes of the invention are to provide means for economically attaching securely line-wires and for detaching the same from the insulator.

Another feature of the invention is to provide an insulator that can be economically manufactured, strong, durable, and less liable to become broken, and which will be very efficient in its operation.

With the foregoing and other purposes in view the invention consists of the novel construction and arrangement of parts herein-after more specifically described, and illustrated in the accompanying drawings, which form a part of this specification, and wherein I have shown the preferred embodiment of the invention, though it is to be understood that I may make such changes, variations, and modifications as come properly within the scope of the claims hereunto appended.

Reference being had to the accompanying drawings, forming part of this specification, in which similar characters of reference indicate corresponding parts in all of the figures. Figure 1 is a perspective elevation. Fig. 2 is a sectional view. Fig. 3 is a sectional view on the line 3-3 of Fig. 2.

In the drawings, the numeral 1 represents the head of the insulator, which may be of any desired shape, but which is shown as cylindrical. Said head is preferably made of glass, but of course may be made of any other suitable non-conducting material. The insulator-head 1 is provided with a longitudi-

nal slot 2, in which the wire is held, and a communicating slot 3, arranged at an oblique angle to said slot 2, so that one end of slot 3 opens into the upper end of slot 2, while the other end of slot 3 opens into the slot 2 below its top. The said slot 2 is sufficiently wide to accommodate a wire 4 of the ordinary size and is curved between its opposite ends to present an intermediate laterally-deflected portion, which gives to the wire a bend to aid in holding the same in place. To allow an easy entrance of the wire 4 in the communicating slot 3, I have provided flared or beveled edges, as indicated at 9. The surfaces 5 and 6 meeting the open communicating slot 3 are irregular by forming corrugations or kinks therein, so that the wire 4, resting in the slot 2, is prevented from slipping out of position or escaping from the slot 3, thereby forming a self-locking means for the wire 4. The insulator-head 1 is provided with a stem 7, in this instance integral therewith and of the same non-conducting material. However, the said stem 7 may be made separate and of any other suitable material, if desired. said stem 7 having spiral threads 8, the trend of which extends from the outer end of the stem 7 to the base of the head 1, the same being for the purpose of attaching the insulator-head 1 to any suitable support. (Not shown.) The corrugations or kinks forming the irregular surfaces 5 and 6 of the slot 2 may extend longitudinally with the slot 2 or vertically thereof, though in this instance I have shown the same extending longitudinally with the slot 2.

The insulator-head 1 having been secured to any suitable support by the engagement of the spiral threads 8 in the support, now to attach the wire to the insulator-head 1 the operator grasps the wire 4, engages the same in the open slot 3, forcing the wire 4 there-through until it enters the slot 2, then by pressure applied to the said wire 4 causes the same to ride over the irregular surface 6 onto the bed of the said slot 2 and rest thereon, and when the wire 4 is so positioned in the slot 2 the irregular surfaces 5 and 6 prevent the wire 4 jumping out or being accidentally displaced in the said slot 2. For detaching the wire 4 from the insulator the operator pulls on the said wire 4, causing the latter to ride over the irregular surface 6 of the slot 2 until the said wire 4 reaches the

open communicating slot 3, then withdraws the said wire through the communicating slot 3 from the insulator-head 1.

The stem 7 has a wrench-receiving portion of some suitable kind, which is illustrated as a countersink 10 in its bottom square in formation to receive a correspondingly-shaped tool to facilitate the turning of the stem from out of its threaded seat in a cross-arm or other support should the head be broken.

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

An insulator including a head and a threaded stem, said head having a slot provided with corrugated walls and an opening coextensive with said slot to form communication therewith.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES L. MATHIAS.

Witnesses:

W. S. DUDLEY, Jr.,  
PERRY JEFFERSON.