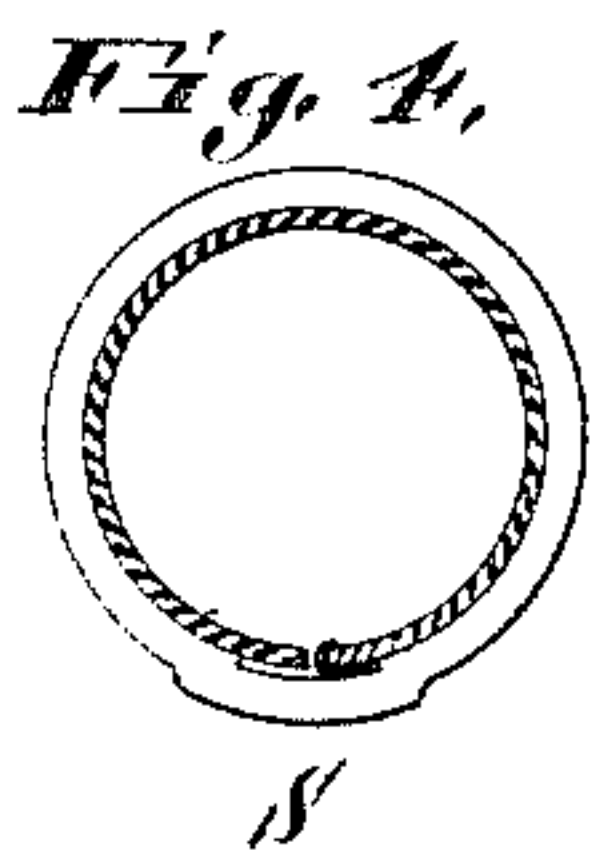
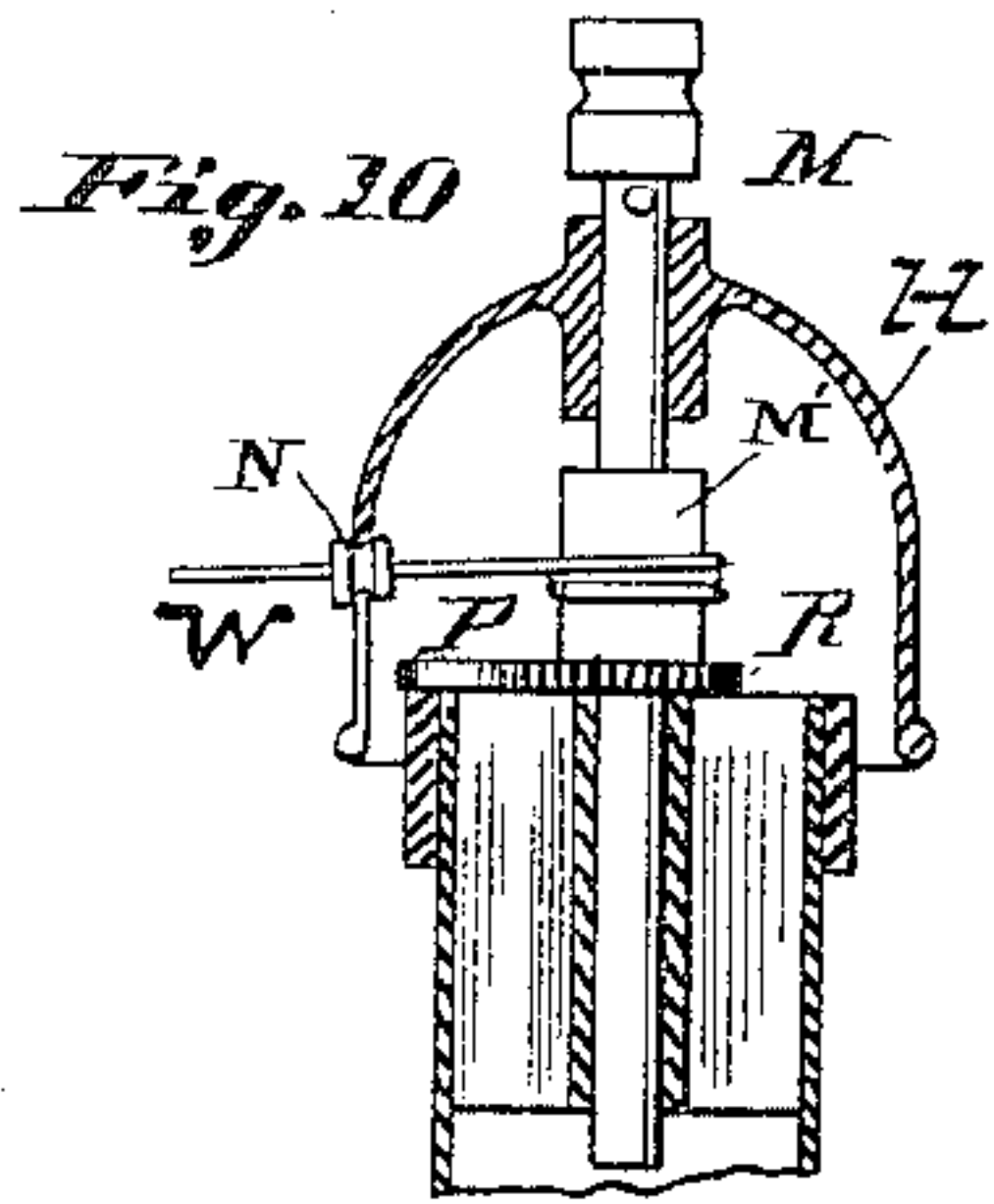


(No Model.)

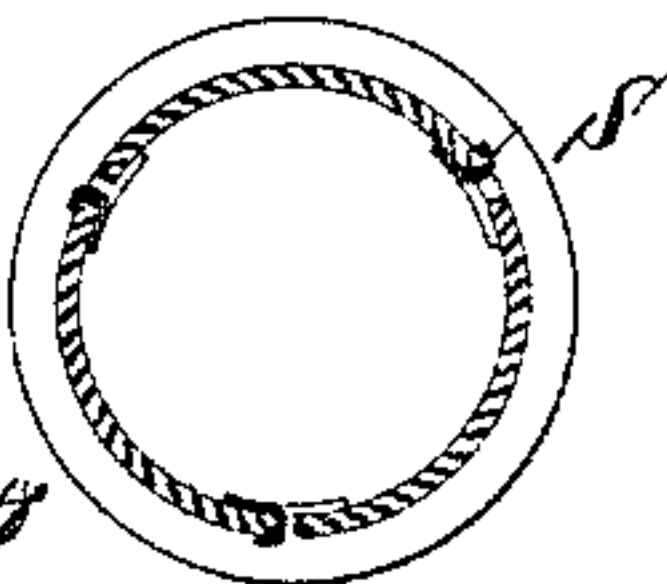
S. H. TERRY.  
METAL POLE.

No. 433,189.

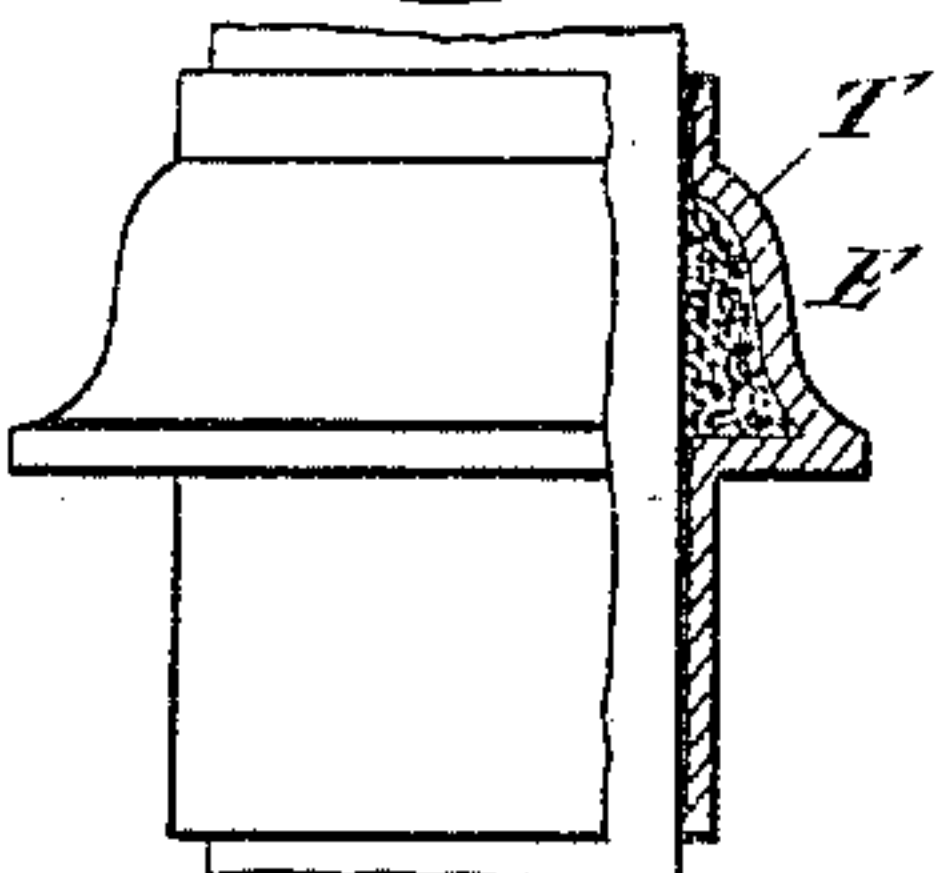
Patented July 29, 1890.



*Fig. 13.*



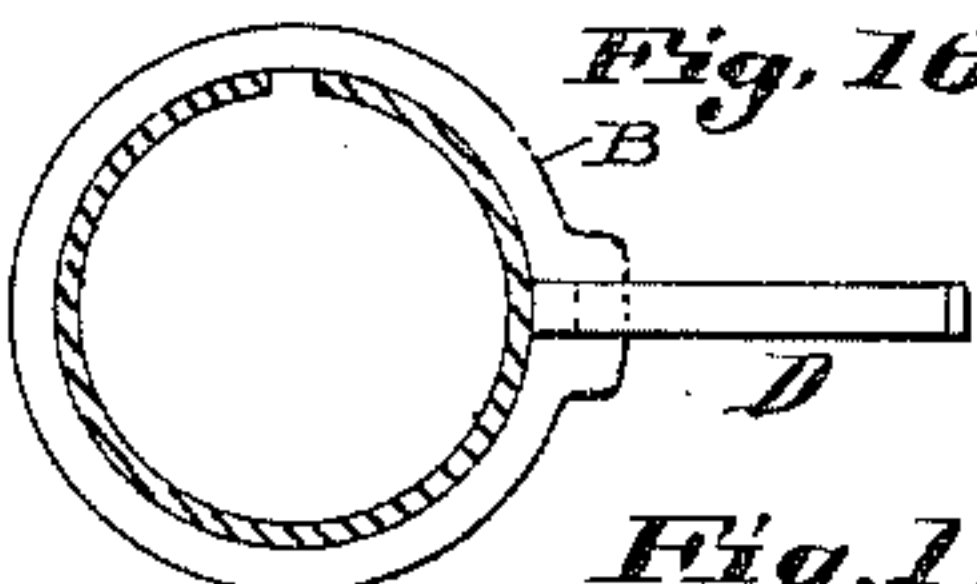
*Fig. 15*



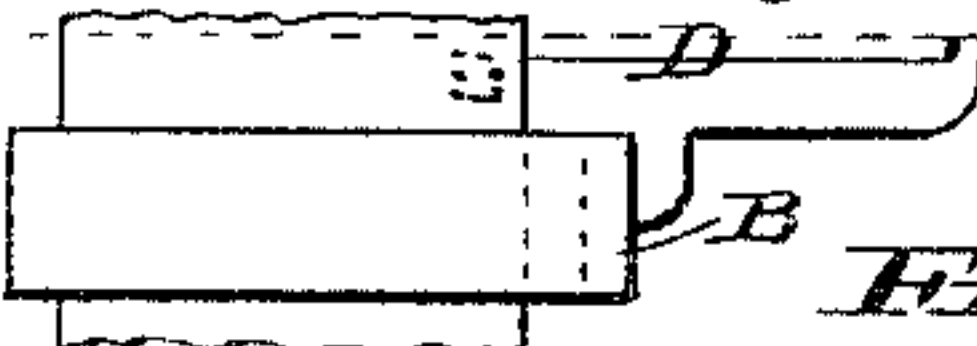
*Fig. 14.*



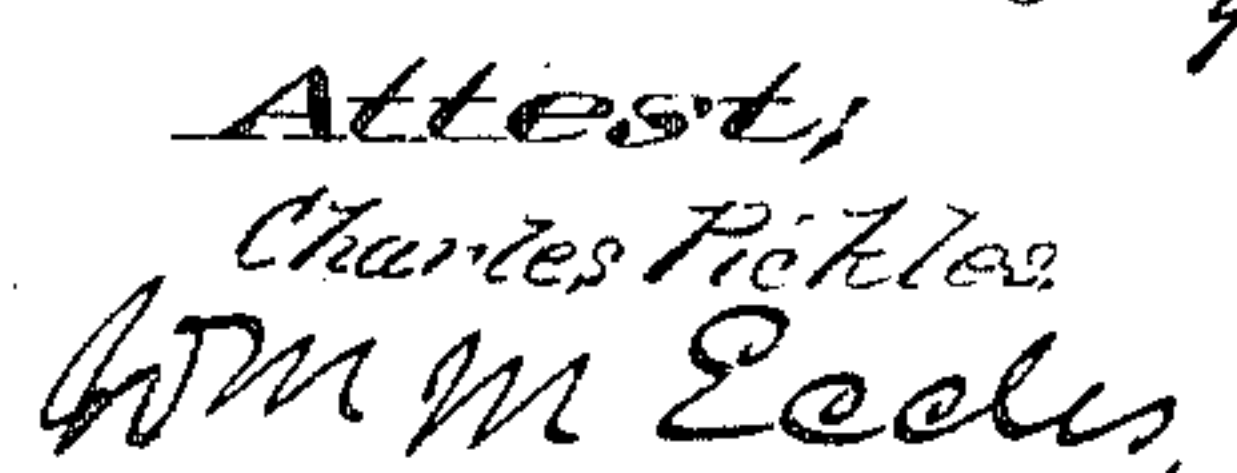
*Fig. 16.*



*Fig. 17.*



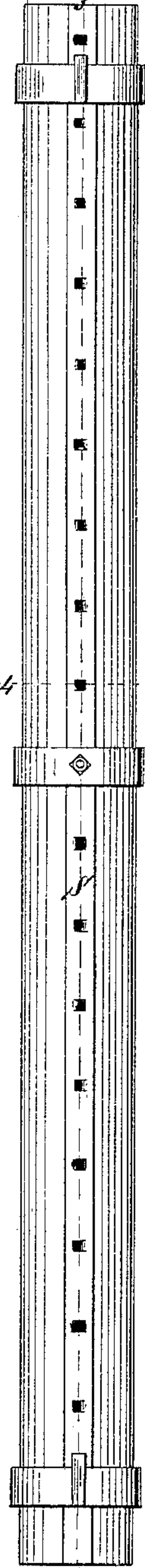
*Fig. 8.*



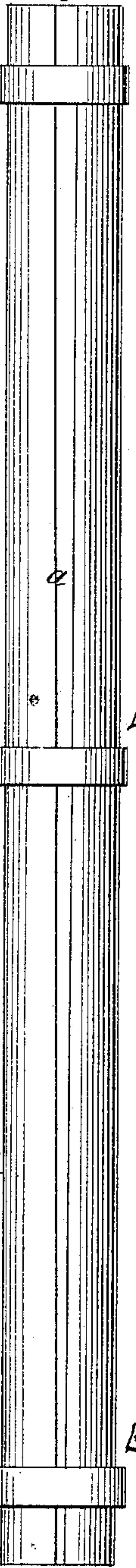
Attest,

Charles Pickles  
Wm M Eeles.

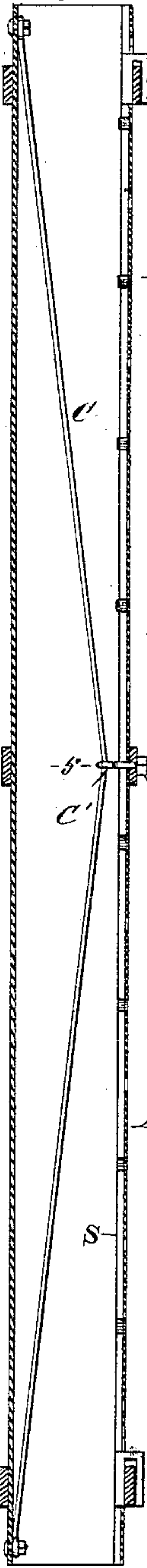
*Fig. 1.*



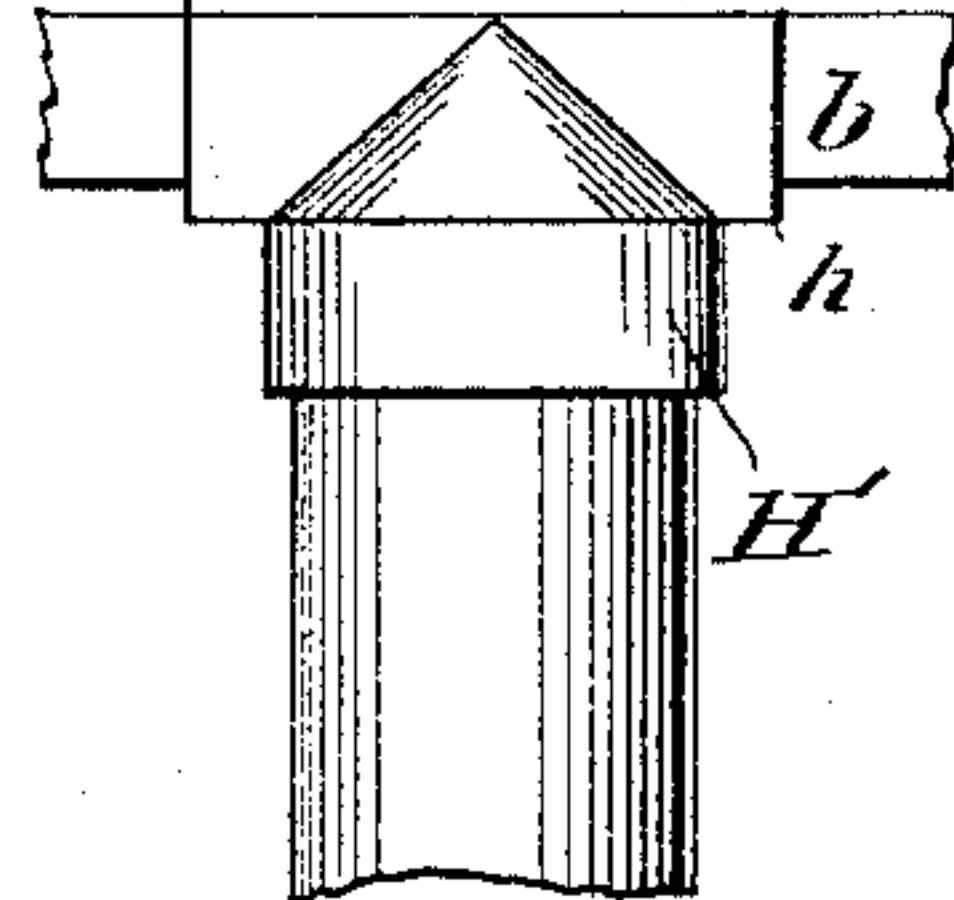
*Fig. 2.*



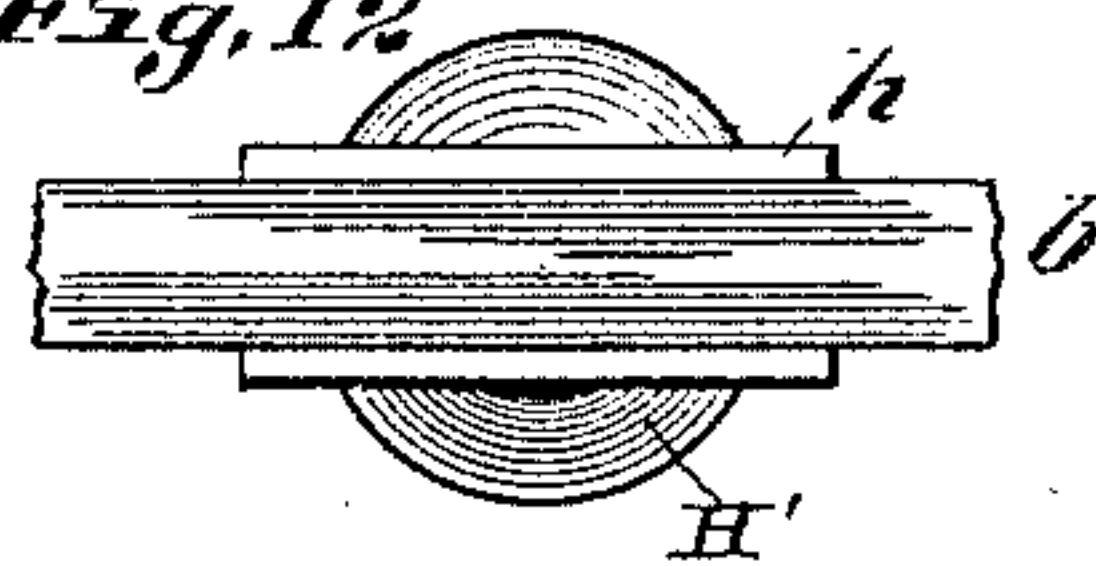
*Fig. 3.*



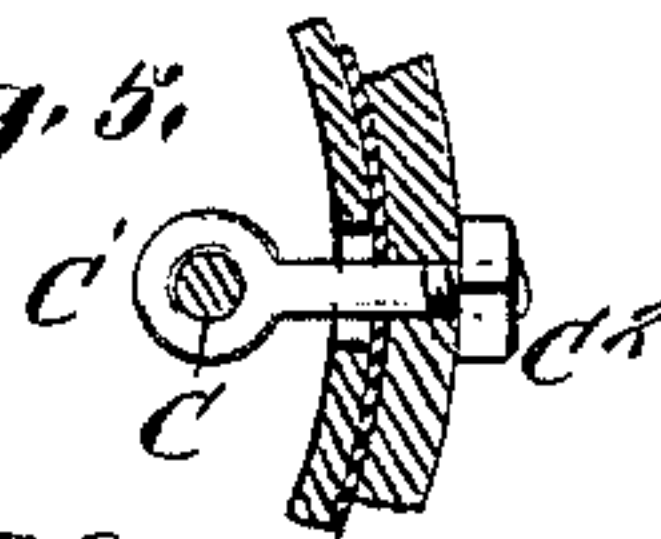
*Fig. 11.*



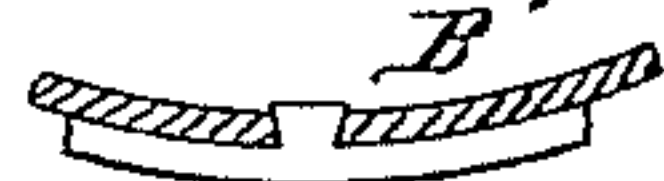
*Fig. 12.*



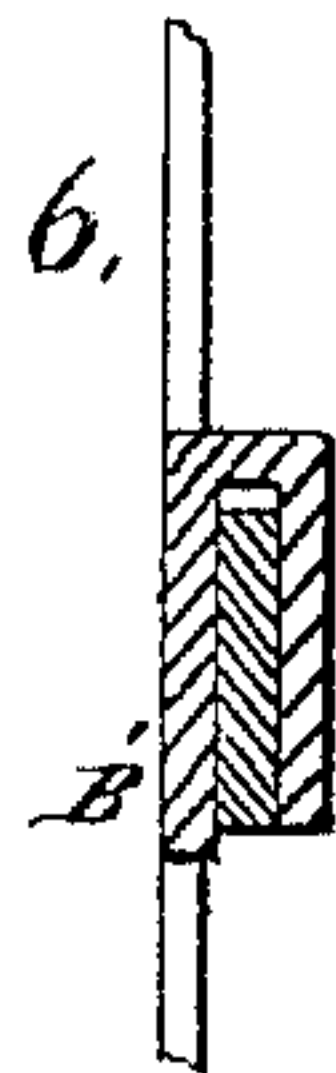
*Fig. 5.*



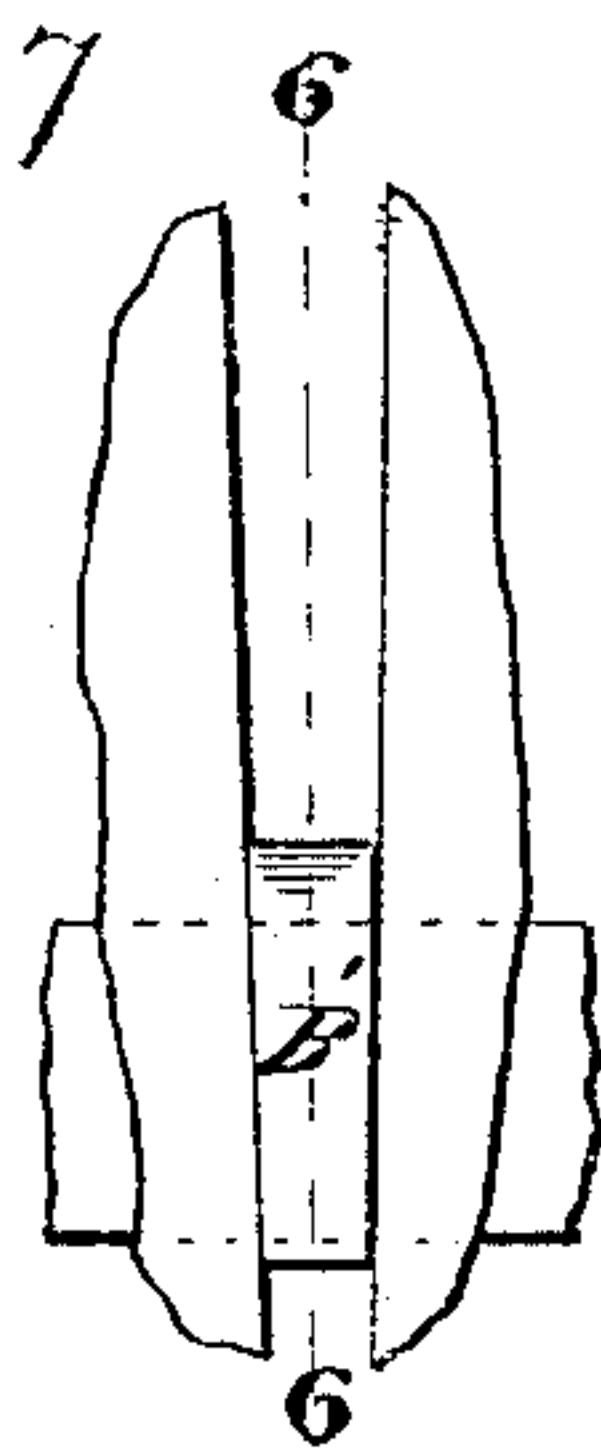
*Fig. 18.*



*Fig. 6.*



*Fig. 7.*



Inventor,

Samuel H Terry



# UNITED STATES PATENT OFFICE.

SAMUEL H. TERRY, OF ST. LOUIS, MISSOURI.

## METAL POLE.

SPECIFICATION forming part of Letters Patent No. 433,189, dated July 29, 1890.

Application filed March 31, 1890. Serial No. 346,109. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL H. TERRY, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a new and useful Improvement in Metallic Poles, of which the following is a specification.

My invention relates to metallic poles; and it consists in the arrangement and combination of parts herein described and claimed.

The objects are to make a stiff and rigid pole; to make a pole provided with a key that can be spread against the edges of the parts of the pole by a wedge; to have a flaring key which will bind the edges of the parts of which the pole is made against the ring and prevent it from bending inward; to provide a shield interposed between the earth and the body of the pole; to provide the pole with an insulated top, and to provide mechanism for shielding the slot of the pole. I attain these objects by the mechanism illustrated by the accompanying drawings, in which—

Figure 1 is an elevation of a section of my pole, showing the slot with a shield. Fig. 2 is an elevation of the same, showing the pole with the shield removed. Fig. 3 is a longitudinal section drawn on line 3 3 in Fig. 1. Fig. 4 is a transverse section drawn on line 4 4 in Fig. 1. Fig. 5 is a transverse section drawn on line 5 5 in Fig. 3. Fig. 6 is a vertical section drawn on line 6 6 in Fig. 7. Fig. 7 is a view of a part of the pole, one of the outside rings and a detachable wedge-shaped key hung over the ring and passing between the edges of the body of the pole. Fig. 8 is a section of Fig. 2, showing a ring with a hole in its periphery through which to insert a key. Fig. 9 is a transverse section drawn on line 9 9 in Fig. 8. Fig. 10 is a section of the top of the pole. Fig. 11 is a modified form for a top to the pole. Fig. 12 is a top view of Fig. 11. Fig. 13 is a transverse section of a pole having three longitudinal pieces forming the pole and showing the weather-shields for the slots. Fig. 14 is a modified form shown in transverse section of a weather-shield. Fig. 15 shows that part of the pole in the ground, partly in section and part in elevation, and a shield surrounding the pole. Fig. 16 is a transverse section of one of the poles just

above one of the rings, which has a step attached to the rings; Fig. 17, an elevation of a part of one of the poles and ring having a detachable step attached thereto. Fig. 18 is a section of a part of a pole showing a flaring key.

A is the hollow pole throughout the drawings.

B are rings surrounding the pole and binding the parts together.

B' is a key which is flaring in Fig. 18 and split in Fig. 7.

C is a brace-rod fastened to the inside of the pole at either end and to an adjustable eye and bolt near the center. This eye and bolt is made integral with each other, and is designated by C'. This eye and bolt passes through the side of the pole and is provided with a nut C<sup>2</sup>, by which the eye and bolt can be screwed in or out. The rod C passes through this eye, and when the bolt is drawn out by the action of screwing the nut on it, it will draw the rod C tight and thus operate as a means of strengthening the pole against lateral strain. This key B' is sometimes made wedge-shaped and is loosely attached to the ring, and may be driven down between the lips, as seen in Fig. 7, and is preferably made flaring, when it can be driven down with the ring in the tapering slot, as seen in Fig. 2.

The slot *a*, Fig. 2, is made larger at one end than at the other, so that when the key B' is driven down into it, the key will tighten the body of the pole within the ring without driving the ring alone—that is, by making the slot tapering the wedge or key B' can be driven down between the lips or edges of the body of the pole in many instances without disturbing the ring. This is very essential at times after the pole has been painted about the ring, or when the ring has become rusted on the pole. This could not be done without disturbing the ring if the slot *a* were not tapered, as shown.

D is a step which can be securely fastened to the ring B.

E is a shield surrounding the base of the pole, closed tightly around the pole at the bottom, and open at the top. In the top there is run tar in a heated state and allowed to congeal. Any substance impervious to water may be used. This substance is represented



by T. The function of this tar is to prevent oxidation of the metal.

S is a long strip of metal wide enough to cover the slot of the pole, and is provided at intervals with sections cut and bent out from the body of the strip, which are bent around the edges of the slot on the inside when the body of the shield is on the outside of the pole and bent over the outside of the edges forming the slot when the shield is put on the inside of the pole. The former of these two constructions is shown in Fig. 13 and the latter is shown in Fig. 4.

In Fig. 14 the shield S is held in place by a bead or lip on its edges, embracing the edges of the metal forming the slot.

H is a metal top or housing containing an inclosed mandrel M, surrounded near its center with a porcelain cylinder M'. Around this porcelain cylinder M' is wound the cable or wire which the pole is intended to support. When this pole is used for electric roads, this wire W is fastened at one of its ends around the porcelain cylinder M', and passes across the street to an adjoining pole, and has its other end wound around a like cylinder on the opposite pole, and serves as a support of the trolley-wire or electric cable. N is a porcelain plug having a hole through it for the admission of the said wire or cable. This mandrel M is provided with a hole at the top, through which to insert an iron lever with which to wind the wire W up on the cylinder on the mandrel. This mandrel is provided with a ratchet R and pawl P, which prevents the cylinder from turning backward when wound up.

H' is a modified form of metal top or housing. It is provided with a flanged groove h, crossing the top transversely and adapted to receive and securely hold a common wood cross-bar b, to which the wires may be attached.

B<sup>2</sup> in Figs. 8 and 9 is a removable key loosely passing through the binding-ring and wedging between the edges of the longitudinal section of the pole. It is obvious that when the slot a is tapering from the one end to the other that a ring having a key, such as is shown in either form, may be forced down on the pole from the larger end of the tapering slot to the smaller end, and thus securely bind the pole and ring together.

The object of the split key and wedge, as

shown in Figs. 6 and 7, is to enable the constructor to arrange the rings approximately an equal distance from each other.

Now what I claim, and for which I ask Letters Patent of the United States to be granted me, is—

1. In a metallic pole, a guy-rod situated within the pole and extending laterally along the same and fastened to the pole at both ends to the same side of said pole, and having one of its intermediate points passing through an adjustable eyebolt passing through the opposite side of the pole, said bolt having a nut attached to its outer end on the outside of the pole whereby the eyebolt can be adjusted from the outside, whereby the guy-rope can be tightened and the pole stiffened, substantially as described.

2. In a metallic pole, an open longitudinal slot diverging from one end to the other, in combination with a binding-ring surrounding said pole and provided with an internally-projecting key operating to bind the parts securely together as the ring and key are driven from the large end of the slot toward the small end of the same, substantially as described, and for the purposes set forth.

3. In a metallic pole, a wedge interposed between the lips of a longitudinal slot of a pole at a point where the binding-ring surrounds the said pole, in combination with said pole and a binding-ring surrounding said pole, substantially as above described, and for the purposes set forth.

4. In a metallic pole, a flaring shield surrounding the base of the pole closed tightly around the pole at its lower edge, and having an opening around its upper edge to admit heated tar or other water-proof substances, in combination with said pole and water-proofing, substantially as described, and for the purposes set forth.

5. In a metallic pole, a shield of sheet metal having fastenings cut integral with the metal and adapted to clamp around the edges of the metal forming the slot, in combination with a pole having an open longitudinal slot, substantially as described, and for the purposes set forth.

SAMUEL H. TERRY.

Attest:

WM. M. ECCLES,  
J. G. SMITH.