No. 687,982. Patented Dec. 3, 1901.

W. E. FISHER.

IMPLEMENT FOR SINKING ELECTRICAL GROUND PLUGS.

(Application filed Apr. 22, 1901.)

(No Model.)

Fig. 1.

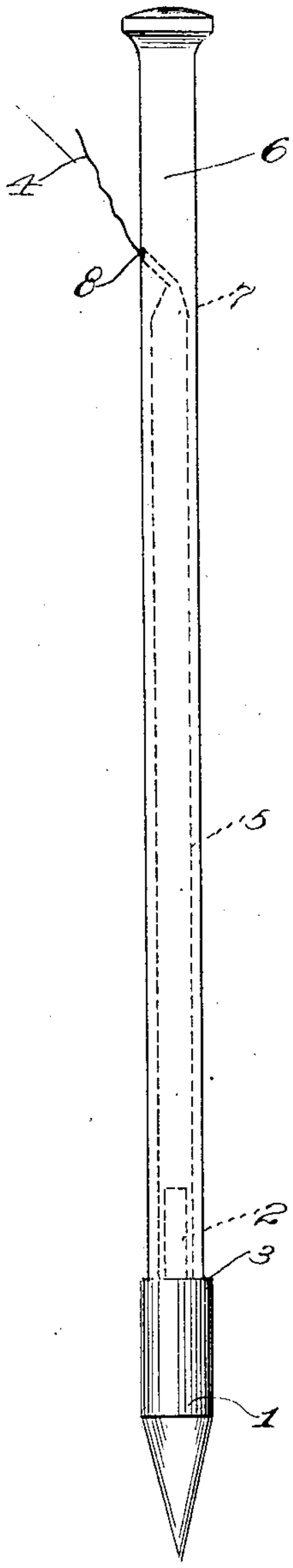
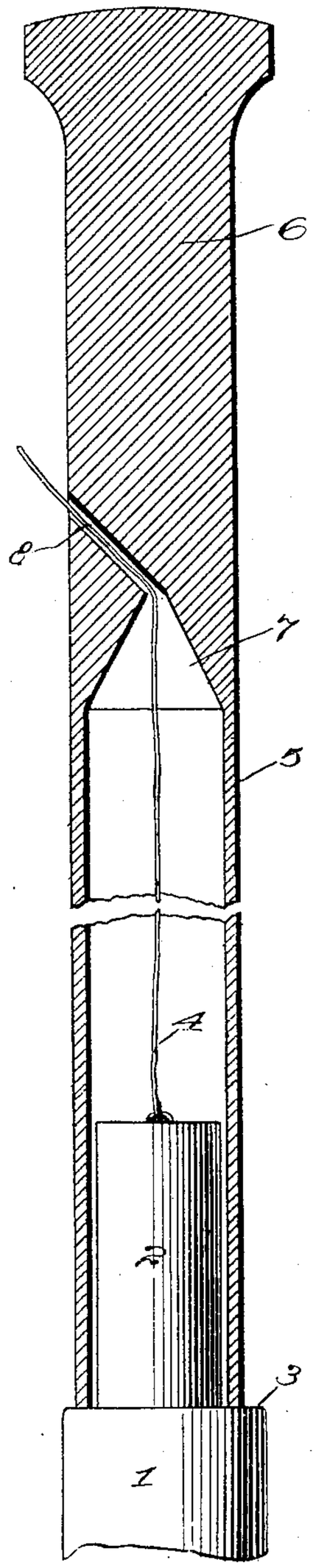


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILBER E. FISHER, OF BLOOMSBURG, PENNSYLVANIA.

IMPLEMENT FOR SINKING ELECTRICAL GROUND-PLUGS.

SPECIFICATION forming part of Letters Patent No. 687,982, dated December 3, 1901.

Application filed April 22, 1901. Serial No. 56,931. (No model.)

To all whom it may concern:

Be it known that I, WILBER E. FISHER, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented a new and useful Implement for Sinking Electrical Ground-Plugs, of which the following is a specification.

This invention relates to the art of grounding electrical circuits and is designed to provide improved means for grounding telephone and telegraph wires in particular.

It is furthermore designed to provide an improved grounding-plug or anchor for the wire and also means for conveniently sinking the same into the ground without digging an opening therefor.

A final and important object is to accommodate the wire connected to the plug in the sinking thereof, so that the upper end of the wire will remain above the level of the ground and in convenient access while the plug is being driven and also after the driver has been withdrawn from the ground.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of the grounding-plug and driver therefor constructed in accordance with the present invention. Fig. 2 is an enlarged detail central sectional view of the driver with the plug in elevation.

Like characters of reference designate corresponding parts in both figures of the drawings.

In carrying out the present invention there is provided a metallic grounding-plug 1, which has a pointed lower end to facilitate the sinking thereof into the ground and a reduced axial upstanding stem or shank 2, rising from the upper end thereof, thereby providing a marginal shoulder 3 at the base of the stem or shank. A wire 4 is connected in any suitable manner to the upper end of the stem.

For sinking the plug into the ground there is provided an implement comprising a hollow or tubular driving-bar 5, the lower end of which is open and of a size to loosely receive the stem of the plug with its lower end fitting against the marginal shoulder of the plug. The opposite upper end of the bar is closed by means of a solid driving-head 6, in the inner end of which the bore of the bar terminates in a conical socket 7, from the apex of which an opening 8 inclines outwardly and upwardly and emerges through the outer lateral side of the head.

In assembling the plug and the driver the wire is first entered through the lower open end of the bore thereof, and by means of the conical guide-socket at the inner end of the bore the end of the wire will be guided to the apex thereof, and thereby entered into the lateral opening 8, and from thence outwardly through the side of the driving-head, so as to be accessible. After the plug has been received within the end of the bar the upper driving-head thereof is struck with a suitable implement to drive the plug to a suitable distance into the ground, after which the bar is withdrawn, the wire slipping through the bar with its upper end always remaining above the surface of the ground. It will be observed that the major diameter of the plug is greater than the external diameter of the driver, thereby producing a shoulder, which hangs in the ground, and thereby holds the plug within the ground when the driver is being withdrawn. This driving process obviates the necessity for digging a hole for the plug, and thereby facilitates the sinking thereof. Moreover, the bore of the bar forms a receptacle for the reception of the wire during the driving of the plug, and the wire is maintained in position for convenient access and is prevented from becoming tangled and drawn downwardly into the ground with the plug, or, to be more correct, the upper free end of the wire is maintained above the ground and in readiness for connection with a line-wire.

While the plug has been shown in the draw-

ings as cylindrical in shape, it is also contemplated to make the same polygonal, and also corrugated, the stem being cylindrical or polygonal, as desired, and the opening in the driving-bar made to fit the stem.

What is claimed is—

1. The combination of an electrical grounding-plug having a wire connected thereto, and a driving-bar therefor, having an open-ended bore for the reception of the wire, the upper end of the latter being projected outwardly through the upper end of the bore.

2. The combination of an electrical grounding-plug having a wire connected thereto, and a driving-bar therefor, having a longitudinal bore which opens at the lower end of the bar for the reception of the wire, the upper end of the bore terminating in a conical socket in the head of the bar, the latter being provided with a lateral opening communicating with the apex of the conical socket, with the free end of the wire projected outwardly through the opening.

3. The combination with an electrical grounding-plug, having a reduced upstanding stem forming a marginal shoulder at the base thereof, and a wire connected to the stem, of a tubular driving-bar, having a solid upper driving-head, the lower end of the bar being open for the reception of the stem of the plug, the marginal shoulder of the latter forming a seat for the lower end of the bar, the inner end of the tubular portion of the bar terminating in a conical socket in the head of the bar, and there being a laterally and upwardly inclined opening formed through the head and in communication with the apex of the conical socket, the wire lying within the bar and projected outwardly through the lateral opening thereof.

4. A driving-bar for sinking electrical grounding-plugs, having an upper driving-head, and provided with a longitudinal bore opening outwardly through the lower end of the bar and terminating at its inner end in a conical socket in the inner end of the head, there being a laterally-inclined and upwardly-directed opening extending from the apex of the conical socket outwardly through the adjacent side of the driving-head.

5. The combination with an electrical grounding-plug, having a wire, of a driving-bar therefor, having a receptacle for the reception of the wire during the driving of the plug.

6. The combination with an electrical grounding-plug, having a wire, of a driving-bar therefor, having a receptacle for the reception of the wire during the driving of the plug, and means for maintaining the free end of the wire above the surface of the ground during the driving of the plug and the withdrawing of the driver.

7. A driving device for electrical grounding-plugs, which have wires connected thereto, consisting of a bar constructed for engagement with a plug, and provided with a receptacle for the reception of the wire, and means for maintaining the free end of the wire above the surface of the ground during the driving of the plug and the withdrawing of the bar.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILBER E. FISHER.

Witnesses:
BRUCE DREISBACH,
GUY JACOBY.