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Patented Dec. 9, 1902.

H. ETHERIDGE.

PRESERVING WOOD OR IRON POLES AND TIMBERS.

(Application filed Aug. 14, 1902.)

(No Model.)

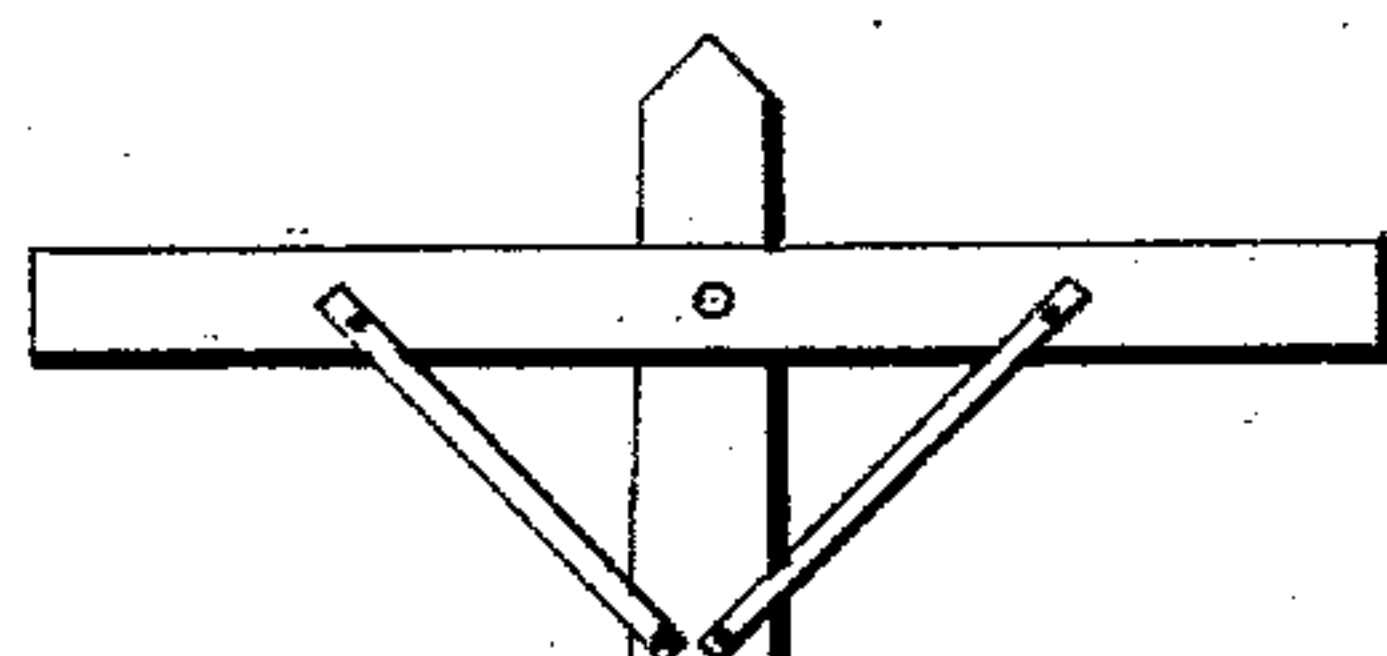


FIG. II.

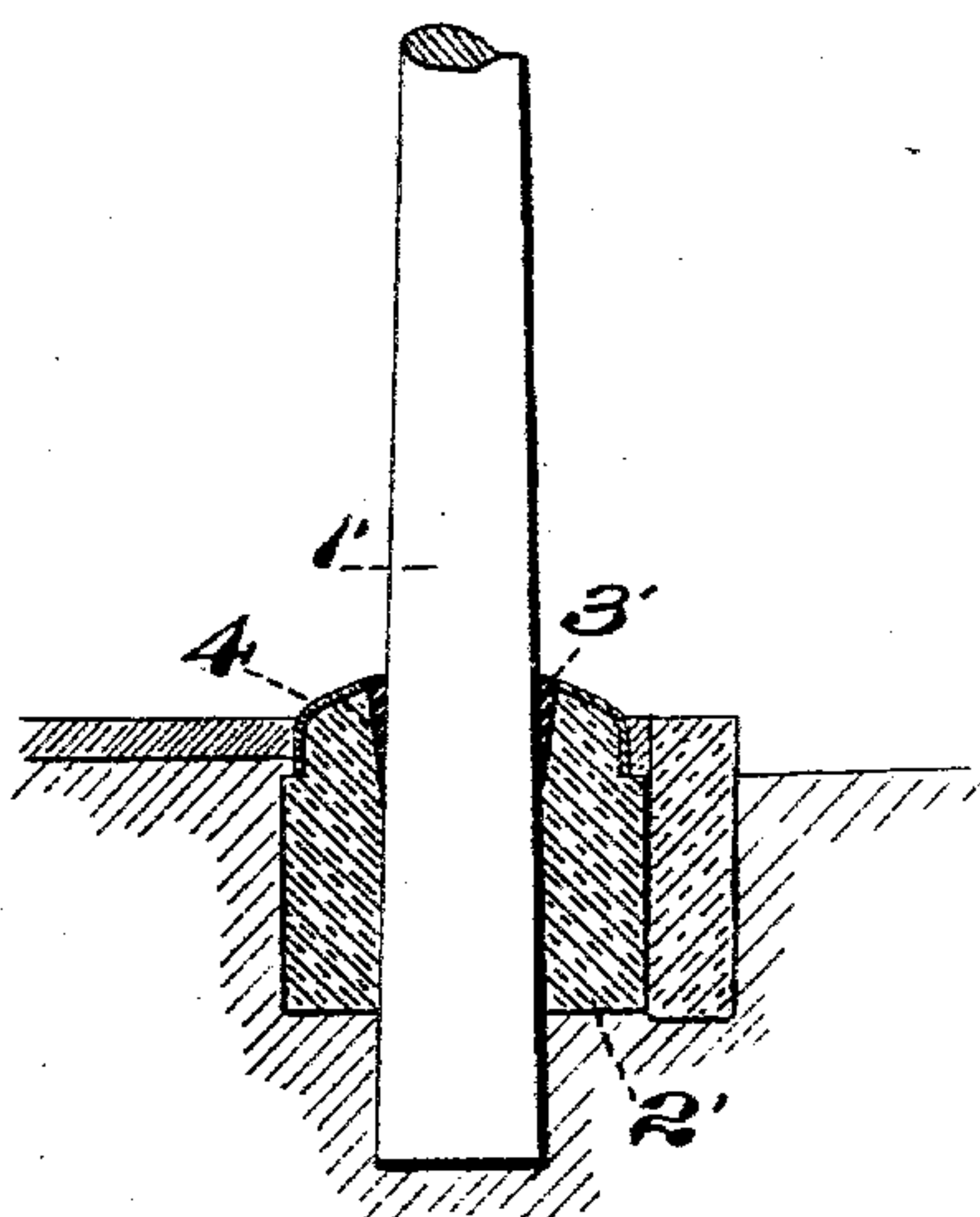


FIG. III.

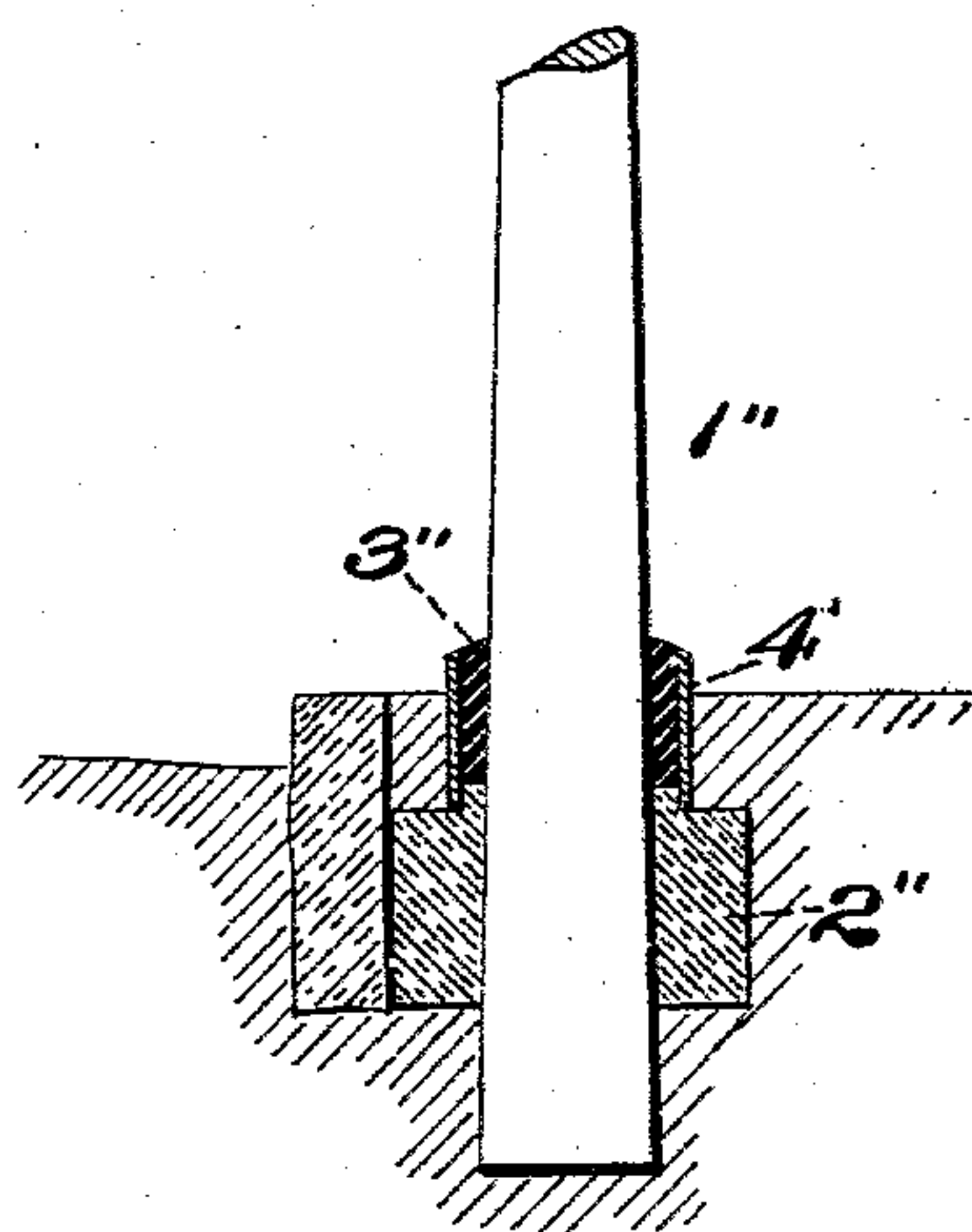


FIG. I.

WITNESSES:

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PRESERVING WOOD OR IRON POLES AND TIMBERS.

SPECIFICATION forming part of Letters Patent No. 715,362, dated December 9, 1902.

Application filed August 14, 1902. Serial No. 119,585. (No model)

To all whom it may concern:

Be it known that I, HARRY ETHERIDGE, a citizen of the United States, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Preserving Wood or Iron Poles and Timber, of which improvement the following is a specification.

In wooden poles employed to support the conducting-wires of telephone, telegraph, electric light and power systems, and also timbers that are placed in and extend above the surface of the earth I have noticed that a rapid decay takes place in the pole or timber at the ground-line or aforesaid surface of the earth. In cases of metal and metal poles or supports this moisture is manifested in the oxidation of the metal at the ground-line, which, like that of the wooden poles, soon renders them unfit for service. This decay and oxidation is due to the presence of and alternate changes in the moisture of the pole and earth, particularly at the aforesaid ground-line.

The object of my invention therefore is to provide a means to prevent this decay, and thereby prolong life and usefulness for an indefinite period.

In the accompanying drawings I have as an example illustrated the application of my improvements and variations thereof in connection with aforesaid poles, in which drawings—

Figure I is a vertical view of a pole, showing the setting, filling, and earth thereat in section. Fig. II is a similar view of the lower portion of a pole, showing a modified form of setting and filling. Fig. III is also a vertical view of a portion of a pole, showing a modified form of setting and filling.

In the practice of my invention after the opening or hole has been formed in the earth to receive the pole 1 I as a matter of preference apply a layer of concrete 2 to the bottom of said opening. The pole is then lowered into said opening, and the concrete setting 2 formed thereabout in said opening to a point some distance above the actual earth-level, tapering from about said level upward, so as to form a support for the moisture-proof filling 3. While this concrete setting is still in its plastic condition an annular

space is formed in said setting about the pole to receive the filling 3, of pitch or pitch and sand or gravel or other suitable non-absorbing or moisture-repelling material the surface of which is given a slight inclination, so as to shed any water that may come in contact with the pole or filling—such, for instance, as in storms, street-washing, &c. Before the filling 3 is placed a coating of moisture-repelling substance, such as tar or its equivalent, is first placed upon the pole and the surface of the annular opening of the setting, so as to unite or form a perfect bond with them and the moisture-repelling filling. The filling 3 when applied penetrates and adheres to the pole and forms a natural fillet at the junction thereof with said pole, as well as uniting with the concrete setting, and as said concrete setting and moisture-repelling filling extends above the actual earth-level it is evident that the moisture in the earth can neither be communicated to the pole nor can water reside on the surface of the moisture-repelling filling. These two conditions effectually prevent, first, the absorption of moisture from the earth by the pole, and, secondly, the consequent alternate wet and dry condition of the pole at the ground-line, and the pole being thus protected is therefore preserved against decay.

If desired, the setting of concrete at the bottom of the opening in the earth may be dispensed with and the earth filled into about line X X, Fig. I. This will reduce the cost of the concrete setting of the pole, and will accomplish the purpose just as successfully as though the pole-base was set wholly in concrete, as I have noticed the base of the pole does not decay as rapidly in the ground as it does at the ground-line.

The construction of the setting may be varied in several ways—as, for instance, Fig. II, pole 1' is provided with an iron base 4, concrete setting 2', and moisture-repelling substance 3'. The application of the iron base 4 will permit a more attractive finish than can be made with cement and would be preferable in brick or asphaltum paving and at the same time protect the setting from injury. This same idea is carried out in Fig. III, except that the iron cap 4' is cylindrical in its form, and instead of the moisture-repelling

substance 2" assuming a tapered form it will be observed that the inside moisture-repelling filling 3" occupies the whole of the space between the outside diameter of the pole 1" and inside diameter of the iron casing.

In preparing the moisture-proof filling I prefer to first thoroughly mix the sand or gravel with hot pitch in the form of a thick paste, then tamp the same into the annular recess, and then fill up with hot pitch, so as to thoroughly fill this annular recess and also to form a smooth surface for the water to run off.

It is evident that other variations in the structure of the base, to extend above and below the actual earth surface line, capable of repelling moisture may be made and materials other than those specified employed in its structure without departing from the spirit of my invention.

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

1. The combination with a pole, or support, of a surrounding preserving-base, and a filling of non-porous or moisture-proof material between the pole and said preserving-base.

2. The combination with a pole or support, of a surrounding preserving-setting at the base thereof extending above and below the earth surface, and a non-porous moisture-proof material uniting said setting with said pole at the exposed surface, adapted to repel and prevent the accumulation of moisture

thereat and thereby preserve said base against decay.

3. The combination with a pole or support, of a surrounding preserving-base extending above and below the earth surface, and a fillet of moisture-proof material at the juncture of the exposed surface of said base and pole uniting one to the other, adapted to prevent the accumulation of moisture thereat and preserve said pole-base against decay.

4. The combination with a pole or support, of a surrounding preserving-base extending above and below the earth surface, an annular groove formed therein at its exposed surface around the pole, and a filling in said groove uniting the pole with the base, adapted to prevent the accumulation of moisture thereat and preserve the pole-base against decay.

5. The combination with a pole or support, of a surrounding preserving-base extending above ground at an inclination to said pole, and a fillet of moisture-proof material uniting said pole with said base at said exposed surface.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HARRY ETHERIDGE.

In presence of—

ARTHUR R. MAY,
EDGAR S. MAY.