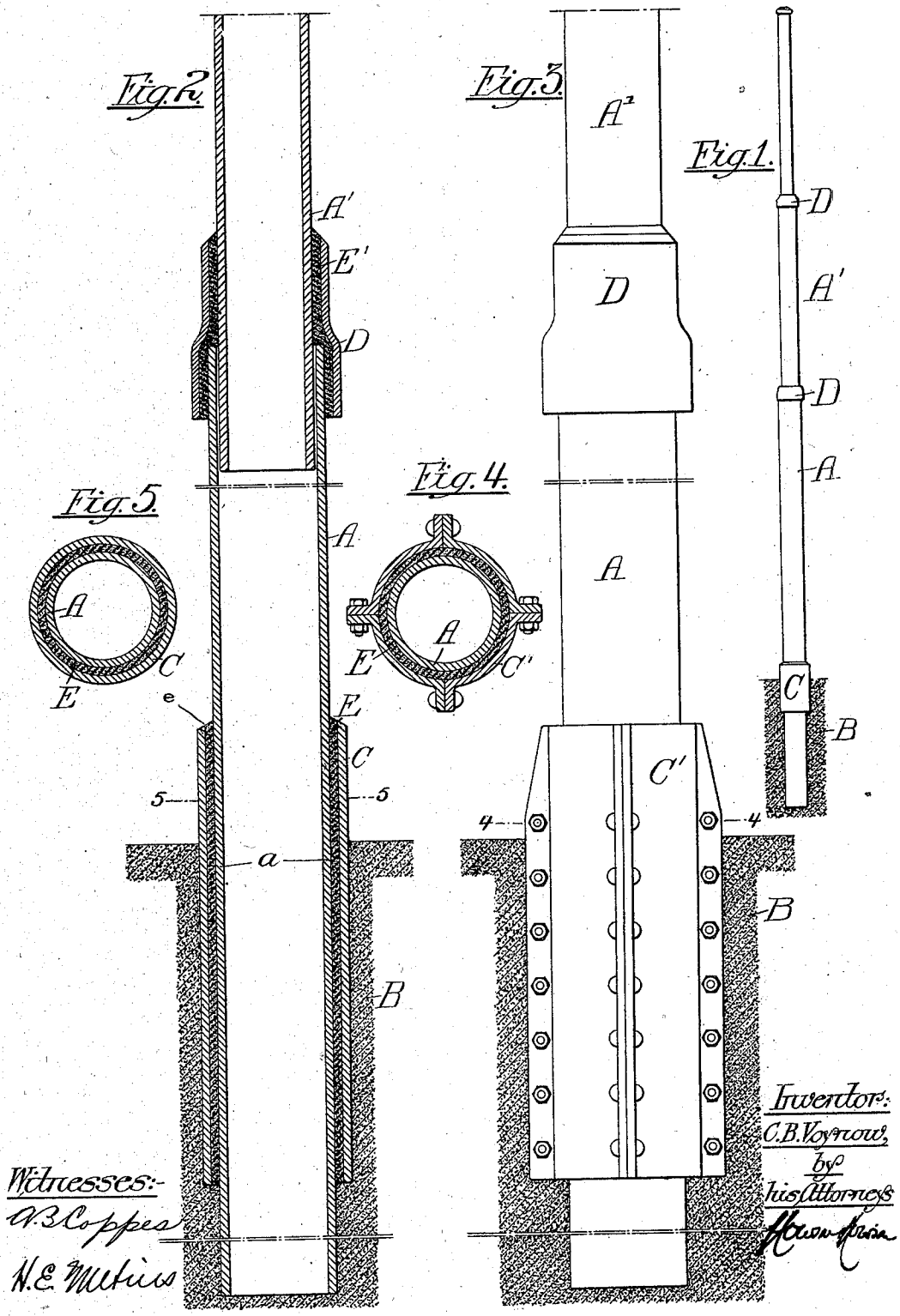
No. 723,085. PATENTED MAR. 17, 1903.

C. B. VOYNOW.

POLE OR POST.

APPLICATION FILED SEPT. 25, 1902.

NO MODEL.



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UNITED STATES PATENT OFFICE.

CONSTANTINE B. VOYNOW, OF PHILADELPHIA, PENNSYLVANIA.

POLE OR POST.

SPECIFICATION forming part of Letters Patent No. 723,085, dated March 17, 1903.

Application filed September 25, 1902. Serial No. 124,773. (No model.)

To all whom it may concern:

Be it known that I, CONSTANTINE B. VOYNOW, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Poles or Posts, of which the following is a specification.

My invention consists of an improved form of pole, the object of the same being to provide an improved construction by which certain portions of a pole may be reinforced or strengthened either at the time of manufacture of the pole or after it has been in use for a more or less prolonged period of time. This object I attain as hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of a metallic trolley or electric-light pole constructed according to my invention. Fig. 2 is a sectional elevation, somewhat enlarged, of a portion of the pole illustrated in Fig. 1. Fig. 3 is a side elevation of a portion of a pole similar to that shown in Fig. 2, except that the reinforcing or protecting ring shown in said figure has been replaced by a construction composed of rolled sections. Fig. 4 is a sectional plan view of the pole shown in Fig. 3, taken on the line 4 4; and Fig. 5 is a sectional plan view of the pole illustrated in Fig. 2, the same being taken on the line 5 5.

In the above drawings, A A′ represent two telescoping sections of a metallic trolley or wire carrying pole of the well-known construction, this being shown in the drawings as under operative conditions. It has been found in practice that poles of this construction are apt to be weakest and after prolonged use to fail at several localized points—viz., at or near the ground-level and at the point or points at which the sections are joined to one another. By my invention I propose to materially increase the strength of these parts of the pole, as well as to protect the same, by means of a loosely-fitting metallic sleeve of such dimensions that it shall extend on both sides of the point at which failure is likely to occur or at which it is desired to strengthen the pole. After slipping this pole in position I fill the space between it and the body of the pole with some liquid or molten material which naturally will have a fusing-point below that of the material composing the pole and the sleeve. For this purpose I preferably use sulfur or zinc, although it will be understood that other substances might be equally well adapted for the purpose—such as type-metal, liquid or semiliquid cement, or, in fact, any material which could be conveniently introduced into the space between the sleeve and the pole and which would afterward harden.

When employing zinc, sulfur, or similar materials, I have found that in order to secure the best results it is advisable to heat the sleeve C before introducing the molten metal between it and the pole, so that as said sleeve cools the material is forced by its shrinkage into every irregularity of the surface, both of the sleeve and the pole, thereby making a tight and weather-proof filling, as shown at E.

If it is desired to apply the invention to a pole at the point of junction of two of its sections, the sleeve may be either cylindrical, as shown at C, or of the form shown at D, it being, however, elongated to a greater extent than the ordinary well-known forms of sleeve hitherto used and provided with filling material E′, as indicated in Fig. 2 and as described above.

If for any reason it should not be possible or practical to use a continuous sleeve of the form shown in Figs. 1, 2, and 5, I may without departing from the main feature of my invention employ a sleeve made in one or more sections and preferably of the construction shown in Figs. 3 and 4, where I have used a combination of rolled pieces, which together are known as a "Phoenix" section, these being riveted together in pairs and the pairs connected, as shown, by bolts. It will be understood that the said section C′, like the sleeve C, fits the body of the pole A loosely, and after it has been bolted or riveted in position I fill the space between it and the pole with liquid material of the nature indicated above. If desired, the top edge of any of these sleeves may be beveled, as shown at *e* in Fig. 2, and the filling material E or E′ is similarly beveled in continuation of the bevel of the sleeve, or the sleeve may be cut at an angle to its axis, so as to allow any water to run off. It will be understood that my invention is not confined to the application of sleeves to poles at the time of their manu-

facture, since they may be with great advantage applied to a pole after it has been set in position and is in use. It has been found that after a lapse of a short period of time metallic poles are almost invariably seriously corroded or rusted at points coincident with or adjacent to the ground-level (indicated by the letter *a*) and also at the point of junction of two sections, with the result that sooner or later the pole will fail at one of the above points, owing to the diminished cross-section and the strain caused by the wire or apparatus carried thereby. It will therefore be seen that my invention is particularly applicable to poles which would ordinarily be nearly worthless and which would require removal, owing to their unsafe condition.

If desired, I may clean the outside surface of the pole at the point to be covered by the sleeve and also the inside surface of said sleeve previous to the introduction of the liquid or molten material, employing for this purpose a sand-blast, emery-wheel, or other well-known method. Another use to which it will be seen that my invention may be advantageously applied is in the prolongation of the life of metallic or, in fact, wooden piles, which almost invariably become corroded or rotted at that portion of their surface which is alternately exposed to the action of air and water.

It is of course immaterial whether the sleeve C is of cast or sheet metal, and it would be preferable when applying the invention to wooden piles to employ a filling material having a relatively low fusing-point.

I claim as my invention—

1. A pole having a loose sleeve around a portion thereof, said sleeve consisting of a piece independent of the pole structure and having the space between itself and the pole filled with a fusible material, substantially as described.

2. A pole having a loose sleeve around a portion thereof, said sleeve being independent of the pole structure and having the space between itself and the pole filled with a material in a molten state, the fusing-point of said material being lower than that of either the pole or the sleeve, substantiallly as described.

3. A pole having a loose sleeve around a portion thereof, the space between said sleeve and the pole being filled with a fusible material, said sleeve being of a temperature such that it exerts pressure upon said material after the same has been inserted in said space and has been permitted to attain its normal temperature, substantially as described.

4. The combination of a pole having a loose sleeve around a portion thereof and having the space between said sleeve and the pole filled with a fusible material, the sleeve being made in a plurality of sections and having means whereby said sections are detachably held together, substantially as described.

5. The combination of a pole consisting of sections of different diameters, a loose sleeve having two sections also of different diameters and fitting over said pole at the point of junction of two of said sections, with fusible material filling the space between the pole and said sleeve, substantially as described.

6. The combination of a pole made in a plurality of sections, a sleeve loosely fitting said pole made in two sections of different diameters and constructed to surround the pole at the point of junction of two of its sections and a fusible material filling the space between said sleeve and the pole, said material bearing upon the end of one of the pole-sections and thereby retaining itself and the sleeve in position, substantially as described.

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

CONSTANTINE B. VOYNOW.

Witnesses:

WILLIAM E. BRADLEY,

JOS. H. KLEIN.