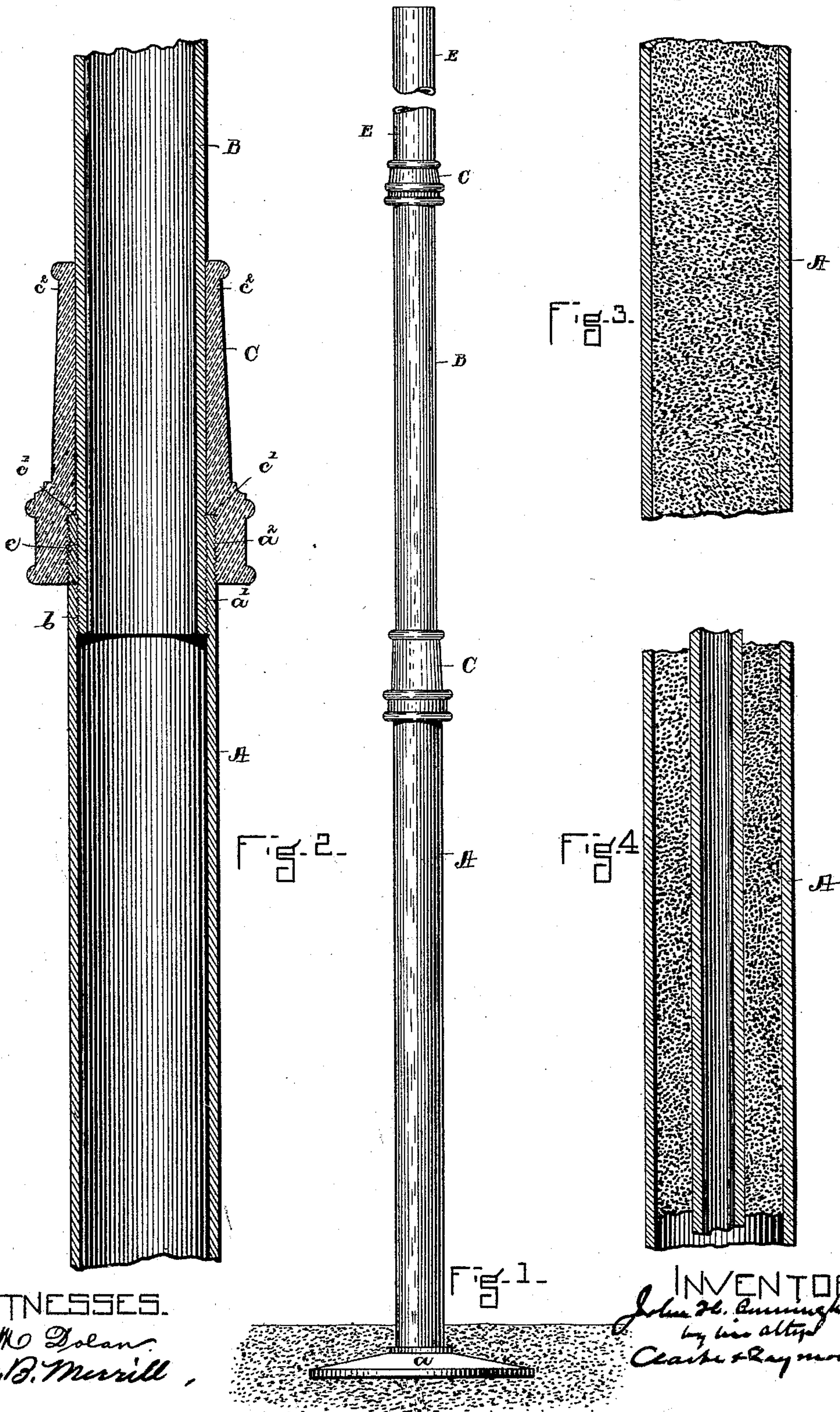


(No Model.)

J. H. CUNNINGHAM.
SECTIONAL METAL POLE.

No. 408,379.

Patented Aug. 6, 1889.



WITNESSES.

J. H. Dolan
A. B. Merrill

UNITED STATES PATENT OFFICE.

JOHN H. CUNNINGHAM, OF CHELSEA, MASSACHUSETTS.

SECTIONAL METAL POLE.

SPECIFICATION forming part of Letters Patent No. 408,379, dated August 6, 1889.

Application filed March 23, 1889. Serial No. 304,489. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CUNNINGHAM, of Chelsea, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Sectional Metal Poles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

It is desirable that hollow metal poles shall be built in sections, and that the various sections be united in a manner to economize the use of metal and insure proper strength at the joints; and my invention is designed to produce these results, as well as certain other improvements, which will hereinafter be indicated.

In the drawings, Figure 1 is a view in elevation of the pole; Fig. 2, a view in vertical section, enlarged, of the joint between two sections; and Figs. 3 and 4 represent modified forms, to which reference is hereinafter made.

The hollow sections of the pole may be of cast or wrought iron, or both. In practicing the invention I employ as a base-piece the section A, which has a broad base a , by which it is suitably anchored in the ground, or which is adapted to be secured in place in any other manner. I form at the upper end of this section an interior screw-thread a' and an exterior screw-thread a^2 , and I then screw into the end of the pipe the next section B, which has formed upon its lower end the exterior screw-thread b , which fits the interior screw-thread a' , and I screw upon the exterior thread a^2 of the pipe the coupling-sleeve C. This sleeve has a screw-thread c to fit the said exterior thread a^2 , and a shoulder c' , adapted to rest or come in contact with the upper end of the section A, and a comparatively long sleeve c^2 of a bore to receive the section B. The sections B and E of the pole are similarly constructed and united. In some instances, to obtain a tight fit between the section c^2 of the sleeve and the end of the section which it receives, molten lead or other similar metal may be poured into the space between the two, although gen-

erally it is intended that the sleeve shall not have what would be termed a very "loose fit." If desired, the pole may be stiffened by being filled with sand, cement, or other material, or the sections of the pipe applied either during the manufacture of the pipe or tube or subsequently, (see Fig. 4;) or there may be used a smaller pipe or rod in the center of the post and the cavity or space about it, or between the pipe or rod and the outer pipe may be filled with cement, sand, or other substance tending to stiffen the post. (See Fig. 4.)

In the manufacture of the post it is preferable that the sleeve C be first screwed upon the end of the section to which it is secured, and that the next section be then slipped through the sleeve and screwed into the end of the piece with which it is united. This construction provides a post which is strong and stiff and will not sag, sway, or break at the joint when under strain.

Of course the unthreaded portion of the coupling, which I have termed the "sleeve," must be of considerable extent, in order to brace and properly support the base of the next section in order, and to prevent the pipe from breaking off at the upper end of the screw-thread, the object of the sleeve being to extend the supporting-points of the lower section of the pipe considerably above the upper end of the threaded portion of the upper or next section in order.

It is preferable that the sleeve C be made quite thick, and it can be formed by casting.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. As an improved article of manufacture, a hollow metal pole made of two or more sections, which are united by screwing one into the other and by a coupling screwed upon the end of one and provided with a long sleeve to embrace or receive the end of the other, substantially as described.

2. The combination of the pipe or tube, having at its upper end an interior thread a' and an exterior a^2 , with the pipe or tube B, having the exterior thread b to fit the interior thread of the section A, the sleeve C, having the interior thread c to fit the exterior thread

a^2 of the section A, and the long section c^2 of a size to receive and sustain the lower part of the said section B, substantially as described.

- 5 3. As an improved article of manufacture, a metal pole made of two or more sections, which are united by screwing one into the other and by a coupling screwed upon the end of one and provided with a long sleeve to em-

brace or receive the end of the other, and the cavity of which sections is packed or filled with a substance of a stiffening character, substantially as described.

JOHN H. CUNNINGHAM.

In presence of—

F. F. RAYMOND, 2d,

J. M. DOLAN.