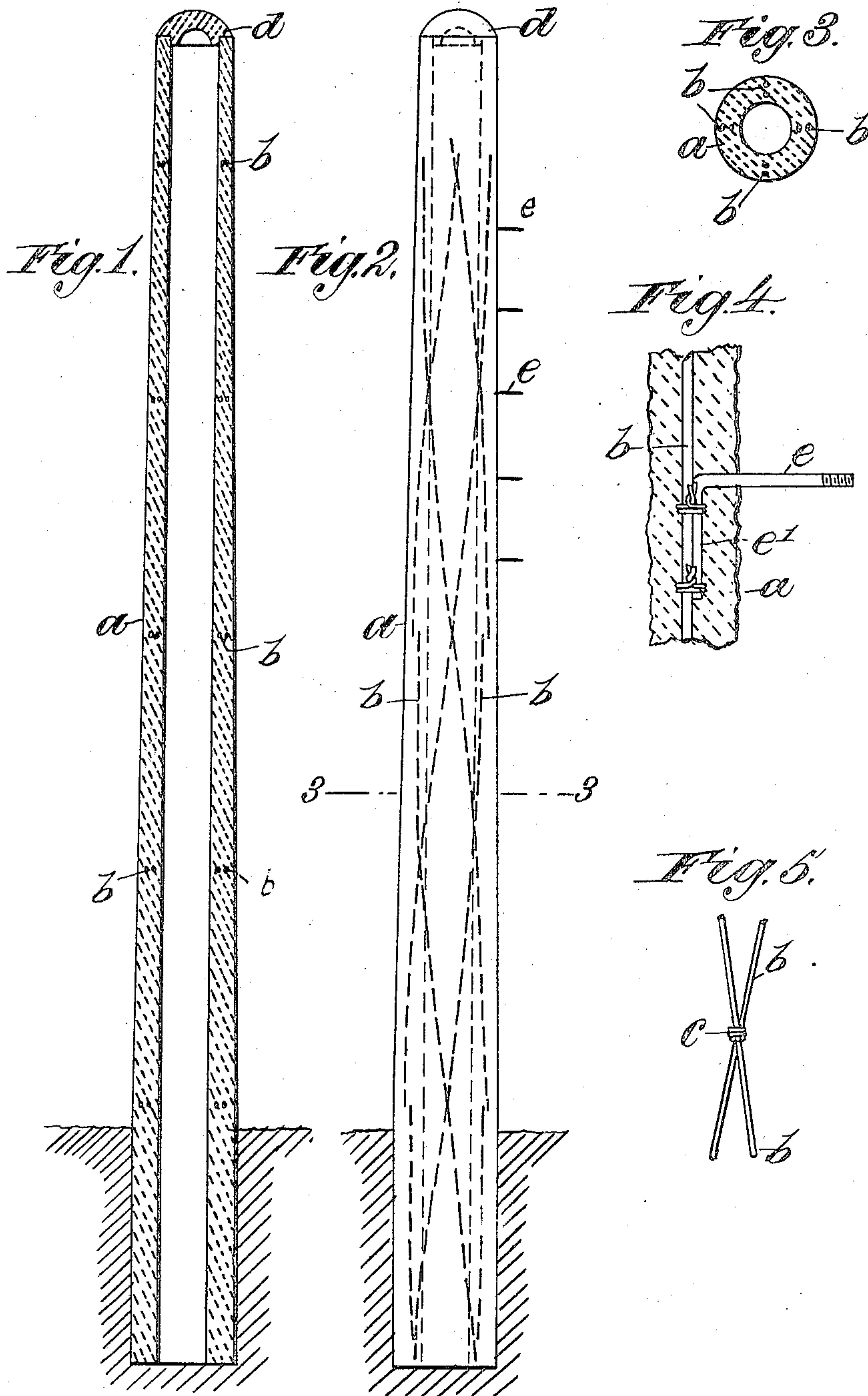


No. 822,499.

PATENTED JUNE 5, 1906.

J. F. ANCONA.
CONCRETE STRUCTURE.
APPLICATION FILED NOV. 28, 1905.



Witnesses:
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UNITED STATES PATENT OFFICE.

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CONCRETE STRUCTURE.

No. 822,499.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed November 28, 1905. Serial No. 289,454.

To all whom it may concern:

Be it known that I, JOHN F. ANCONA, a citizen of the United States, residing at Proctor, in the county of Rutland and State of Vermont, have invented or discovered certain new and useful Improvements in Concrete Structures, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has for its object to provide hollow or molded cement structures adapted for use as telegraph, telephone, or electric-light poles or for fence-posts, sewer-pipes, conduits, or columns, and which is of such construction that with comparatively thin walls the structure will have relatively great strength and tenacity.

To this end the structure comprises a hollow body or column formed of concrete, 20 molded cement, or other suitable plastic material which hardens in drying and in which is embedded a series of reinforcing or strengthening wires or rods, preferably of steel, having a right and left spiral arrangement or disposition in the concrete or molded walls in such a manner as to cross each other at intervals, the said wires or rods being preferably tied together at their points of intersection or crossing.

30 In the accompanying drawings, Figure 1 is a vertical section of a pole or column embodying the present invention. Fig. 2 is an elevation of the same; and Fig. 3 is a horizontal section of the same on line 3 3, Fig. 2. Fig. 4 is a detail view showing the preferred method of mounting cross arms or brackets which may be utilized either as steps for climbing the pole or column or which will afford means for attachment of the usual insulators on which electric conducting-wires are supported. Fig. 5 is a detail view showing a manner in which the crossing wires may be tied together at a point of intersection.

45 Referring to the drawings, *a* denotes a hollow and preferably somewhat upwardly-tapering body or column formed of concrete, molded cement, or other suitable hardened plastic material in which are embedded reinforcing wires or rods *b*, having a right and left spiral arrangement about the walls in

which they are embedded in such a manner as to cross each other at intervals, where they are preferably tied together, as at *c*. The hollow body or column is preferably provided with a cap *d*, which may be attached in any 55 suitable manner, as by cementing or otherwise. The columns when intended for use as electric-light, telephone, or telegraph poles will preferably be provided with a series of outwardly-projecting arms or brackets consisting of right-angular rods *e*, the inner vertical portions *e'* of which are preferably wired or otherwise suitably attached to the reinforcing-rods *b*, embedded in the concrete structures. 60

It will be understood that any desired number of the spirally-disposed reinforcing-rods *b*, embedded in the plastic material, may be employed. In the circular column herein illustrated a series of eight of such rods are 65 shown in the cross-section, Fig. 3; but any desired greater or lesser number may be employed, according to the strength and tenacity which it may be desired to give to the concrete structure. 70

In the practical embodiment of the invention for use as poles or columns the circular form, as shown in the drawings, will be preferred, although for some purposes rectangular, octagonal, or other cross-sectional 75 forms of the structures may be provided.

The outwardly-projecting arms or brackets *e* will serve as steps to be used in climbing the pole or column, or they may be utilized by providing a suitable number of the same at 80 or near the top of the pole or column as supports for wires, in which case they may be provided with common glass insulators.

If the structure be employed as a fence-post, the brackets may be modified, so as to 85 be of suitable form for supporting rails or wires.

Having thus described my invention, I claim and desire to secure by Letters Patent— 90

1. A hollow column or structure consisting of hardened concrete or other suitable plastic material having embedded therein right and left hand spirally-disposed reinforcing rods or wires intersecting or crossing each other at 100

intervals, combined with outwardly-projecting brackets the inner ends of which are embedded in the hardened plastic material.

2. A hollow column or structure consisting
5 of hardened concrete or other suitable plastic material having embedded therein right and left hand spirally-disposed reinforcing rods or wires intersecting or crossing each other at intervals, combined with outwardly-project-

ing brackets the inner ends of which are embedded in the hardened plastic material and tied to the reinforcing rods or wires.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. ANCONA.

Witnesses:

LATHROP H. BALDWIN,
REDFIELD PROCTOR, Jr.