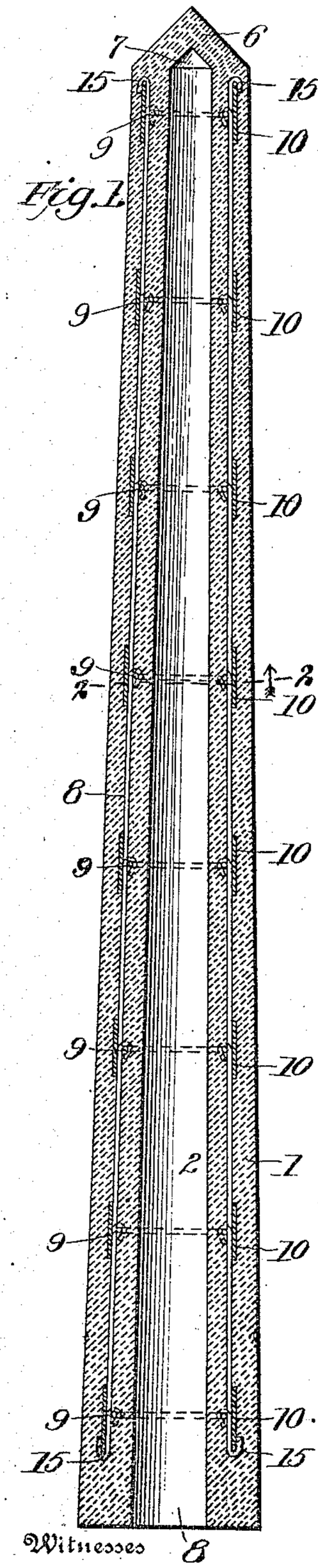
No. 870,858. PATENTED NOV. 12, 1907.

F. H. TIDNAM.

TELEGRAPH POLE.

APPLICATION FILED JULY 9, 1907.

Fig. 1.



Witnesses

C. H. Walker.

J. T. Walker.

Fig. 3.

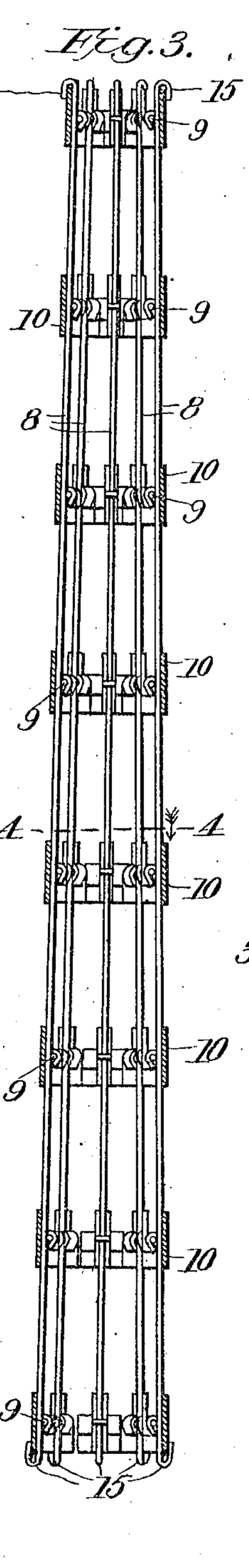


Fig. 2.

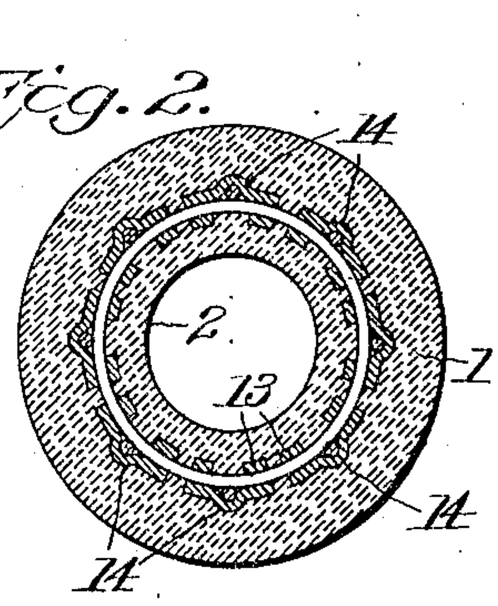


Fig. 4.

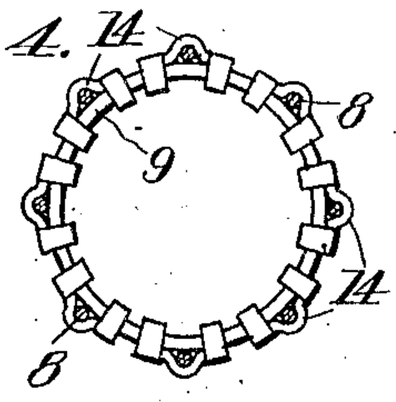


Fig. 7.

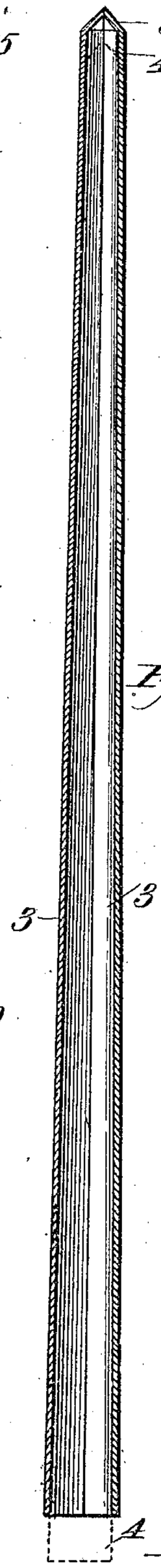


Fig. 8.

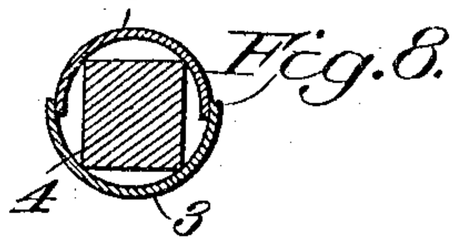


Fig. 5.

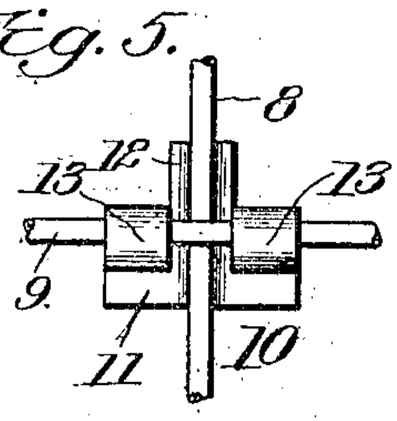
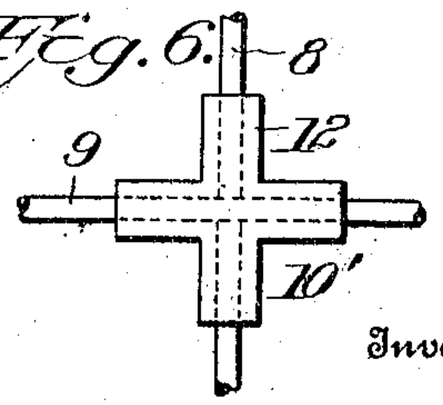


Fig. 6.



Inventor

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UNITED STATES PATENT OFFICE.

FREDERICK H. TIDNAM, OF OKLAHOMA, OKLAHOMA TERRITORY.

TELEGRAPH-POLE.

No. 870,858. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed July 9, 1907. Serial No. 382,867.

To all whom it may concern:

Be it known that I, FREDERICK H. TIDNAM, a citizen of the United States, residing at Oklahoma city, in the county of Oklahoma and Territory of Oklahoma, have invented certain new and useful Improvements in Telegraph-Poles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an improvement in telegraph poles, and particularly to a cement pole or post.

The object of the invention is the construction of a pole or post, having a cement body, and said body reinforced and strengthened by a peculiarly-constructed, metallic framework.

Another object of the invention is the construction of a composite or compound pole, comprising, preferably, a hollow, cement body, reinforced by a peculiarly-constructed, metallic framework or "cage".

With these and other objects in view, the invention consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings: Figure 1 is a vertical, central, sectional view of a pole constructed in accordance with the present invention. Fig. 2 is a horizontal, sectional view taken on line 2, 2, Fig. 1, looking in the direction of the arrow. Fig. 3 is a vertical, central, sectional view of the metallic framework or "cage", which is embedded in the cement of a finished post. Fig. 4 is a horizontal, sectional view taken on line 4, 4, Fig. 3, looking in the direction of the arrow. Fig. 5 is an enlarged view of one of the clamps of the framework, which secures a single longitudinally-extending wire or rod and a horizontal wire or rod together. Fig. 6 is another embodiment of the present invention, showing a two-way clamp for fastening two crossing wires or rods together. Fig. 7 is a vertical, sectional view of the core employed in the construction of a finished pole. Fig. 8 is a transverse, sectional view of the core, showing the wedge therein for holding the sections in an expanded position.

Referring to the drawings by numerals, 1 designates the body of the plastic or cement pole or post, which is formed by placing the material in a green state in any suitable mold or receptacle. Prior to the placing of the cement or plastic material in the mold or receptacle, I, preferably, place the sectional core shown in Figs. 7 and 8 therein, for producing a hollow center 2 in the finished post.

The core comprises semi-cylindrical tapering sections 3, 3, which sections constitute a substantially conical structure. The sections overlap at their longitudinally-extending edges, Fig. 8, and by means of a wedge or filling means 4, these sections 3 can be expanded and held in their expanded or adjusted position until the cement body 1 has become hardened. To prevent the sections 3 from being expanded too far, I, preferably, wrap an ordinary string or cord around the sections before the same is expanded for producing a desired diameter.

It is to be noted that by means of the tapering or conical structure of the core, the pole is formed with a similarly-constructed, hollow portion 2, and, furthermore, this hollow formation of the pole not only greatly reduces its weight, but the sides of the body 1 are of the same thickness throughout their length, so that the framework, Fig. 3, is surrounded at all portions with substantially the same amount of cement, whereby a very durable structure is produced. Furthermore, by means of the pointed end 5 of the sectional cover, an integral cap 6 is formed upon the body 1, which cap is conical-shaped, and of a uniform thickness. It is to be noted that the inner end of the hollow portion 2 is formed with a conical portion 7, while its opposite lower end 8 is open.

The framework or cage for the pole or post comprises longitudinally-extending wires or rods 8, and horizontal, annular wires or rods 9. In the following description, I shall refer to the wires or rods 8 as longitudinally-extending "primary members" and the annular wires or rods 9 as horizontal, annular "auxiliary members". At the crossing point of each primary member 8 and auxiliary member 9, the two members are securely fastened together, by means of a clamp 10, see particularly Fig. 5. This clamp 10 comprises a horizontal body portion 11, and a vertical, body portion 12. Integral with the horizontal body portion 11 and the vertical body portion 12, are lugs 13, which are bent, preferably, around the auxiliary member 9, constituting an annular structure. The body portion 12 of the clamp is outwardly bulged, as at 14, Figs. 2 and 4, constituting a way or groove, in which fits the primary member 8. By means of the annular lugs 13 and the grooved structure of the body portion 12, the two members are securely locked together by the clamp. Furthermore, while the clamp does not weaken the cement body of the pole, still by reason of the body portions 11 and 12 of the clamp, it will be seen that the whole structure of the pole will be strengthened, as the metallic body portion at the crossing point of each two of the primary and auxiliary members is widened or thickened. In other words, the peculiarly-constructed clamp constitutes an enlarged or broadened portion of the primary and auxiliary wires at their crossing point.

In Fig. 6, I have shown another embodiment of the present invention, comprising a two-way clamp 10′, through which extends a vertical, primary member 8, and a horizontal, auxiliary member 9. This clamp 10′ can be fixedly fastened to the members by any suitable means, and as is the case with clamp 10, the members at their crossing or junction point will be

greatly increased in strength, besides fastened together, so that the uniform shape of the framework will be retained by the clamps until the cement or plastic material hardens. It will be noted that I have provided clamping and fastening means at the crossing point of each two primary and auxiliary members, and said clamping and fastening means extending parallel with said members and greatly reinforcing the same.

The ends of the longitudinally-extending members 8 are, preferably, bent over, in the form of hooks 15, Fig. 3, against the outer edges and sides of the clamps.

By means of the hooked ends 15 of the primary members 8, all liability of the clamps moving too far outward, prior to their being fixedly secured to the wires, is obviated. Furthermore, the hooks 15 slightly increase the size of the framework contiguous to the ends of the pole, which also increases the strength of the finished article.

What I claim is:

1. A cement telegraph pole, comprising a body having a conical-shape, hollow, central portion, producing sides of the body of the same thickness throughout their lengths, said body provided with an integral, conical cap of uniform thickness, a metallic framework embedded in said body, said framework comprising a plurality of longitudinally-extending primary members, horizontal, annular, auxiliary members engaging said primary members, and clamps connecting each two primary and auxiliary members at their crossing point, said clamps comprising horizontal and vertical body portions, the vertical body portion outwardly bulged, said outwardly-bulged portion constituting a groove, the primary member positioned in said groove, and said horizontal body portion provided with annular lugs surrounding the auxilliary member.

2. A post, comprising a hollow, cement body, a metallic framework embedded in said body, said framework comprising primary longitudinally-extending members, auxiliary, annular members engaging said longitudinally-extending members intermediate their ends, and clamps positioned upon said primary and auxiliary members at their crossing point and securing said members together, each clamp extending parallel with a primary member and an auxiliary member, the clamp provided with portions extending beyond the crossing point of the two members and reinforcing the same.

3. A pole, comprising a body provided with a conical tapering, hollow, inner portion, the sides of said body of the same thickness throughout its length, said body provided with a conical cap, a metallic, reinforcing framework embedded in said body, said framework comprising longitudinally-extending wires, annular wires engaging said longitudinally-extending wires intermediate their ends, and means securing said longitudinally-extending and annular wires together at each of their junction or crossing points.

4. A composite pole or post, comprising a hollow cement body and a metallic framework embedded in the sides of said body, said framework comprising annular members and longitudinally-extending, parallel members, and connecting means at the crossing point of each annular and longitudinal member and reinforcing the same a distance beyond the crossing point, whereby the strength of the framework is greatly increased.

5. A composite post, comprising a hollow body having a reinforcing framework embedded in said body, said framework comprising a tapering cylindrical structure formed of a series of longitudinally-extending wires, and binding and spacing means for said longitudinally-extending wires comprising a plurality of annular wires and clamps.

6. A composite pole or post, comprising a plastic body and a metallic framework embedded in said body, said framework comprising longitudinally-extending members, each member having portions at its ends bent back parallel to the body of the member, and fastening means positioned between the body of the members and their parallel portions and securing said fastening means to the longitudinally-extending members.

7. A composite pole or post, comprising a plastic body and a framework embedded in said body, said framework comprising annular members and longitudinally-extending members, and means connecting said annular and longitudinally-extending members at their crossing points and reinforcing said members a distance beyond the crossing points, whereby the strength of the framework is greatly increased.

8. A composite pole or post, comprising a plastic body and a framework embedded in said body, said framework comprising vertical members, horizontal members engaging said vertical members, and clamping means positioned upon said vertical and horizontal members at their crossing points and securing said members together, each clamping means extending parallel with a vertical member and a horizontal member and provided with portions extending beyond the crossing point of said two members and reinforcing the same.

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

FREDERICK H. TIDNAM.

Witnesses:
R. A. KLEINSCHMIDT,
A. M. FEINEMAN.