E. J. NEWHALL.

TELEPHONE POLE.

APPLICATION FILED JUNE 13, 1908.

915,305.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 4.

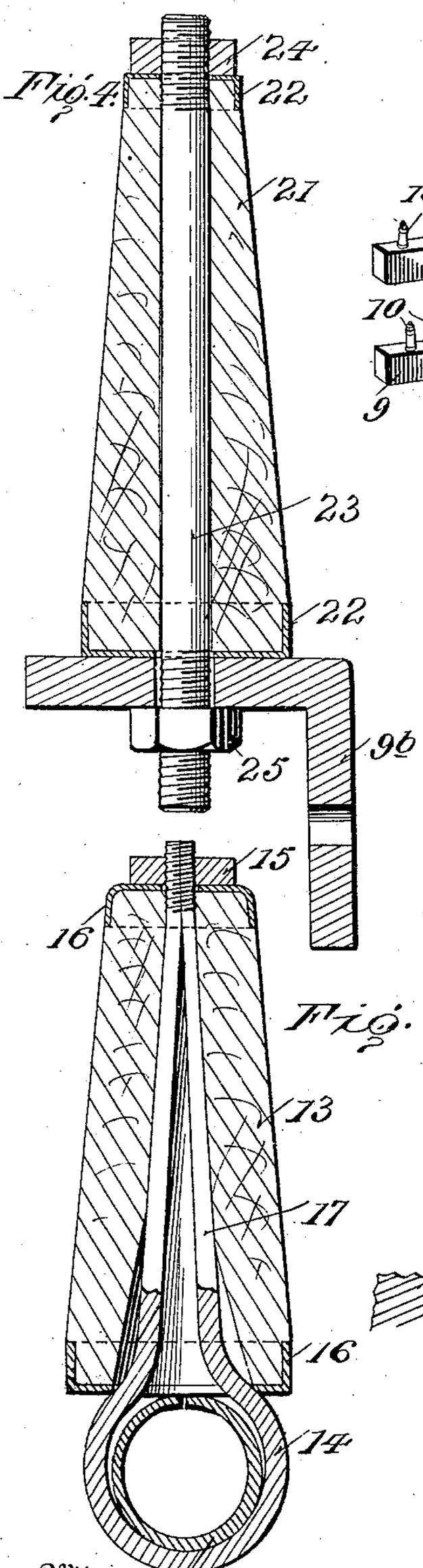

Fig. 1.

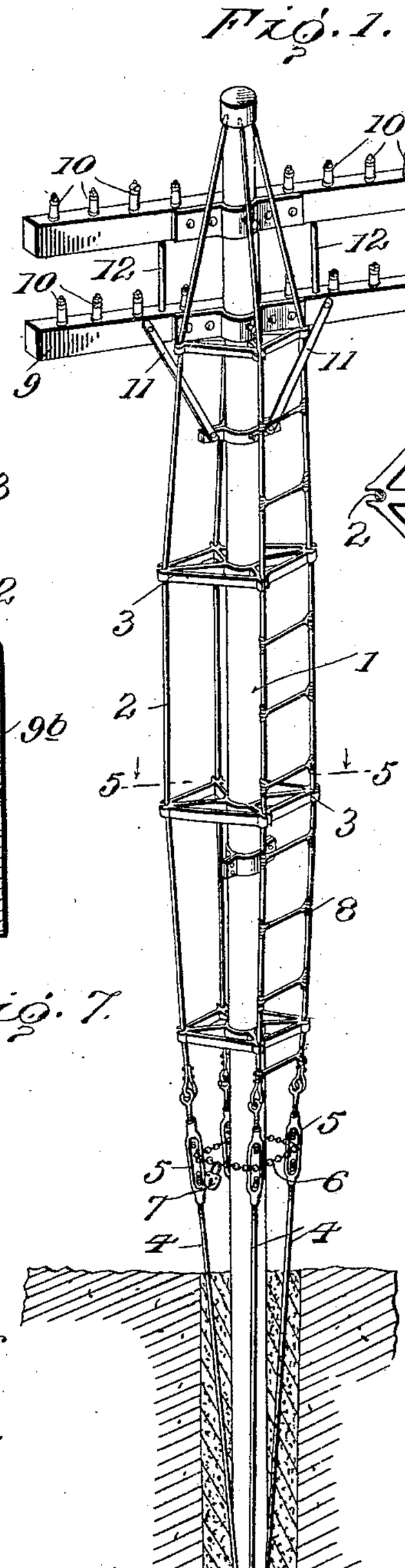

Fig. 5.

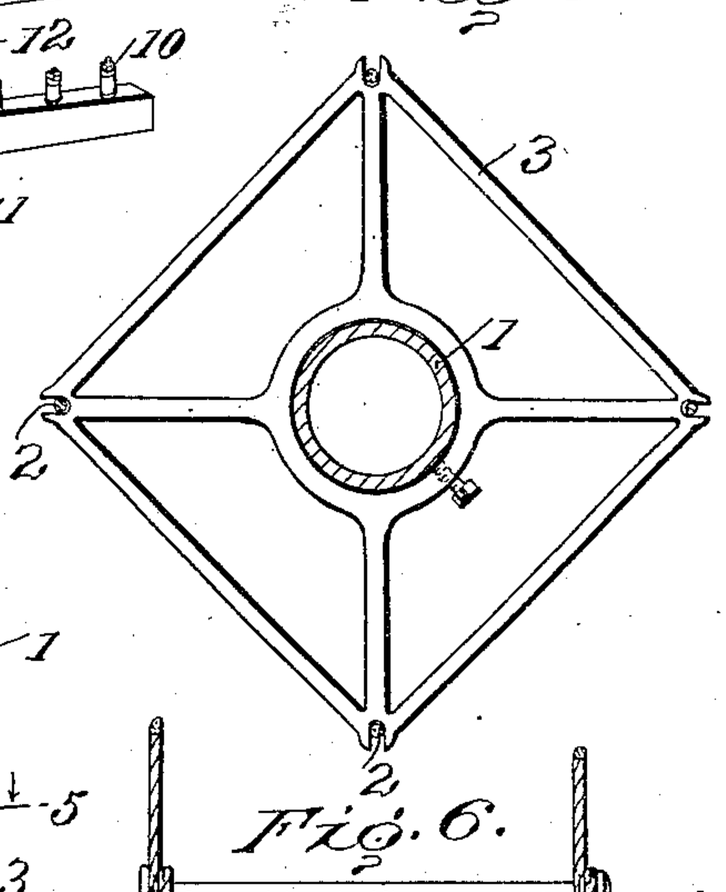

Fig. 6.

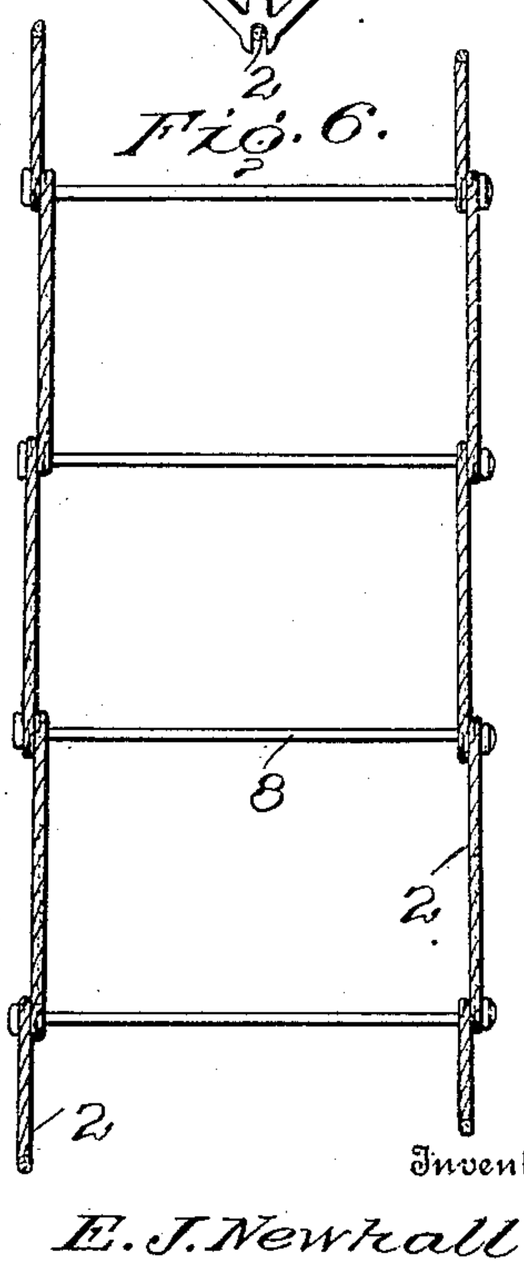

Fig. 7.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

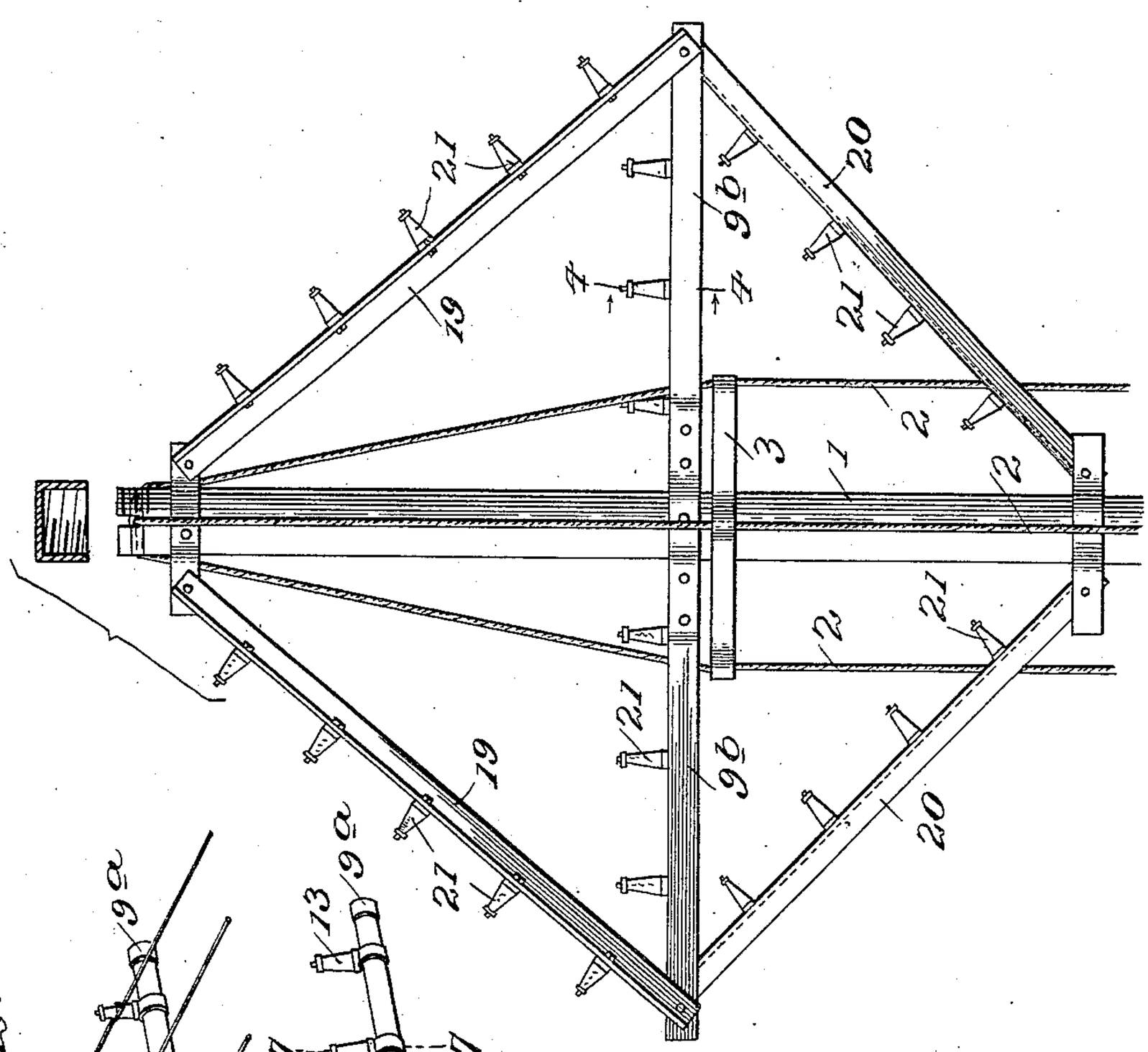
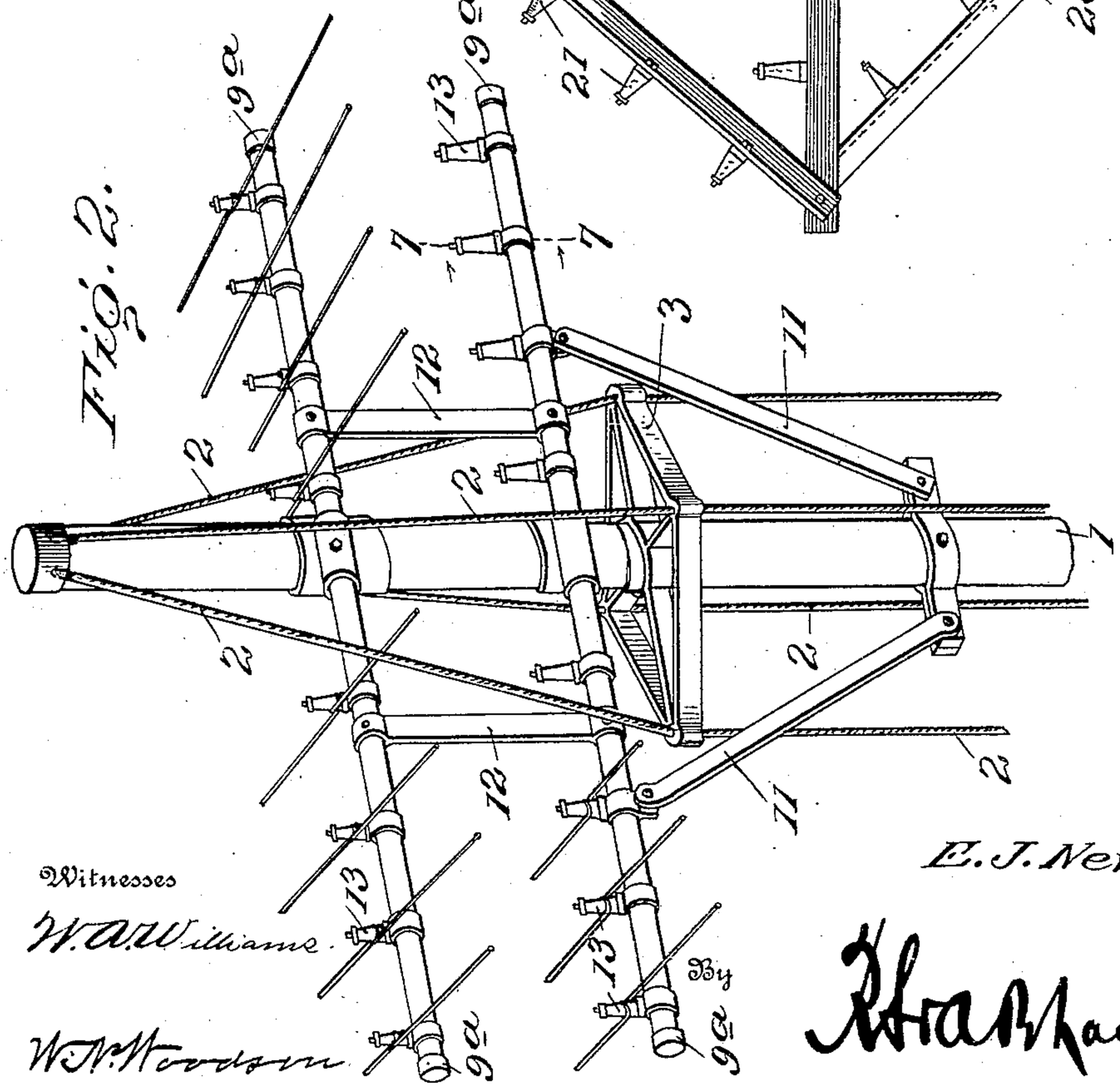


Fig. 2.



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TELEPHONE-POLE.

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To all whom it may concern:

Be it known that I, EUGENE J. NEWHALL, citizen of the United States, residing at Waupaca, in the county of Waupaca and State of Wisconsin, have invented certain new and useful Improvements in Telephone-Poles, of which the following is a specification.

The present invention provides a pole of novel construction particularly designed for stringing telephone and telegraph wires, the pole involving a light and substantial construction.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of a pole embodying the invention. Fig. 2 is a modification showing the wooden beams or arms replaced by metal tubes. Fig. 3 is a further modification, showing angle irons used for the beam or arm and braces therefor. Fig. 4 is a sectional view on the line 4—4 of Fig. 3, showing the parts on a larger scale. Fig. 5 is a horizontal section on the line 5—5 of Fig. 1. Fig. 6 is a modified form of guys composed of links which are connected by rungs forming a ladder. Fig. 7 is a cross section on the line 7—7 of Fig. 2, showing the parts on a larger scale.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The pole 1 may be of any length and consist of one piece or a number of sections coupled together in any firm and secure manner. The preferable form of pole consists of a pipe or tube and is strengthened by means of guys 2 and braces 3. The guys 2 may be cables or ropes and are generally provided in a series of four and arranged equidistant about the pole. The braces 3 consist of rectangular planes which are secured at a middle point to the pole, the corners receiving the guys in a manner to prevent slipping. The upper ends of the guys 2 are attached to the upper end of the pole and thence inclined outwardly and downwardly to the first brace. Turn buttons serve to connect the lower ends of the guys 2 to the upper ends of the stays 4, the parts of the turn buckles 5 being connected, respectively, with the parts 2 and 4. The stays 4 have connection at their lower ends with the lower end of the pole and incline upwardly and outwardly. After the guys and stays have been properly tensioned by means of the turn buckles 5, a chain 6 is passed through the frames of the turn buckles and its ends are secured by means of a lock 7. The chain 6 prevents anyone from tampering with the turn buckles and also serves as a step when mounting the ladder provided at one side of the pole. A series of rungs 8 are connected at their ends with guys 2 upon the same side of the pole and in connection therewith provide a ladder by which ascent of the pole may be readily had. Beams 9 are clamped or otherwise firmly secured to the upper portion of the pole and support pins 10 which receive the means connecting the telephone or telegraph wires thereto. Braces 11 stay the lower beam and ties 12 connect the lower beam with the beam immediately above.

In the construction shown in Fig. 2, the beams 9^a are tubular, being lengths of pipe and are clamped to the pole 1. The beams 9^a are braced and strengthened by parts 11 and 12 in substantially the same manner as the beams 9. The pins applied to the beams 9^a comprise a series of elements consisting of a wooden body 13, a support 14 and a nut 15. The wooden body 13 is reinforced at its lower end by means of a ferrule 16 or like part, and has a longitudinal opening to receive the stem 17. The support 14 consists of an eye which receives the beam 9^a and the stem 17, and is formed of a stout wire or like part doubled upon itself, the end portions of the members projecting above the body 13 of the pin being threaded to receive the nut 15, by means of which the eye portion of the support is contracted so as to firmly and securely grip the beam. The upper side of the beam 9^a is flattened at 18 to form a seat to receive the pin, thereby preventing possible turning of the pin upon the beam when subjected to strain.

In the construction shown in Fig. 3, a beam 9^b is clamped or secured to the upper portion of the pole and is of L-form in cross section. Braces 19 connect the ends of the

beam 9^b with the upper end of the pole. Other braces 20 connect the outer ends of the beam 9^b with the pole a short distance below the beam 9^b. The several braces are formed of L bars. The pins for receiving the wires are attached to the beam 9 and the braces, and each consists of a body 21 of wood or other material, said body having a longitudinal opening and being tapered in its length and reinforced at its ends by means of ferrules 22. A metal pin 23 passes through the wooden body 21 and is threaded at its ends to receive nuts 24 and 25 by means of which the pins are secured to a flange of the parts 9^b or the braces, and by means of which the parts 22 and 21 are held in place.

The pole when set up, has its lower end let into an opening formed in the ground, cement or like material being tamped into said opening and when set forming a substantial base for the pole. The guys, stays and coöperating braces stiffen and strengthen the pole and result in a light, strong and durable construction.

Having thus described the invention, what is claimed as new is:

1. In combination, a pole, braces secured to the pole at intervals in its length, guys having connection at their ends with the extremities of the pole and deflected outward away from the pole intermediate of their ends and supported by means of the said braces, turn buckles coöperating with the guys for tensioning the same, and a chain or like part passed through the frames of the turn buckles and secured and serving to prevent tampering with said turn buckles.

2. In combination, a pole, braces secured to the pole at intervals in its length, guys having connection at their ends with the extremities of the pole and deflected outward away from the pole intermediate of their ends and supported by means of the said braces, and rungs connecting guys upon the same side of the pole and providing therewith a ladder to facilitate the ascent of the pole.

3. In combination, a pole, braces secured to the pole at intervals in its length, guys having connection at their upper ends with the pole and deflected by means of the braces, stays having connection at their lower ends with said pole, turn buckles connecting the upper ends of the stays with the lower ends of the guys, and means connecting the turnbuckles in series to prevent their movement when properly adjusted.

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

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