

No. 720,025.

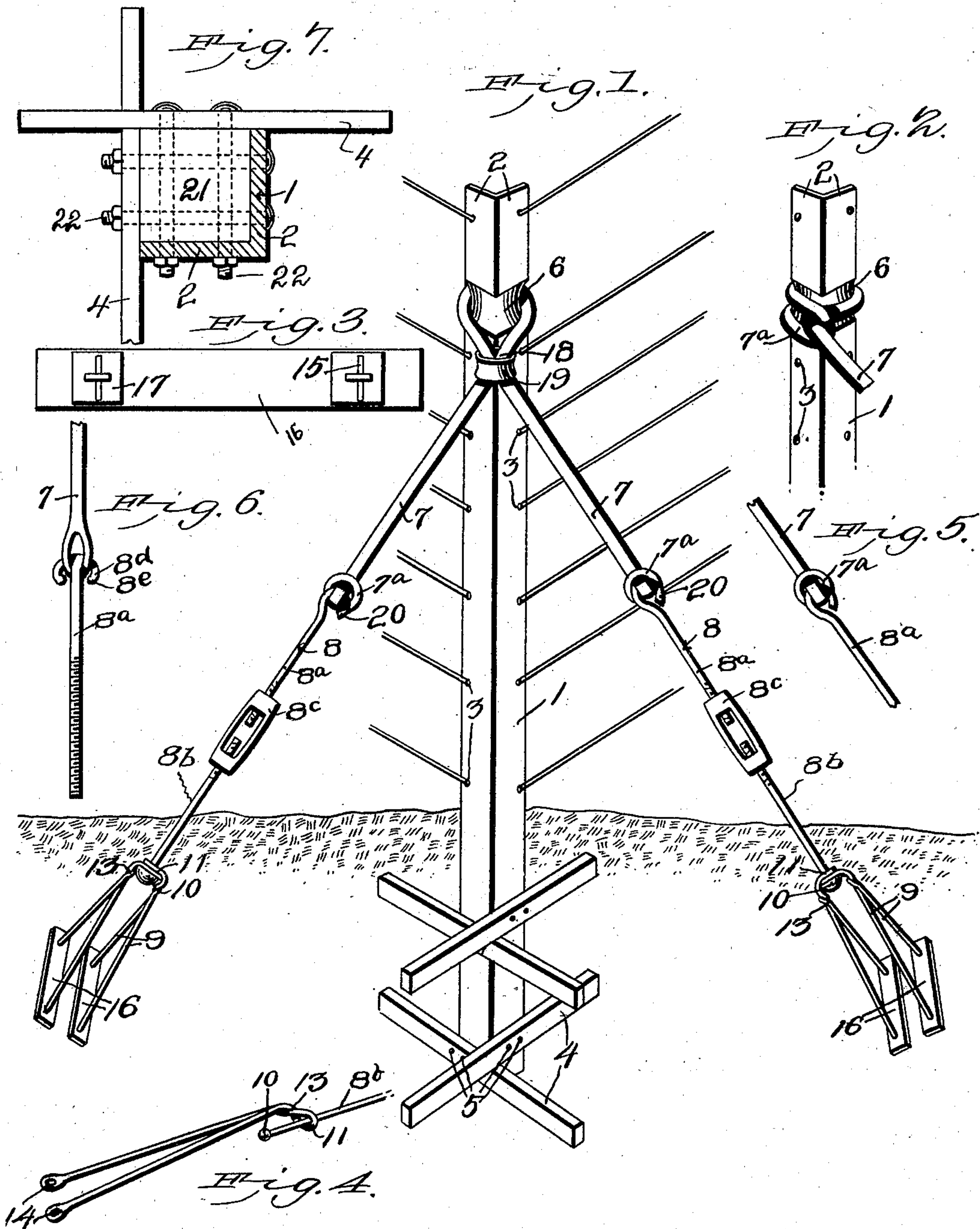
PATENTED FEB. 10, 1903.

J. H. HARBOLD.
BRACE AND ANCHOR FOR POSTS.

APPLICATION FILED APR. 28, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
E. J. Stewart
J. W. Garner

John H. Harbold, Inventor
by *Chas. H. Snow*
Attorneys

No. 720,025.

PATENTED FEB. 10, 1903.

J. H. HARBOLD.
BRACE AND ANCHOR FOR POSTS.

APPLICATION FILED APR. 28, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 8.

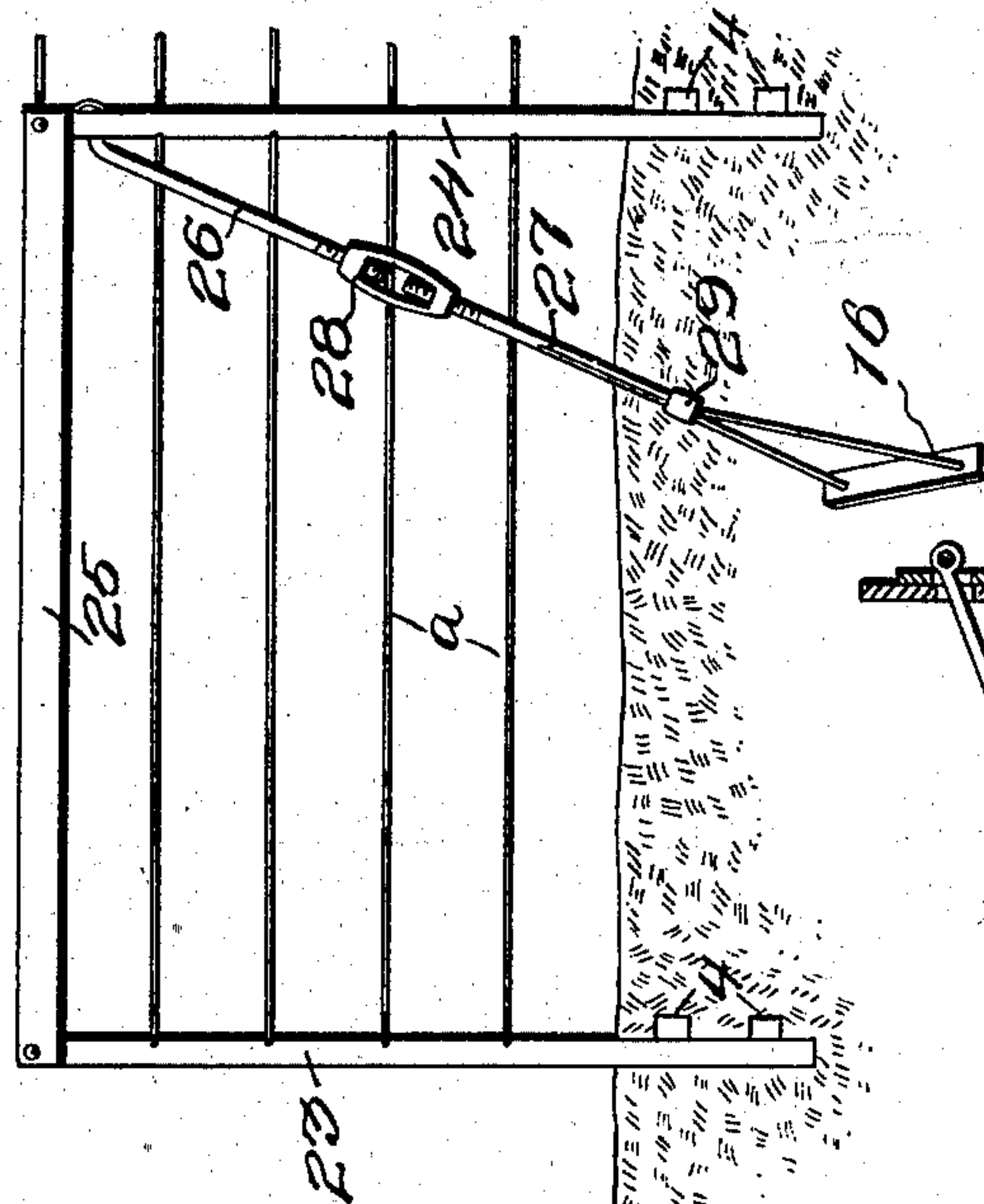
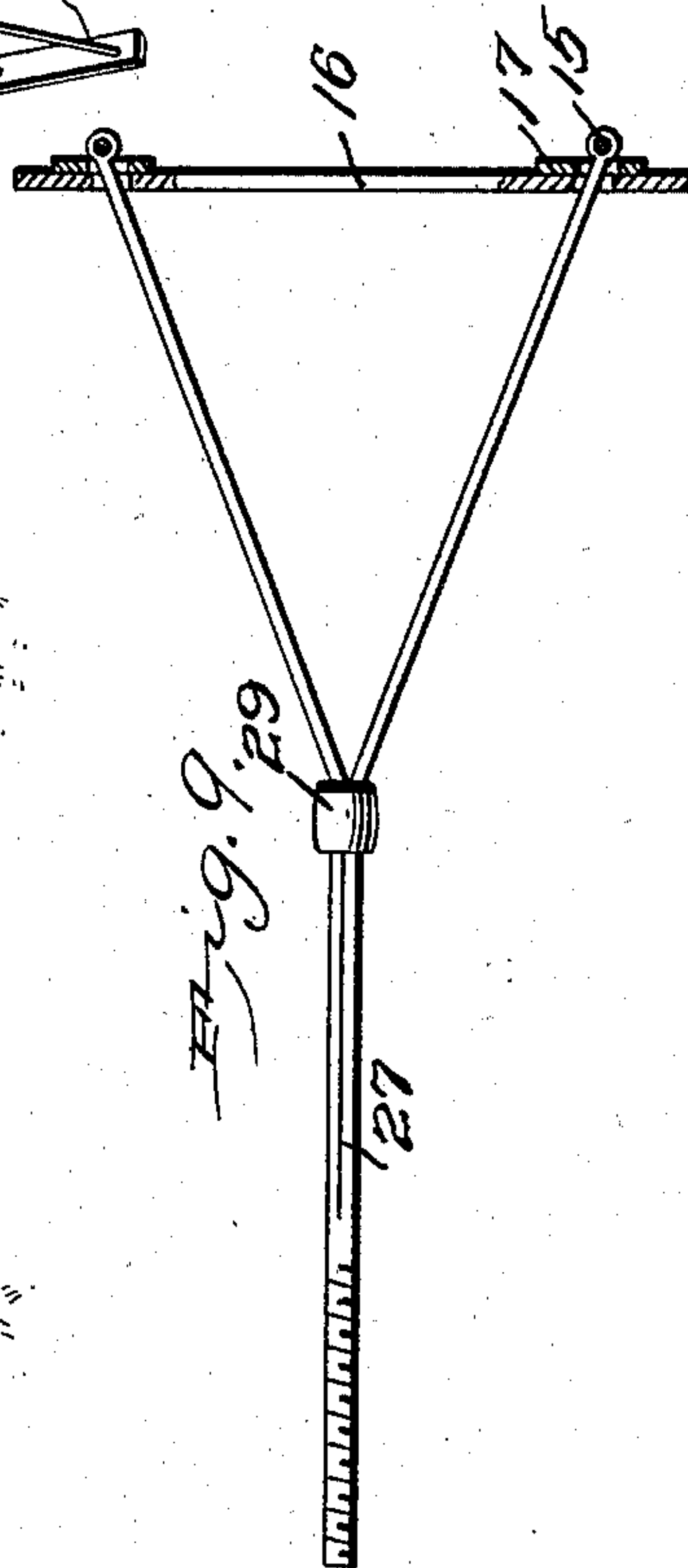


Fig. 9.



Witnesses

E. F. Stewart
J. W. Garner

John H. Harbold, Inventor.

C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JOHN HENRY HARBOLD, OF MARSHALL, MISSOURI.

BRACE AND ANCHOR FOR POSTS.

SPECIFICATION forming part of Letters Patent No. 720,025, dated February 10, 1903.

Application filed April 28, 1902. Serial No. 105,077. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY HARBOLD, a citizen of the United States, residing at Marshall, in the county of Saline and State of Missouri, have invented a new and useful Brace and Anchor for Posts, of which the following is a specification.

My invention is an improved brace and anchor for fence-posts and the like; and it consists in the peculiar construction and combination of devices hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a fence-post provided with an improved brace and anchoring devices embodying my invention. Fig. 2 is a detail perspective view showing the upper portion of a fence-post and my improved brace rope or cable attached thereto in another manner. Fig. 3 is a detail elevation of one of the anchor-bars, showing the rear or outer side thereof and showing the anchor-rod attached thereto. Fig. 4 is a detail perspective view of one of the anchor-rods. Fig. 5 is a similar view showing one end of the brace rope or cable attached to one end of one of the tightening-rods. Fig. 6 is a detail view of a modification. Fig. 7 is a detail view, being a horizontal section through the corner-post and showing a block in the angle thereof and cross-bars secured to said block. Fig. 8 is an elevation of a portion of a fence embodying my improved bracing and anchoring devices and having a gateway. Fig. 9 is a detail view, showing a modification in the construction of the anchor-rods.

In the embodiment of my invention here shown the fence-post 1 is made of angle iron or steel, having its faces or sides 2 disposed at an angle, preferably at right angles, with relation to each other and provided near their outer edges with openings 3, through which the fence-wires may be passed and by means of which the fence-wires may be attached to the post. At and near the base of the post where the same is buried beneath the surface of the ground are crossed bars 4, which are here shown as bolted to the angled sides of the post, as at 5. Said crossed bars serve to retain the base of the post firmly in the ground and counteract any tendency of the

post to turn in response to the stress or pull of the fence-wires. The post is formed at a suitable distance from its upper end with a neck 6, which is semi-annular in form and is concavo-convex in transverse section, with its concave side outermost.

My improved brace comprises a rope or cable 7, one or more tightening-rods 8, and one or a plurality of anchoring devices. The brace-rope 7 is preferably made of wires twisted together and is formed with loops 7^a at its ends. Each tightening-rod 8 comprises an upper section 8^a, a lower section 8^b, and a turnbuckle 8^c, which connects their reversely-screw-threaded opposing ends together. The section 8^b of each tightening-rod is formed with a head or enlargement 10 at its lower end, the said section 8^b being adapted to be passed through an eye or ring 11, formed in an anchor-rod 9, so that the head or enlargement 10 will engage said eye or ring 11, and hence connect the section 8^b to the anchor-rod. The anchor-rods 9, which are approximately V-shaped, are here shown as doubled, twisted together, as at 13, formed integrally with the rings or eyes 11, and as having their ends, which are somewhat spaced apart, provided with openings 14 for the reception of keys 15. The ends of the anchor-rods are passed through openings in anchor-bars 16, and the keys being then inserted in the openings 14 the anchor-rods are thus attached to the anchor-bars, as will be understood. The anchor-bars are then appropriately buried in the ground. In Fig. 3 I show washers 17 on the rear or outer side of an anchor-bar interposed between the same and the keys.

The brace-rope is shown in Fig. 1, in which there are anchoring devices shown disposed opposite two sides of the post, as having its central portion passed around the neck 6 of the post, crossed, as at 18, and the crossed portions of the brace-rope passed through and connected together by a thimble 19. The upper ends of the upper sections 8^a of the tightening-rods are formed with rings 20, and the loops 7^a at the ends of the brace-rope are passed through the said rings 20 and engaged by the end portion of the brace-rope, as shown in detail in Fig. 5, whereby the

tightening-rods are attached to the brace-rope. It will be understood that by means of the turnbuckle 8^c the rods 8, and hence the brace-rope, may be tightened to any desired extent. The neck 6, formed in the post, prevents abrasion of and injury to the brace-rope.

Where only one anchoring device is employed opposite one side of the post, as in Fig. 2, the thimble 19 is dispensed with, and one end of the brace-rope is passed around the neck 6 of the post, the brace-rope being passed through one of its loops 7^a, as shown, thereby forming a bight or loop in the brace-rope to engage the neck portion of the post.

It will be understood that by the provision of the openings 14 in the anchor-rods and the keys to enter the said openings the anchor-rods may be securely connected to the anchor-bars and that corrosion will not materially interfere with the separation of the parts.

In Fig. 6 I show a modified construction of the section 8^a of the tightening-rod, in which the same is provided with a substantially T-shaped head 8^d, with downturned hooks 8^e, adapted to engage one of the loops of the brace-rope.

Instead of having the bars 4 bolted directly to the sides of the post, as shown in Fig. 1 and hereinbefore described, a rectangular block 21 may be placed in the angle between the sides of the post, as shown in Fig. 7, and the bars 4 secured to the outer sides of said block by bolts 22, which pass through said bars, block, and the sides of the post, said bolts hence also serving to secure the block to the post. The crossed bars being thus placed on the sides of the post facing the lines of the fence, the tension of the running wires or fabric of the fence causes the stress to be communicated from the lower portion of the post directly to the crossed bars, and no stress is exerted on the bolts which connect the post, block, and bars together.

In Fig. 8 of the drawings I show a portion of a fence including a gateway and provided with my improved anchoring and bracing devices. The gate-posts 23 have their upper ends connected to the upper ends of the contiguous line-posts 24 by brace-bars 25, which may be of any suitable size and material and may be either bolted to the gate and line posts, as here shown, or secured thereto by any other suitable means or in any suitable manner. The running-wires *a* of the fence-line are here shown as extending from the line-posts 24 to the gate-posts. The lower portions of the said posts, which are below the ground, have cross-bars 4, secured to their inner sides and disposed at right angles to the fence-line. One or more of said bars 4 may be secured to each of the posts, as may be desirable. The line-posts, which are next adjacent to the gate-posts, are braced on their outer sides and directly in the fence-line, as

shown, and being connected to the gate-posts by the bars 25 the gate-posts are effectually braced and the braces are entirely out of the way.

In the form of brace and anchoring devices shown in Figs. 8 and 9 the brace-rods comprise each an upper section 26, a lower section 27, and a turnbuckle 28, connecting them together, the opposing ends of said sections being reversely screw-threaded. The lower section 27 is split and forked for a suitable distance from its lower end, and on the same is a collar 29. By this construction of the lower section 27 the same may be used in connection with a single anchor-bar 16, the ends of the forked arms of said section 27 being passed through openings in the anchor-bar and secured by keys 15, as hereinbefore described in connection with the brace and anchoring devices shown in Figs. 1 and 3.

The running-wires *a* of the fence may be connected together by stay-wires 30 and the latter attached to anchor-plates 31, which will be buried in line with the fence and disposed intermediate the line-posts. In practice these anchor-plates will be made of iron or steel and of any suitable size and shape.

It will be understood that my improved anchoring and bracing devices may be used for other than fence purposes and that the various parts thereof may be of any preferred form and may be made of any suitable size and material.

I do not desire to limit myself to the use of my improved brace and anchoring devices in connection with fence and other posts, as it is obvious that the same may be used for anchoring other structures.

Having thus described my invention, I claim—

1. The combination of a post having sides arranged at an angle, said post being provided with a semi-annular neck concave in transverse section and presenting an exterior concave face, a brace rope or cable encircling the neck and crossed at one side of the post, a thimble arranged on the crossed portions of the rope or cable and anchors connected with the rope or cable, substantially as described.

2. In combination with a post having a neck, a brace-rope encircling the neck and crossed on one side of the post, a thimble through which the crossed portions of the rope are passed, anchors, and connections between the same and the brace-rope, substantially as described.

3. The combination of a post having a neck, a brace rope or cable encircling the neck and crossed at one side of the post, a thimble arranged on the crossed portions of the rope or cable, a pair of anchors, approximately V-shaped anchor-rods secured at the outer ends of their sides to the anchors and provided at their apexes with inwardly-extending overlapping eyes, and with adjustable connec-

tions secured in the eyes of the anchor-rods and connected with the ends of the cable or rope, substantially as described.

4. The combination of a pair of anchors, approximately V-shaped anchor-rods spaced apart and provided at their apexes with inwardly-extending laterally-disposed overlapping eyes, and a brace extending through the eyes and having an engaging element located

in the space between the anchor-rods, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN HENRY HARBOLD.

Witnesses:

JOSEPH HAMILL,
E. B. BROWN.