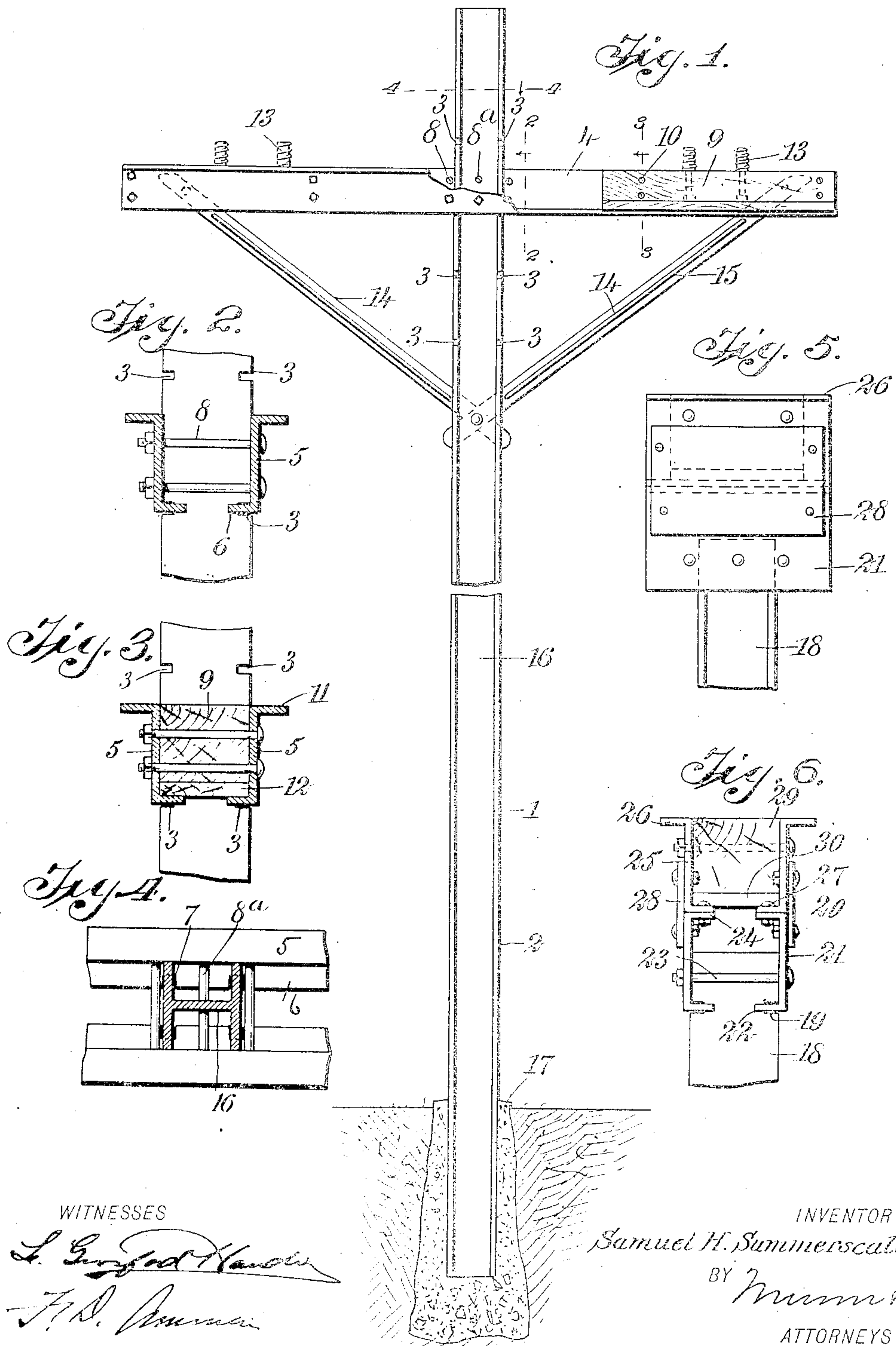


No. 859,993.

PATENTED JULY 16, 1907.

S. H. SUMMERSCALES.  
TELEGRAPH OR ELECTRIC WIRE POLE.

APPLICATION FILED NOV. 23, 1906.



WITNESSES

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# UNITED STATES PATENT OFFICE.

SAMUEL HENRY SUMMERSCALES, OF WINNIPEG, MANITOBA, CANADA.

## TELEGRAPH OR ELECTRIC WIRE POLE.

No. 859,993.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed November 23, 1906. Serial No. 344,706.

*To all whom it may concern:*

Be it known that I, SAMUEL HENRY SUMMERSCALES, a subject of the King of Great Britain, and a resident of Winnipeg, in the Province of Manitoba and Dominion of Canada, have invented a new and Improved Telegraph or Electric Wire Pole, of which the following is a full, clear, and exact description.

This invention relates to poles such as used for supporting electric conductors. The pole is intended to be especially useful in supporting electric wires of all kinds, such as electric light, telegraph, or long distance transmission lines.

The object of the invention is to produce a pole which shall be durable, though simple in construction, and which is provided with improved means for attaching the arms or cross trees to the body of the pole.

The invention consists in the construction and combination of parts to be described more fully hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is substantially a side elevation of a pole constructed according to my invention, showing the foundation of the pole in cross section; a portion of one of the arms is represented as broken away, and so is a portion of the body of the pole; Fig. 2 is a cross section on the line 2—2 of Fig. 1 and illustrating the manner of attaching the arms to the pole; Fig. 3 is a cross section on the line 3—3 of Fig. 1 and illustrating especially the construction of the arm; Fig. 4 is a cross section on the line 4—4 of Fig. 1 and further illustrating the manner of attaching the arm to the pole; Fig. 5 is a side elevation of the upper portion of the pole and illustrating a form of mounting for an insulator where the pole is not provided with an arm and is intended to carry a single conductor or line; and Fig. 6 is an edge or end elevation of the mounting shown in Fig. 5.

Referring more particularly to the parts, 1 represents the body of the pole, which is preferably formed of channel iron, presenting substantially the cross section of a capital "H"; as shown in Fig. 4. This pole body may be formed of a single structural shape such as an I-beam of commerce having special or extended flanges 2. In practice, however, the pole body may be formed by attaching, back to back, a pair of channels, the flanges of which project in opposite directions. At its upper portion, the flanges 2 of this pole are provided with notches 3 disposed in pairs and opposite to each other as indicated. These notches are for the purpose of facilitating the attachment of a cross tree or arm 4, the construction of which is very clearly shown in Figs. 2 and 3. This arm is formed of two oppositely disposed parallel Z-beams 5, the lower

flanges 6 whereof project inwardly and are received in any pair of the alining notches 3. The pairs of notches are disposed vertically at a suitable distance apart to insure the proper insulation between the conductors carried by the different arms when more than one arm is attached to the pole. The lower flanges 6 which engage the notches 3 are provided, themselves, with notches or recesses 7, as indicated in Fig. 4, which register with the notches 3 as shown. The Z-bars or beams 5 are connected together by through bolts 8 by means of which the bars may be clamped firmly against the edges of the flanges 2 of the pole body. These bolts 8 are preferably disposed quite close to the pole body, as indicated in Fig. 1.

Near the outer ends of the arm 4, blocks 9 are provided, which are preferably formed of wood or similar material and these blocks are held in position between the bars 5 by means of through bolts 10 which pass through them as shown. The upper faces of the blocks 9 are flush with the upper faces of the upper flanges 11 of the Z-bars, but the block does not extend down to the flanges 6, from which arrangement a space is provided in which a removable slide 12 is provided. This slide is supported, as shown, from the flanges 6, and is adapted to be slid outwardly in order to facilitate the removal of fastening devices or bolts 13; these bolts pass upwardly through a block and their heads are recessed in the lower portion thereof, as shown. Their upper portions project above the upper faces of the blocks so as to enable them to attach insulators in any suitable manner.

The arm 4 is braced near its extremities by inclined diagonals or braces 14, which are preferably of the form of tee-irons, the webs 15 of which are cut away at the ends of the braces so as to facilitate their attachment to the arm and the body of the pole, as indicated.

In addition to the bolts 8 at the point of attachment of the arm to the pole, I provide similar bolts 8<sup>a</sup> which pass through the web 16 of the pole body, and through the Z-bars also, as shown very clearly in Fig. 4. With the arrangement described, evidently the pole body may be provided with a plurality of notches, any pair of which may be selected as a seat for the arm, and where a number of arms are to be attached to the same pole, these notches will be located at a suitable distance apart facilitating the quick attachment of the arms.

The lower extremity of the pole 1 is stepped in a foundation or base 17 of concrete or cement, so that the pole is held very rigidly in an upright position. Sometimes it is not intended that the pole should carry more than one line wire, and under these circumstances I provide the construction shown in Figs. 5 and 6. In this case I do not employ an arm, but simply provide the upper extremity of the pole 18 with oppositely disposed notches 19.

On the end of the pole I attach a mounting 20, the



lower portion of which is formed of two oppositely disposed channels 21, the lower flanges 22 whereof project toward each other, and are provided with notches similar to the notches 7 which engage the notches 19; the arrangement being such that the inner faces of the channels will seat against the edge of the flanges of the pole. These channels 21 are rigidly held in position by through bolts 23 which pass across near the sides of the pole. Upon the upper flanges 24 I attach the lower flanges of Z-bars 25, and the flanges 26 at the upper portions of these Z-bars project outwardly, as shown. In addition to the rivets or bolts 27 which attach the Z-bars to the flanges 24, I provide butt-plates 28 which lap over the joint and which are riveted or bolted to the webs of the Z-bars and the channels so as to form a very rigid structure. Between the Z-bars there is mounted a block 29 which constitutes a seat for the insulator, the upper face of the block being flush with the upper faces of the flanges 26 as indicated. Beneath the block 29, a removable slide 30 is provided, similar to the slides 12 described above. The manner of mounting the holding bolt for the insulator in this form of the invention is the same as that described above and shown in Fig. 1.

The notches 3 effectually prevent any tendency of the arm or the mounting from sagging down on the pole body. At the same time, the notches which are provided in the channels or Z-bars prevent any tendency for the mounting or arm to move laterally upon the pole.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A pole having a body presenting outwardly projecting flanges with notches therein, bars having flanges presenting notches engaging said first notches, means for clamping said bars against the side of said pole, and means whereby said bars may form a seat for an insulator.

2. A pole having a body with bars rigidly attached thereto, a block attached between said bars and constituting a seat for an insulator, fastening devices passing upwardly through said block, and a slide disposed under said fastening devices and removably held between said bars.

3. A pole having a body, bars rigidly attached thereto and presenting inwardly projecting flanges, a block mounted between said bars, fastening devices mounted in said block for attaching an insulator thereupon, and a slide adapted to be slid into position under said block and resting on said flanges.

4. A pole presenting outwardly projecting flanges having notches therein, an arm formed of oppositely disposed Z-bars having inwardly projecting flanges at the lower edges thereof, said flanges presenting notches engaging said first notches, means for clamping said Z-bars to said body, blocks mounted between said Z-bars and constituting seats for insulators, bolts passing upwardly through said blocks to attach the insulators, and slides disposed beneath said blocks and resting on said flanges.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL HENRY SUMMERSCALES.

Witnesses:

E. H. EVANS,

O. P. LAMBOURNE.