J. E. JENNINGS.

LATTICED POLE.

APPLICATION FILED JULY 13, 1915. RENEWED OCT. 10, 1916.

1,211,160. Patented Jan. 2, 1917.

Fig. 1

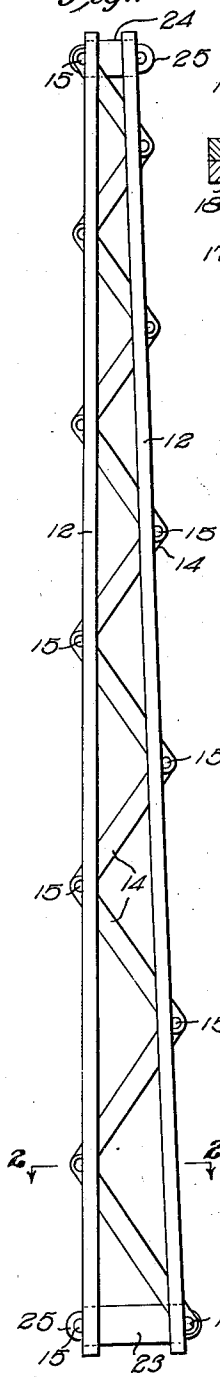


Fig. 2

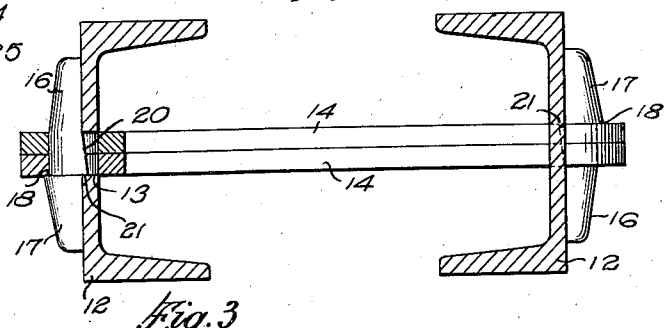


Fig. 3

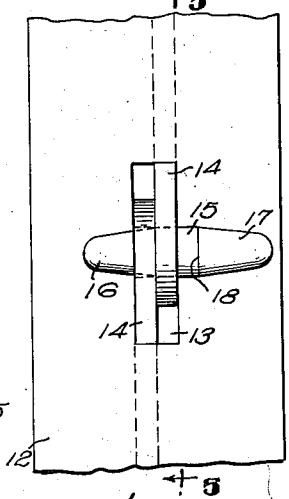


Fig. 4

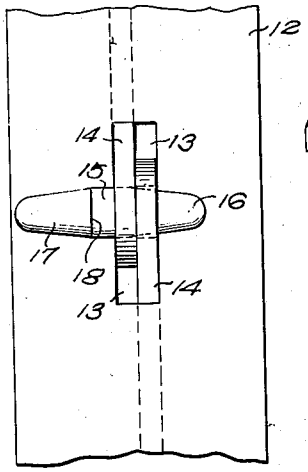


Fig. 5

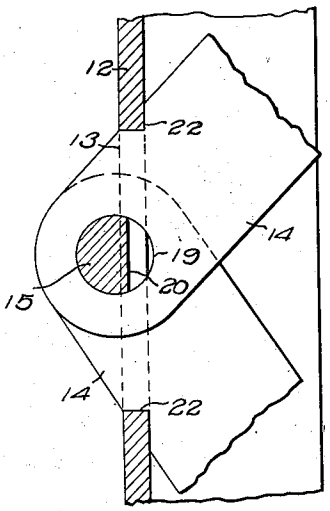


Fig. 6

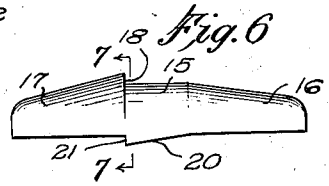
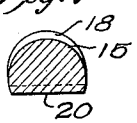


Fig. 7



WITNESSES

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LATTICED POLE.

1,211,160. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed July 13, 1915, Serial No. 39,565. Renewed October 10, 1916. Serial No. 124,900.

To all whom it may concern:

Be it known that I, JOHN E. JENNINGS, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Latticed Pole, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide means for connecting metal members to form a structure of the character indicated, without the use of bolts; to provide a pole constructed to offer the minimum rigidity and resistance in one plane; to provide a structure of the character indicated, wherein the cost of assembly is reduced; and to provide self-locking fastening devices for uniting the members of the structure in service relation.

Drawings.—Figure 1 is a side elevation of a pole constructed and arranged in accordance with the present invention; Fig. 2 is a cross section thereof taken as on the line 2—2 in Fig. 1, the section being shown on an enlarged scale; Fig. 3 is a detail view on an enlarged scale, showing a fragment of a pole constructed as shown in Fig. 1 of the drawings, the ends of braces for securing the same, and a fastening device for said braces; Fig. 4 is a similar view, showing the fastening device as introduced from the opposite side of the exposed ends of the braces; Fig. 5 is a section taken as on the line 5—5 in Fig. 3; Fig. 6 is a detail view, showing the side of one of the fastening pins; and Fig. 7 is a cross section taken as on the line 7—7 in Fig. 6.

Description.—When constructing poles in accordance with the present invention, two lengths of channel bars 12 are employed. These bars are perforated to form elongated rectangular openings 13, at suitable intervals and as per design. The width of the openings 13 equals the combined thickness of brace rods 14. The ends of the rods 14 are perforated to form round holes 19, through which are driven pins 15.

The pins 15 are formed from suitable steel or wrought metal, shaped to form a relatively long tapered wedging end 16 and a short driving end 17. Intermediate the two ends 16 and 17, a relatively straight saddle is formed. Between the saddle and the driving end 17, the metal of the pin is sharply upraised to form an abutment 18, the function whereof is to limit the drive of the pin for the insertion thereof through the holes 19. Approximately in line with the abutment 18 and extended from the under side of the pin 15, is a lock 20. The lock 20 ends in an abrupt wall 21, which forms an abutment behind which the metal of the channel bars spring, as shown in Fig. 2 of the drawings, when the pins are driven home.

The rods 14 are further locked on the channel bars 12 by providing the said braces with nicks 22, shown best in Fig. 5 of the drawings. The said nicks form seats wherein rests the metal forming the ends of the rectangular openings 13.

By constructing a pole in accordance with the present invention, the cross bars 23 and 24 are mounted on the bars 12 in the same way as is employed for mounting the brace bars 14. The said cross bars are provided with reduced ends 25, forming between the reduced ends and the body of the cross bars, shoulders which bear against the inside of the channel bars 12, when in service relation. As the said cross bars and brace bars are installed, the pins 15 are driven through the holes 19 formed therein when protruded to the outer side of the web of the channel bars 12. The wedging ends of each of the pins enter the said holes. The pins are then driven, the lock 20 operating as a wedge member against the outer surface of the bars 12 to draw the rods 14 through the openings 13. By the same action, the metal forming the web of each channel bar, is slightly deflected until the wall 21 passes into the said opening, when the metal which has been deflected springs into place at the rear of the said abutment, locking the key thereafter firmly in position. The abutment 18 bears against the side of the adjacent rod 14, forcing the two protruding ends of the coupled rods together, thereby overcoming any tendency to rattle.

It will be seen that when all the rods 14 are installed, the pole becomes a rigid and unyielding structure. It will also be seen that if a strain is imparted on the pole in the plane coincident with the centers of the bars 12, the brace rods 14 operate successively as tensile and crushing members, operating substantially as a cantaliver.

In service the cross bar 23 is formed to a longer dimension than the bar 24 to taper the completed pole upward. In service the pole is anchored in position, being usually

secured by embedding the cross bar 23 and the lower ends of the bars 12 in a cement base.

Claims:

1. A pole comprising a plurality of oppositely disposed perforated reach bars; a plurality of brace rods, each having perforated ends and extending between and through the perforations in said bars; and wedge-shaped fasteners extending through said perforated ends and pressing against the outer surface of said bars, said fasteners having each an abutment on the bearing side thereof adapted to fall within the perforations within said reach bars for locking the fasteners against withdrawal from the perforations in said brace rods.

2. A pole comprising a plurality of oppositely disposed perforated reach bars; a plurality of brace rods, each having perforated ends and extending between and through the perforations in said bars; wedge-shaped fasteners extending through said perforated ends and pressing against the outer surface of said bars, said fasteners having each an abutment on the bearing side thereof adapted to fall within the perforations within said reach bars for locking the fasteners against withdrawal from the perforations in said brace rods; and means operatively engaging said fasteners and said brace rods for limiting the extension of said fasteners through the perforations in said brace rods.

3. A pole comprising a plurality of oppositely disposed perforated reach bars; a plurality of brace rods, each having perforated ends and extending between and through the perforations in said bars; wedge-shaped fasteners extending through said perforated ends and pressing against the outer surface of said bars, said fasteners having each an abutment on the bearing side thereof adapted to fall within the perforations within said reach bars for locking the fasteners against withdrawal from the perforations in said brace rods; and an abutment formed on the outer surface of each of said fasteners to limit the insertion thereof through the perforations in the brace rods.

4. A structure as characterized comprising a perforated member, the material forming the edge of which perforation being resilient for resuming its normal position after being deflected therefrom; a brace member having a perforated end extending through the perforations in the first-mentioned member; and a fastening device having a wedge-shaped end adapted for driving through the perforations in said brace members, said fastening device having a projection extending from the under side thereof for insertion in said perforation, the metal at the side of the perforation being deflected to admit the projection to said perforation.

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

JOHN EDWARD JENNINGS.

Witnesses:
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J. C. ENGLISH.