No. 634,692. Patented Oct. 10, 1899.

J. LANZ.

POLE OR COLUMN.

(Application filed Sept. 6, 1898.)

(No Model.)

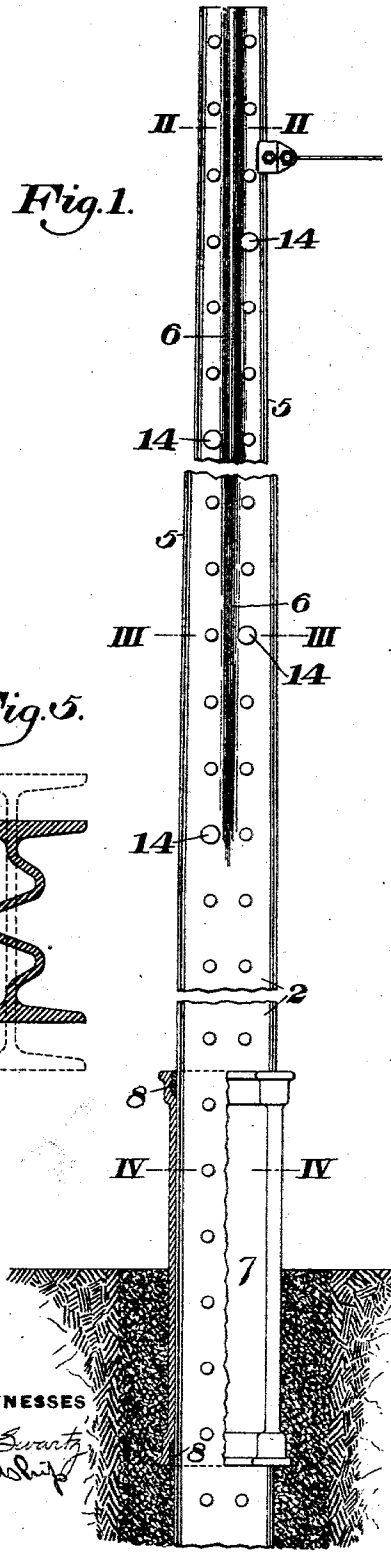


Fig. 1.

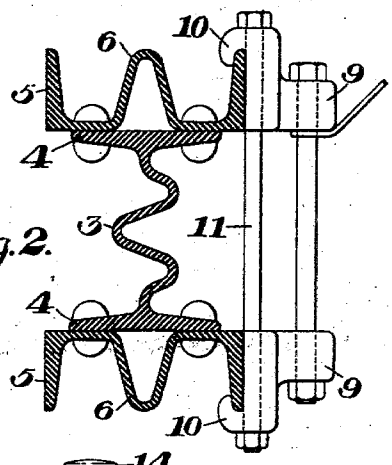


Fig. 2.

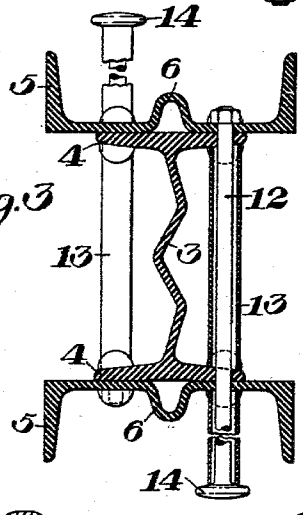


Fig. 3.

Fig. 5.

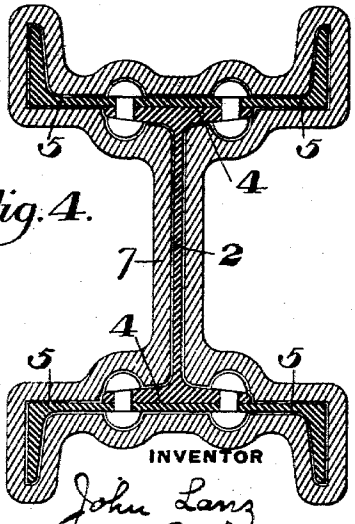


Fig. 4.

WITNESSES

Warren W. Swartz

B. J. Holdship

INVENTOR

John Lanz

by Bakewell & Bakewell

his Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN LANZ, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE CARNEGIE STEEL COMPANY, LIMITED, OF SAME PLACE.

POLE OR COLUMN.

SPECIFICATION forming part of Letters Patent No. 634,692, dated October 10, 1899.

Application filed September 6, 1898. Serial No. 690,368. (No model.)

To all whom it may concern:

Be it known that I, JOHN LANZ, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Poles or Columns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, partly broken away, of one form of my improved pole. Figs. 2, 3, and 4 are cross-sections on the line II II, III III, and IV IV, respectively, of Fig. 1; and Fig. 5 is a cross-section showing my improved pole in its simplest form.

My invention relates to the poles employed in connection with telegraph and telephone lines, electric street-railways, &c., and is designed to afford a simple, cheap, and strong pole which can be formed of a rolled shape or shapes.

In the drawings I show in Figs. 1 to 4, inclusive, the construction of my pole when used for an anchor or pull-off pole. The body of this pole consists of an I-beam 2, the upper part of whose web is provided with a reverse or V-shaped fold 3, which tapers upwardly to the top. To the end flanges 4 4 of this I-beam I rivet channel-shapes 5 5, each of which is provided with a V-shaped fold 6, which extends from an intermediate point to the top, tapering upwardly the same as the fold of the I-beam. These end channels are bent inwardly, so as to fit the flanges of the I-beam as they approach each other toward the top.

To prevent corrosion and injury to the base of the pole, I preferably provide a casting 7, which is arranged to slide over the base end of the pole and fit neatly about it, the ends being tamped with lead fillings 8 8. This casting, which I preferably extend into the ground or concrete about the same distance as aboveground, also acts as a reinforcement of the weaker part of the pole or point of greatest strain thereon.

As shown in Fig. 5, for the ordinary span-wire or other poles I use the I-beam alone, having its web crimped or bent into a V-shaped fold, which extends from an intermediate portion to the upper end of the pole, the sides of the fold approaching each other toward the top, so that the pole tapers on opposite sides.

To secure span-wires, insulators, or other devices to the pole, I provide a clamp, as shown in Fig. 2, consisting of two collars 9 9, having hook-shaped ends 10 and provided with a through-bolt 11, by which they may be drawn into engagement with oppositely-extending flanges upon the pole. I do not claim herein this construction of clamp, as the same is described and claimed in a copending application executed by me on February 21, 1899.

In place of the rivets for securing the channels to the I-beam I may use through-bolts 12, having separating-collars 13 between the flanges, as shown in Fig. 3, which collars act as stiffeners to the pole when the web is crimped, and when these screw-bolts are used I preferably extend them alternately on opposite sides, so as to form a series of steps or pins 14, by means of which the pole may be climbed.

The advantages of my invention will be apparent to those skilled in the art, since a pole at least a portion of which tapers upwardly is thus cheaply and easily made from an ordinary I-beam, or where used for an anchor-pole from such I-beam with a pair of channels.

Instead of using a tapering fold a tapering slot may be cut from the web of the I-beam and the opposite side forced inwardly, so as to close up the slot and make a tapering portion. The form of the tapering fold may also be changed and many other variations will suggest themselves to those skilled in the art without departing from my invention, since

I claim—

1. As a new article of manufacture, a pole having a channeled beam or shape which is straight throughout its lower portion above the ground-level, the upper portion of its web being tapered, with the metal distributed upon both sides of the central plane of the web; substantially as described.

2. As a new article of manufacture, a pole composed of an I-beam, the web of which is straight throughout its lower portion above

the ground-level, the upper portion of the web being tapered, with the metal of the tapered portion distributed upon both sides of the central plane of the web; substantially as described.

3. A pole composed of a channeled beam, the web of which is provided with a continuous integral tapering fold, the metal of this tapered portion being distributed upon both sides of the central plane of the web; substantially as described.

4. A pole composed of an I-beam, the web of which is provided with a continuous integral tapering fold, the metal of the tapered portion being distributed upon both sides of the central plane of the web; substantially as described.

5. A pole composed of an I-beam, at least a portion of which tapers toward one end, and a channel-section secured to the flange of the I-beam; substantially as described.

6. A pole composed of an I-beam, at least a portion of which tapers toward one end, and channels also tapered and secured to the flanges of the I-beam; substantially as described.

7. A pole composed of an I-beam, having its web provided with a tapering fold extending from an intermediate part to one end, and two channels, the webs of which are provided with tapered folds and secured to the flanges of the I-beam; substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN LANZ.

Witnesses:
GEORGE B. BLEMMING,
L. M. REDMAN.