

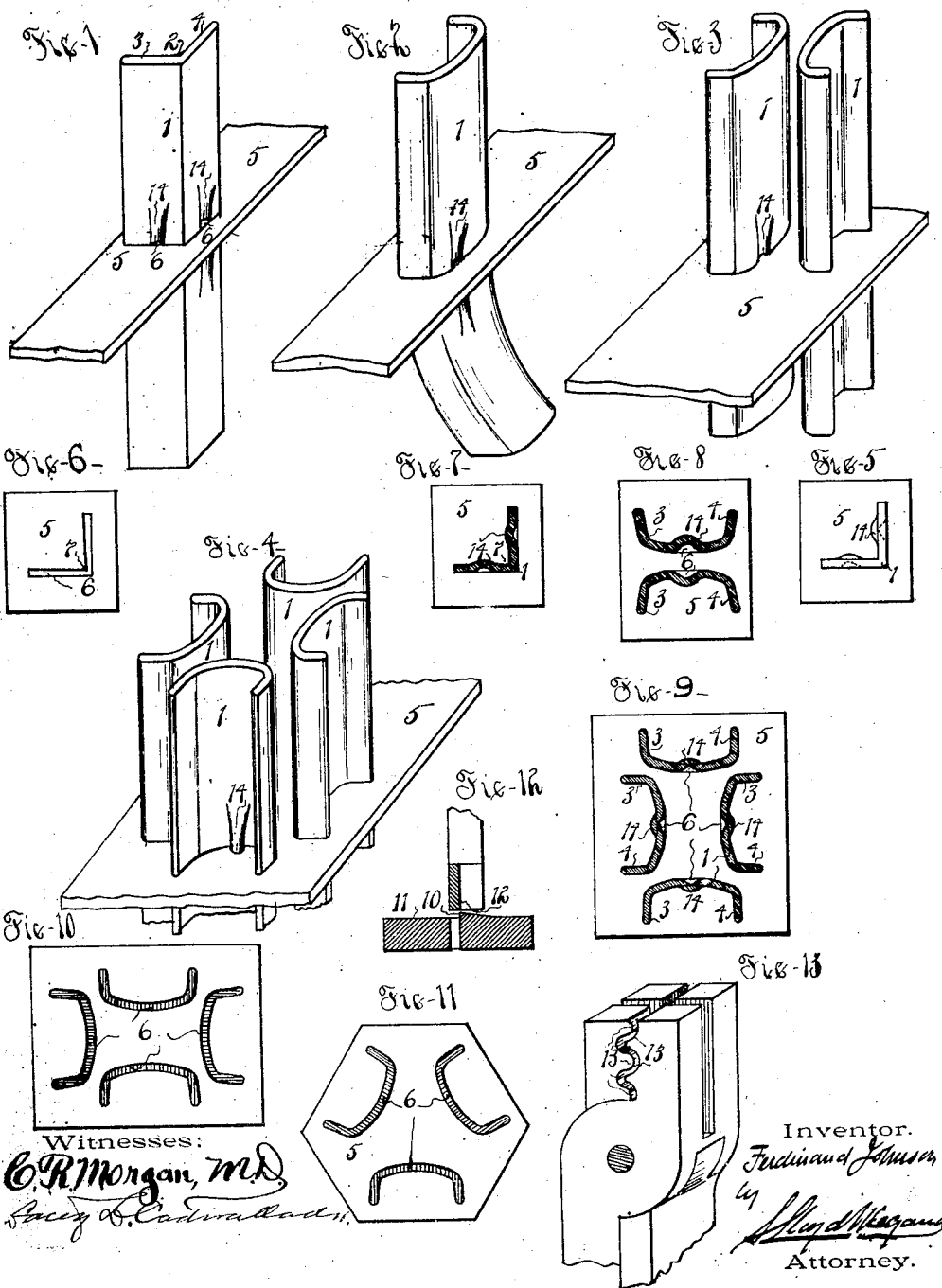
(No Model.)

2 Sheets—Sheet 1.

F. JOHNSON.
METALLIC POST.

No. 551,770.

Patented Dec. 24, 1895.



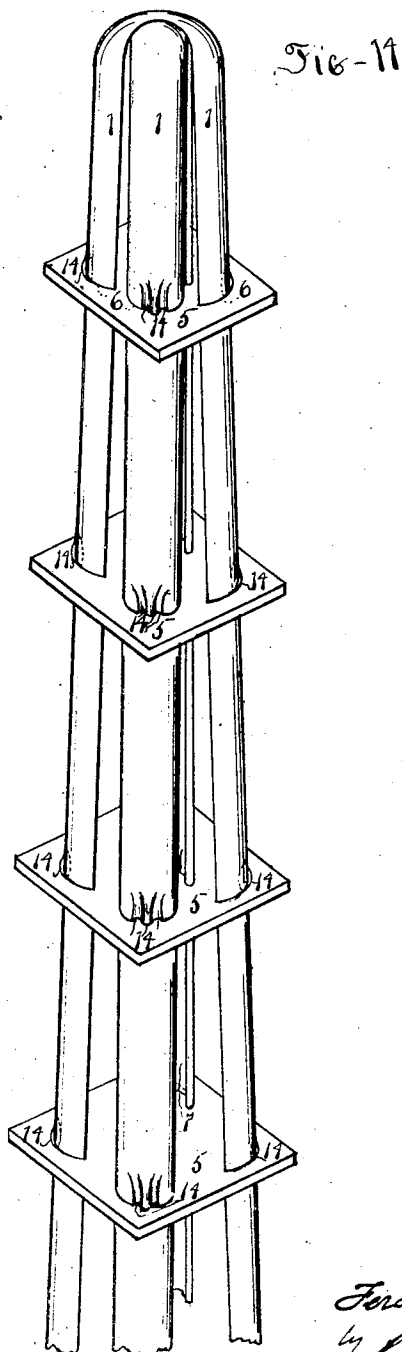
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WITNESSES:

J. Daniel Eby
George L. Cadwallader

INVENTOR

Ferdinand Johnson
by S. Lloyd Wiegand atty

UNITED STATES PATENT OFFICE.

FERDINAND JOHNSON, OF NEW LONDON, PENNSYLVANIA.

METALLIC POST.

SPECIFICATION forming part of Letters Patent No. 551,770, dated December 24, 1895.

Application filed April 29, 1895. Serial No. 547,594. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND JOHNSON, a citizen of the United States, residing at New London, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Posts; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to posts for fencing and the support of lamps, lanterns, electric insulated lines, &c., and has for its object cheap production of light and substantial posts, by combining metallic bars with bracing-plates in such a manner as to adapt them to be readily planted in the earth or concrete foundations, and when planted to resist the usual disturbing causes; and to this end it consists in the art of attaching plates transversely to metal bars, or thereby uniting two or more metallic bars by such plates so as to brace each other, and the forming by such transverse plates a means of driving such posts into the earth, and of securing them when so planted.

I will now proceed to particularly describe the mode of making and practicing this invention, referring in so doing to the accompanying drawings, in which—

Figure 1 shows an elevation of a single post; Fig. 2, an elevation thereof as bent to better secure it in the earth. Fig. 3 shows a double post. Fig. 4 shows a quadruple post. Fig. 5 shows a plan view of Fig. 1; Fig. 6, a detached view of the transverse plate on Fig. 1 before said plate is attached to the upright post. Fig. 7 shows a section of the post in the plane immediately above the point of attachment of the plate. Fig. 8 shows a section of the twin post shown in Fig. 3 immediately above the transverse plate. Fig. 9 shows a like view of the quadruple post in section at the same part. Fig. 10 shows a detached view of a plate for quadruple posts. Fig. 11 shows a detached view of a plate for a triple post. Fig. 12 shows the die and punch for piercing the plates. Fig. 13 is a tool for attaching cross-plates to the posts, and Fig. 14 a perspective view of a quadruple tapering post.

The posts in these several instances are

made of what are known as rolled "shaped irons" or steel, and may be of any of the usual forms of angle, channel or I forms of cross-section. The horizontal plates are made of flat pieces of ductile metal, and have apertures punched in them, with a tongue raised in the act of punching, which being set back again into flat position impinges strongly against the upright bar, and by corrugations made in the web of the upright bar, at points intermediate between the edges of the post, above and below said plate, lock the plate against any endwise motion on the post, and against any bending of the tongue in the plate from the flat plane to which it has been forced in attaching it to the post. Several of these plates may be attached to posts when of considerable length, such plates being arranged in a series of successively greater length and breadth so that the several members of the post, say triple or quadruple, may converge toward the top and effectually brace each other, such posts being available for lamp and lantern supports, for telegraphic and insulated lighting lines and for insulated electric trolley-lines.

The lower portion of the several posts below the bottom of the plate are bent so as to give a greater hold in the earth. In many cases this bending is effectively done after the driving operation, and then the driving is done in an oblique direction and in some cases it may be done preliminary to driving, thus affording a resistance to the lifting of the post out of the earth, as in the case of line-posts of fences for inclosures for cattle-grazing grounds.

Referring to the drawings, 1 represents a post; 2, the web of the post; 3 and 4, the flanges or edges thereof; 5, the transverse plate; 6, the aperture in the transverse plate; 7, the tongue in such aperture, which tongue is made of such dimensions as when raised upward in the cutting or punching process that it leaves an aperture adequate to pass the post, and when pressed downwardly it impinges upon the web 2 of the post 1, and is slightly upset or compressed in so doing. The piercing or punching of the holes 6 in the plate 5 is done by a die, (shown in Fig. 12,) which has the portion of the die 11 (marked 10) raised above the plane of the rest, and the

punch 12 cuts the web upon this raised portion 10 of the die 11 with a shearing action and curls it upward before completing the aperture and expelling the waste metal or scrap through the die 10. The corrugations in the post 1 to retain the plates 5 in position are made by a compressing-tool (shown in Fig. 13 in detached view) in which there are grooves or corrugations 13, which grasp the web 2 of the post 1 and bend it into corrugation 14 above and below the plate 5, so that the inner and outer margins of the hole 6 in the plate 5 have a portion of the web 2 bent outward and inward pressing and firmly resting upon them.

The same operation of applying the implement shown in Fig. 13 may be made to bend the tongue down into the flat position, so that a single operation answers to attach the plate 5 to the post 1. The upper ends of compound or multiple posts may be either fastened by riveting or bolting or may be made by simply bending a single bar over upon itself, so as to form two posts from the same bar, or they may be secured to each other by any of the head or cross pieces required for use in supporting lamps or electric insulating devices.

Having described my invention and the operation thereof, what I claim is—

1. As an article of manufacture a post adapted for fencing and like uses provided with transverse braces, fitted in contact with both the internal and external surfaces of the post and secured by the impingement of the brace upon opposite sides of the bar or bars forming the upright of such post and by corrugations formed in the central part of the breadth of the upright bars above and below such transverse plate substantially as set forth.

2. A post consisting of two or more vertical or inclined bars of shape rolled metal, a transverse plate placed thereon, having apertures therein with tongues compressed against the bars, and corrugations in said bars, resting upon the sides of the transverse plate substantially as and for the purpose set forth.

3. Posts formed of two or more strips or bars of shape rolled metal with a series of plates of excessively smaller length and breadth secured transversely thereto by perforations provided with tongues compressed against said bars, and secured in position longitudinally on said bars by corrugations formed in the web of said bars upon opposite sides of said transverse plates, forming as assembled tapering compound columns of said bars, with transverse plates substantially as and for the purpose set forth.

4. The combination of one or more posts formed of rolled shaped metallic bar with a plate transversely secured thereon by a tongue of metal formed integrally with said plate, and forced into flat plane therewith and into firm impingement upon said bar substantially as set forth.

5. The combination of one or more posts formed of rolled shaped metallic bars with a transverse plate or plates fitted to make contact with both the internal and external surfaces of said bar or bars and secured in position by corrugations of portions of the center of breadth of said bars contiguous to said transverse plate or plates substantially as set forth.

FERDINAND JOHNSON.

Witnesses:

GEORGE COOKE,
ROBT. L. SINGER.

Correction in Letters Patent No. 551,770.

It is hereby certified that in Letters Patent No. 551,770, granted December 24, 1895, upon the application of Ferdinand Johnson, of New London, Pennsylvania, for an improvement in "Metallic Posts," an error appears in the printed specification requiring correction as follows, viz: In line 50, page 2, the word "excessively" should read *successively*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 31st day of December, A. D. 1895.

[SEAL.]

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.