

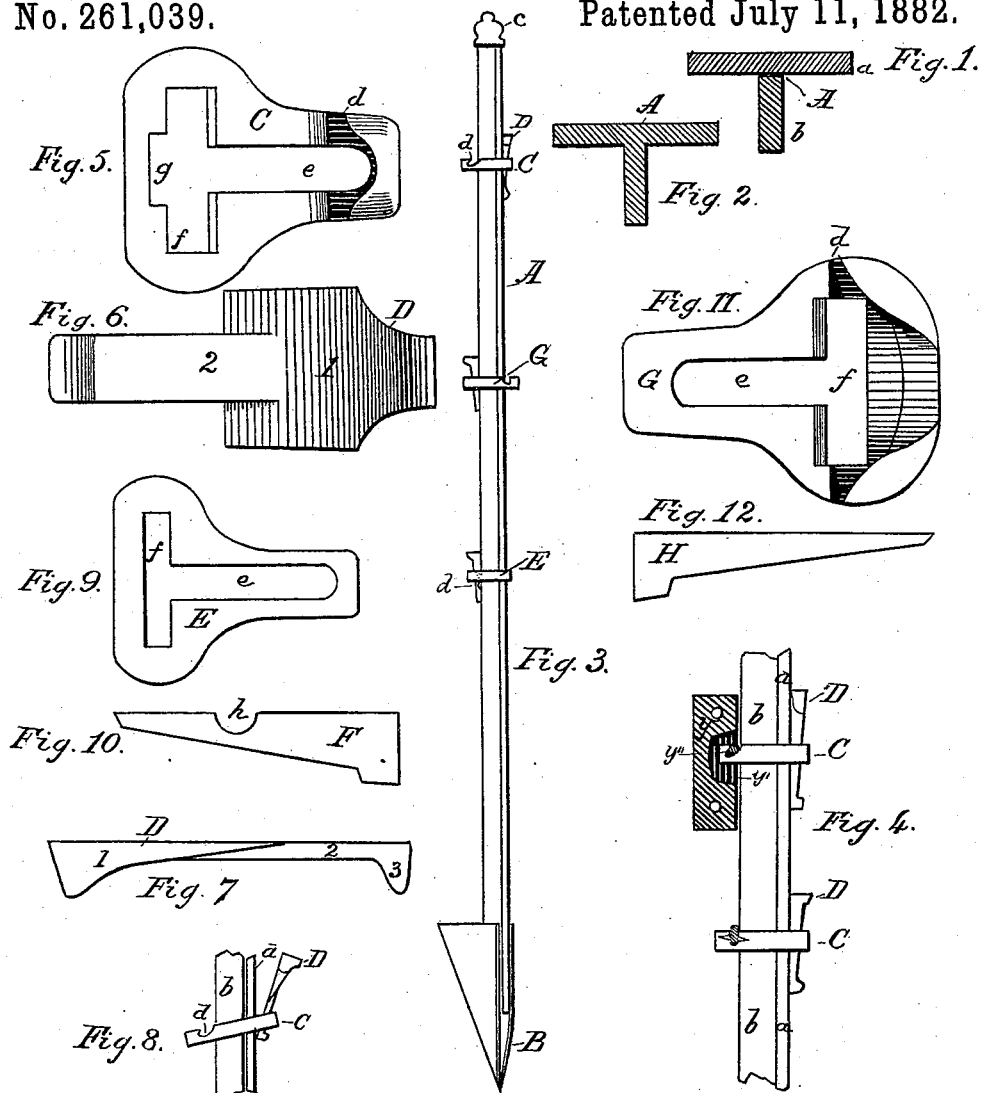
(Model.)

2 Sheets—Sheet 1.

E. R. POWELL.
METALLIC FENCE POST AND CLAMPING DEVICE.

No. 261,039.

Patented July 11, 1882.



Witnesses:

James A. Harney
T. S. Peck

Inventor:

Edwin R. Powell

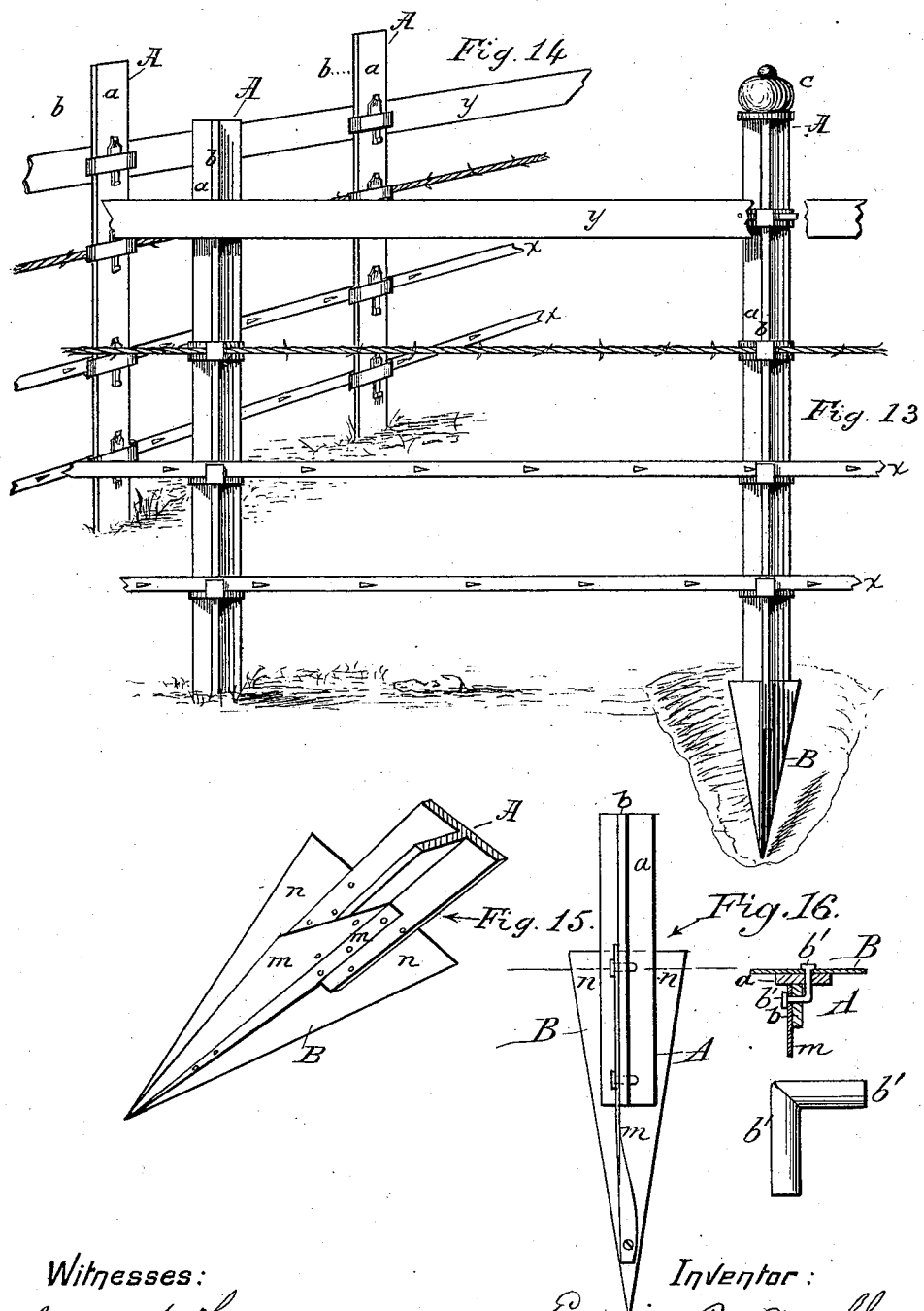
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UNITED STATES PATENT OFFICE.

EDWIN R. POWELL, OF BURLINGTON, VERMONT.

METALLIC FENCE-POST AND CLAMPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 261,039, dated July 11, 1882.

Application filed March 4, 1882. (Model.)

To all whom it may concern:

Be it known that I, EDWIN R. POWELL, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Metallic Fence-Posts and Clamping-Devices for the same, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in the construction of metallic fence-posts, and also the wire and clamping devices for securing the same to the post; and the objects of my improvements are, first, to provide a post which shall combine all the essentials of strength and durability with the least material, and of cheapness and simplicity in construction; second, a clamp or collar for strengthening the post and rigidly attaching the wire or rail to any point on either face of the post in the easiest and most reliable manner. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a transverse section of my post when composed of two metallic bars securely clamped together, as described. Fig. 2 is a transverse section of my post when constructed, if preferred, of T-iron. Fig. 3 represents a side elevation of the post and clamping devices. Figs. 4, 5, 6, 7, 8, 9, 10, 11, 12 are details of my several clamps and keys. Figs. 13 and 14 are elevations of a length of fence when complete. Fig. 15 is a perspective view of the shoe B. Fig. 16 is a front view of the bottom of the post, the shoe, the transverse section of same, and a side view of a right angle bolt-rivet to attach the shoe to the post.

A is the fence-post proper. It is made of metal—wrought-iron or Bessemer steel preferred—and is formed either of two flat parallel vertical bars, *a* and *b*, clamped together, the edge of one being placed against the center of the face of the other, so as to form a T in cross-section, as shown in Fig. 1, or it may be constructed of a single piece of T-iron, as represented in cross-section in Fig. 2, the width and thickness of the parts being proportioned to the strength required. As the strain applied to the fence is the greatest laterally, the width of the bar or arm (*a* in Fig. 1) which stands on a line parallel with the plane of the

fence is greater than the one which projects at right angles with its center. When constructed as in Fig. 1 the two bars are fastened together at the bottom by the central flange, *m*, of the shoe B, Fig. 15, and which is secured to both bars *a* and *b* by bolts, while the several clamps used for the attachment of the wire when keyed into place serve to rigidly secure the upper portion of the bars together. My post may be made in either way described, as my improvement consists in constructing it of the peculiar T shape specified for the purpose of enabling it to receive the greatest strain to which it can be subjected in the direction of its greatest strength without adding materially to its weight and cost, and so combine the greatest strength with the least material. If desired, the post may be surmounted by an ornamental cap, *c*, when complete.

To secure an easy and firm setting of the post A, I attach to its lower extremity the shoe B, Fig. 15, which is composed of two separate pieces of metal, *m* and *n*. These are designed to be attached to the post in the planes of their respective surfaces. These two pieces diverge upward from a point at their lower extremities, where they are bolted together, so that the flanges thus formed shall extend beyond each edge of what is known as the "bar" *a* and the outside edge of the bar *b*. The flange *n* is bolted to the exterior face of the widest bar and the flange *m* to the other bar, unless the post is made of two bars, as in Fig. 1, when the flange *m* serves to connect both bars together at the bottom by turning its inside edge at right angles, so that it can be securely bolted to both bars; or what I prefer as a means to secure the flanges *m* and *n* to the two parts or projections *a* and *b* of post A is the right-angle bolt or rivet *b'*, which goes through the parts *a* and *b* of the post and flanges *m* and *n* of the shoe B, thus securely attaching all the parts together by a single rivet or bolt, making such attachment strong and durable, as seen in Fig. 16. Thus simple in construction, the triple-flanged shoe B adds but little to the weight and cost of the post. At the same time it presents the largest lateral and transverse bearings, thus making the post comparatively immovable.

The metallic clamps C E G, Figs. 5, 9, and

11, are designed to clamp together the two parts of the post when constructed of the bars *a* and *b*, as shown in Fig. 1, and also to attach to the post the wire or rail used. The shape of these clamps is cruciform for the purposes of strength and to correspond generally with the formation of the post *A*, which they are slotted in the form of a *T* to fit, and on which they are intended to slide. Though resembling each other in their general appearance, they are made to vary according to the requirements of the wire attachment to the post.

The clamp *C* is specially designed to secure the wire to the outer edge of the transverse arm *b* of the post. In its upper side, at the end of the slot *e*, through which the arm *b* slides, a hollow, *d*, is made of a size sufficient to contain the wire, the interior side of the slot *f* being so beveled as to allow the wire end of the clamp to be tipped down, as shown in Fig. 8, to more easily receive the wire. A recess, *g*, is formed in the exterior side of the slot *f*, into which the key *D* is fitted. After the wire is inserted into the hollow *d* the clamp is restored to its horizontal position at the point where it is to be fastened to the post. The key *D* is then driven home, thereby firmly clamping the post and binding the wire firmly to it.

The key *D* is composed of two parts, as shown in Figs. 6 and 7, which are plan and sectional views of the same, respectively. The upper portion, 1, which rests against the exterior face of the arm *a*, is a broad wedge to correspond with the length of the slot *f*, to make the clamp more rigid in its attachment when the key is driven into place. The lower portion, 2, is a narrow tongue extending downward on the face of the bar *a*, and is designed to closely fit the recess *g* of the slot *f*. It has an outward projection, 3, at its lower extremity to prevent the liability of the key to slip upward in the working of the clamp, caused by the expansion and contraction of the wire, thereby tending to loosen its attachment to the post. If it is desired to attach the wire to the face of the bar on the opposite side of the post, the clamp is made as shown in *G*, Fig. 11, the wire-recess *d* being then formed on the opposite or larger end of the clamp. It can then be keyed to the post, as indicated in Fig. 3. If it is not required to bind the wire so rigidly to the post, or if so preferred, I use the clamp *E*, Fig. 9, passing the wire through the groove *h*, which is formed across the interior edge of the key *F*, Fig. 10, so that when the key *F* is in place in the clamp *E* the wire is securely held between the key and the post.

My improved wire *x x* (shown in Figs. 13 and 14) consists of a narrow metal strip, from the center of which, at chosen intervals, a line of barbs is made to project. These may readily be stamped out in the form of points by cutting them out diagonally and then bending them outward on each side alternately at right angles with the strip. By this device the entire strength of the strip is preserved, inasmuch as the outside edges of the strip are not weakened by cutting. Sufficient allowance can easily be made for its expansion and contraction, if desired, by allowing a loop in the strip to intervene between each length of fence and securing the strip to the post at the head of the loop. Should wooden rails be preferred, they can be readily attached to the post by forming a short shallow groove, *y'*, in the center of the rail at the point where it comes in contact with the post, over which a wire, *y''*, is fastened longitudinally. This wire can then be inserted into the hollow *d* of the clamp *C* or *G*, the depth of the groove allowing for the projecting end of the clamp, as shown in its cross-section *y*, Fig. 4. The rails are connected by means of dowels in their ends.

From the above detailed description the operation of my improvements is obvious.

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

1. A fence-post, *A*, composed of two metal bars, *a* and *b*, secured together in *T* form in cross-section by clamps and keys, substantially as described.

2. The combination, with a fence-post composed of metal bars *a* and *b*, clamped together in *T* form, of the pointed triple-flanged shoe *B*, formed of two separate parts, *m* and *n*, the part *n* secured to bar *b* and the part *m* to both bars *a* and *b*, substantially as described.

3. The clamp *E* and key *F*, having the wire seat *h* therein, in combination with the fence-post *A*, having the *T* form, as and for the purposes described.

4. The right-angle rivet-bolt *b'*, in combination with the shoe *B*, having flanges *m* and *n*, and the post *A*, formed in *T* shape from a single piece, or in two parts, *a* and *b*, substantially as and for the purposes described.

In testimony whereof I do affix my signature in presence of two witnesses.

EDWIN R. POWELL.

Witnesses:

CHARLES F. LEWIS,
JAMES A. HARVEY.