P. HAFFA.

Iron-Fence.

No. 164,830. Patented June 22, 1875.

FIG. 4

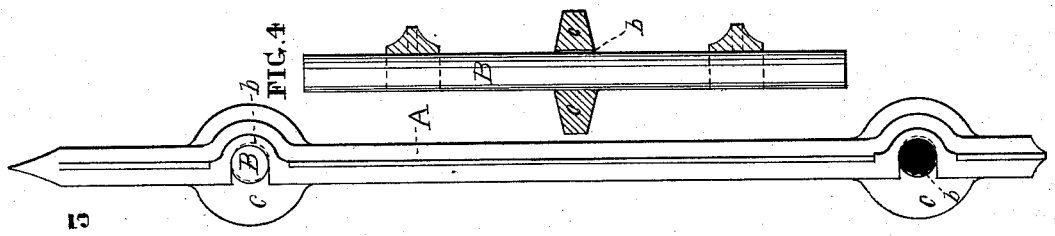

FIG. 5

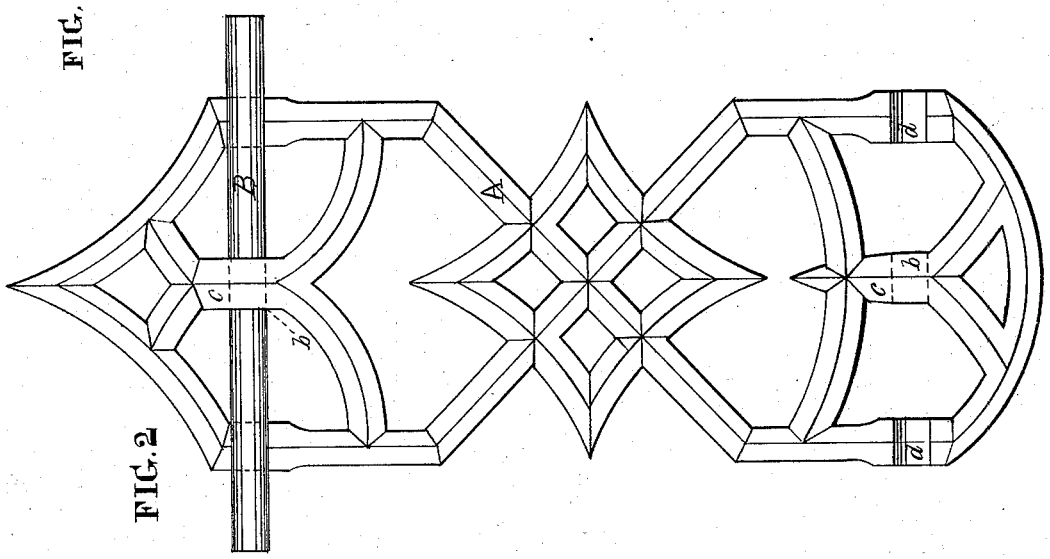

FIG. 2

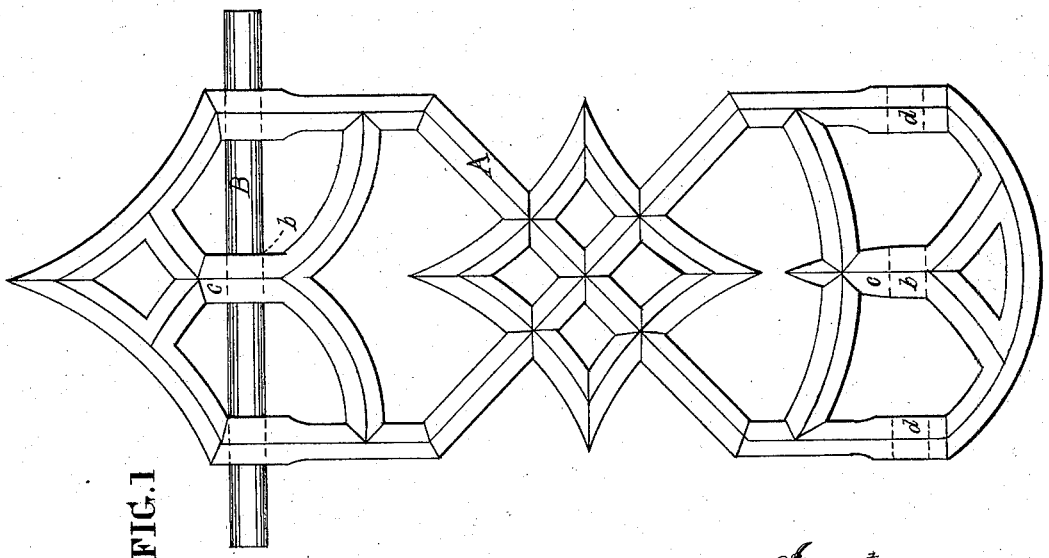

FIG. 1

Witnesses.
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PHILIP HAFFA, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN IRON FENCES.

Specification forming part of Letters Patent No. **164,830**, dated June 22, 1875; application filed April 3, 1875.

To all whom it may concern:

Be it known that I, PHILIP HAFFA, of the city and county of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Cast-Iron Fences, of which the following is a specification:

The object of my invention is the manufacture of a fence in which simplicity and cheapness are combined, and at the same time strength and firmness are secured.

My invention consists of a pale for a cast-iron fence, constructed with a full hole in the middle of its width, and a recess at each edge at its rear side for the reception of each rail, respectively, the recesses being so arranged out of line with the hole as to cause the rail to bind hard against their bottom and against the opposite side of the hole, whereby it shall be held firmly in its connection with the pale and still have the hole sufficiently large to admit of its passing through it for a ready connection with the pale, as hereinafter fully described.

In the accompanying drawings, Figure 1 is a front view of a pale, A, of a fence constructed with my improvement, there being the upper rail B in connection with the pale. Fig. 2 is a rear view of the same. Fig. 3 is an edge view. Fig. 4 is a cross-section at the line *x x* of Fig. 1.

Like letters of reference in all the figures indicate the same parts.

A is a pale of a fence, which may be constructed of any desired pattern. B is the top rail in connection with the pale A. Its cross-section is represented in the drawings of a round form, yet it may be of any desired form by making the openings in the rail which receive it of corresponding form. The pale has a horizontal hole, *b*, in its middle circular enlargement *c*, of a size which admits of the rail B being pushed easily through it, whereby its connection therewith may be speedily accomplished, and without any danger of breaking the pale, the secure fastening of the rail to prevent shifting or rattling being effected in the manner following. The edges of the pale are connected with the rail by means of recesses *d d*, which encircle one-half of the latter. The recesses are out of line with the hole *b* enough to cause the front side of the rail B to bind upon them, and the rear side of the same against the rear side of the hole *b* sufficiently hard to hold the rail firmly in place without any other fastening.

It must readily appear that the pale above described may be constructed very cheaply, as the recesses at its edges make their own cores, and the hole *b* with a plain and short core; and, besides, the panels of the fence may be put together very expeditiously either at the manufactory or on the ground without screws or other fastenings.

I claim as my invention—

The pale A, having for the reception of each rail a full hole, *b*, in the middle of its width, and a recess, *d*, at each edge, so arranged out of line with the hole *b* as to cause the rail to bind hard upon the bottoms of the recesses and on the opposite side of the hole, substantially in the manner and for the purposes set forth.

PHILIP HAFFA.

Witnesses:

ISAAC RINDGE,

STEPHEN USTICK.