A. J. MARKS.

Fence.

No. 217,391. Patented July 8, 1879.

Fig. 1.

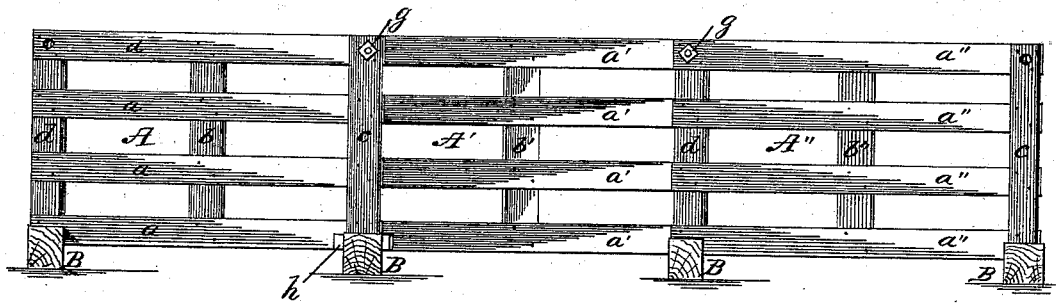

Fig. 2.

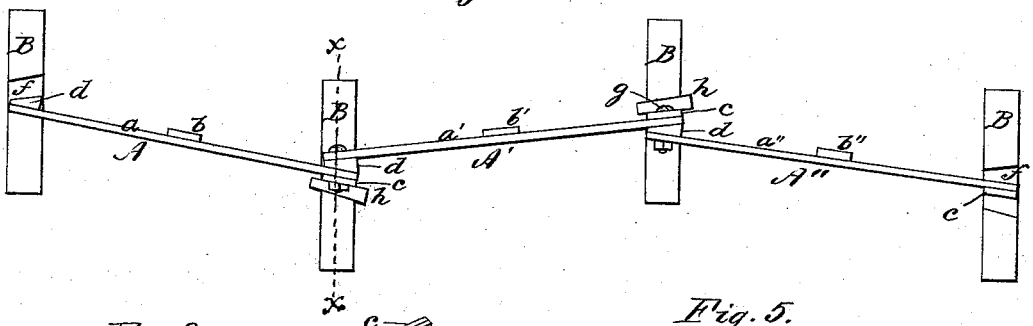

Fig. 3.

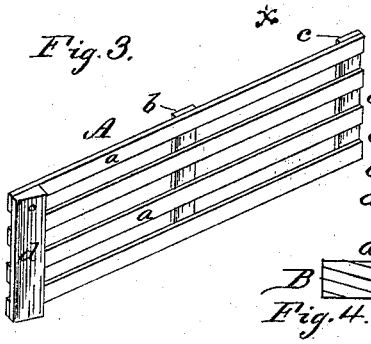

Fig. 4.

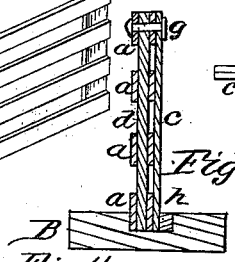

Fig. 5.

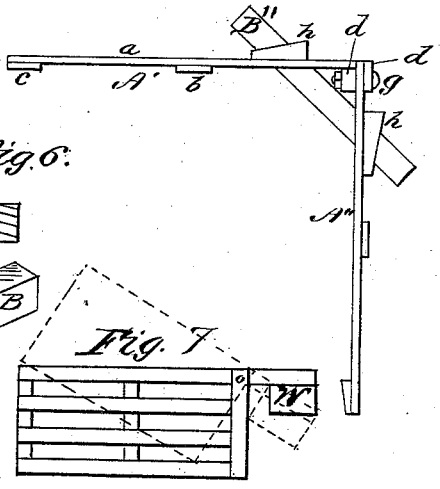

Fig. 6.

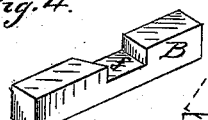

Fig. 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

ANDREW J. MARKS, OF BEAVER, PENNSYLVANIA.

IMPROVEMENT IN FENCES.

Specification forming part of Letters Patent No. **217,391**, dated July 8, 1879; application filed February 27, 1879.

To all whom it may concern:

Be it known that I, ANDREW J. MARKS, of Beaver, of Beaver county, in the State of Pennsylvania, have invented a certain new and useful Improvement in Fences, of which the following specification is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the fence. Figs. 2 and 5 are plan views, and Figs. 3 and 4 are perspective views of details. Fig. 6 is a vertical transverse section on line *x x* of Fig. 2. Fig. 7 is a side elevation of panel adapted to use as a gate.

This invention relates to improvements in Letters Patent No. 197,875, granted to me December 4, 1877; and consists in fitting the ends of the panels with vertical bars, and binding the panels together with horizontal bolts passed through the overlapping bars of the adjacent panels, the bottoms being joined by sills and wedges, as in my previous patent, the several parts being constructed and combined as hereinafter fully described and claimed.

My object is to produce a fence which can be used either as portable or permanent, is easily made, can be placed on any kind of land without digging post-holes, is strong and durable, and as cheap as it is possible for a fence to be. To these ends I construct as follows: The panels A A′ A″ are preferably made up of horizontal boards *a a′*, &c., having one or more cleats or binders, *b b′*, &c., between the ends, though they may also be made up of palings or otherwise. At the ends of each panel are, respectively, a vertical strip or bar, *c*, rectangular in section, and a vertical beveled strip or bar, *d*, as shown in Fig. 2.

As in my former patent, I use the transverse sills B, at such distances apart as will bring them under the end bars of the panels. These sills B have, as before, a transverse groove, *f*, with inclined faces, forming a wedge-shaped recess, as shown. A bolt-hole is cut through the top portions of the various vertical bars which form the ends of the panels, and bolts *g* fitted thereto of such length as to pass through both end bars of two adjoining panels.

The fence is put together in the following manner: The sills B are laid, first, simply on the ground, with the grooves uppermost. The panel A is then placed so that its end bars rest in the sill-grooves. The panel A′ is next placed so that its adjacent end bar laps the corresponding bar of panel A. Bolt *g* is passed through and its nut tightened firmly. Then the wedge *h* is driven into its place between the lapped end bars and wall of the sill. The next panel, A″, is placed in like manner, and so on, each panel occupying but a moment or two to place securely in position. The vertical bars at the panel ends provide a stiff surface-bracing to the whole panel, so that when fastened above by the horizontal bolts, and below by the wedges and sills, the entire fence is as rigid as if made of one piece. According to the angle of bevel on the bars *d*, the amount of "worm" may be varied; or, by making these bars rectangular, the fence may be built straight, depending then upon the transverse sills for its stability against wind-storms or shocks; but by giving sufficient bevel to bars *d*, the fence may be made strong enough to stand firmly against any storm or pressure, however great.

In practice I make all the horizontal and vertical bars of the fence out of one size of lumber, so that no work is required beyond sawing them to length and nailing them together. The beveled bars are best made by taking a suitably-sized piece of lumber and dividing it on a bevel, thus making two bars at once. All that remains is to make the sills and wedges. Thus the whole fence may be made indoors and carried to its place on the farm.

The construction is so simple that, having the lumber and a saw, a farmer can make and put up my fence in about the same time it would take him to dig post-holes for an ordinary fence.

I make a corner by turning the vertical bar *d* at right angles to its panel, and passing the bolt through, as shown. The bottom is fixed in a diagonal sill having wedge-shaped grooves at right angles to each other, the panels resting each in its own groove, and a separate wedge is driven into each.

To make a harvest-gate at any given panel, I simply attach a counter-balance, W, to the panel on the opposite side of the bolt by prolonging the top rail, or by a suitable fitting.

In this manner a perfect automatic gate is obtained. As soon as the wedges are knocked out or loose and the one bolt removed, all of which takes but a moment, the panel rises vertically on the other bolt, as a pintle, and the opening is made.

In the course of time, should the ends of the boards rot away, they can be cut off, refitted, and the fence thus made as good as new, with but a trifle of shortening, which can be compensated by the addition of one or more new panels. This cannot be done with a post-and-rail fence, on account of the posts being permanently placed at a certain distance apart.

I claim as my invention—

1. The herein-described fence, consisting of panels A A′, &c., each having the vertical rectangular end bar *c* and the vertical beveled end bar *d*, overlapping each other at an angle, and fastened together above by the horizontal bolts *g* and nuts, and below by the diagonally wedge-grooved sills B and wedges *h*, all substantially as described.

2. The corner-fence consisting of panels A′ A″, their lapping vertical end bars, horizontal bolt *g*, diagonal sill B″, and wedges *h*″, combined and arranged substantially as described.

In testimony whereof I have hereto set my hand this 8th day of February, 1879.

ANDREW J. MARKS.

Witnesses:
JOHN M. PATTERSON,
T. J. MCTIGHE.