A. J. MARKS.
Fence.

No. 197,875 Patented Dec. 4, 1877.

Fig. 1.

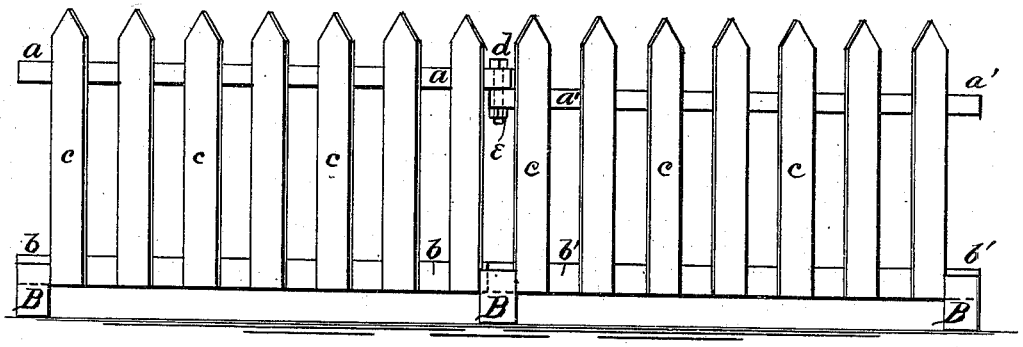


Fig. 2.

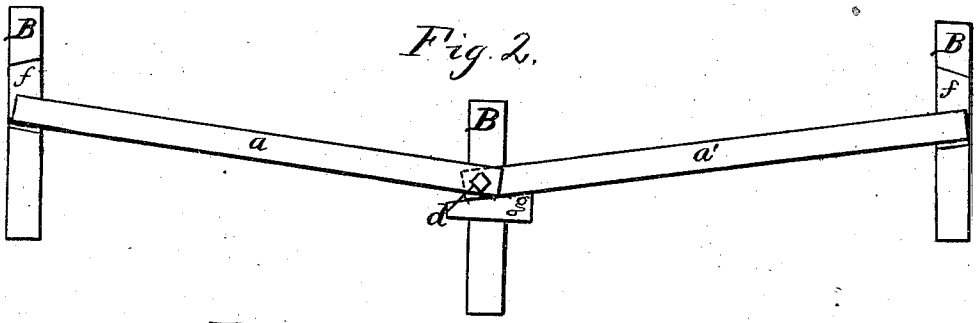


Fig. 3.

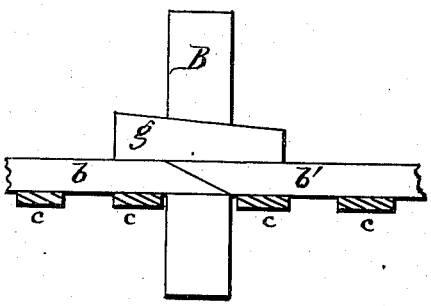
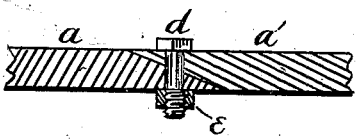


Fig. 4.



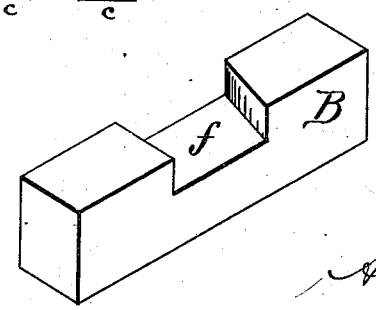


Fig. 5.

Witnesses.
F. A. Pollock.
G. Smith

Andrew J. Marks,
Inventor.
by Connolly Brown & Fiske,
Attorneys.

UNITED STATES PATENT OFFICE.

ANDREW J. MARKS, OF BEAVER, PENNSYLVANIA.

IMPROVEMENT IN FENCES.

Specification forming part of Letters Patent No. **197,875**, dated December 4, 1877; application filed November 2, 1877.

To all whom it may concern:

Be it known that I, ANDREW J. MARKS, of Beaver, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Portable Fences; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part hereof, in which—

Figure 1 is a front elevation; Fig. 2, a plan; Figs. 3 and 4, modified details; Fig. 5, a view of one of the grooved sills.

My invention relates to the construction of fences; and consists in panels of any form, having the usual top and bottom rails or stringers, but without posts, and connecting the panels by bolting the top rails together, and setting the bottom rails in grooves cut transversely in sills which rest upon the surface of the land, and then fixing them by driving wedges between the lapped ends of the bottom rails and the faces of the grooves, or substantially as hereinafter fully described and claimed.

In the drawings I show two panels, made up of the top rails *a a'*, bottom rails *b b'*, and palings *c*, or boards, or any other known style of fencing having top and bottom rails. I arrange the top rails *a a'* with their ends alternately overlapping, either by constructing them at different heights, or by overlapping bevel or dovetail. Down through the two ends thus lapped I pass a bolt, *d*, and draw the rails *a a'* tightly together by a nut, *e*. This causes the ends of the bottom rails *b b'* to lap, which lap may, if desired, be fitted by beveling or dovetailing, or otherwise. I then simply lay transverse sills B at such distances apart as that they will lie under the laps of the rails. These have a transverse groove, *f*, with inclined faces, (a wedge-shaped groove.) I then allow the laps of the bottom rails *b b'* to drop into these grooves, and drive in a wedge, *g*, between the rails and the inclined face of the groove, thus binding the rails tightly and immovably in the sills. Another panel is now added in the same way to those already erected, fixed in the same way, and so on till the fence is completed.

To take down the fence, it is simply necessary to knock out the wedges *g*, remove bolts *d*, and cart away the parts to any desired spot.

By giving the proper inclination to the grooves *f*, I can make a "worm-fence." The top rails may be all in the same horizontal line, and overlapped by beveling or otherwise, as in Fig. 3. The bottom rails may also lap in the sills, similarly as in Fig. 4.

Cleats or braces *h* may be applied to the panels, and any style of fence—board, paling, or picket, whether of wood, iron, or other material—may be adopted with equal facility, so that while using the same mechanical construction I can build any style of fence, from the common "worm" to the most elaborate and ornamental railing for a park or pleasure-ground.

Having no fastening but bolts *d* and wedges *g*, simplicity is fully realized and cheapness secured. On farms it is very valuable, not only for general use, but for such occasional purposes as changing or limiting pastures, inclosing hay-stacks, subdividing fields, &c.

Its construction gives employment for a farmer's idle time in wet weather, and a practical knowledge of only the commonest tools is required in building it. The whole fence may and should be constructed indoors, and, when completed, nothing remains to be done but to cart it to its destination and erect it.

Ground-posts being dispensed with, and the sills resting on the surface, the fence may be erected up or down hill, on side hills or in hollows, over sand, rock, or loam, and will fulfill its purpose just as well in one location as in another. The sills being two or three feet in length, the fence cannot be overturned.

It is cheaper than the commonest worm-fence, considering the labor involved in the two constructions, while there is no comparison of appearance between the two.

By disconnecting at one end and removing the wedge and sill at the other, (the sill being pushed back a little,) a panel may be swung back like a gate on its bolt or pintle, and thus a simple way of making an opening in the fence is secured for harvest-time.

It is to be particularly observed that the fastening of the panels at the base by means of the wedge-grooved block and wedge or key

has the advantage over other known means of fastening in this, that the fence may be arranged either as a worm-fence or perfectly straight, and held perfectly firm and rigid, yet under such conditions that any panel may be readily used as a gate and thrown back for the passage of stock into or from the inclosed space.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

The portable fence-panels, having their bottom rails separably connected together, and their top rails connected by a vertical bolt passing through their lapping ends, substantially as set forth, in combination with the sill B, having a wedge-groove, *f*, and the wedge or key *g*, as and for the purposes specified.

In testimony whereof I have hereto set my hand this 23d day of October, 1877.

ANDREW J. MARKS.

Witnesses:

THOS. J. MCTIGHE,

THOS. A. CONNOLLY.