(No Model.)

L. S. SAFFORD.

FENCE.

No. 484,245. Patented Oct. 11, 1892.

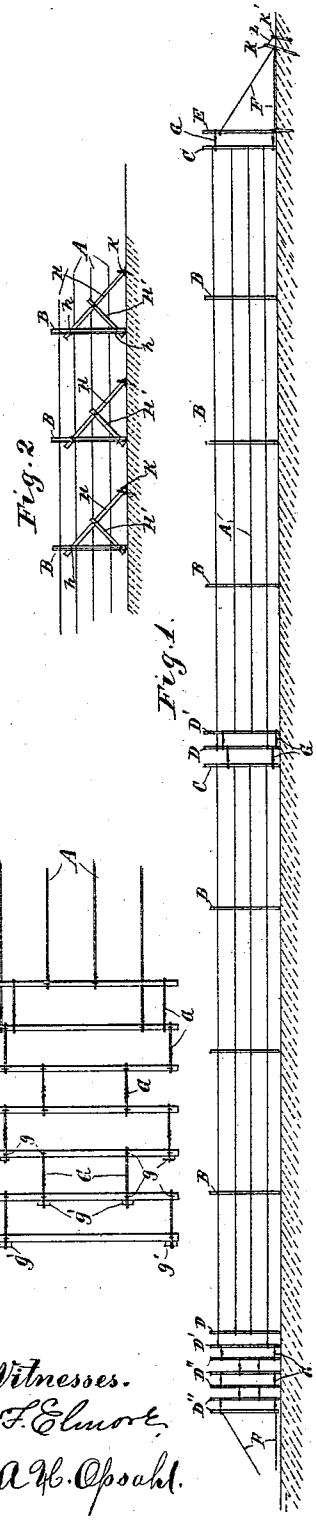

Fig. 1.

Fig. 2.

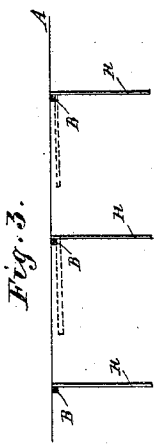

Fig. 3.

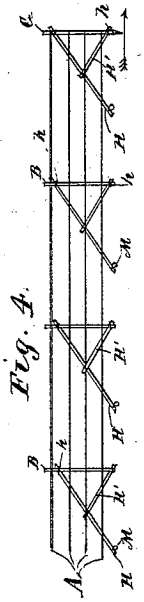

Fig. 4.

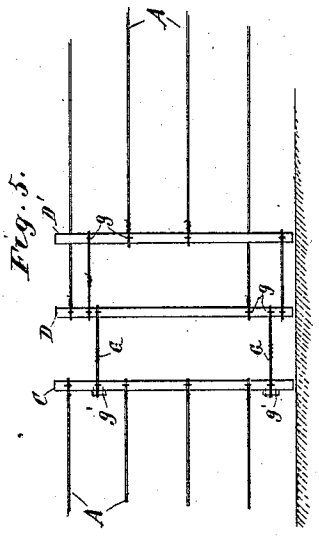

Fig. 5.

Fig. 6.

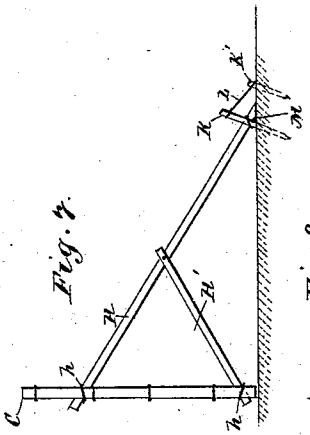

Fig. 7.

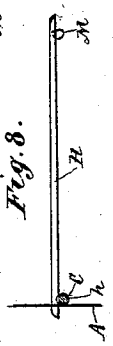

Fig. 8.

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UNITED STATES PATENT OFFICE.

LARKIN S. SAFFORD, OF KELSO, NORTH DAKOTA.

FENCE.

SPECIFICATION forming part of Letters Patent No. 484,245, dated October 11, 1892.

Application filed June 23, 1891. Serial No. 397,265. (No model.)

To all whom it may concern:

Be it known that I, LARKIN S. SAFFORD, a citizen of the United States, residing at Kelso, in the county of Traill, State of North Dakota, have invented certain new and useful Improvements in Portable Fences, of which the following is a specification, reference being had to the accompanying drawings.

My invention has for its object to provide a cheap and efficient fence which may be readily removed from place to place, as desired, by dragging the same over the ground and which when in its working position shall be firm and stable and readily adaptable to different conditions of temperature.

To these ends, as one feature of my invention, I employ to support the fence in its upright position lateral braces having pivotal connections with the posts which hold the wires or boards. The braces are chamfered or beveled on their ends and have portions extended beyond the posts. They are attached to the sides of the posts and preferably by wire loops passing around the posts and through staples on the braces. These braces may therefore be swung so as to stand parallel with the fence, and when the fence is then turned over the posts and wires will be supported by the braces lying flat on the ground without any kink or twist of the wires, and may be readily dragged over the ground with an action similar to that of an ordinary sled. When in this position, the braces become practically sled-runners upon which to transport the fence, the chamfered ends serving to cause the same to readily rise over and clear any ordinary obstruction.

In addition to the lateral braces above described, longitudinal or stay braces may be applied at the ends or at any desired intermediate points in the line of the fence to resist endwise strain. The stay-brace may either be similar to the lateral brace or may be composed of ordinary stay-wires. For securing the foot of the braces in working position I employ a pair of stakes set in line with each other and connected at their tops by a stay-wire or otherwise. The foot of the brace is attached to the innermost of the stakes by a wire loop and staple or otherwise. The outermost stake, with the stay-wire connecting the top of the same to the top of the innermost stake, serves to reinforce the latter with advantageous leverage, so that the two together will firmly secure the brace and the fence from displacement by lateral pressure in either direction.

So far as the braces are concerned they are equally serviceable whether the body of the fence be constructed of posts and boards or posts and wires. I preferably construct the fence of posts and wires, and an additional feature of my invention is directed to the independent adjustment of the outside and inside sets of wires. To this end I employ, in addition to the ordinary intermediate posts, two or more terminal posts at one end of each section of the fence, to which the wires are secured in pairs, one pair of the wires being also secured to all the intermediate posts and the other wires being loosely stapled to the intermediate posts, so that they may move freely through the same. In my preferred construction the upper and lower wires are secured to the intermediate posts and the other or inner set of wires are loosely stapled thereto. The inner sets of wires and their respective terminal posts at that end of the section may therefore be moved lengthwise of the outside or upper and lower wires. This construction is a great convenience in adjusting the wires to their proper tension.

In order to make the fence self adjusting under the contraction of the wires in cold weather, I also provide a compensating panel consisting of a series of two or more spring-posts looped together by wires so arranged that the connecting wires or loops uniting any two adjacent posts are located at unequal distances from the ends of the posts. The part of the post to which any particular wire is attached will spring and permit the wire to contract. Any desired amount of compensation may be provided by varying the number of the spring-posts. The terminal posts above described, which are movable with reference to each other, constitute of themselves a compensating panel of this kind between each adjacent pair of sections or between an end section and a fixed end post.

My invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout—

Figure 1 is a side elevation representing two adjacent sections of fence in its upright or working position. Fig. 2 is a perspective of a part of one of the sections. Fig. 3 is a top or plan view of the same. Fig. 4 is a plan view of the left end section shown in Fig. 1 as it would appear when laid down for dragging over the ground. Fig. 5 is a side elevation, on an enlarged scale, of the terminal posts and their connections uniting two adjacent sections. Fig. 6 is a similar view, on an enlarged scale, of one of the compensating panels. Fig. 7 is a side elevation or view, looking lengthwise of the fence, of one of the lateral braces, shown as applied to the right-hand terminal post of one of the sections. Fig. 8 is a top or plan view of the same.

A represents the wires; B, the intermediate posts; C, the right-hand terminal post, and D D′ the left-end or adjustable terminal posts.

E is a corner or end post. (Shown as fixed in the ground and held by a stay-brace F.)

G are the wire loops connecting the different pairs of adjacent posts at the ends of the sections, as D D′, D C, or C E. These loops work loosely through staples, as shown at *g*, and may be taken up or let out by removable keys, as shown at *g′*. All the wires are connected, as shown, to the right-hand terminal C. The upper and lower wires are secured to the adjustable terminal D and also to the intermediate posts B, being wrapped around the same or otherwise fastened, as shown in Fig. 8. The inside wires are secured to the terminal D′ and work through staples on the intermediate post. The outside wires work through staples on the terminal post D′. It is therefore evident that the inside pair of wires and the terminal post D′ may be adjusted lengthwise of the outside wires and secured by the insertion or removal of key-pieces from the loops. In a similar way the terminal post D may be adjusted with reference to the terminal post C of the next-adjacent section.

Inspection of Fig. 5 or 6 will show that, in view of the positions of the fence-wires A and the loop-wires G, the ends of the post D would spring on the contraction of the top and bottom wires and that the center of the post D′ would yield in like manner on the contraction of the inside wire. This compensation is readily multiplied by additional spring-posts, as shown at D″ in Fig. 6.

H H′ is the lateral brace, of which the part H′ may be pivotally secured to the part H, as shown in Figs. 2 and 7. *h* are the loops encircling the post and working through staples on the parts of the brace and serving to pivotally connect the brace and the post. The fence ends of the brace overlap or extend beyond the post, as shown in Fig. 7.

K K′ are the pair of stakes, and L the stay rod or wire connecting the tops of the same for securing the foot of either the lateral brace H H′, as shown in Fig. 7, or the longitudinal stay-brace F, as shown in Fig. 1.

M is the loop at the foot of the brace, working through a staple therein and encircling the inner stake K.

A lateral brace such as is shown in Fig. 7 is applied to as many of the posts, either terminal or intermediate, or both, as may be desired, to support the fence against lateral pressure. In case the fence be built over undulating ground it may be necessary to apply a stay-brace F at other points in the line of the fence than at the extremities or corners in order to effect the proper dip and resist the endwise strain.

The fence may be constructed in sections of any desired length convenient for handling.

Whenever it is desired to move the fence, the stakes K K′ and the corner-post E are withdrawn. The lateral braces are then folded backward in line with the fence, as shown in the dotted lines in Fig. 3, and the section is turned down, as shown in Fig. 4. A team may then be applied to the end of one section and the fence be dragged without injury to any other point where it is desired to set the same up into working position.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a portable fence, the combination, with the posts for holding the wires or boards, of lateral braces applied to the sides of the posts, having pivotal connections therewith and having their fence ends extending beyond the posts, whereby when the braces are swung lengthwise and the fence is turned down the body of the fence will rest entirely on the braces, clear of the ground, and without distortion of any of its parts, substantially as described.

2. In a portable fence, the combination, with the posts for holding the wires or boards, of the lateral braces having pivotal connections with the posts and provided with chamfered or beveled extremities, whereby when the fence is turned over on the braces they will act like sled-runners to support and permit the fence to be dragged over the ground.

3. A post-and-wire fence having in addition to the ordinary intermediate posts two or more terminal posts at one end to which the wires are secured in pairs, one pair of the wires being also secured to all the intermediate posts and the other wires loosely stapled thereto, whereby the wires may be tightened in pairs, substantially as described.

4. A post-and-wire fence having in addition to the ordinary intermediate posts two or more terminal posts at one end, the top and bottom wires being secured to one of said terminal posts and all the intermediate posts, and the intermediate wires loosely stapled to the intermediate posts and secured in pairs to other terminal posts, whereby the

intermediate wires may be adjusted lengthwise of the top and bottom wires, or the latter on the former, substantially as described.

5. In a post-and-wire fence, a compensating panel consisting of a series of two or more spring-posts looped together by wires, the said connecting-wires uniting any two adjacent posts being located at unequal distances from the ends of the posts, whereby the posts will spring or yield, substantially as described.

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