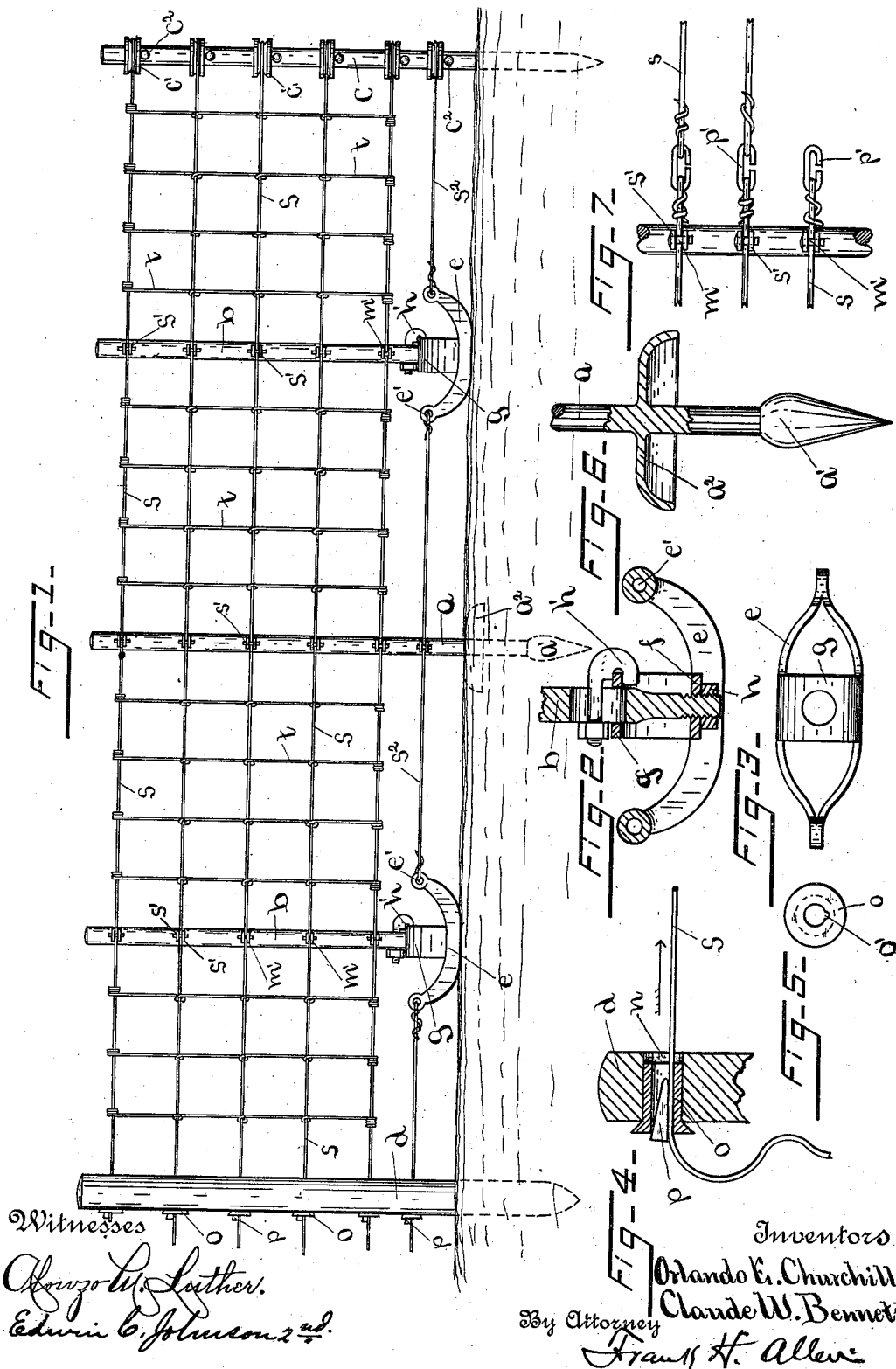


(No Model.)

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FENCE.

No. 519,420.

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UNITED STATES PATENT OFFICE.

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FENCE.

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To all whom it may concern,

Be it known that we, ORLANDO E. CHURCHILL and CLAUDE W. BENNETT, both citizens of the United States, and residents of Penn, Cass county, Michigan, have invented certain new and useful Improvements in Fences, which improvements are fully set forth and described in the following specification, reference being had to the accompanying sheet of drawings.

The object of this invention is to produce a fence, the greater portion of which shall be composed of wire, which fence shall be so constructed as to admit of its being readily transported, substantially as a whole (or in convenient sections) from one place to another and set up therein, without the necessity of taking the same entirely apart to be put together again piece by piece after transportation, as now practiced, and which fence, after having been properly assembled, set up and adjusted in the place desired shall be as strong and durable as fences of this class of common construction.

In the drawings Figure 1 is an elevation of our fence properly assembled and set up and shows the several styles of posts employed in its construction with the wire properly strung thereon and secured thereto. Fig. 2 is a central sectional view of what we term a post-sled and shows the manner in which a post is supported thereon. Fig. 3 is a plan or top view of one of said sleds. Fig. 4 is a sectional view of a portion of a post to which the wires are fastened after being stretched and illustrates the manner in which we preferably secure said wires thereto. Fig. 5 is an end view of a metal thimble usually placed in the post illustrated in Fig. 4, in which thimble the wire is secured and held from slipping. Fig. 6 is a view, partly in section, of what we term our anchor post and Fig. 7 illustrates principally the means we preferably employ for coupling together the adjacent ends of the horizontal wires, hereinafter fully described.

Referring to the drawings, the letter *a* indicates our anchor post, *b* a post the upper portion of which is similar to that of post *a*, said post *b* being supported as hereinafter described and *c* indicates the style of post we usually employ at all corners and angles and

d a larger post, one or more of which are employed (as the case may demand) in putting up a fence of our improved form.

The posts *a—b* and *c* are preferably made of metal and for lightness may be hollow while the post *d* is generally wood although any materials desired may be employed, the above being mentioned simply as being the most suitable. We have already referred to the fact that post *b* is peculiarly supported and we will now explain more fully the construction of such support. Supports of sled form are provided made of metal or wood (preferably metal) the same consisting of two parallel runners, *e* the ends of which are turned up substantially in sled form and an eye *e'* punched therein, the shape of said runners being clearly seen in Figs. 2 and 3. Supported upon or between the runners *e* and extending in a direction at right angles to the general direction of said runners is a cross piece, or plate, *f* having a hole in the center thereof to receive the lower end of the post *b*. Supported by said runners *e* and located directly over the plate *f* is a brace *g* which brace is substantially semi-circular in form and has a hole in its highest portion through which the post *b* enters, said hole being in direct vertical alignment with the hole above referred to in plate *f*. Assuming that a sled support as above described is constructed, it can be readily seen that, should a post *b* be inserted through the holes in brace *g* and plate *f* and properly secured against vertical displacement, said sled support will serve to hold said post in an upright position. To further insure said post against vertical displacement an elongated slot is cut in the same, substantially coincident with brace *g*. The lower end of post *b* is threaded to receive a nut *h*. A hook *h'* is provided which fastens over the brace *g*, the shank of said hook being sufficiently long to extend through the slot in post *b* and receive a nut on the threaded end thereof (see Fig. 2).

When it is desired to assemble a post and sled of the above construction the shank of hook *h'* is inserted in the slot in post *b* and the lower (threaded end) of said post passed through the hole in brace *g* and from thence through the hole in cross plate *f* directly beneath. Post *b* is adjusted vertically in said

holes, to fix the line of fencing at the proper height, and is then firmly clamped to the sled by screwing home the nut *h* and also the nut of hook *h'*.

5 Posts *a* are designed to be driven into the ground and they are therefore provided with points *a'* or may simply be sharpened. Each post *a* is also formed with an enlargement *a²*,
10 formed substantially as an inverted basin which, when the post is driven into the ground enters sufficiently to form a substantial support and prevent the post from being too easily withdrawn from the ground. When driving the post home the dirt may be
15 removed, if necessary, to a depth sufficient to receive the enlargement *a²* and then returned to place and tamped down on top of said enlargement. The corner posts *c* are similar in appearance to the anchor post *a*, they
20 having pointed or sharpened ends formed with or without the basin shaped piece *a²*. To allow the wire to draw freely around these corner posts *c*, when tightening said wire, they are provided with as many grooved pulleys *c'* as there are wires to be supported, a
25 pin *c²* being inserted in said post beneath each of the pulleys to hold said pulleys in the desired position and prevent any tendency to slip downward on the post.

30 Each of the posts *a—b* and *c* is provided with means for supporting the horizontally extending wires *s* of the fence, which means of support consists of several pairs of small projections *s'* cast on, or secured to, each
35 post and equaling in number the number of wires it is desired to support. The projections of each pair are located sufficiently far apart to permit of the insertion of a wire *s* between them and each pair of projections is provided with vertical holes in alignment
40 with each other. After the wire has been inserted between the projections, a bolt or pin *m'* is dropped into the holes thus effectually securing said wire to the post, as most clearly illustrated in Fig. 7.

45 We locate at each end of our fence, or at suitable intervals throughout its length, a large post *d* (preferably wood) from which post the horizontal wires are stretched and to which the ends of such wires are secured
50 after having been stretched. A number of horizontal holes *n* are drilled in post *d* equal in number to the number of wires which are to be secured. These holes *n* are of suitable
55 size to receive a shouldered thimble *o*. The thimble *o* is driven into the post *d* up to its shoulder from the side opposite to that from which comes the strain or pull of the wire. The wire is then passed through thimble *o*
60 and it will be seen by reference to Fig. 5 that a small groove *o'* is cut in the lower portion of said thimble hole in which groove the wire lies. After being stretched tightly, a wedge or key *p* is introduced from the shoulder end
65 of the thimble and driven into the same, thus forcing the wire down into the groove *o'* and it will be readily understood by reference to

Fig. 4 that the greater the pull or strain of said wire (the strain being in the direction of the arrow) the more tightly will it be wedged
70 in the thimble but any tendency of the thimble to be drawn through its hole is prevented by its enlarged or shouldered end. Should the post *d* be of metal instead of wood, the
75 thimble *o* will not be required it being simply necessary to provide a hole therein with a groove in its lower portion substantially like the hole through the thimble *o*.

Having now described the various posts used in the construction of our fence we will
80 now proceed to describe the wire portion of the same. The horizontal wires (here shown as five in number) are first stretched upon the posts *a—b—c* and *d* as shown. These horizontal wires support vertical wires *t* strong
85 thereon, said vertical wires being secured to the top and bottom horizontal wires by being twisted around the same, and a number of loops are formed at suitable intervals between said top and bottom wires through
90 which loops the intervening horizontal wires pass (see Fig. 1) and are thus in a measure supported. It will be seen that, when the horizontal and vertical wires are thus connected together, a complete net work of wire
95 is formed. Separable joints or connections may be provided at stated distances apart as illustrated in Fig. 7. The adjacent ends of the horizontal wires which it is desired to connect may be bent back and twisted upon
100 themselves and a loop thus formed in the end of each wire. A double hook or link *p'* is then introduced, as shown in Fig. 7 and it will be seen by reference to said figure that when said link is inserted the meeting ends of
105 the horizontal wires are securely connected.

Having now fully explained the several elements composing our fence we will assume that it is desired to set up the same.

The posts *a—b—c* and *d* are first placed
110 in the desired positions, the posts *c* provided with pulleys *c'* being used at all corners and the posts *a—b* being preferably set as shown in Fig. 1. The posts *b* are adjusted as above explained to bring the projections *s'* to a com-
115 mon height. The net work of wires consisting of the horizontal wires *s* and the vertical wires *t* are next placed in position, one end of each horizontal wire being securely fastened to one of the posts *d* and the free end
120 of each wire, after having been stretched, being fastened by means of the wedges *p* to the post, *d*. Each horizontal wire is introduced between the projections *s'* on posts *a* and *b* and secured therein by the bolts *m'* as
125 described and each wire is also placed on its individual pulley on post *c* and around which it freely renders when being stretched. The runners *e* of the sleds are connected by wires *s²* secured to posts *b* and *c* and *d* in the same
130 manner as the horizontal fence wires. When said wires are released from posts *a*, *c* and *d* the entire fence may be moved in its upright position the same riding on its sleds, the post

6 during such operation serving to support the entire fence thus obviating the necessity of taking the entire fence apart when it is desired to remove the same a reasonable distance only. When the desired location is reached, posts *a-c* and *d*, which have previously been pulled up, are once more set in the desired positions and the horizontal wires stretched and secured thereto as before, the whole operation being quickly and readily performed.

Our fence, as a whole, may be cheaply produced, is very strong and light, is especially valuable for its ease of portability and very simple in its construction.

Having described our invention, we claim—
1. In combination with fixed posts, portable posts having supports of sled form as set forth, and horizontal wires connecting said posts; the portable posts being adjustably mounted upon their supports, as and for the purpose specified.

2. In combination with fixed posts *a*, and end posts *d*, intervening portable posts mounted upon supports of sled form, and wires connecting said posts; the end posts being provided with thimbles and binding keys substantially as specified.

3. A post for a portable fence, mounted upon runners of sled form having cross-bars or braces through which said post passes, said post having a vertically-adjustable engagement with said braces, substantially as described.

4. A post, having an opening, in combina-

tion with a support therefor, an upwardly-extending brace, engaged by said post, and a hook, having its shank extending through said opening in the post and engaged by a clamping nut and its head engaging said brace, substantially as shown and described.

5. A post, having an elongated opening, in combination with a support therefor, said post having a vertically-adjustable engagement with said support, and a hook, having its shank extending through said opening in the post, and engaged by a clamping nut, and its head engaging said brace, substantially as shown and described.

6. A post for a portable fence, having a threaded lower end, in combination with supports for said post, said supports having a cross-bar, formed with a threaded opening engaged by the threaded end of said post, a brace having an opening through which said post extends, and a clamp engaging said brace and post, substantially as shown and described.

7. As an improvement in wire fences, fixed posts, as *a* and *d*, and the intervening movable posts mounted on runners, wires, attached to said posts, and wires connecting said runners of the movable posts, all arranged, combined and operating substantially as described and for the purposes specified.

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CLAUDE W. BENNETT.

Witnesses:

LEWIS CRANDALL,
J. M. WRIGHT.