

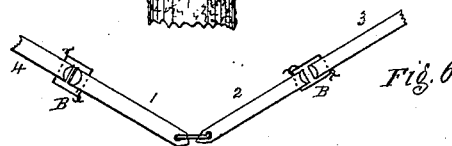
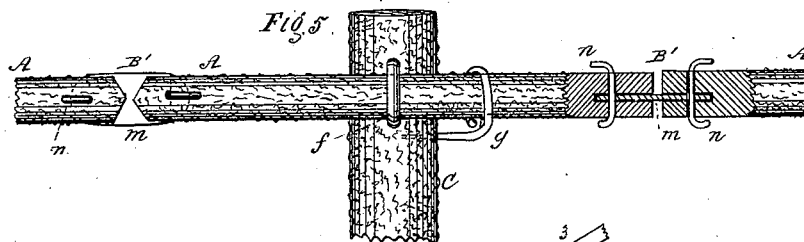
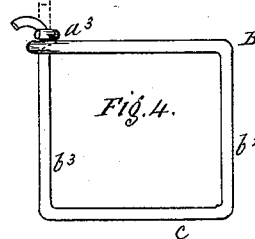
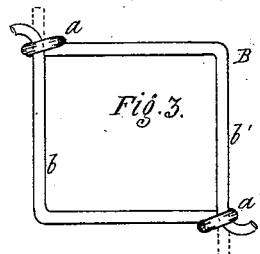
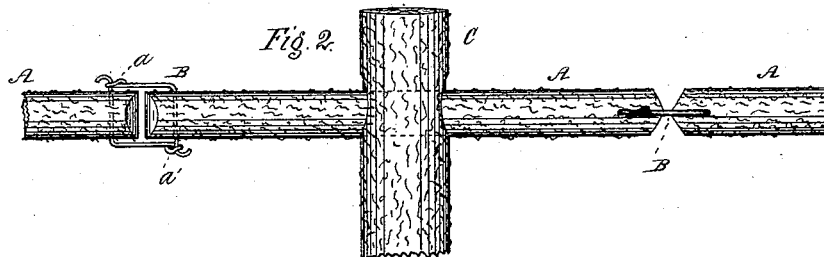
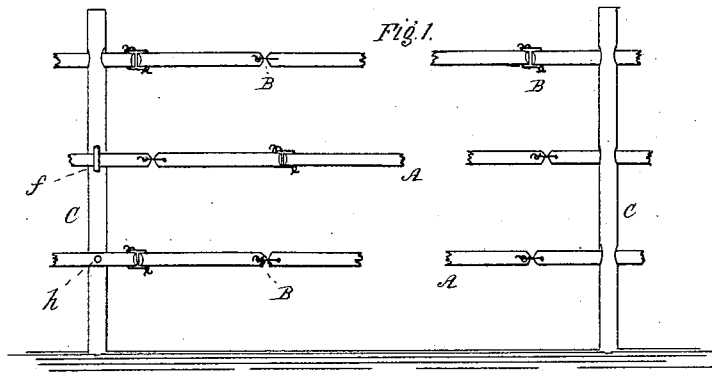
(No Model.)

W. E. BROCK.

FENCE.

No. 304,496.

Patented Sept. 2, 1884.



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UNITED STATES PATENT OFFICE,

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FENCE.

SPECIFICATION forming part of Letters Patent No. 304,496, dated September 2, 1884.

Application filed December 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BROCK, of Dunellen, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Fences; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The object of this invention is to utilize branches of trees, brush-wood, and other small and refuse timber for the construction of fences. Timber of this description has not heretofore been applicable for fences as the same have hitherto been constructed, and has been either wasted or used for fuel; but by my invention this waste product, consisting of thin pieces and short lengths, can easily and at little expense be utilized in constructing neat, strong, and durable fences, which are as desirable in all respects as those constructed of valuable timber. My said invention is especially useful in those localities where the timber growing upon the lands consists chiefly or entirely of underbrush, and in such localities is adapted to take the place of the more expensive and less durable wire fences which are so extensively used; but it is also useful in localities which are more heavily timbered, as those portions of the timber which have usually been allowed to go to waste can be used in the construction of fences at little expense, and the more valuable portions hitherto used for making fences can be used for other purposes or sold.

The invention consists in a fence having its bar or bars made of separate short lengths of wood, connected at their ends by wire links, said lengths each being beveled or rounded at both ends, and the bars thus constructed being attached to upright posts, all as hereinafter particularly set forth and described.

In the accompanying drawings, Figure 1 represents a portion of a fence constructed according to my invention. Fig. 2 is a portion of one of the bars. Figs. 3 and 4 are detached views, on an enlarged scale, of the wire links employed; and Fig. 5 is a portion of a bar and a post, showing modifications of the devices for connecting the lengths and attach-

ing the bars to the posts. Fig. 6 is a diagram, hereinafter explained.

Similar letters of reference indicate the same parts in all the several figures.

A A A are the separate short lengths of which the bar is composed, and which may be pieces of branches or of underbrush, or other small timber which has hitherto been allowed to go to waste. These pieces are sawed into suitable lengths of, say, twelve to twenty-four inches, more or less, and both ends of each are beveled or rounded, as shown, and at a short distance from each end a hole is bored through them transversely to receive the shanks of wire links B or B'. The wire links B B may be made either in one piece or in two pieces, as shown in Figs. 3 and 4. The preferred form is shown in Fig. 3, the same being composed of two separate but similar pieces of wire, each of which is bent at right angles at about its center, and each has a loop, *a a'*, formed at one end. In applying this link the shanks *b b'*, which are straight, are passed through the holes above mentioned in the ends of adjoining lengths A, and the end of the one passed through the loop *a* or *a'* of the other, and then turned or twisted over said loop, as shown. The form shown in Fig. 4 is similar, except that it is made in one piece instead of two. In applying this the shank *b²* is passed through the hole in one of the lengths A. The portion *c* is then bent at right angles to *b²*, and the shank *b³* bent at right angles to the latter and passed through the hole in the adjoining length A, and the end of the same passed through the loop *a³* and turned back or twisted, as in the former case. The adjoining lengths A are thus pivoted to each other, and the bevels on opposite ends of each are set at right angles to each other, and each joint arranged to swing at right angles to the next joint on either side thereof, thereby imparting a great degree of flexibility.

C C represent the posts, which may be of the ordinary kind, and set in the ground in the ordinary manner, and may be either round or angular in cross-section. Ordinarily I attach the bars to the posts by passing them through mortises cut in the latter in the ordinary manner; but, if preferred, they may be

attached by means of staples *f*, or by a hold-fast, *g*, or ring having a shank adapted to be driven into the post, as shown in Fig. 5, or they may be attached by nailing them to the posts, as at *h*, Fig. 1.

The bevels on the ends of each length *A* being at right angles to each other, as shown, and alternate joints being pivoted so that they swing in directions which are at right angles the one to the other, as described, a great degree of flexibility is obtained, and whenever any pressure is brought to bear upon a bar from any direction it will yield to such pressure, and hence the strain will be mainly in a longitudinal direction, or lengthwise of the bar, as in the case of a chain, so that comparatively very light timber may be used for the bars. This construction also admits of the bars being very closely and compactly packed into convenient form for transportation, as may be seen by reference to the diagram, Fig. 6, by which it will be seen that the lengths marked 1 and 2 will lie side by side when folded, and that 3 will lie on top of 2 and 4 on top of 1, and so on for any number of lengths, which can thus be folded into a rectangular bundle.

In Fig. 5 is shown a modified form of link, consisting of a flat piece of metal, *m*, let into the ends of adjoining lengths *A*, and provided with perforations near its ends, through which the pins *n n* are passed, the ends of the latter

being turned back, as shown, after being inserted.

I am aware that a fence has been made of lengths or strips of wood, barbed and joined at their ends with wire links or couplings; but in that the ends are not beveled, but cut off square, and the wire couplings would have to be of undue length, (thereby weakening the fence,) in order to permit the lengths to be folded side by side. Moreover, in said fence upright strips of wood are attached to the links or couplings, and consequently the fence is not flexible under a vertical pressure. Such a construction I do not claim, but hereby disclaim, one object of my improvement being to make the fence flexible both horizontally and vertically, or in any direction between the two, and to bring the ends of the lengths close together.

What I claim as my invention is—

A fence-bar composed of separate short lengths of wood, *A*, having their ends beveled at right angles the one to the other, said lengths being connected by wire links *B*, constructed as described, so that adjoining lengths swing in directions that are at right angles to each other, as and for the purposes set forth.

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