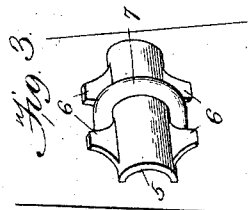
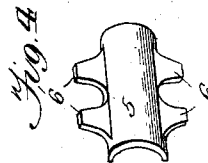
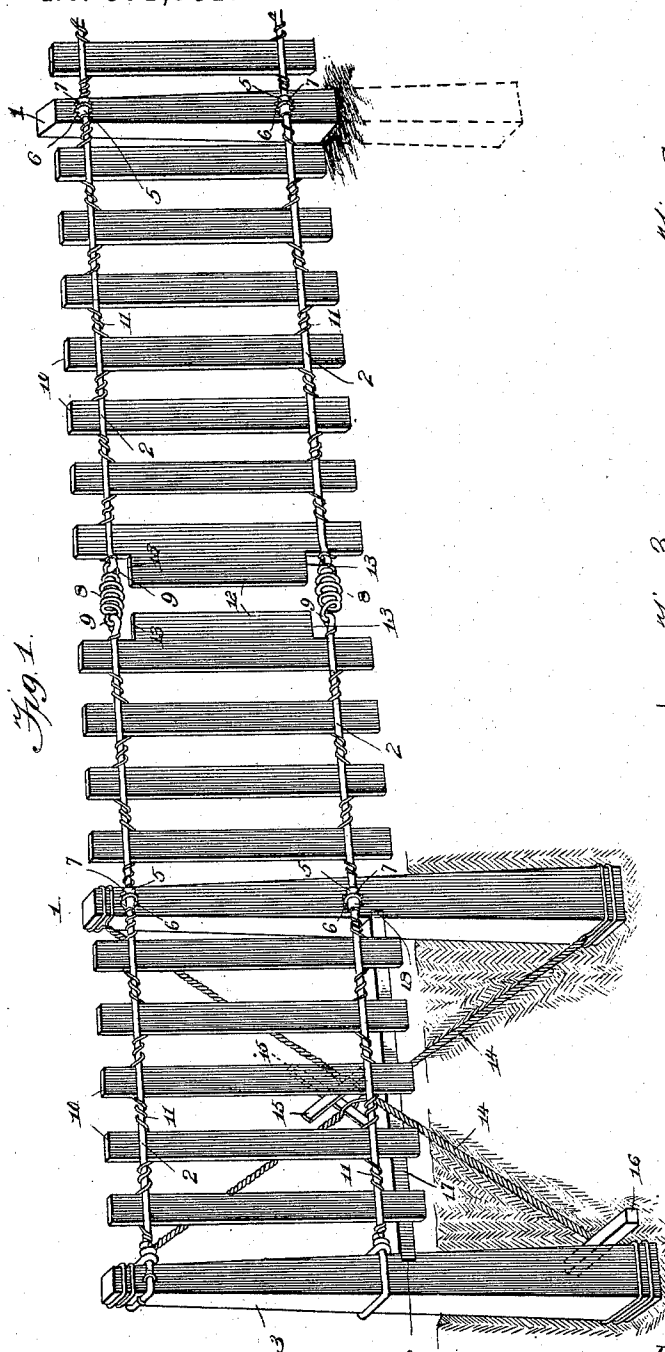


(No Model.)

W. F. BEALS.
FENCE.

No. 571,331.

Patented Nov. 17, 1896.



Witnesses
John C. Shaw.
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By *his* Attorneys.

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UNITED STATES PATENT OFFICE.

WILLIAM F. BEALS, OF DECATUR, ILLINOIS.

FENCE.

SPECIFICATION forming part of Letters Patent No. 571,331, dated November 17, 1896.

Application filed March 9, 1895. Serial No. 541,171. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BEALS, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented a new and useful Fence, of which the following is a specification.

This invention relates to fences of that class which embody in their organization line-wires secured at intervals in their length to properly-disposed posts along the prescribed line of fencing, pickets interposed between the fence-posts, and binding-wires for attaching the pickets to the said line-wires; and the purpose of the invention is the provision of a fence which will maintain a nearly uniform tension upon the line-wires at all times and under all conditions of atmospheric changes, and in which the terminal posts will be firmly and bracingly sustained against the linear tension on the fencing, and in which the line-wires will have positive connection with the fence-posts in such a manner as to admit of their longitudinal movement, due to contraction and expansion, without undue wear against the fastening devices by means of which the said line-wires are attached to their supporting-posts.

The improvement consists, essentially, of the novel features and the peculiar construction and combination of the component parts of the structure, which hereinafter will be more fully set forth, and recited in the claim, and which are shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a length of fencing embodying the essential principles of the invention, the bracing-stays for the terminal posts being clearly indicated. Fig. 2 is a detail view of the tension or compensating spring, which is interposed in the length of the line-wires. Fig. 3 is a detail view showing the means of attaching the line-wires to the fence-posts on a larger scale. Fig. 4 is an enlarged detail view of the fastening by means of which the line-wires are secured to the fence-posts.

In constructing a fence embodying the essence of the present invention the supporting or fence posts 1 are erected along the prescribed line on which it is proposed to construct the fencing in any desired manner. The line-wires 2, which will be of proper gage

to insure stability to the fence, are strung or attached to the posts 1, near the upper and the lower ends thereof. The ends of the line-wires 2 are firmly secured to the terminal post 3 in any desired manner, preferably by being passed around the same and having their ends twisted upon or around the main wires. The fastening for securing the line-wires to the fence-posts is preferably an elongated plate 5, which is concaved or hollowed between its edges on the side designed to be placed against the post, and pairs of lugs 6 project from the edges of the said plate at diametrically opposite points and midway between the ends of the said plate. This fastening is placed with its concave side over the line-wire, and a staple 7 is driven over the plate 5 into the fence-post and serves to secure the said plate in position, the members of the staple passing in the space between the pairs of lugs 6, so as to prevent longitudinal displacement of the plate 5. This plate provides an extended bearing-surface for the line-wires and prevents the latter from wearing and breaking at points opposite the post, which frequently happens on account of the wearing away of the line-wires by their frictional engagement with the fastenings by means of which they are attached to the fence-posts.

The tension or compensating spring 8 is formed of heavy wire, which is coiled, the ends being formed into hooks or eyes 9, by means of which attachment of the line-wires is had with the ends of the said coil-springs. These springs 8 will be provided in sufficient number and located at proper points in the length of the fence, so as to maintain a proper tension upon the line-wires, and being formed of heavy spring-wire will sustain severe strain without rupture. In disposing the tension or compensating springs 8 they will be provided in pairs and located the one above the other, as clearly indicated in Fig. 1.

The pickets 10 will be attached to the line-wires 2 by binding-wires 11, the latter being of light gage and coiled around the line-wires between the adjacent edges of the pickets, the coils upon opposite sides of a picket being wound in reverse direction to prevent entanglement and twisting of the binding-wires with the line-wires in the construction of the

fence. The pickets 12, corresponding to the position of the tension-springs 8, will be considerably wider than the pickets 10, and will be notched in their edges near each end, as shown at 13, to provide a space for the reception of the end portions of the springs 8. Two such pickets 12 will be provided and located one upon each side or end of the springs, so as to have the said springs 8 located in the space provided by the opposing notched edges thereof. By this construction and disposition of the pickets 12 a wide space is obviated at points corresponding with the position of the springs 8, and the said springs 15 are protected in a measure from injury.

In the disposition of the fence-posts the one adjacent to the terminal post 3 is located at about four to five feet from the said terminal post 3 and is bracingly connected therewith by diagonally-disposed stays 14, which extend in opposite directions and cross at about a central point, the ends of said stays 14 being attached, respectively, to the upper and the lower ends of the adjacent posts. These stays 14 are formed by means of parallel wires, which are firmly attached at their ends to the opposite posts, preferably by being wrapped around the same. To secure the required tension on the stays 14, short bars 15 are passed between the parallel wires at a middle point, and are rotated so as to twist the said parallel wires until the desired result is attained. The ends of these short bars 15 cross and are engaged with the lower line-wire to prevent their rotating in a reverse direction, which would result in an unwinding of the said wires and a consequent lengthening of the stays. A cross-bar 16 is located at the base of the terminal post 3 and is arranged between the lower end of the said post and the stay 14 attached thereto. This cross-bar 16 affords an extended bearing and serves to securely anchor the said terminal post 3 in the ground. A bar 17 is disposed between the terminal post 3 and the adjacent fence-

post, and is designed to bracingly support the terminal post 3 by means of the combined anchorage of the said two posts in the ground. This brace-bar 17 is preferably disposed a short distance above the surface of the ground, and has its ends let into notches 18, provided in the opposing faces of the said terminal post 3 and the fence-post adjacent thereto.

From the foregoing description it will be seen that the terminal post 3 is firmly and securely braced, and is capable of withstanding the linear tension to which the fence is subjected under normal conditions. It will also be seen that by means of the springs 8 a tension on the line-wires is maintained under all conditions and at all times. By means of the fastenings 5 providing an extended bearing for the line-wires the life of the fence is extended and repairs rendered less frequent, because the said line-wires are not liable to rupture by means of the frictional contact and wear incident to the longitudinal movement of the said line-wires relative to their fastenings in compensating for contraction and expansion.

Having thus described the invention, what is claimed as new is—

In a fence comprising line-wires and pickets attached thereto, the combination of tension or compensating springs disposed at corresponding points in the length of the line-wires, and comparatively wide pickets disposed one on each side, or end, of the tension-springs, and having the opposing edges notched to receive the end portions of the said tension-springs and afford protection for the latter, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM F. BEALS.

Witnesses:

L. T. RUEHL,
GEO. W. BRIGHT.