(No Model.)

J. S. ORR.

FENCE.

No. 370,157. Patented Sept. 20, 1887.

Fig. 1.

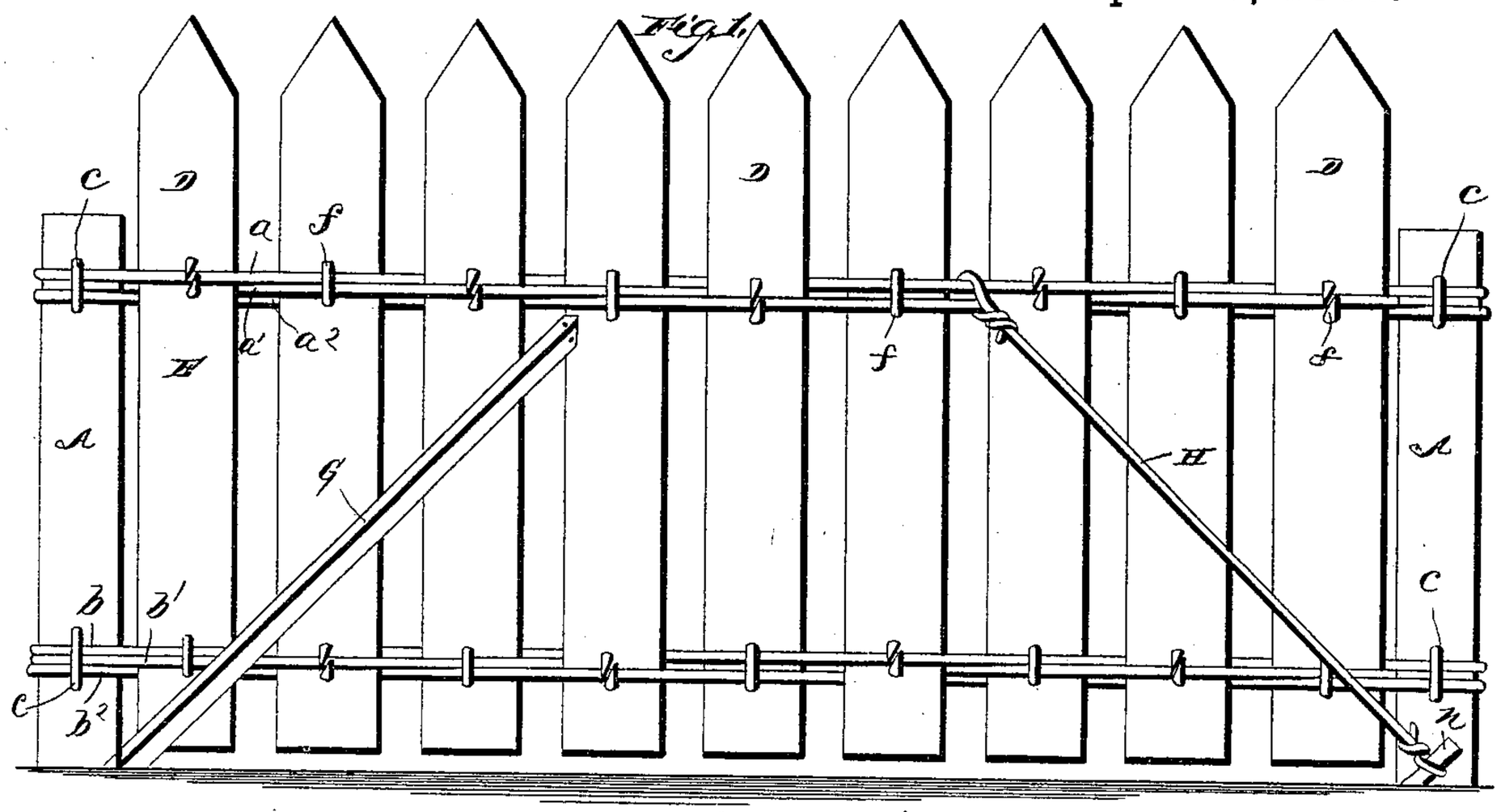


Fig. 2.

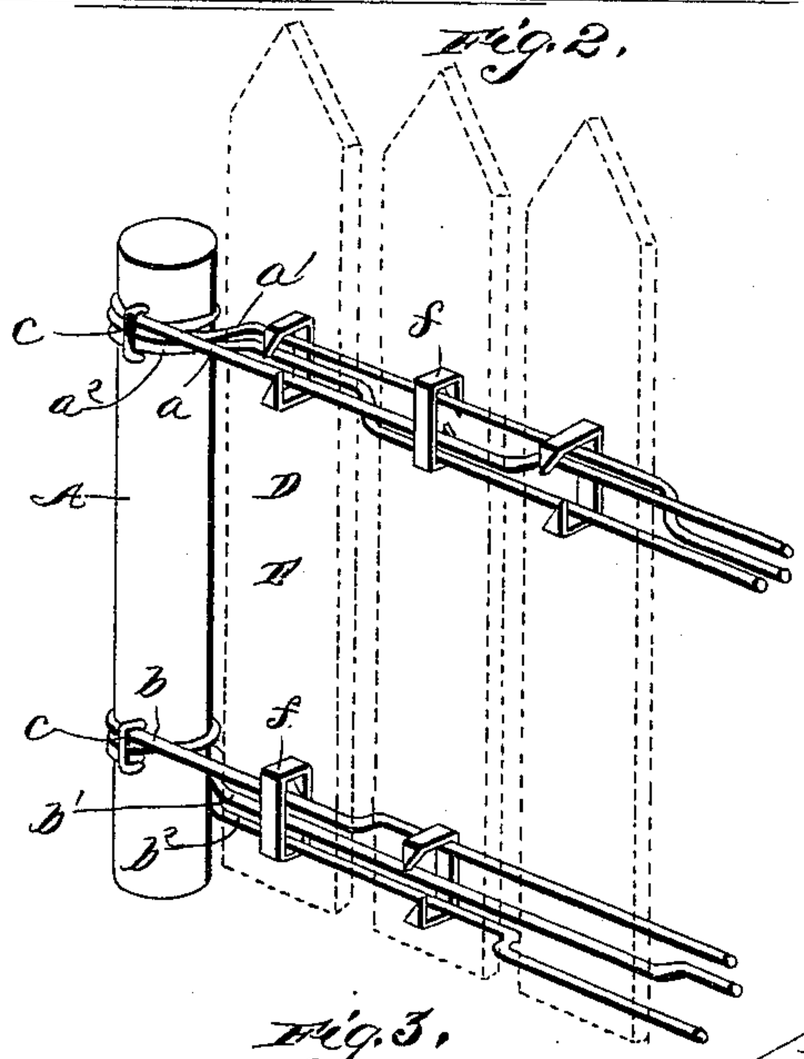
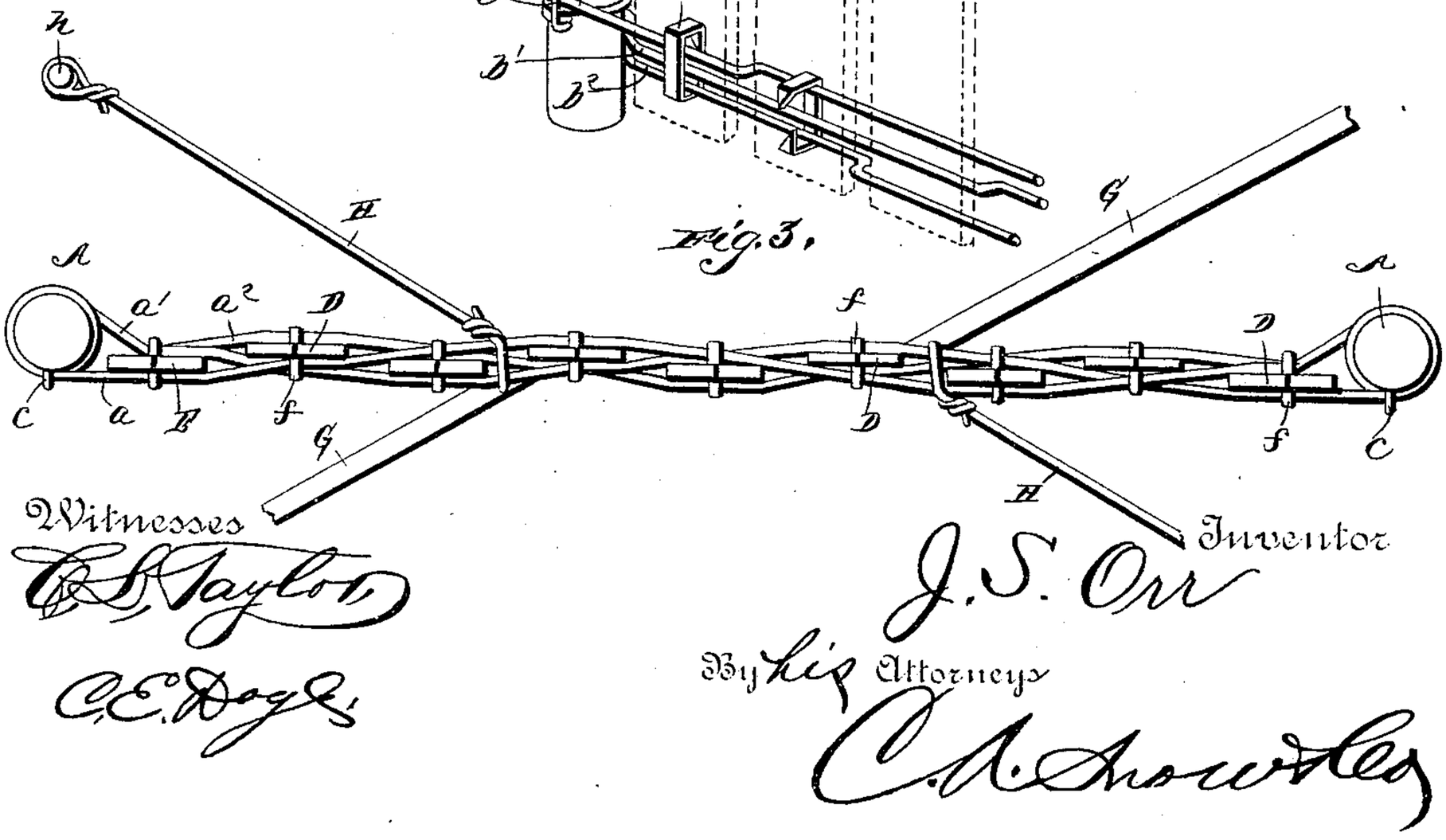


Fig. 3.



Witnesses

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JOHN S. ORR, OF AUGUSTA, KENTUCKY.

FENCE.

SPECIFICATION forming part of Letters Patent No. 370,157, dated September 20, 1887.

Application filed June 29, 1887. Serial No. 242,902. (No modol.)

To all whom it may concern:

Be it known that I, JOHN S. ORR, a citizen of the United States, residing at Augusta, in the county of Bracken and State of Kentucky, have invented a new and useful Improvement in Fences, of which the following is a specification.

My invention relates to improvements in picket or paling fences; and it consists in a certain novel manner of securing the uprights or palings in place by means of wires, &c., and also in certain other details of construction, as more fully described hereinafter, and specifically pointed out in the claims.

In the drawings, Figure 1 is a side view of a fence constructed according to my invention. Fig. 2 is a detail view of a portion of the fence during the process of construction to show the manner of arranging the wires. Fig. 3 is a top plan view of the fence.

Referring by letter to the drawings, A A designate the posts of the fence, stretched loosely between which at the upper ends are the three wires *a a' a²*, and *b b' b²* are similar wires similarly stretched between the said posts at the lower ends. The said wires are passed around the posts at the ends and secured thereto by the staples *c c*, driven into the posts; and D D are the uprights or palings, which are placed between the said wires and secured in place thereby. To place the said uprights in position, proceed as follows: Place the first paling between the wires, with one wire on one side and two wires on the other, the single wire being, however, on opposite sides of the paling at the top and bottom thereof, as seen in the drawings, and press the said first paling tightly against the post. Place the second paling between the wires and carry one of the two wires which were on the same side of the first paling around the second paling, thus causing two wires to be on one side of the second paling and one on the other side, the respective positions of the said double and single wires being, however, reversed from those on the first paling. This is clearly shown in the drawings. The first paling, E, is crossed on the near side at the top by one wire and on the opposite side by two wires, while at the bottom the said paling E is crossed on the near side by two wires and on the opposite side by one wire. The second paling, however, is crossed at the upper end on the near side by two wires and on the opposite side by one wire, while the bottom, as before described, is reversed—namely, one wire on the near side and two on the far side. In this manner the entire fence is constructed—namely, the double wires are alternately on opposite sides of adjacent palings, and the manner in which the wires cross the upper ends of the palings is reversed at the lower ends, except where three sets of tie-wires are used, when the wires at the top and bottom of each paling are arranged in the same way, while the set in the center is reversed from the sets at the top and bottom. In this manner both sides of the fence are made exactly alike, and consequently the strength is the same to resist pressure on either side of the fence. Different wires, however, are carried around the palings each time—that is, first the wire *a* is carried around a paling, and then the wire *a'* is carried around the next paling, and then the wire *a²* is carried around the next paling, and then the wire *a* is again carried around the next paling, and so on. Thus it will be seen that as each wire in succession is used to pass around a paling the three wires used will all be the same length, and will come out at the end of the panel even.

The wires at the bottom of the palings, and also at the center, are arranged in exactly the same manner as those at the top of the palings, with the exception that the order is changed to make the wires pass around the same picket or paling in opposite directions, as before described.

Each paling in succession, after being pressed up tightly against the last paling placed in position, is secured in the said position by a staple, *f*, driven into the said paling over the wire.

If boards or light palings are used, the staple is driven into the paling over the doubled wire, and the ends of the said staple, which project through the paling, are clinched or bent down over the single wire.

It will be seen that after each paling has been pressed tightly against the preceding paling and the staples secured in place, as described, the said palings will be held very rigidly in place, and will be capable of resisting a very heavy shock against the side of the fence.

As an additional safeguard against the dam-

age of the fence, I provide the braces G and H. The braces G are of wood, being a rail of any desired size, which is secured firmly in the ground at one end and secured to the side of one of the palings at the other end; and it will be seen from the position of the said brace—namely, set at an angle of about forty-five degrees or less to the line of the fence—that it (the said brace) will support the fence both laterally and longitudinally.

H designates a wire brace attached at the upper end to the upper tie-wires of the fence at the other end of the panel from the brace G, and the said brace H is inclined to the line of the fence in the same manner as the brace G, and secured at the lower end to the peg or pin *h*, which is driven firmly into the ground. One of the braces H is attached to the fence on the opposite side thereof from the brace G at the same end of the panel, and a brace G is secured on the opposite side of the fence from the brace H above described.

The braces H are designed to draw longitudinally on the fence, and the braces G are designed to resist the said action, and thus, as the two different kinds of braces are arranged alternately on opposite sides of the fence, there will be no possible chance for any sagging, warping, twisting, or straining of the structure, either by the weather, the wind, or by animals confined by the said fence.

My fence is simple, easily constructed, and exceedingly strong and durable. The passing of the wires from one side of the palings to the other alternately enables the fence, when the palings are pressed up close to the adjacent paling, to be very firmly bound together. The said action of pressing the palings close together as the building of the fence proceeds causes the wires to be very tightly stretched, and thus before the braces are put in position the fence is very rigid.

By arranging the double and single wires alternately on opposite sides of the same paling at the top and bottom all twisting of the fence is avoided.

I have described the construction of my fence when three tie-wires are used in each group; but it is obvious that more than three may be used, if desired, the number depending entirely on the character of fence to be erected and the purpose for which it is to be used, the same arrangement of the wires being possible with any number used. Also, any number of sets of wires may be used, depending only on the height of fence desired, the manner of twining or interlacing the wires around the palings being reversed in the different sets, as hereinbefore fully described.

Having thus described the construction of my improved fence, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a fence, of the vertical posts A A, wires *a a′ a²*, stretched between the said posts at the upper ends thereof, the wires *b b′ b²*, stretched between the said posts at the lower ends, the palings D, inserted between the said wires at the upper and lower ends, the three wires being divided into a double and a single strand, each of said strands being successively and alternately passed around the adjacent palings, with the wires *a a′ a²* arranged alternately to the wires *b b′ b²*, substantially as specified.

2. The herein-described improvement in fences, comprising the posts, the wires stretched between the posts and arranged in groups of three at the top and bottom of the posts, and the palings D, designed to be inserted through the wires, separating the latter into a double and a single strand, the double strand being on one side of each paling at the top and the single strand on the other side of the same paling, the wires crossing each other between the palings, and being thus arranged alternately along the line of the fence, the wires at the bottom of the palings being arranged opposite to the wires at the top of the palings, as set forth.

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

JOHN S. ORR.

Witnesses:
L. P. KNOEDLER,
J. W. HARRIS