

No. 646,466.

Patented Apr. 3, 1900.

J. Q. & A. C. SHIMER.
WOVEN WIRE FENCING.

(Application filed May 28, 1898.)

(No Model.)

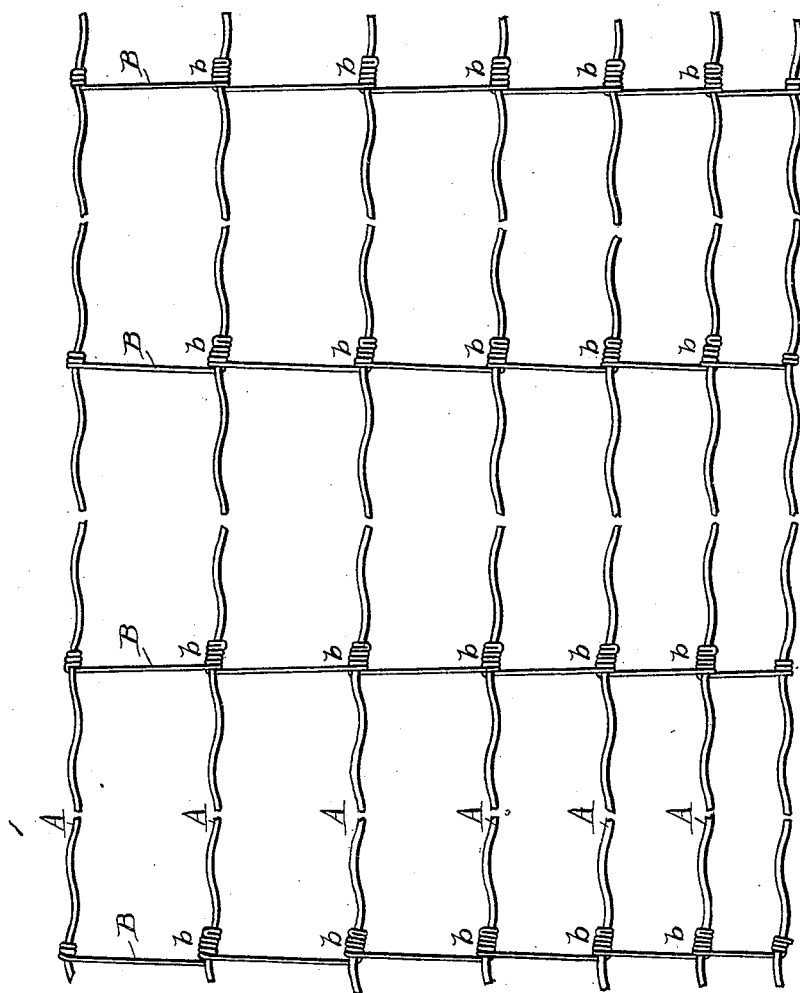
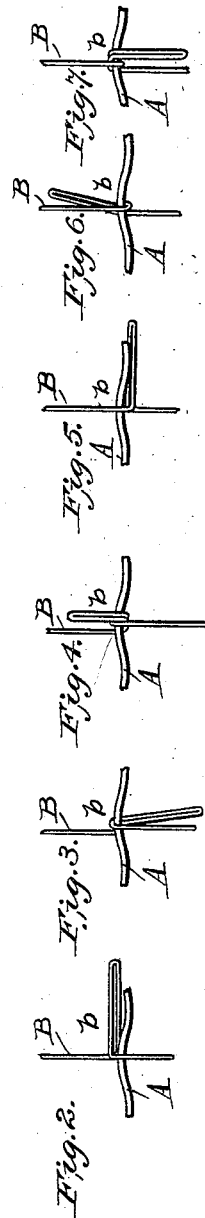


Fig. 1.

WITNESSES:

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JOHN Q. SHIMER AND ALLEN C. SHIMER, OF ANDERSON, INDIANA.

WOVEN-WIRE FENCING.

SPECIFICATION forming part of Letters Patent No. 646,466, dated April 3, 1900.

Application filed May 28, 1898. Serial No. 682,012. (No model.)

To all whom it may concern:

Be it known that we, JOHN Q. SHIMER and ALLEN C. SHIMER, citizens of the United States, and residents of Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Woven-Wire Fencing; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is an elevation of a section of fence embodying our invention. Figs. 2, 3, and 4 are detail views showing successive steps in the wrapping of the stay-wires, and Figs. 5, 6, and 7 are similar views showing the wrapping of the loops in the opposite direction.

This invention has relation to certain new and useful improvements in wire fencing, the object being to provide fencing of strong but elastic character capable of being manufactured by machinery in a rapid and efficient manner.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim.

Referring to the accompanying drawings, the letter A designates the horizontal wires of the fencing, said wires being of crimped or corrugated form, and B designates the vertical tie or stay wires which connect the wires A at intervals. These tie or stay wires run continuously from the top to the bottom horizontal wires and are wrapped around each intermediate wire, as shown at b, this wrapping being accomplished by forming loops in the said tie or stay wires, which loops are wound around the horizontal wires. By the use of suitable machinery (which is to form the subject-matter of an application about to be filed by us) the several loops of each tie-wire may be simultaneously wrapped around the horizontal wires, which operation enables the fencing to be manufactured in a rapid and economical manner.

Heretofore, in so far as we are aware, it has been necessary to carry the tie-wire from one horizontal wire to another, making the several wraps successively, a process which is necessarily of much slower character than that which we now employ.

We prefer that the wrapping-loops b of successive tie-wires shall be wrapped in opposite directions, as shown, but do not wish to limit ourselves to that construction. The advantage of such alternate wrapping is that the wraps of each stay-wire act as a lock to prevent any tendency of the adjacent wires to unwrap. It will be readily seen that if one of the horizontal wires is subjected to great strain, as by a person climbing over the fence, the tendency would be to unwind the wraps of the adjacent stay-wires. This tendency is resisted by the opposite winding shown and described. We also prefer that the loops shall be of considerable length, sufficient to wrap at least twice around the horizontal wires, and that the wraps be separated somewhat, so that when completed they shall extend some distance laterally from the vertical portions of said wires, the end of the loop being bent over more or less closely upon the wrap.

It will be observed that the stay or tie wires extend in substantially-straight vertical lines, the wraps being made entirely to one side thereof. This not only makes the stays shorter for fencing of a given height and effects a considerable saving in wire to each rod of fencing, but it also makes a neater appearance than the more or less irregular zig-zagging, which results when the loops are wrapped intermediately of adjacent portions of the stay-wires. It also forms a stronger fence, since any strain received by a horizontal wire is communicated to those above it in a direct line. The wrapping of the loops entirely to one side of the stay-wires also permits the several loops of each stay-wire to be simultaneously wrapped.

The crimps or corrugations in the wires A should be in a vertical plane, for the reason that it largely increases the visibility of the wires and also serves to more effectually hold the wraps of the tie-wires from slipping on

the wires A than if made in a horizontal plane. In addition to holding the tie-wires the crimps or corrugations give elasticity to the fence and permit the expansion and contraction due to changes in temperature.

The corrugations in the horizontal wires are imparted thereto previously to the application of the stay-wires thereto and are not the result of the application of the stay-wires thereto under tension. In fact we find it necessary in constructing our fence to use hard drawn-steel wire for the runner-wires, as crimps or corrugations formed in soft wire are of little value and with wire of this character it would not be possible to form crimps or corrugations therein by tension on the stay-wires. We also desire to have corrugations between the stay-wires as well as at the points where such wires are applied, as shown in the drawings. Our stay-wires are applied under very little, if any, tension and do not deflect the horizontal wires.

Having thus described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

The herein-described elastic fencing, consisting of the drawn-steel or the like horizontal wires, formed with permanent crimps or corrugations therein, and tie or stay wires having loops formed therein which are wrapped around the said horizontal wires without deflecting them from their natural course, adjacent tie or stay wires having their loops wound in opposite directions, substantially as specified.

In testimony whereof we affix our signatures in presence of witnesses.

JOHN Q. SHIMER.
ALLEN C. SHIMER.

Witnesses for John Q. Shimer:

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