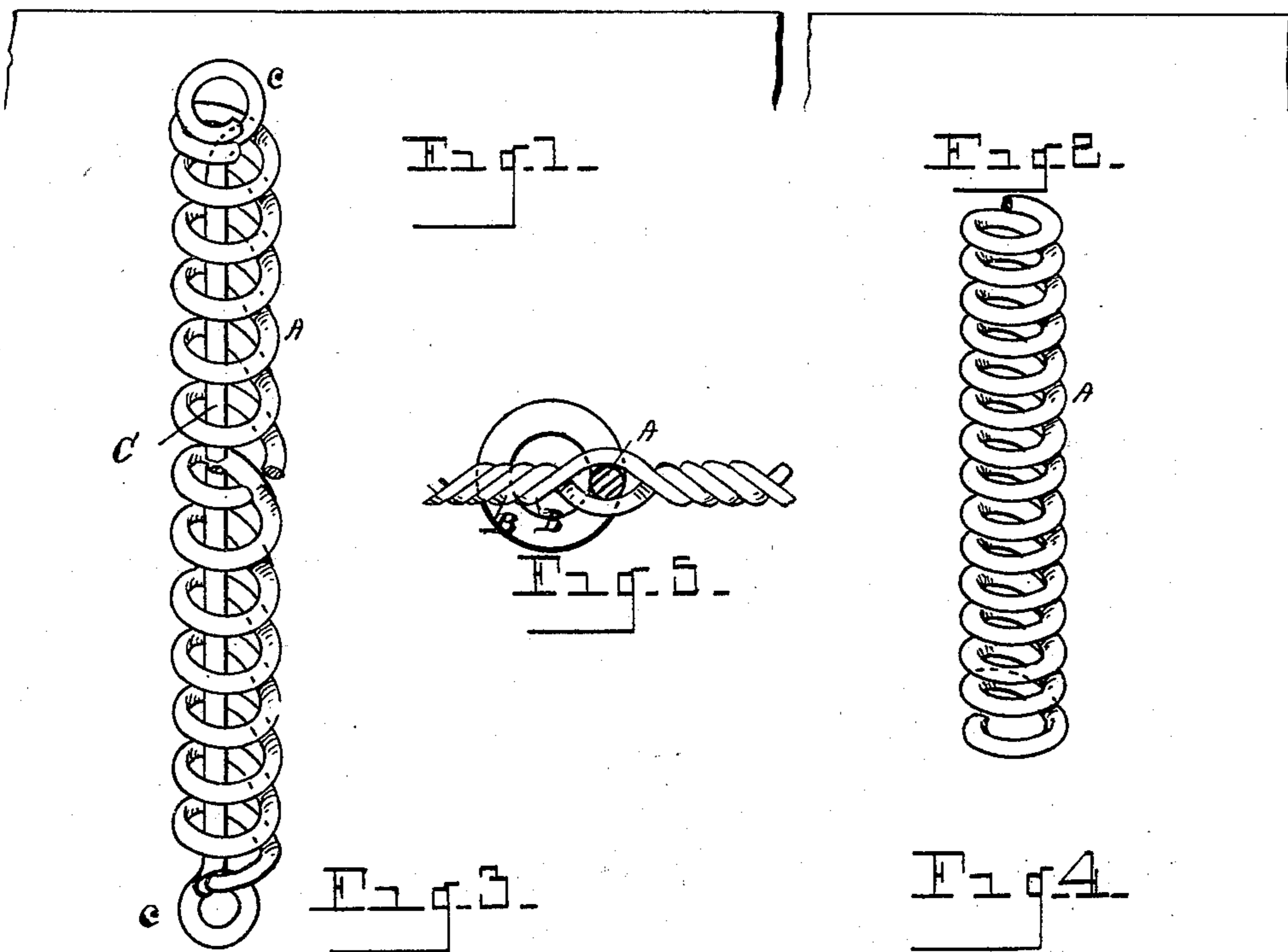
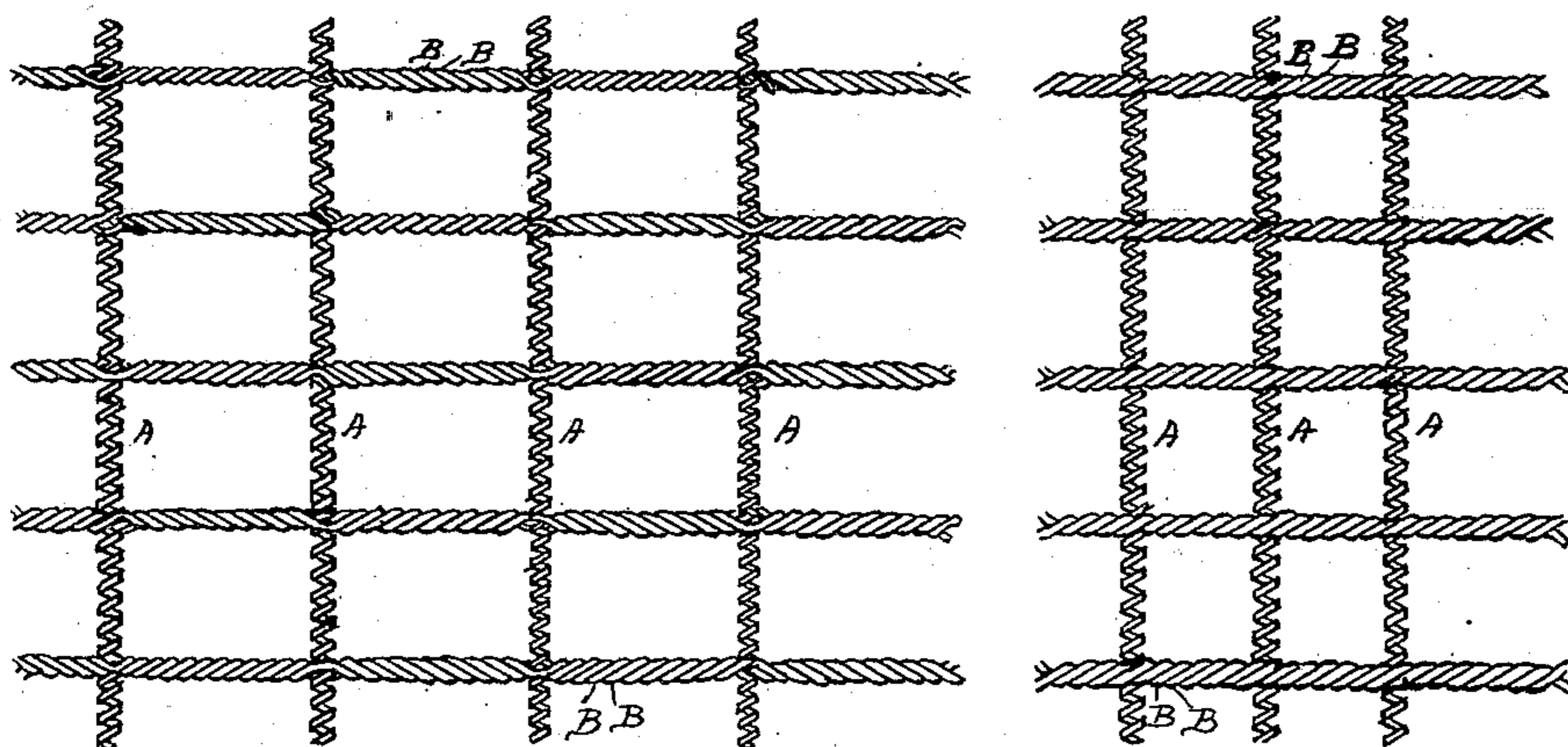


(No Model.)

J. R. JONES.  
METAL FABRIC FOR WIRE FENCES.

No. 604,398.

Patented May 24, 1898.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES R. JONES, OF WATERFORD, MICHIGAN.

## METAL FABRIC FOR WIRE FENCES.

SPECIFICATION forming part of Letters Patent No. 604,398, dated May 24, 1898.

Application filed September 24, 1897. Serial No. 652,825. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES R. JONES, a citizen of the United States, residing at Waterford, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Metal Fabrics for Wire Fences; and I 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, which form a part of this specification.

My invention has for its object an improvement in a metal fabric designed more particularly for a wire fence; and it consists of the construction, combination, and arrangement of devices hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation, showing a portion of the wire fence or metallic fabric embodying my invention. Fig. 2 is a similar view showing a modified manner of twisting the double wires. Fig. 3 is a detail view of a portion of one of the pickets, showing also a modification. Fig. 4 is an illustration of a portion of one of the pickets formed with closer coils; and Fig. 5 is a partial view in plan, showing one of the pickets in horizontal section.

Heretofore in wire fences open spiral, corrugated, or crimped metal pickets have been employed in connection with longitudinal strands of wire twisted thereabout. Corrugated pickets are obliged to be formed of very soft annealed wire in order that they may be crimped. If the wire was not of very soft metal, it would break up into short pieces in the effort to crimp it. Moreover, after the corrugated or crimped pickets heretofore employed are woven into place in connection with the longitudinal strands it is often desired to bend one or both of the extremities of the pickets over the adjacent strands, which, even with the annealed wire commonly used, often causes the pickets to be broken off, especially if attempted to be bent in a wrong direction or contrary to the direction in which the extremity has been crimped. So, also, even if the crimped pickets stand the strain of the crimping process and of being woven into place in the fence

additional strain is liable to break the pickets on account of the grain of the metal having been damaged in crimping, as when stock has run against the fence, often breaking off the picket intermediate to its extremities. When the crimped pickets stand the strain of crimping, they have often broken in the act of being woven into place as the longitudinal strands are twisted firmly thereabout. So, also, the open spiral pickets heretofore employed in connection with longitudinal strands of wire twisted thereabout have failed to brace the point of connection of the strands with the pickets on different sides of said point and above and below said point.

The purpose of my invention is to provide a metallic fabric for wire fences of superior construction and utility which shall be cheap and durable and which may readily be manufactured and which will effectually overcome the difficulties and objections above referred to.

I carry out my invention as follows:

A represents vertical metal pickets formed of coiled wire, which may be coiled in any customary manner, as by continuously winding suitable wire about a cylindrical mandrel, at the same time advancing in a well-known manner. The continuous coils are preferably made close together. My invention contemplates forming said pickets of spring-wire so coiled, although I do not limit myself solely to the spring quality of the metal. Whether the pickets are formed of spring metal or otherwise some degree of elasticity will be given to said pickets and to the fence, although it is obvious that when made of spring metal the pickets and the fence will have greater elasticity than if otherwise formed.

B B represent strands of wire running substantially at right angles to the pickets, said strands arranged in pairs, the strands being twisted the one about the other and around each of the pickets in a well-known manner and by any suitable means. In Fig. 1 the strands are shown reversely twisted upon opposite sides of each of the pickets. In Fig. 2 said strands are shown continuously twisted, the twist being in the same direction on both sides of each of the pickets. My invention contemplates making the twist either continuous or reversed, as may be preferred.

By making the coils of the pickets close together it is evident that the wire of the coils above and below the point of connection of the strands therewith extend laterally on an arc of a circle on both sides of said point and in close proximity thereto, thereby effectually bracing said point of connection on different sides thereof and both above and below said point affording great firmness and strength to the fence, while a series of resilient coils are formed between adjacent points of connection.

The pickets may be made either of soft or hard metal, as may be desired. By forming the pickets of coiled wire it is obvious that the grain or strength of the metal is not weakened or destroyed in the construction of the picket and in the formation of the coils, and hence it is unnecessary to carry out my invention to have the wire specially annealed to prevent breakage or weakening of the picket. Moreover, the employment of the coiled wire for the pickets enables me to use a wire of greater size, if desired, than has been formerly used for pickets. Hence my invention contemplates the use of any desired size of wire in the construction of the coiled pickets.

The especial feature of my invention is the fact that by employing coiled pickets much greater resistance is afforded to the strain in all directions, the pickets thus affording greater resistance to pressure, inasmuch as, obviously, the two adjacent coils of the picket extend from the point of the attachment of the strands therewith laterally on the arc of a circle on both sides thereof and in one direction therefrom longitudinally of the fence, as shown in Fig. 5. It will be seen that the strands are attached to the picket at a point where the wire connects two adjacent coils, so that the strain is distributed to the coils both above and below the point of connection of the strands with the wire. The pickets and the fence having an elastic quality it is obvious that any strain or pressure which may come upon the top of the fence will be counteracted when the strain or pressure is relieved. The pickets being elastic have a tendency to cause the fence to resume its normal position. The elastic quality of the fence is an important feature of my improvement, as thereby I provide yielding pickets and am enabled to construct a yielding fence.

By the use of the coiled pickets also it will be obvious the pickets present a larger area to the vision, so that the tangibleness of the fence is greater. The coiled-wire pickets are readily woven into the structure of the fence in a well-known manner, the twisting of the

strands holding them securely in position. By the use of the coiled-wire pickets there is no tendency for the pickets to rotate in the act of being woven into the fence. It will be obvious that the strands engage the picket between adjacent coils. It is a well-known fact that wire coiled thus forms a picket of much greater strength than if the picket was formed of a straight piece of wire.

In Fig. 3 of the drawings I have shown a coiled picket having a straight piece of wire C running therethrough, the extremities thereof being formed with loops c. By the use of the interior wire C obviously lighter wire may be employed in the formation of the coiled pickets A. I would have it understood, however, that my invention contemplates either using the straight wire C in the coiled picket or dispensing with the same, as may be desired.

The loops at the extremities of the wires C hold the parts in place and form an ornamental finish. It is evident that the coil A will yield vertically in either direction upward or downward upon the rod C.

What I claim as my invention is—

1. A resilient wire fence having in combination resilient pickets formed of continuously-coiled spring-wire, and longitudinal strands arranged in pairs twisted together and about the wire connecting two adjacent coils of the pickets, the pickets having a series of resilient coils intermediate to the pairs of longitudinal strands, and the coils above and below the point of connection of the strands with the picket extending laterally on an arc of a circle on both sides thereof, thereby bracing the point of connection of the strands with the pickets on different sides of said point and both above and below said point, substantially as set forth.

2. In a wire fence, coiled-wire pickets, interior wires within the coiled-wire pickets and forming a part of the pickets, and in combination therewith longitudinal strands twisted together and about the pickets, the interior wires disconnected with the coils of the pickets, as set forth.

3. In a wire fence, coiled-wire pickets, interior wires within the coiled-wire pickets and forming a part of the pickets, the extremities of the interior wires formed with loops, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

JAMES R. JONES.

Witnesses:

N. S. WRIGHT,  
MARY HICKEY.