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Patented Apr. 22, 1902.

J. M. STUCKER.  
PROCESS OF MAKING FENCE FABRICS.

(Application filed Nov. 6, 1901.)

(No Model.)

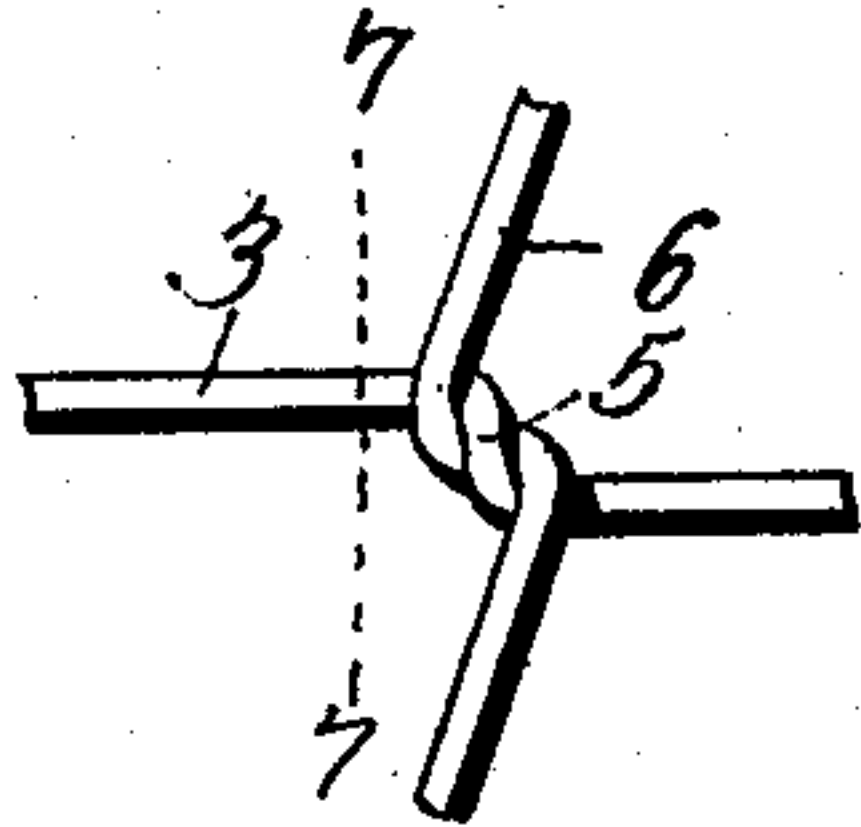
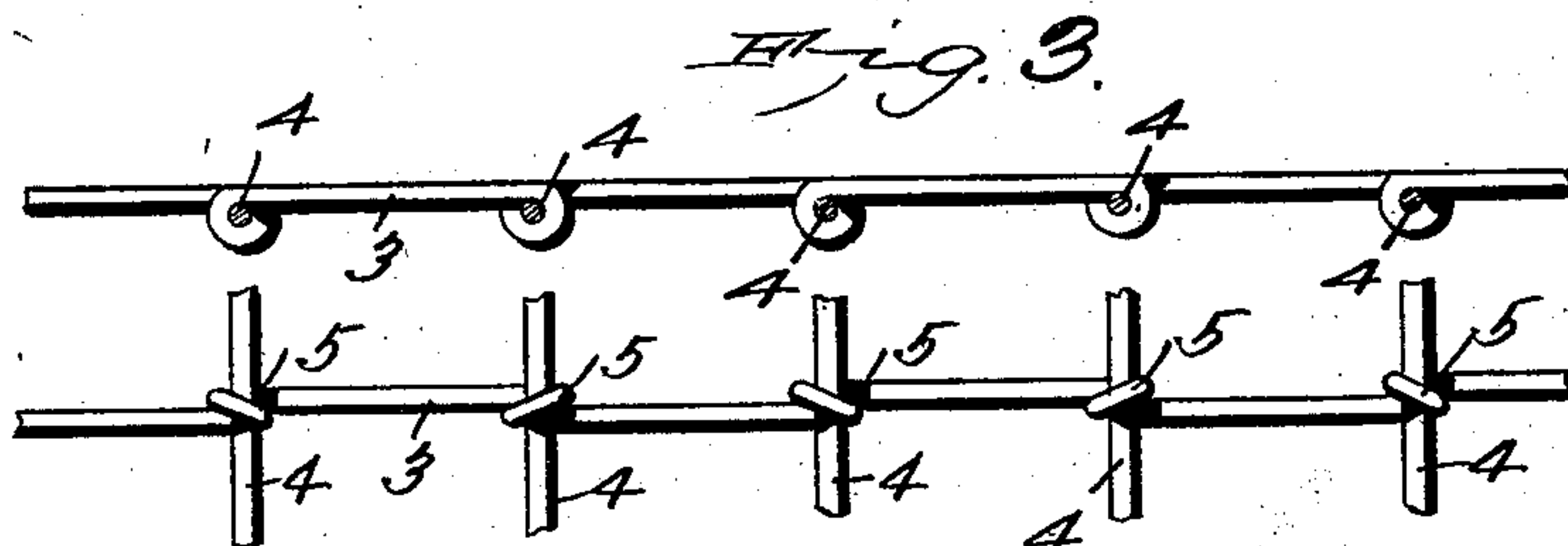
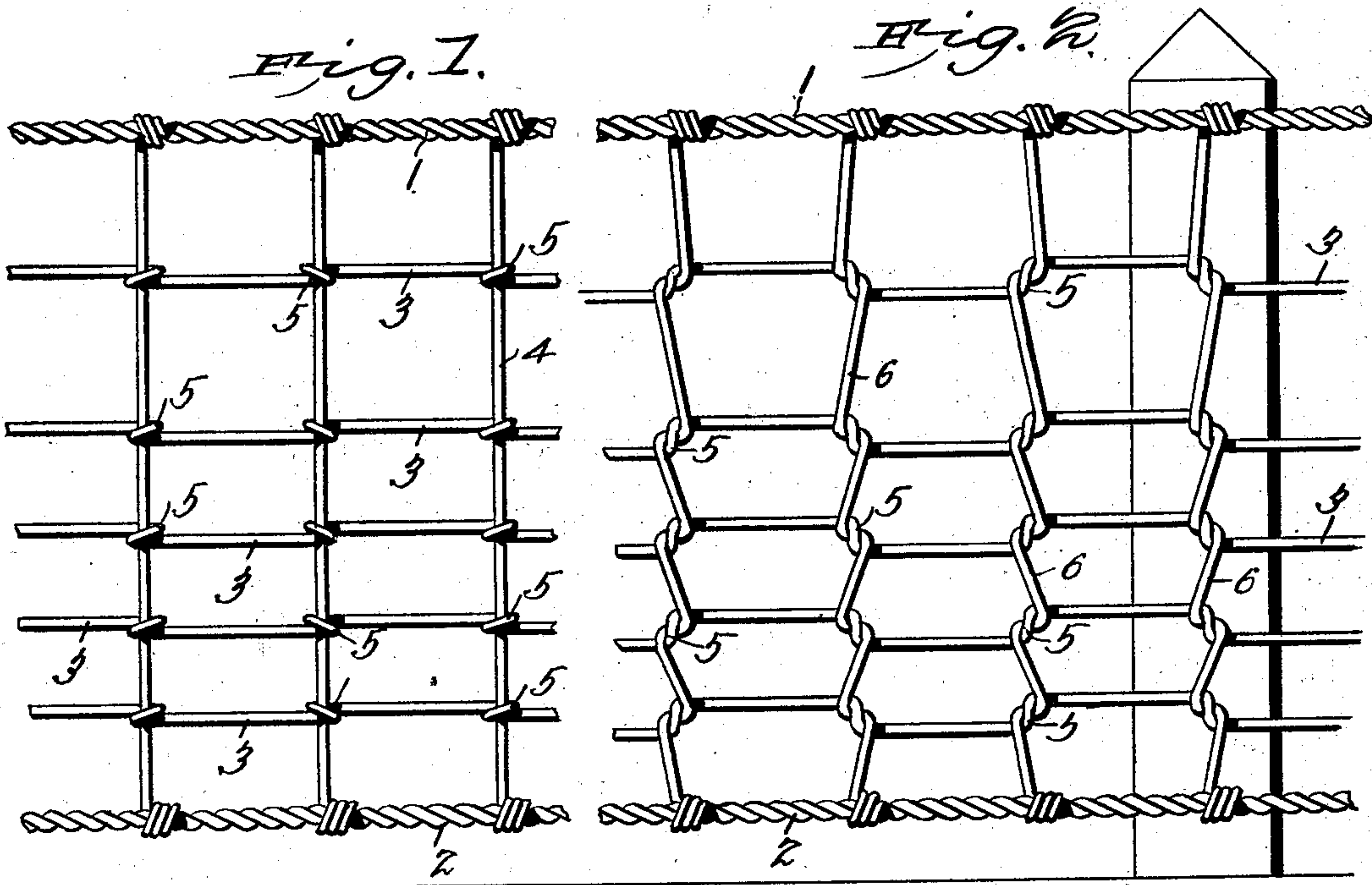


Fig. 6.

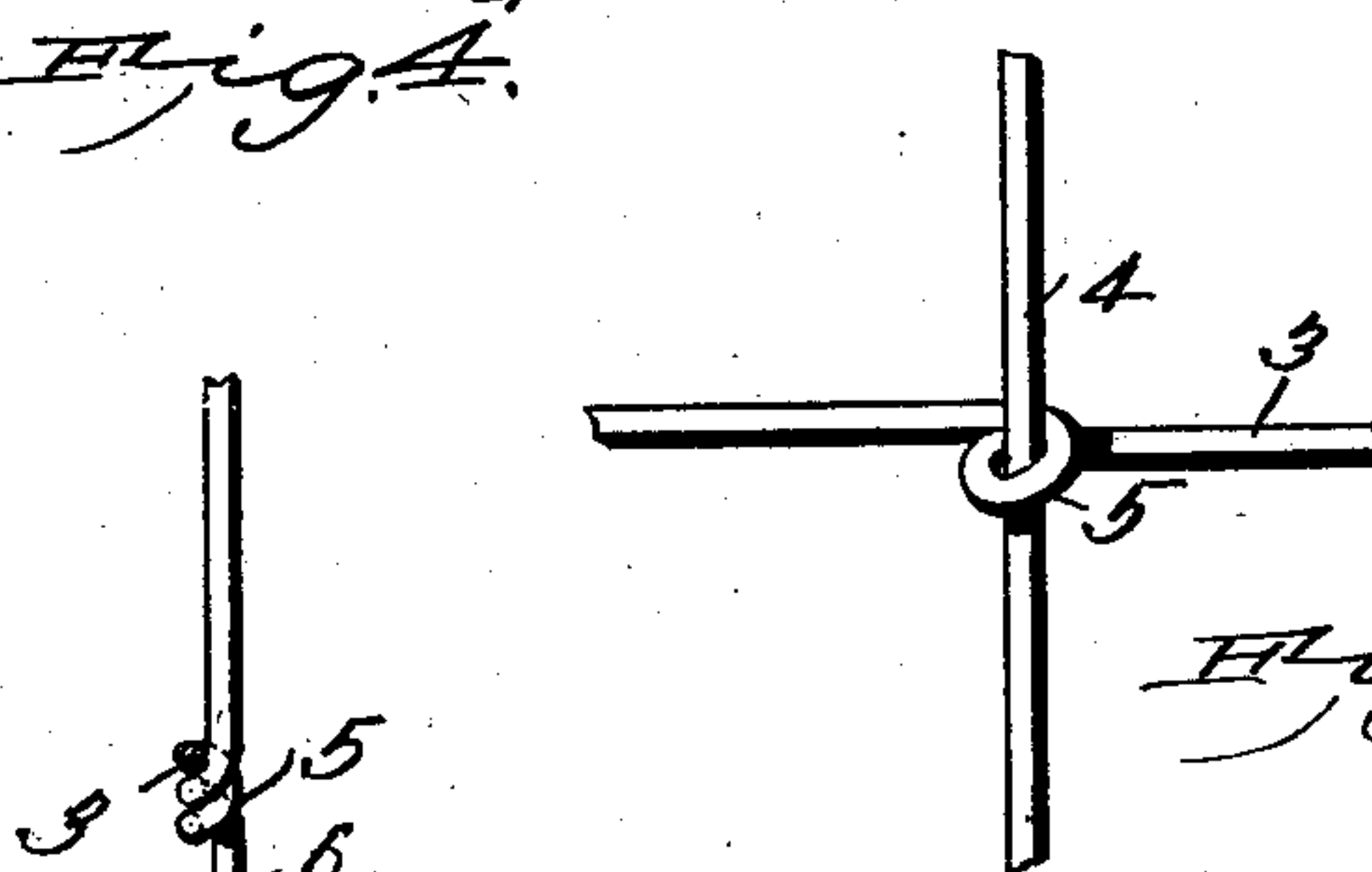


Fig. 5.

Fig. 7.

Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN M. STUCKER, OF LAWRENCE, KANSAS.

## PROCESS OF MAKING FENCE FABRICS.

SPECIFICATION forming part of Letters Patent No. 698,337, dated April 22, 1902.

Application filed November 6, 1901. Serial No. 81,350. (No specimens.)

*To all whom it may concern:*

Be it known that I, JOHN M. STUCKER, a citizen of the United States, residing at Lawrence, in the county of Douglas and State of Kansas, have invented a new and useful Process of Making Fence Fabrics, of which the following is a specification.

This invention relates to certain improvements in the process of making wire fence or other similar fabrics embodying a series of wires extending in one direction and having other wires arranged at an angle thereto at predetermined intervals, and particularly to the formation between such wires of interlocking loops arranged alternately in opposite directions. A counterbracing effect is thus produced in which the strains are so counterbalanced as to prevent any irregularity of mesh.

In the accompanying drawings, Figure 1 is an elevation of a portion of the fence-wires assembled in position prior to the longitudinal strain which results in the formation of interlocking kinks from these several loops. Fig. 2 is a similar view of a portion of the completed fence fabric. Figs. 3 and 4 are respectively a plan view and elevation showing the arrangement of the loops on the longitudinal wires. Fig. 5 is a detail perspective view of a portion of one of the longitudinal and one of the vertical wires, showing a loop in the former. Fig. 6 is an elevation of the two wires shown in Fig. 5, illustrating the interlocking kink formed between the wires by the exertion of a strain on the longitudinal wire. Fig. 7 is a transverse sectional elevation on the line 7 7 of Fig. 6.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The fabric when used for fencing will comprise as essential elements opposite selvage-wires 1 and 2 of the twisted or cable variety, a plurality of longitudinally-extending wires which may be arranged at the same or at varying distances apart, and a series of intersecting vertically-disposed or picket wires 4, which are interlocked at regular intervals with the longitudinal wires 3. The longitudinal wires 3 are provided with a series of slip-loops 5, arranged alternately in opposite directions with the loops all on one side of the

vertical plane of the wire and the portions of the wire between the loops being subsequently forced to assume positions in different planes, as more fully described hereinafter. After the loops have been formed in the wires 3 said wires are arranged in parallel longitudinal relation at any suitable distances apart, and in some fabric productions they may be arranged at equal distances from each other, while in other productions they may be arranged in closer relation near the lower selvage-wires to form an efficient fence to prevent the passage of small animals. When the longitudinal wires 3, which may be termed "warp-wires," are disposed in parallel relation, the slip-loops 5 are in transverse or vertical alignment, and the transverse or picket wires 4 are then threaded through said loops in a straight condition, as shown in Figs. 1 and 4, said transverse or picket wires being afterward secured at their opposite extremities to the margin or selvage wires in any suitable manner. All of the longitudinal or warp wires 3, as well as the selvage-wires, are secured at one extremity, and a pulling strain or tension is then equally exerted on all of the longitudinal wires. This strain or tension is applied lengthwise or longitudinally of the wires 3 in a regular manner and the slip-loops 5 disappear, and the portion of the wire of which the loop is composed primarily turns as the loop disappears and assumes the shape shown in Figs. 2 and 6, which is substantially in the form of the letter Z, with a vertical connecting bar or member 6, as clearly shown in Fig. 6, and passes around the adjacent portions of the transverse or picket wire 4, which is bent in a similar manner, but in an opposite direction, the kinks so formed becoming firmly interlocked.

It will be noted on reference to Figs. 3 and 4 that the loops 5 are arranged alternately in opposite directions with the loops all on one side of the vertical plane of the wire and the portions of the wire between the loops ranging alternately in different horizontal planes, said loops being so arranged that the connecting-wire between adjacent loops and the subsequently-formed kinks will be either above both loops or below both loops.

It will be seen that the transverse or picket wires are so bent as to form oppositely-in-



clined portions due to the formation of the loops alternately in opposite directions and the subsequent pulling strain, which results in the formation of the loops into kinks. The  
5 relative positions of the alternate kinks in the transverse and longitudinal wires lends a hinged elasticity to the panel of fence, thereby enabling the erection of the same over irregular surfaces of the ground and at  
10 the same time preserving uniformity of appearance of the mesh. As the loops and kinks are arranged alternately in opposite directions, there is a counterbracing effect produced, alternate picket-wires being inclined  
15 to precisely the same extent in opposite directions, while the longitudinal wires are arranged between alternate picket-wires in different horizontal planes. This results in the formation of a fence in which the strain is  
20 so counterbalanced as to prevent any tendency to irregularity of mesh, and as there is no tendency of the wires to move under the strain exerted constantly in the same direction the fencing may be readily manufac-

tured in a factory and will not become distorted when being placed in position. 25

Having thus described my invention, what I claim is—

The herein-described process of making fence-fabrics, said process consisting in first 30 forming longitudinal warp-wires with slip-loops arranged alternately in opposite directions, with the loops all on one side of the vertical plane of the wire, and the portions of the wire between the loops ranging alter- 35 nately in different horizontal planes, then threading straight lengths of transverse wires through said loops and securing the extremities of said transverse wires, and finally exerting a longitudinal pulling tension on said 40 warp-wires, substantially as specified.

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

JOHN M. STUCKER.

Witnesses:

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W. B. BROWNELL.