

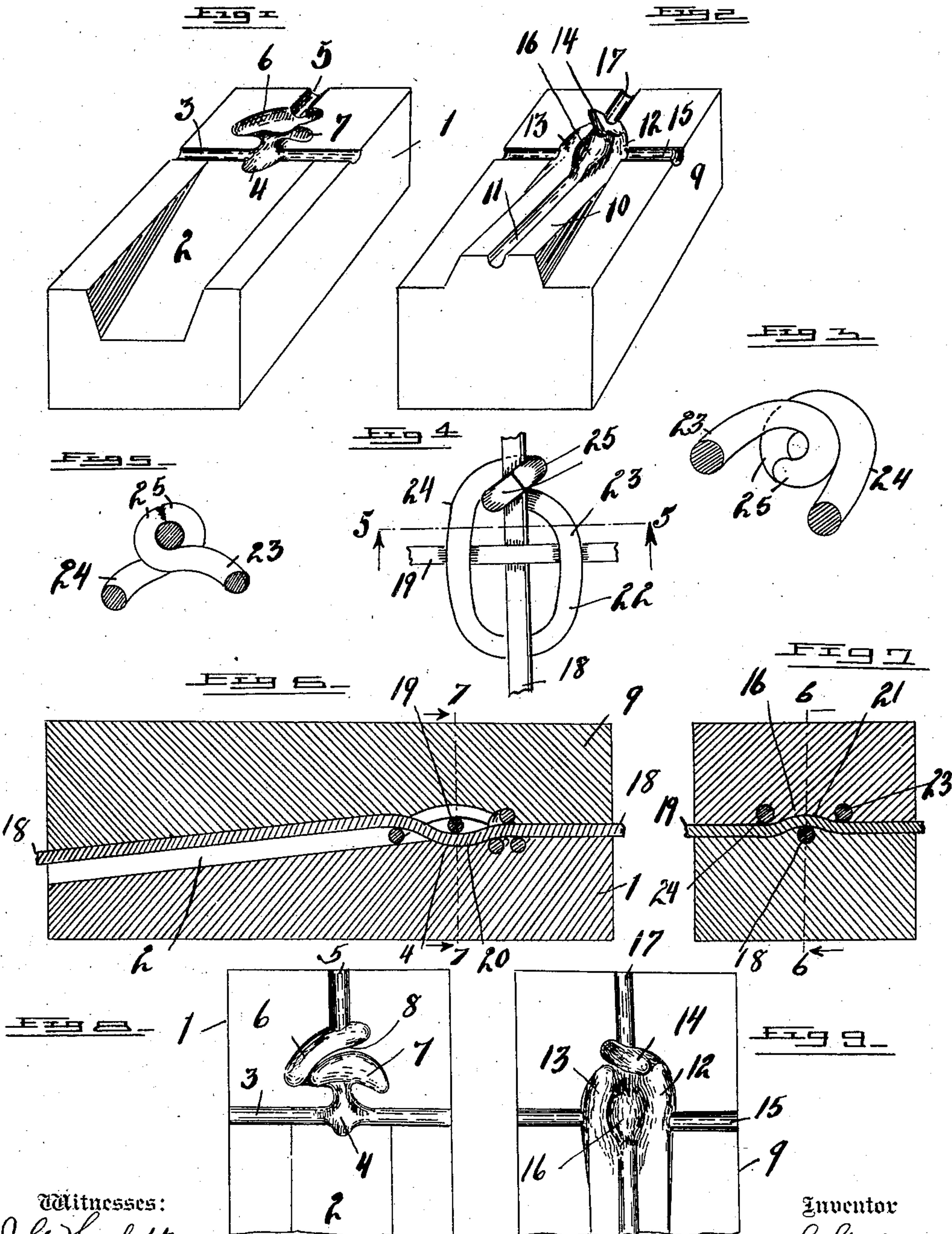
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O. S. STURTEVANT.
DIES FOR JOINING INTERSECTING WIRES.

APPLICATION FILED DEC. 18, 1903.

NO MODEL.



Witnesses:

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UNITED STATES PATENT OFFICE.

ORANGE S. STURTEVANT, OF ADRIAN, MICHIGAN.

DIES FOR JOINING INTERSECTING WIRES.

SPECIFICATION forming part of Letters Patent No. 755,961, dated March 29, 1904.

Application filed December 18, 1903. Serial No. 185,641. (No model.)

To all whom it may concern:

Be it known that I, ORANGE S. STURTEVANT, a citizen of the United States, residing at Adrian, in the county of Lenawee, State of Michigan, have invented certain new and useful Improvements in Dies for Joining Intersecting Wires; and I 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 the figures of reference marked thereon, which form a part of this specification.

This invention relates to dies for tying intersecting wires; and it consists in the peculiar formation and association of parts, as hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide for suitably forming the peculiar tie or knot for joining the intersecting wires of wire fencing or fabric, as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the working face of one of said dies. Fig. 2 is a perspective view of the working face of the other of said dies. Fig. 3 is a fragmentary view in detail of the knot or tie. Fig. 4 is an elevation of said tie, showing it embracing the intersecting wires of a fence or fabric. Fig. 5 is a sectional view, as on line 5 5 of Fig. 4. Fig. 6 is a longitudinal section through the dies with their working faces together, as on line 6 6 of Fig. 7, showing the crossed strands of wire therein and the tie formed around said wires. Fig. 7 is a transverse section, as on line 7 7 of Fig. 6. Fig. 8 is a plan view of the working face of one of the dies. Fig. 9 is a plan view of the working face of the other of said dies.

Referring to the characters of reference, 1 designates a steel block from which one of the dies is formed, having an inclined channel 2 therein for the entrance of the staple which forms the tie and the plunger which forces the tie into position upon the wires crossed between the faces of the dies. At the termination of the inclined channel is a groove 3, crossing the face of the die, which also crosses

the concaved recess or depression 4. Formed in the face of die 1 at the end opposite to that having the channel 2 is a groove 5, which extends inwardly and terminates at the curved concavity 6, formed in the face of the die between the end of the groove 5 and the transverse groove 3. Also formed in the face of the die adjacent to the concavity 6 is the curved concavity 7, lying transversely of the line of the groove 5 and communicating recess 4 and separated from the concavity 6 by the curved partition 8. The die 9 is also formed of a steel block and is provided upon its face with an inclined plane 10, adapted to be received in the channel 2 of die 1 and having a longitudinal groove 11 in the face thereof. The base of said incline upon each side of the groove 11 leads into the curved concavities 12 and 13, respectively, the end of concavity 12 communicating with one end of the diagonal concavity 14 and the end of concavity 13 intersecting the side wall of said concavity 14. Crossing the face of die 9 transversely is a groove 15, which also crosses the concavities 12 and 13 and the depression 16 between said concavities. Formed in the face of die 9 at the end in alinement with the groove 11 is a groove 17, which intersects the diagonal concavity 14 at a point midway between the points of communication of the concavities 12 and 13 therewith. When the dies are placed with their working faces together, the inclined plane 10 lies within the channel 2, causing the grooves 3 and 15 to register, as well as the grooves 5 and 17. The grooves 5, 11, and 17 receive one of the cross-strands of wire 18, while the grooves 3 and 15 receive the other of the cross-strands 19. When the dies are brought together upon the crossed wires, the strand 18 is forced into the depression 4, forming a crimp 20, while the strand 19 is forced into the depression 16, forming the crimp 21 therein. After the dies have been placed together upon the crossed wires the tie 22, which is in the form of a staple, is introduced into the channel 2 and forced by a suitable plunger into the dies, the legs of said staple being directed into the opposed concavities 12 and 13, whereby they are caused to crossover the strand 19 and their terminals directed into

the concavities 6 and 7 in the die 1, the leg 23 of the staple entering the concavity 7, which as the dies are placed together registers with concavity 13, and the leg 24 of the staple entering concavity 6, which registers with concavity 12, whereby as the staple is driven into the die its ends are caused to wrap around the strand 18, as shown at 25, their meeting terminals being brought together and shaped to the strand in the diagonal concavity 14 of die 9, into the opposite ends of which said end portions of the staple are directed, forming the knot or tie shown in Fig. 4, in which the end portions of the staple cross the strand 18 from opposite sides and are wrapped around the strand 18 to meet upon the opposite face thereof in the form of a closed coil, as clearly shown in Fig. 3, in which view the strand 18 is withdrawn to disclose the opening through the coil. This character of knot or tie which is formed in the dies herein shown and by the peculiar arrangement of the grooves, channels, and concavities therein possesses the merit of being securely fastened in position and presenting no projecting ends likely to catch or tear a passing object.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Dies having transverse registering grooves for the reception of the cross-wires, one of said dies having an inclined way, a depression at the terminal of said incline and curved concavities, the other of said dies having an inclined plane with a longitudinal channel, curved concavities leading from the base of said incline, a depression between said curved concavities and a diagonal concavity communicating with the terminals of said curved concavities and interposed between them.

2. Dies having transverse registering grooves for the reception of the cross-wires, one of said dies having a central depression and curved concavities crossing the line of one of said grooves, the other of said dies having parallel concavities, a depression between said concavities and a diagonal concavity crossing the line of one of said grooves and communicating with the terminals of said parallel concavities.

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

ORANGE S. STURTEVANT.

Witnesses:

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