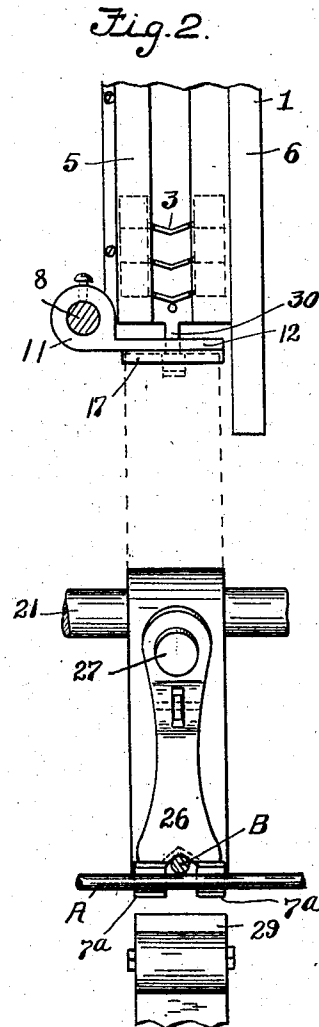
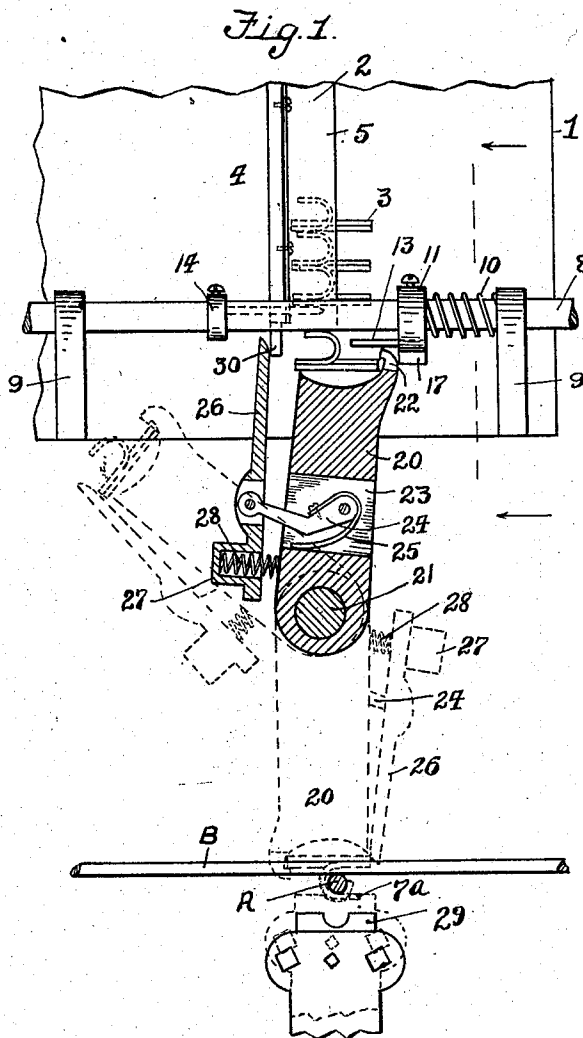


No. 815,640.

PATENTED MAR. 20, 1906.

G. W. SCHOCK.
WIRE FENCE MACHINE.
APPLICATION FILED JUNE 26, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

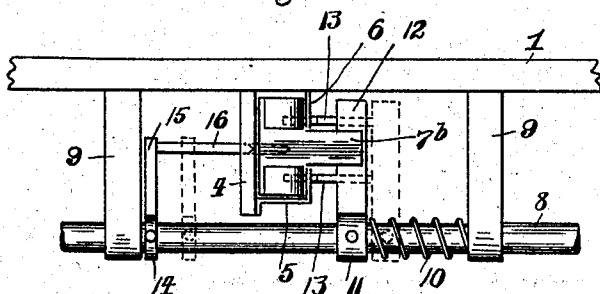


Fig. 4.

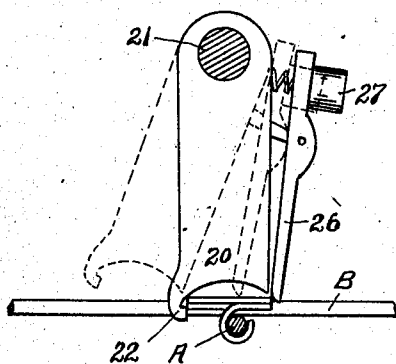


Fig. 5.

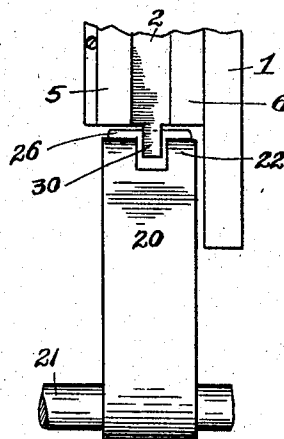
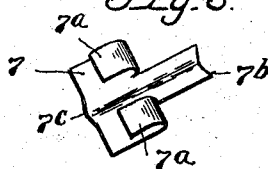


Fig. 6.



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GEORGE W. SCHOCK, OF SOUTH BEND, INDIANA.

WIRE-FENCE MACHINE.

No. 815,640.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed June 26, 1905. Serial No. 267,042.

To all whom it may concern:

Be it known that I, GEORGE W. SCHOCK, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented new and useful Improvements in Wire-Fence Machines, of which the following is a specification.

This invention relates to improvements in wire-fence machines.

The object of the present invention is to feed wire-fence ties and position them at the intersection of the stay-wires and longitudinal wires of the fence and hold them at such point until operated upon by suitable mechanism to clench them around the wires of the fence.

The ties employed in the present device are in the form of clips which are cut and bent into the required shape preparatory to being placed into a suitable hopper, from which they fall by gravity onto a feeding mechanism operated by a swinging delivery device, which grasps the clip and carries it to the point of intersection of the wires of the fence, where it is operated upon by suitable dies and clenched in place, all as will be more fully described hereinafter, illustrated in the accompanying drawings, and finally pointed out in the appended claims.

In the drawings, Figure 1 is a view, partly in side elevation and partly in section, of the feeding means, the delivery device, and the die, embodying all the features of my invention and showing in dotted lines two positions of the delivery device with the clip carried thereby. Fig. 2 is a front elevation looking in the direction of the arrows in Fig. 1 with the delivery device shown in its lowered position. Fig. 3 is a plan view of the hopper and its feeding means with the latter shown in dotted lines in one of its positions. Fig. 4 is a side elevation of the delivery device with the clip applied to the fence-wires. Fig. 5 is a front elevation looking in the direction of the arrows in Fig. 1 with the delivery device shown in its raised position, and Fig. 6 is a perspective view of the clip.

Making renewed reference to the drawings, wherein like characters of notation indicate corresponding parts appearing in the several illustrations, and references being had thereto, 1 designates a suitable face-board or frame of the machine, and 2 indicates a hopper for the clips 3. This hopper preferably consists of a casing with a back-board 4, to which is secured the angular end plate 5, and to the face-

board 1 and projecting toward the angular plate 5 is another plate 6, all of which form a vertical runway for the clips, the runway being slotted longitudinally at the front, so as to permit the end of the clips to project therefrom, as shown. The clips having been previously cut are bent into the required shape. One of the clips is shown in Fig. 6 as consisting of a plate 7, which is provided with two longitudinal cuts, forming a tongue 7^a upon each side and a central projection 7^b. The tongues may be bent back upon the plate, as shown, and then the plate is provided with a central longitudinal reëntrant portion 7^c, which is adapted to partially envelop the longitudinal wire of the fence, while the tongues engage the stay-wire, arranged at right angles to the longitudinal wires. When these tongues are bent up and clenched around the stay-wires, as will be described hereinafter, the wires are held against displacement.

The means for operating the die and the means for operating the delivery device are not shown in the present drawings, and they form no part of the present invention, which consists of that portion of a wire-fence machine which feeds and delivers the tie to the die.

The feeding mechanism for the clips is mounted beneath the hopper and consists of a longitudinally-movable rod 8, supported in suitable bearings 9, that project from the frame or face-board 1. This rod 8 has an endwise movement against the tension of the spring 10, mounted thereon and which has one end bearing against a collar 11. This collar has a tangential arm 12, from which extend clip-supporting fingers 13, which are spaced apart a sufficient distance to permit the projecting end 7^b of the clip to pass therebetween when the fingers are released from engagement with the plate or side portion of the clip, as shown in dotted lines in Fig. 3.

In order that the clips may have a progressive feed, it is necessary to support a row of clips in the hopper while the bottom one is being fed to the delivery device, and for this purpose the endwise-movable rod 8 is provided with a collar 14, made fast to the rod and having a tangential arm 15, from which extends a supporting-finger 16, that projects through an opening in the back-board 4 of the hopper and into the latter in the path of the clips, so that when the bar 8 is shifted against the tension of the spring 10 the fingers 13 are withdrawn from beneath the bot-

tom clip and the latter is permitted to drop onto the delivery device. At the same time the finger 16 is projected into the hopper between the tongues of the bottom clips and in the path of the plate portion of the clip immediately above, as shown in dotted lines in Figs. 1 and 3, wherefore the entire row of clips is supported during the delivery of the bottom clip. When the shaft 8 is released, the spring 10 will return the shaft to its normal position and project the fingers 13 into the path of the plate of the next clip, while the finger 16 will be retracted from the hopper, and the entire row of clips therein will drop upon the fingers 13. This feeding mechanism is operated by a vibrating or swinging delivery device by providing a lug 17 on the collar 11 and disposing it within the path of the free end of the swinging-clip deliverer or carrier. This delivery mechanism consists of a swinging anvil 20, rigidly mounted upon a rock-shaft 21 and having at its free end a bifurcated jaw or claw 22 for engaging the extension 7^b of the clip when the latter drops from the hopper. This swinging anvil is provided with a transverse slot 23, in which is pivoted an arm 24, having secured thereto a flat spring 25, which envelops the pivoted end of the arm and has its free end in engagement with the end of the slot, so as to normally hold the opposite end of the arm projected forwardly. To the other end of the arm 24 is pivoted a gripping member 26, the lower end of which has a socket member 27, in which is mounted a coil-spring 28, which bears against the face of the anvil, and thus normally holds the free or opposite ends of the gripping member toward the anvil. From this construction it will be seen that the gripping member 26 not only has a swinging movement on its pivot, but also a movement longitudinally of the anvil, so that its free end may be normally held projected in the path of the clip; but it is adapted to be retracted or slid rearwardly when engaged with the wire of the fence.

When the machine is in operation, the upward movement of the swinging delivery member 20 will impart an endwise movement to the feeding-bar 8 by striking the lug 17 on the collar 11, and thus permit one of the clips 7 to drop down upon said delivery member. Upon its forward movement the collar 11 is released and the spring 10 forces the bar 8 and supporting-fingers 13 forwardly, so as to check the feeding or descent of the clips, while the claws 22 force the clip into engagement with the gripping member 26, and the clip in such position is carried down, as shown by dotted lines in Fig. 1. When the delivery member has reached the limit of its downward movement, the tongues 7^a of the clip have straddled the stay-wire of the fence and the gripping member 26 has by contact with the wires been forced rearwardly or up-

wardly. With the parts in these positions a plunger or die 29 is operated by mechanism (not shown) to clench the tongues 7^a of the clip around the stay-wire A of the fence, while the longitudinally-reentrant portion 7^c of the clip partially incloses the longitudinal wire B of the fence, the delivery member 20 serving as an anvil and resisting the pressure of the die, all as shown by dotted lines in Fig. 1. Upon the reverse movement of the delivery member the gripping member 26 will by virtue of its loose pivoted connection with the delivery member slide rearwardly and clear the end of the clip, as shown in dotted lines in Fig. 4, and when free of all obstacles this gripping member will be again projected forwardly by the spring 25, so as to bring its free end within the path of a lug 30, depending from the bottom of the hopper, said lug serving to arrest the movement of the gripping member and hold it in released position until the next clip has been fed to the delivery device.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a wire-fence machine, the combination of a hopper for the wire ties, a feeding mechanism for successively releasing the ties from the hopper, and a swinging delivery device for receiving the ties from the hopper and positioning them on the wires.

2. In a wire-fence machine, the combination of a hopper for the wire ties, a feeding mechanism for successively releasing the ties from the hopper, and a swinging delivering device operating the feeding mechanism to release the ties and position the ties on the wires.

3. In a wire-fence machine, the combination of a hopper for the wire ties, a feeding mechanism for successively releasing the ties from the hopper, and a delivering device operating the feeding mechanism to release the ties from the hopper and having means to grip the tie and position it upon the wires.

4. In a wire-fence machine, the combination of a feeding mechanism for successively feeding the wire ties, and a delivering device operating to release the tie from the feeding mechanism and position it upon the wires.

5. In a wire-fence machine, the combination of a feeding mechanism for successively feeding the wire ties, and a swinging delivery member operating the feeding mechanism, adapted to receive the wire ties and position them on the wires, and a gripping-finger carried by said swinging member and having a slidable and pivotal connection therewith, and a die to clench the tie to the wires, substantially as specified.

6. In a wire-fence machine, the combination of a feeding mechanism, and a delivery device operating the feeding mechanism to deposit the tie on the delivery device and hav-

ing means for gripping the tie and positioning it upon wires, and a die for clenching the tie to the wires, while held by the delivery device, whereby the delivering device serves as an anvil when the die operates upon the tie.

7. A wire-fence machine embodying a hopper for the wire ties, an endwise-movable rod having tie-supporting fingers carried thereby and arranged in different vertical planes upon opposite sides of the hopper, whereby the ties are successively fed, and a swinging tie delivering and positioning device operating the endwise-movable rod to release a tie from the hopper, and a die for clenching the tie to the wires.

8. A wire-fence machine embodying a hopper for the wire ties, an endwise-movable rod, means carried by said rod and arranged to successively discharge the ties from the hopper, a spring to hold the rod in one position, and a swinging tie-delivering device having its free end disposed within the path of the endwise-movable rod and arranged to shift the latter to release a tie, and a die for clenching the tie to the wires.

9. A wire-fence machine embodying a hopper for the wire ties, means for successively feeding the ties, and a swinging delivering member for positioning the tie upon the wires having a gripping-finger pivoted thereto with its free end normally held pressed toward the free end of said swinging delivering member, a die for clenching the tie to the wires, said delivering member serving as an anvil for the die, and a lug projecting from the bottom of the hopper within the path of the free end of the gripping-finger, substantially as and for the purpose set forth.

10. In a wire-fence machine, the combination with a feeding mechanism substantially as described, of a swinging delivering device having a gripping-claw adapted for engagement with the wire tie, a gripping-finger, an

arm pivoted at one end to the gripping-finger and at its other end to the swinging delivering device, a spring secured to said arm to hold the free end of the gripping-finger normally projected beyond the free end of the delivering device, and a die for clenching the tie to the wire, the said delivering device acting as an anvil for said die during the clenching action, substantially as described.

11. A wire-fence machine embodying a hopper for the wire ties, means for successively feeding the ties from the hopper comprising tie-supporting fingers arranged in different vertical planes upon opposite sides of the hopper and shiftable transversely thereof, and a swinging tie delivering and positioning device operating the tie-feeding means and adapted to receive the tie from the hopper.

12. In a wire-fence machine, the combination with a feeding mechanism, of means for receiving the tie from the feeding mechanism and positioning it upon wires, comprising a swinging member having a gripping-finger pivoted thereto, substantially as specified.

13. In a wire-fence machine, the combination with a feeding mechanism, of means for receiving the tie from the feeding mechanism and positioning it upon wires, comprising a swinging member, and a gripping-finger, a connection between the gripping-finger and the swinging member comprising an arm pivoted at opposite ends to the finger and to the member, and a spring operating upon said arm to hold the free end of the gripping-finger normally projected within the path of the clip, substantially as specified.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

GEO. W. SCHOCK.

Witnesses:

GEORGE OLTSCHE,
THOS. J. HILL.