

No. 648,239.

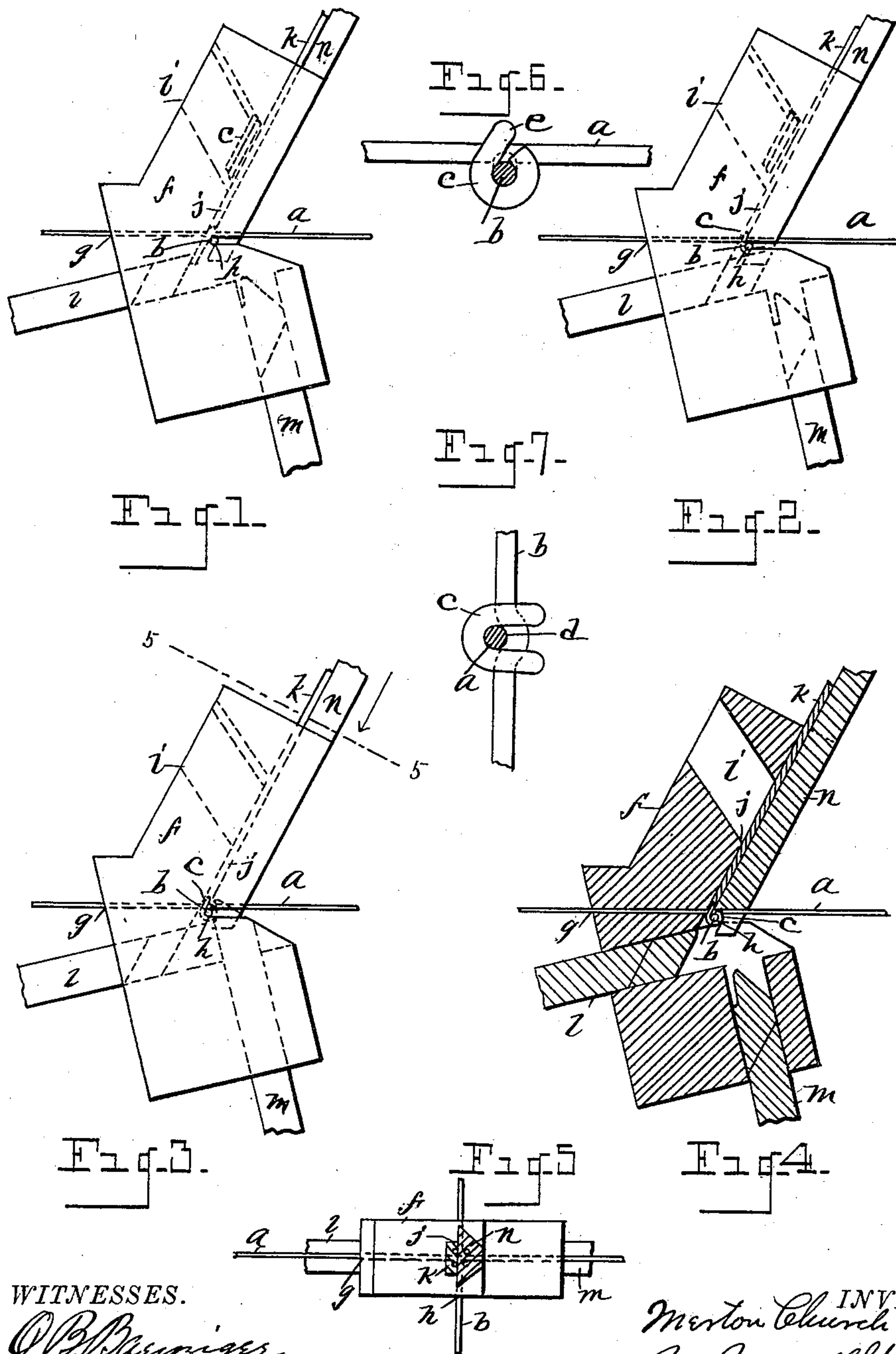
Patented Apr. 24, 1900.

M. CHURCH.

WIRE FENCE STAPLING DEVICE.

(Application filed Jan. 27, 1900.)

(No Model.)



WITNESSES.

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UNITED STATES PATENT OFFICE.

MERTON CHURCH, OF WALKERVILLE, CANADA.

WIRE-FENCE STAPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 648,239, dated April 24, 1900.

Application filed January 27, 1900. Serial No. 2,953. (No model.)

To all whom it may concern:

Be it known that I, MERTON CHURCH, a citizen of the United States, residing at Walkerville, county of Essex, Province of Ontario, Canada, have invented a certain new and useful Improvement in Wire-Fence Machines; 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 a novel wire-fence machine, the same being more particularly designed for joining fence-wires or for applying a suitable staple to join said wires in a superior, simple, and efficient manner.

The invention consists of the construction, combination, and arrangement of devices hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation illustrating features of my invention, showing parts in inoperative position. Fig. 2 is a similar view showing certain of the parts in operative position. Fig. 3 is a similar view showing other parts in operative position. Fig. 4 is a vertical section through the device. Fig. 5 is an end view showing parts in section on line 5 5 of Fig. 3. Fig. 6 is a view showing the horizontal wire, the vertical wire being in section. Fig. 7 is a view showing the upright wire, the horizontal wire being in section.

I carry out my invention as follows:

The particular style of fence which my improved machine is designed and adapted to form consists of a series of horizontal wires (indicated at *a*) and a series of upright wires, (indicated at *b*), the same being joined at the points of their intersection by means of a staple *c*, having its prongs clenched over and about the upright wire, the loop of the staple embracing the horizontal wire and holding it snugly in place against the upright wire. A single joint is shown in Figs. 6 and 7 sufficient to illustrate the design and purpose of the machine, which more particularly has in view the engagement of the staples with the

intersecting horizontal and upright wires at the points of their intersection. In the joining of the wires the upright wire is slightly indented adjacent to the horizontal wire, as indicated at *d*, while the loop of the staple is made to offset or set forward or over or in a plane with the upright wire, as indicated in Fig. 6 more particularly at *e*.

My improved machine embodies in its construction a suitable case *f*, constructed with an orifice therethrough, as indicated at *g*, to receive the horizontal wire and with an additional orifice (indicated at *h*) to receive the vertical wire. The orifices *g* and *h* are arranged so that the horizontal and vertical wires will lie the one against the other. Said case is formed with a suitable runway at *i*, through which the staples *c* may be fed. Leading from the inner end of the channel *i* is an additional channel, (indicated at *j*), through which a single staple may descend to be engaged with the wires. A plunger *k* is made reciprocatory in said channel *j* to force the staples one by one into proper position to engage the wires. The staples when forced, primarily, into place descend over or astride the horizontal wire, as indicated in Fig. 1. A reciprocatory plunger *l*, being forced inward, then bends the prongs of the staple partially around the vertical wire or into position, as indicated in Fig. 2. An additional plunger *m* then advances and further bends the prongs of the staple to the upright wire, as indicated more particularly in Fig. 3, the prongs of the staple being thereby forced into position. (Shown more particularly in Fig. 4.)

To hold the two wires firmly in place while the operation of bending the prongs of the staple is in process, a plunger *n* is forced into contact with said wires, as shown more particularly in Figs. 1, 2, 3, and 4. It will thus appear that the plunger *k* simply forces a staple into place, the plunger *n* holding the two wires closely together, while the plungers *l* and *m*, working consecutively essentially at right angles the one to the other, clench the prongs of the staple about the upright wire. The operation of the machine will thus be clearly understood.

I do not limit myself to any specific mechanism for reciprocating the plungers or for feeding the staples to the machine. In this

manner the prongs of the staple are effectually coiled quite around the upright wire. The channels in the casing *f* for the vertical wire and for the staple-feed are so arranged
 5 at an oblique angle as to bring the loop of the staple into the plane of the vertical wire at a right angle to the horizontal wire, and by means of the plungers *l* and *m* the prongs are forced around the upright wire in almost a
 10 complete circle, giving great firmness to the joint for engagement of the staple with said wires. Any suitable case may be employed to form a suitable plunger-guide and to engage the wires. It will be observed that the
 15 plunger *l* reciprocates in a direction diagonal to the horizontal wire.

What I claim as my invention is—

1. In a wire-fence machine, a case provided with horizontal and vertical intersecting wire-receiving channels, and with a staple-feeding
 20 channel, said case having in combination therewith a reciprocatory plunger to bend the prongs of a staple in the direction of the horizontal channel, and an additional reciprocatory plunger acting at right angles to the first-named plunger to clench the prongs of a staple
 25 about the vertical wire.

2. In a wire-fence machine, a case provided with orifices to receive a horizontal and a vertical fence-wire, means to feed a staple astride
 30 the horizontal wire, a reciprocatory plunger to bend the prongs of a staple in the direction of the horizontal wire, and an additional reciprocatory plunger to clench the prongs of a staple about the vertical wire.
 35

3. In a fence-machine, a guide case or frame provided with orifices to receive a horizontal and a vertical fence-wire, and a staple-feeding channel, said case or frame having in combination
 40 therewith means to hold the wires adjacent the one to the other, means to feed the staples astride the horizontal wire, a reciprocatory plunger to bend the prongs of a staple, and an additional reciprocatory plunger to clench the prongs of the staple around
 45 the vertical wire.

4. In a wire-fence machine, a guide case or frame provided with orifices to receive a horizontal and a vertical wire, and with a staple-feeding orifice, a plunger to hold the wires
 50 firmly together, a plunger to feed the staples astride the horizontal wire, and two reciprocatory plungers working essentially at right angles the one to the other to bend and clench the prongs of the staple about the vertical
 55 wire.

5. In a fence-machine, a guide case or frame constructed with orifices to receive a horizontal and a vertical fence-wire, and with a staple-feeding channel, said case having in combination
 60 therewith means to feed a staple astride the horizontal wire, and reciprocatory plungers to bend and clench the prongs of the staples about the vertical wire, the staple-feeding channel and the orifice for the vertical wire arranged to bring the loop of the
 65 staple in the plane of the vertical wire at right angles to the horizontal wire when the prongs of the staple have been clenched thereabout.

6. In a wire-fence machine, a case provided with horizontal and vertical intersecting wire-receiving channels and a staple-feeding channel, said case having in combination
 70 therewith a reciprocatory plunger made reciprocatory on a line diagonal to the horizontal wire-receiving channel, and an additional reciprocatory plunger acting at right angles to the first-named plunger.
 75

7. In a wire-fence machine, a case provided with horizontal and vertical intersecting wire-receiving channels, said case having in combination
 80 therewith two reciprocatory plungers working essentially at right angles the one to the other to bend and clench the prongs of a staple about the vertical wire.
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In testimony whereof I sign this specification in the presence of two witnesses.

MERTON CHURCH.

Witnesses:

N. S. WRIGHT,
 M. HICKEY.