(No Model.) 2 Sheets—Sheet 1.

# J. MACY & C. M. GILBERT.

## WIRE FENCE MACHINE.

No. 342,524. Patented May 25, 1886.

Fig. 1.

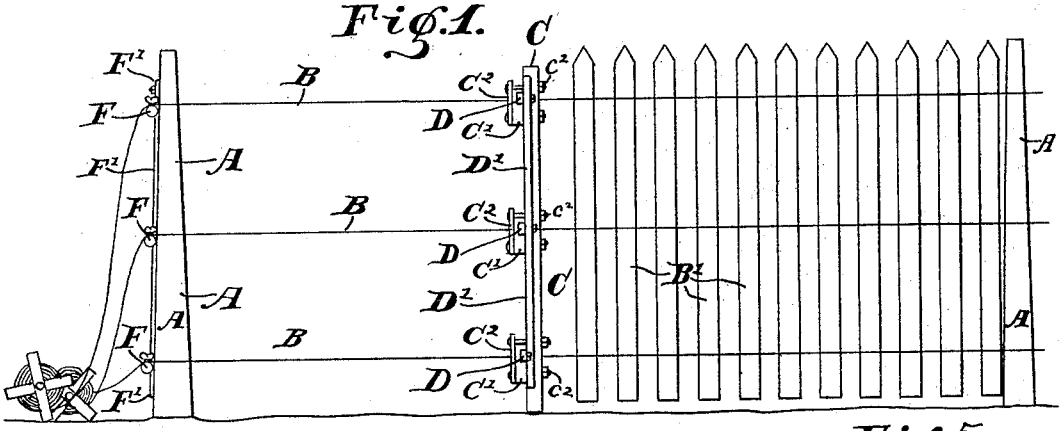


Fig. 2.

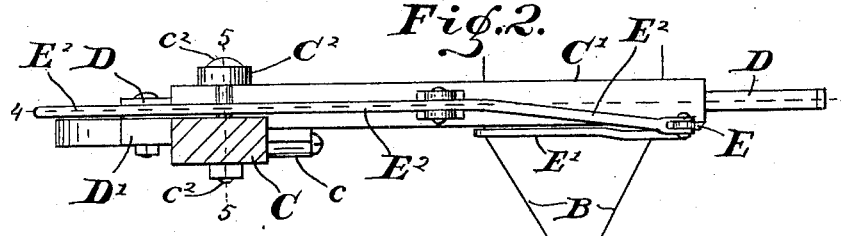


Fig. 5.

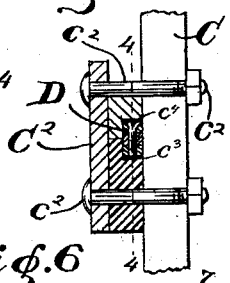


Fig. 3.

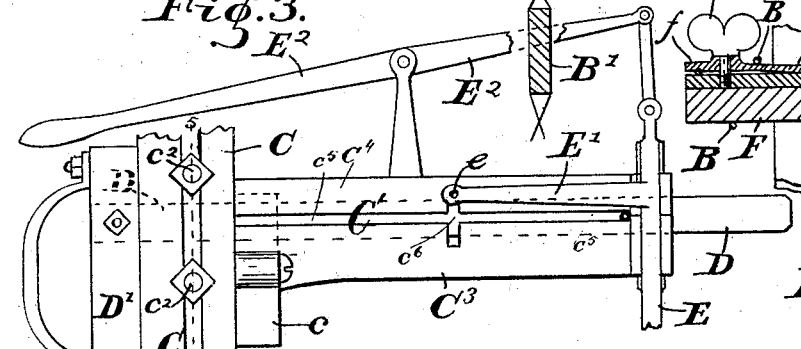


Fig. 6

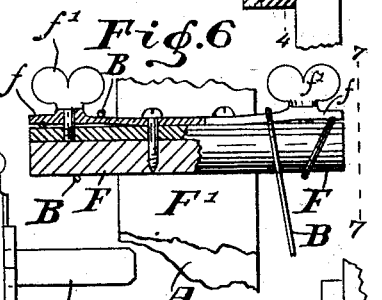


Fig. 4.

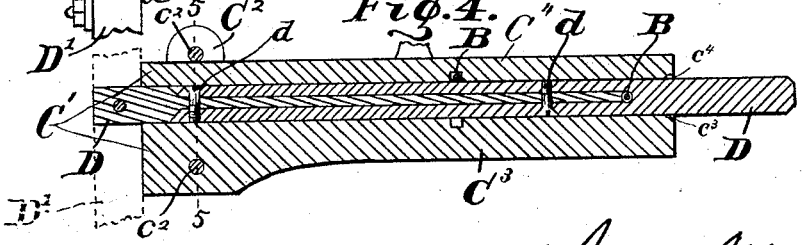
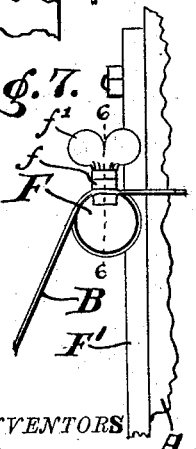


Fig. 7.



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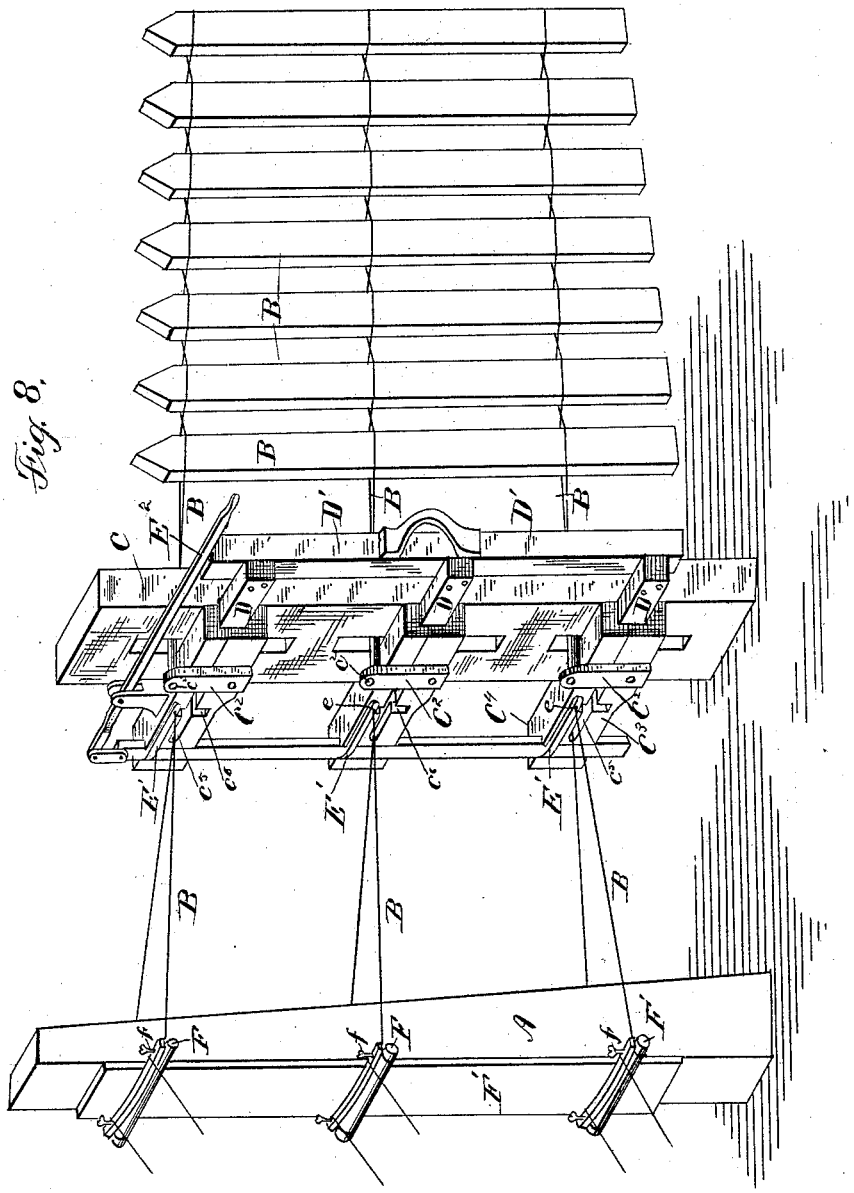
(No Model.) 2 Sheets—Sheet 2.

# J. MACY & C. M. GILBERT.

## WIRE FENCE MACHINE.

No. 342,524. Patented May 25, 1886.

Fig. 8.



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# UNITED STATES PATENT OFFICE.

JAMES MACY, OF DUBLIN, AND CHARLES M. GILBERT, OF STRAUGHN, IND.

## WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 342,524, dated May 25, 1886.

Application filed January 22, 1886. Serial No. 189,379. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES MACY, of the town of Dublin, county of Wayne, and CHARLES M. GILBERT, of the town of Straughn, county of Henry, both in the State of Indiana, have invented certain new and useful Improvements in Wire-Fence Machines, of which the following is a specification.

Our said invention relates to that class of machines by which fences are constructed by weaving pickets into strands of wire; and it consists of the mechanism for that purpose hereinafter described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a section of fence in process of construction by the use of our improved machine; Fig. 2, a top or plan view of one of the weaving devices separately; Fig. 3, a side elevation of the same; Fig. 4, a central section thereof on the dotted line 4 4 in Fig. 2; Fig. 5, a transverse section thereof on the dotted line 5 5 in Fig. 3; Fig. 6, a view, partly in section, on the dotted line 6 6 in Fig. 7, and partly in elevation, of the tension device; and Fig. 7 an end elevation of the same, as seen from the dotted line 7 7 in Fig. 6; and Fig. 8, a perspective view showing the complete machine in connection with a portion of fence and in position for operation.

In said drawings the portions marked A represent the fence-posts; B, the strands of wire; C, the main bar of my improved weaving device; D, the needles or shuttles thereof; E, the shifting device for the wire, and F the tension device by which the wire is kept under proper strain. The posts A and wires B are the ordinary posts and wires of which fences of this character are constructed, as well as the pickets B′, which are woven between the strands of wire, and these parts therefore will not be further described herein, except incidentally in describing the weaving mechanism. The bar C carries one, two, or more arms, C′, (three are shown,) through which the wires pass in being woven about the pickets. Said arms are formed of two parts, $C^3$ and $C^4$, arranged with a longitudinal aperture, $c^5$, between them, forming a way for the travel of one of the wires, and having grooves $c^3$ $c^4$ in their faces to receive the needle or shuttle, and a central vertical notch, $c^6$, cut through said arm, across and communicating with said longitudinal aperture, forming a way for the travel of the other wire. Said bar C′ is secured to the bar C by clamps, (consisting of a clamp-bar, $C^2$, and bolts $c^2$ therefor,) by which they are secured in the manner shown most plainly in Fig. 5. The needles or shuttles D correspond in number to the arms C′, into which they enter, and are secured at their rear ends to a common bar, $D^2$. Said needles are constructed in two parts, as shown, the outer part being in the form of a clip and passing over the inner, and secured thereto by means of a bolt or bolts, *d*, as shown most plainly in Fig. 4. In placing the device upon the wires for use this outer or clip portion of the needle, as well as the upper portion of the arm C, is removed from place, the wires inserted, and the parts restored to position, as will be presently more fully described.

Attached to the ends of the arms C′ is a shifting device, E, which consists of a bar and a number of arms, E′, corresponding to the number of arms C′, and each of said arms extends back alongside the corresponding arms, C′, to the notches therein. In the ends of these arms are eyes or holes *e*, through which the strands of wire pass, and as the machine is operated this shifter is moved up and down, and the strand of wire passing through said eyes is carried above and below the needle alternately, as will be readily understood. All of the pickets may be thus woven with a twist in the wire between them, and thus held more securely than if this were not done. A lever, $E^2$, may be appropriately mounted, as shown, and the bar E operated through it, as will be readily understood.

The tension device consists of a cross-bar, F, mounted on a bar, F′, placed behind the last post of the fence being at the time constructed with arms projecting on each side, carrying tension-strips *f*, which are adapted to be loosened or tightened by the use of thumb screws or nuts *f′*. When the wire is placed in position, the portion next the spool is passed under one of these tension-strips

and then around the arms, as indicated, (see Figs. 6 and 7,) and the thumb-screws $f'$ are tightened down to the extent required, and thus the wire is kept taut during the operation of weaving the fence, and at the same time is permitted to unwind sufficiently to furnish the necessary wire to weave around the pickets.

The operation is as follows: The desired number of strands of wire are fastened tightly to one end post and carried to the other, where they are passed through the tension device, which is secured to said other end post and drawn up tightly. The weaving device is then placed upon said wires in the following manner: There being two strands of wire at each point, the clip portion of the needle D is removed and one wire placed next the end of its inner portion, when the clip portion is replaced and secured in position. Then one portion of the arms C′ having been removed, the other strand of wire is placed in in the notch therein, the needle is placed in the groove, and the portion of the arm C′ which has been removed is replaced, when the machine is ready to operate. When it is desired that the shifting device E shall also be used, the wire, instead of being placed directly in the notches in the arm C′, is placed in the eye in the end of the arm of said shifting device; but the machine can be used without this shifting device, if desired, it being only a means of providing an additional safeguard against the wires getting out of position on the pickets. When the shifting device is not used, a button, $c'$, on the side of the post C, is turned up, and the needle in making its stroke is thus stopped by the wire coming in contact with said button, instead of with the side of the post C, and the parts are so proportioned that the end of the needle will then not pass to the rear of the notches in the arm C′, and, consequently, the strand of wire in said notches is not permitted to pass from one side to the other of the needle, as in the other method of operating when the shifter is employed. As the needles or shuttles are moved back and forth the pickets are placed regularly between the strands of wire in the usual manner.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A weaving device for weaving strands of wire about pickets, consisting of a bar-carrying arms, notches in said arms to receive one strand of wire, a needle or shuttle running in grooves in each of said arms and having an eye to receive the other strand of wire, substantially as set forth.

2. The combination of the bar C, carrying-arms C′, notches in said arms to receive a strand of wire, needles or shuttles running in grooves in said arms having eyes to receive a strand of wire, and a shifting device, E, for passing the first-mentioned strand of wire above and below the needle as it makes its strokes, substantially as set forth.

3. The combination, with a needle or shuttle for carrying a strand of wire back and forth, of a shifting device for alternately passing another strand of wire above and below the needle or shuttle as it makes its stroke.

4. The combination, in a machine for weaving two strands of wire about pickets, of a bar, C, having arms, grooves and notches in said arms, one of the strands of wire passing through said notches, needles or shuttles laid in said grooves and having eyes to receive the other strand of wire, and a shifting device, E, for raising the first-mentioned strand of wire above or forcing it below said needle or shuttle, substantially as set forth.

In witness whereof we have hereunto set our hands and seals, at Indianapolis, Indiana, this 16th day of January, A. D. 1886.

JAMES MACY. [L. S.]
CHARLES M. GILBERT. [L. S.]

Witnesses:
C. BRADFORD,
CHARLES L. THURBER.