(No Model.)

C. F. FARRAR.

FENCE WEAVING DEVICE.

No. 596,864. Patented Jan. 4, 1898.

Fig. 4.

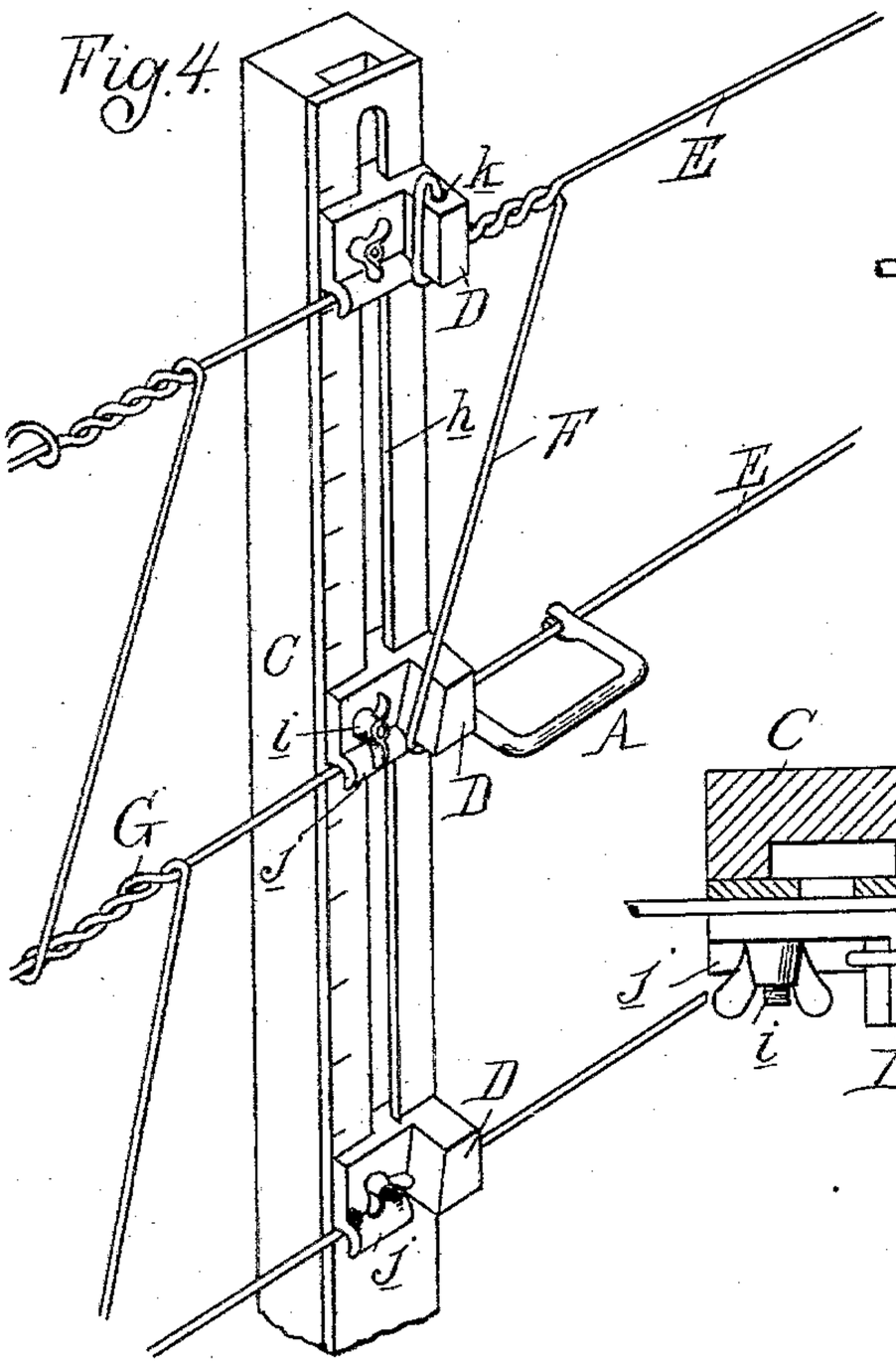


Fig. 3.

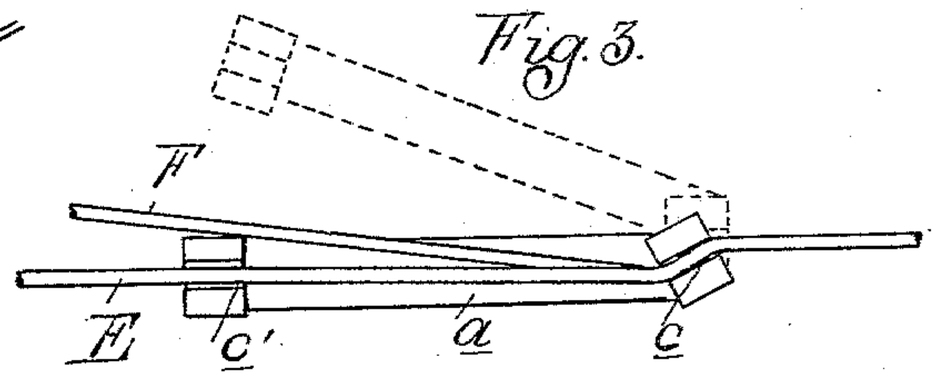


Fig. 2.

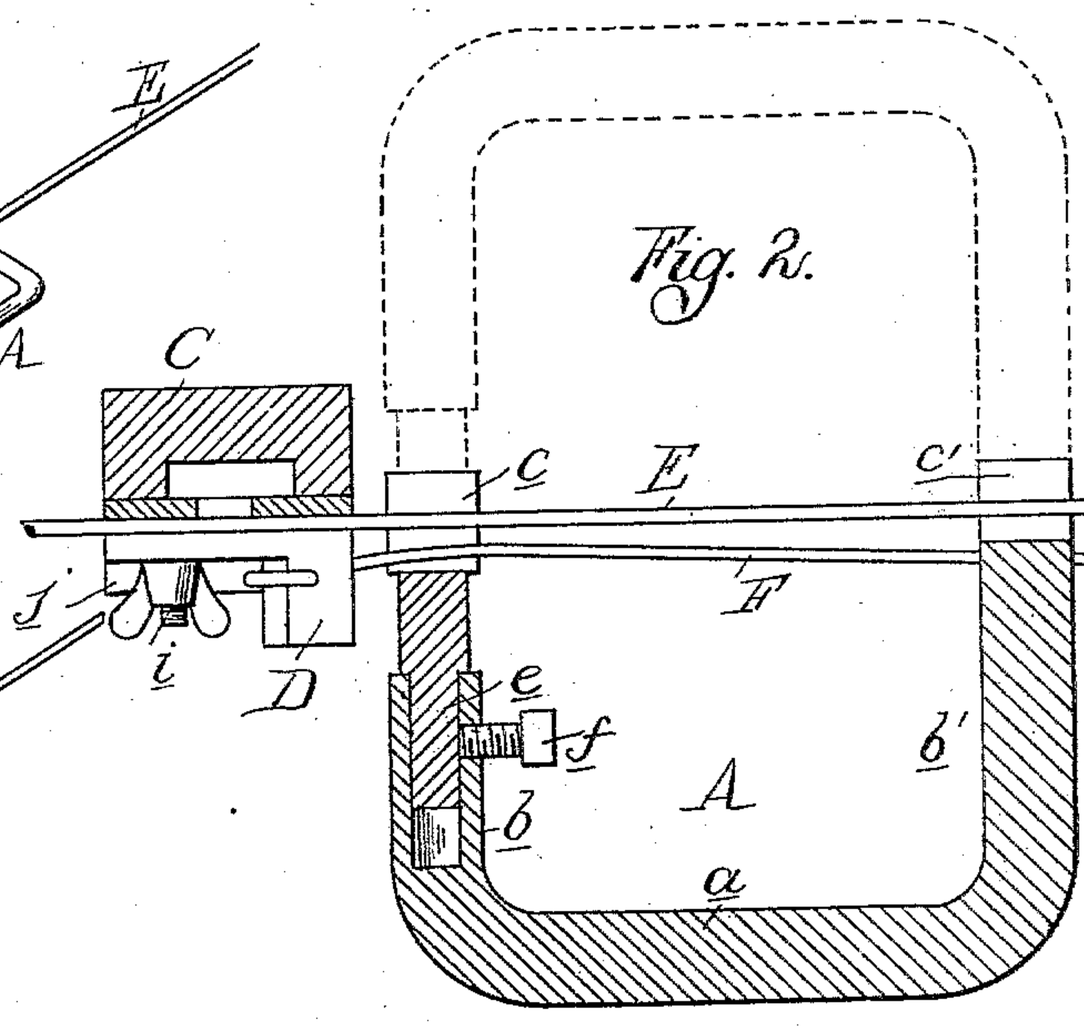


Fig. 5.

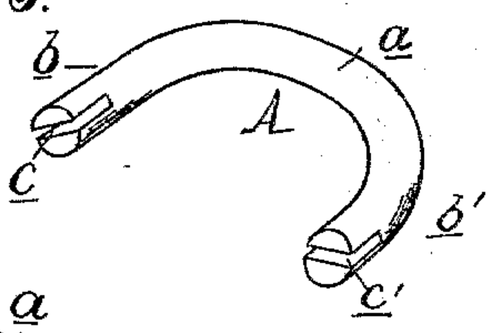
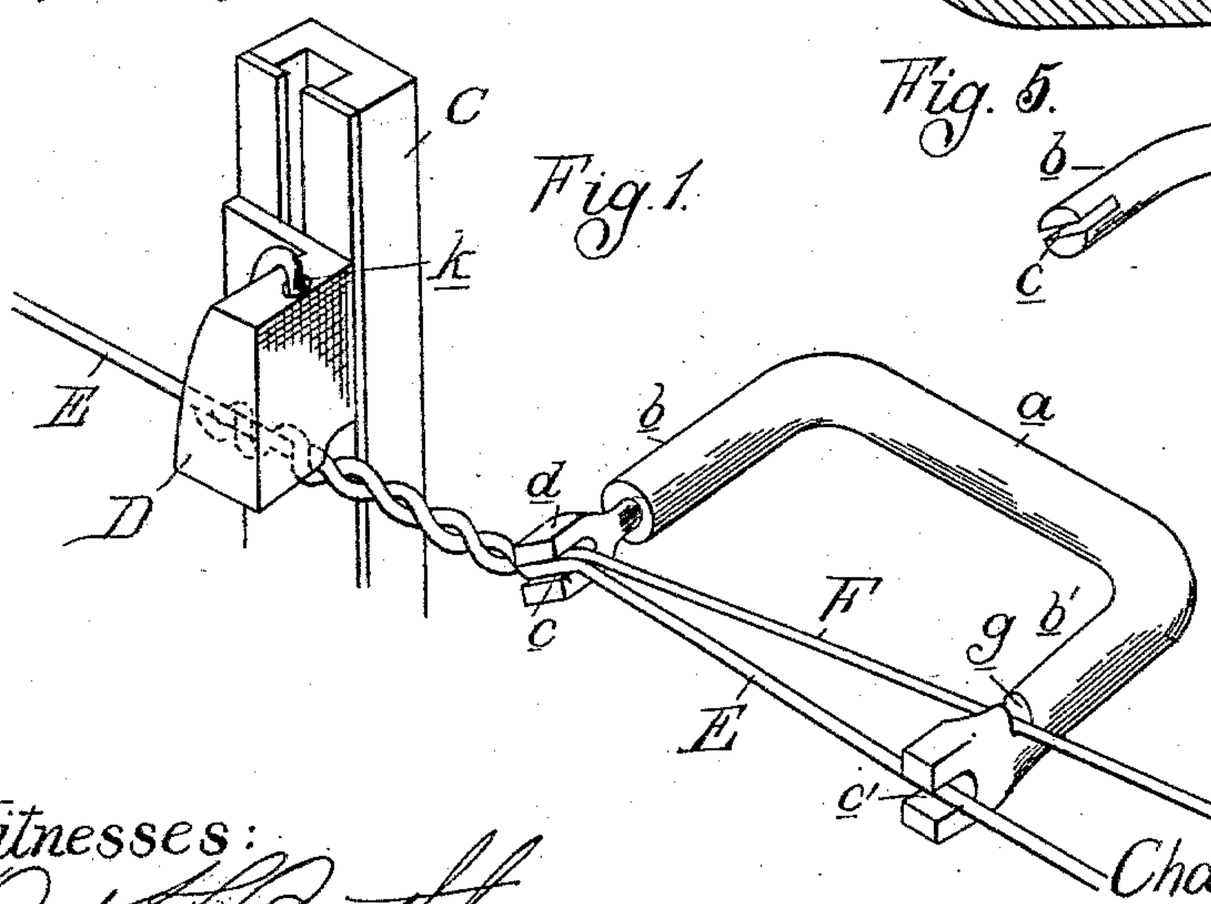


Fig. 1.



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UNITED STATES PATENT OFFICE.

CHARLES F. FARRAR, OF HOWELL, MICHIGAN.

FENCE-WEAVING DEVICE.

SPECIFICATION forming part of Letters Patent No. 596,864, dated January 4, 1898.

Application filed August 11, 1897. Serial No. 647,794. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. FARRAR, a citizen of the United States, residing at Howell, in the county of Livingston and State of Michigan, have invented certain new and useful Improvements in Fence-Weaving Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to apply the stay-wires to the line-wires in such manner that at the point of intersection they interlock with each other; and to this end my invention consists in a simple and convenient hand-tool, by means of which the stay-wires may be applied expeditiously and which produces at the point of intersection with the line-wires what may be called a "cable-twist," whereby the stay-wire is interlocked with the line-wires, while at the same time tension is applied both to the stay-wire and the line-wires, with the result that a very strong and stiff fence is obtained, all as more fully hereinafter set forth, and shown in the drawings, in which—

Figure 1 is a perspective view of my tool, showing it as in operation. Fig. 2 is a horizontal section thereof. Fig. 3 is an end elevation of the tool, illustrating its manner of engagement with the line-wire. Fig. 4 is a perspective view of a portion of fence made by the tool and illustrating the manner of using the tool in connection with an accessory implement or so-called "spacing device" adapted for use in connection with my tool. Fig. 5 is a perspective view of my tool in the simplest form.

My tool constructed in its simplest form is shown in Fig. 5, and consists of a bar A of metal, preferably of steel, and forming a three-sided open frame, of which the central part *a* forms the grasp for the hand of the operator and the extremities *b b'* the sides in which the guide-slots *c c'* are formed, by means of which the tool is adapted to engage with a line-wire. The particularly new feature of this tool is that the slots *c c'* are not in one and the same plane, but are in different planes intersecting each other at an angle in such manner that while the slot *c'* is substantially in the plane of the frame A the slot *c* is in a plane intersecting it at an acute angle. The slot *c'* may be large enough to fit different sizes of line-wires, but the slot *c* should not be larger than necessary to engage the line-wire, and in order to adapt the tool for different sizes of line-wire and also for the purpose of adjusting the plane of the slot *c* I preferably form the slot *c* in a separate piece *d*, which by means of a shank *e* is adjustably secured in a corresponding socket in the frame by a set-screw *f*. Any other construction, however, may be used to obtain this end. Upon the side *b'* of the frame is formed another slot or wire guide *g*, which is for the purpose of guiding the stay-wire.

In connection with my weaving-tool I employ a spacing device, which consists of a bar C, formed upon its front side with a vertical guide-slot *h*, in which the spacing-blocks D slidingly engage and are adjustably secured by thumb-screws *i*. Upon its under side each spacing-block has a horizontal guide-groove *j*, adapted to seat one of the line-wires, and the topmost spacing-block is provided with an aperture *k*.

The front side of the bar C is preferably faced with steel, and a scale is marked on this face to facilitate the adjustment of the spacing-blocks at any desired distance apart corresponding to the distance between the line-wires.

In practice the weaving on of a stay-wire is accomplished as follows: Supposing E to represent the line-wires of a fence, the spacing-tool is placed in position on the line-wire, as shown in Fig. 4. Then a stay-wire F, cut to proper length to form one stay complete, is first inserted with one end into the hole *k* of the topmost spacing-block and thence bent around one side of it and carried underneath the spacing-block to extend alongside the line-wire. Thence the weaving-tool is first engaged with its guide-slot *c* to embrace both the line-wire and the stay-wire (see Fig. 4) and then the other slot *c'* is engaged upon the same line-wire without taking in the stay-wire, which latter is engaged in the slot *g*. Now the operator gives the tool a few turns around the line-wire in the usual way, when the result will be that both the line-wire and the stay-wire will be twisted together, as shown at G in the drawings, the twist being of the same character as in a cable formed by

twisting two strands of wire together. This peculiar result is plainly caused by the angularity of the slot *c*, as will be seen by examining Fig. 3, in which the dotted lines indicate the position of the tool required to first engage its slot *c* upon the line-wire, while the full lines indicate the position of the tool after the other slot *c'* is also engaged with the line-wire. A bend or kink is thus produced in the line-wire and stay-wire where they pass through the slot *c*, and this in turning the tool coils both wires and produces the cable-twist, which interlocks the two firmly and at the same time tensions both the line and stay wires.

The weaving on of the stay-wire to the other line-wires is accomplished in the same manner as before described, and shown in connection with the drawings in Fig. 4.

I prefer to have the stay-wires cut to proper length from straightened wire, as by using the slot *g* it may be readily carried around the line-wire in weaving without entangling it therewith. However, if desired, it may be carried on a spool attached to the tool in any of the different ways in use with other weaving devices.

It will be noticed that though both the slots *c c'* are open the tool in weaving has the further advantage over others of like character that it has much less tendency to become accidentally disengaged and this tendency can be decreased to any desired extent by the slot *c* being made somewhat less angular at the bottom than at its mouth.

The fence resulting from the use of my tool is much tighter and stronger than if made by merely coiling the stay-wires upon the line-wires, as it will be seen that the line-wires are shortened by the cable-twist and the latter, besides preventing any displacement of the stay-wires, gives the fence greater elasticity to compensate for the effects of heat and cold.

What I claim as my invention is—

1. In a tool for weaving stay-wires, a curved bar or frame having two guide-slots for engagement with a line-wire, one in the plane of the frame, and the other in a plane inclined thereto at an angle.

2. In a tool for weaving stay-wires, the open frame A formed with a central portion *a* and sides *b b'*, having the slots *c c'* inclined at an acute angle toward each other.

3. In a tool for weaving stay-wires, the open frame A formed with a central portion and two side bars having slots in the ends for engagement with the line-wire, one of said side bars being provided with an adjustable portion in which the slot is formed.

4. In a tool for weaving stay-wires, the combination of the frame A formed with side bars *b b'*, the adjustable piece *d* in the end of the side bar *b* and having the slot *c*, the slot *c'* in the end of the side bar *b'*, and the slot *g* on the side bar *b'*.

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

CHARLES F. FARRAR.

Witnesses:

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OTTO F. BARTHEL.