No. 614,737. Patented Nov. 22, 1898.

J. W. MARTIN.

WIRE TIGHTENING AND HOLDING DEVICE.

(Application filed July 26, 1897.)

(No Model.)

Fig I

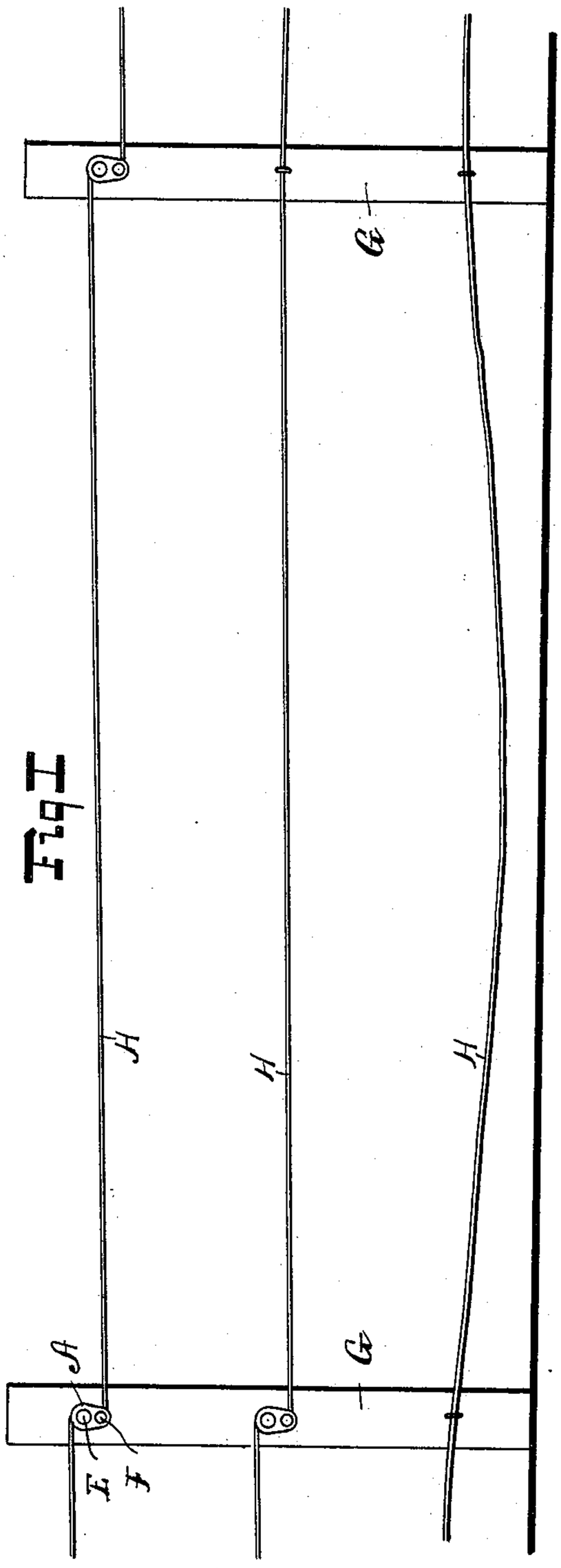


Fig II

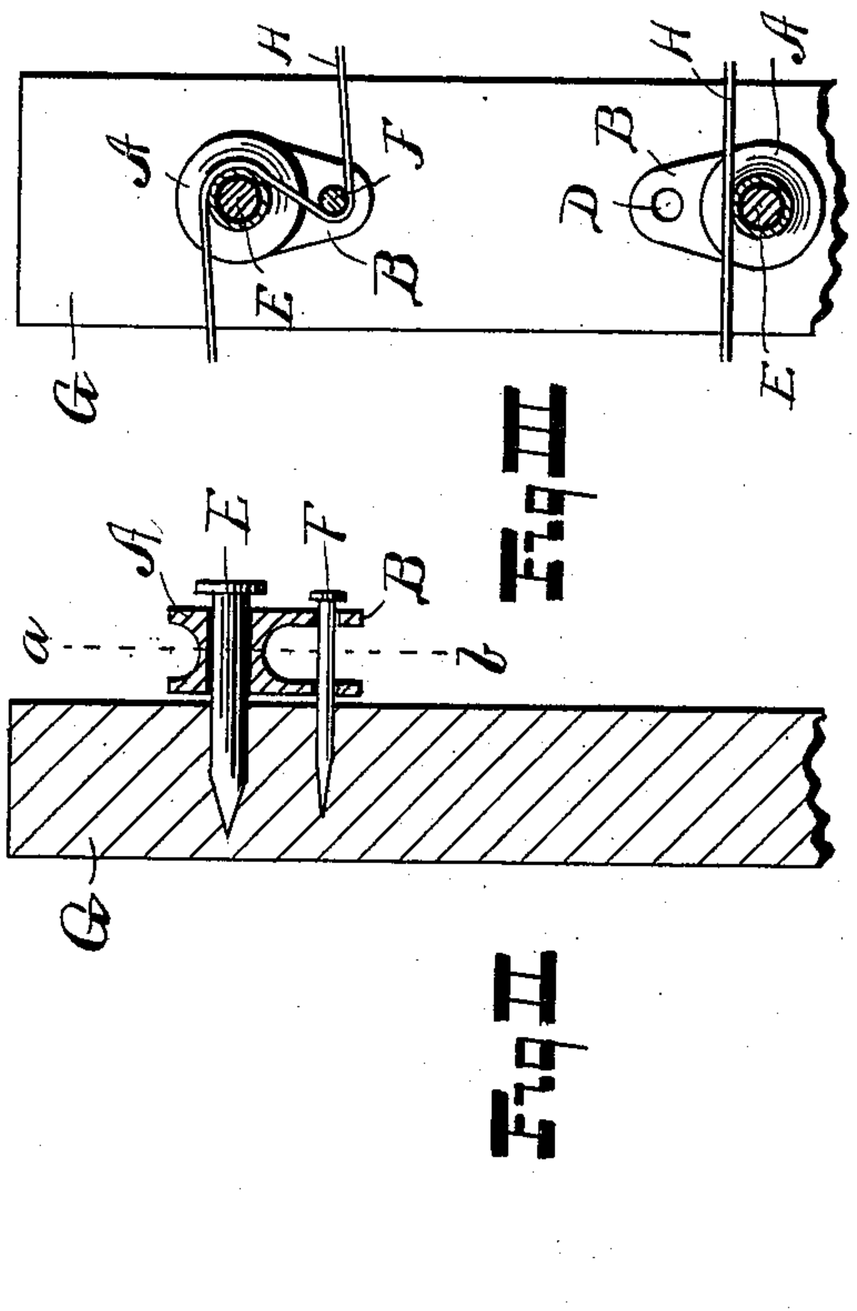


Fig III

Fig IV

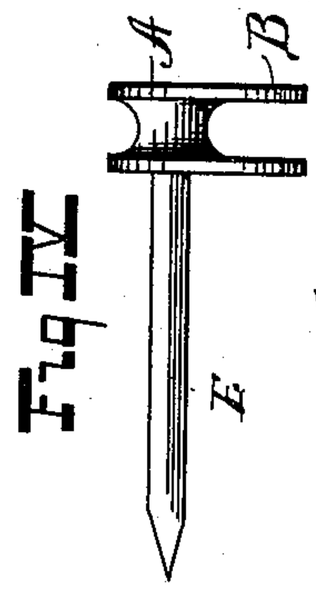
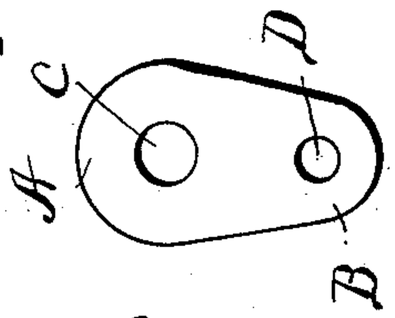


Fig V



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UNITED STATES PATENT OFFICE.

JEROME W. MARTIN, OF KANSAS CITY, MISSOURI.

WIRE TIGHTENING AND HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 614,737, dated November 22, 1898.

Application filed July 26, 1897. Serial No. 645,936. (No model.)

To all whom it may concern:

Be it known that I, JEROME W. MARTIN, a citizen of the United States, residing in Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Wire Tightening and Holding Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in wire-tightening devices.

The object of my invention is to provide a device by the use of which wires of fences, clothes-lines, and similar structures may be held securely and be given any desired tension either at the time the wires are first strung or afterward.

My invention comprises a device adapted to be rotatably mounted upon the post or other wire-support and upon which the wire to be tightened is wound and which is provided with means for engaging the wire when the device is rotated and means for preventing the rotation of the said device after the wire has been tightened.

The preferable form of my invention is a grooved drum adapted to be rotatably mounted upon the post or other support and upon which the wire to be tightened is wound, means for preventing the slipping of the wire on the drum when the drum is rotated, and a locking device for preventing rotation of the drum.

My invention comprises, further, a peripherally-grooved drum provided with one or more lateral ears, each provided with a perforation adapted to receive a locking-pin which is parallel to the axis of the drum, the drum being rotatably supported at its axial center.

My invention comprises, further, certain novel features of construction hereinafter fully described and claimed.

In the accompanying drawings, illustrative of my invention, Figure I represents a panel of fencing some of the wires of which have applied to them my wire-tightening device. This view is a side elevation. Fig. II represents in longitudinal vertical section a device of my invention mounted upon a fence-post and showing the locking-pin driven into the post. Fig. III represents a transverse vertical sectional view taken on the dotted line *a* *b* of Fig. II and showing the fence-wire already engaged by and partially wound upon the drum. In the same figure is represented below the first another wire-engaging device, shown also in transverse section and in the position occupied by it before the insertion of the locking-pin. Fig. IV represents a side view of a modified form of my invention in which the pin E is formed integral with the drum A. Fig. V represents an end view of the form illustrated in the first three figures.

Similar letters of reference indicate similar parts throughout the several views.

A indicates the drum, preferably cylindrical in form and provided with a concave peripheral groove in which the wire to be tightened is wound. Projecting laterally from the two ends of the drum, respectively, are two parallel ears B, which are perpendicular to the drum-axis and which are provided each with a transverse perforation D, oppositely disposed with reference to each other. Through the axis of the drum is a hole C, adapted to receive a spike, nail, pin, bolt, or other analogous article which is driven in the fence-post (represented by G) and around which the drum is rotated when the wire is tightened. In the modification shown in Fig. IV the pin E is integral with the drum A and rotates with the drum.

In operating the form of my invention shown in Figs. I, II, III, and V the pin E after being inserted through the hole C of the drum is driven into the post G. The wire (indicated by H) is then placed either above or below the drum, in the peripheral groove thereof, and between the ears B, as shown in the lowermost device shown in Fig. III. The locking-pin F is then inserted through the holes D, the fence-wire H lying between the pin F and the drum. The drum is then rotated by means of a wrench or other convenient means. The rotation of the drum forces the pin F against the fence-wire, which is wound upon the drum by continuing to rotate the same. When the wire has acquired the tension desired, the pin F is driven into the post, thus securely holding the drum from being rotated rearwardly. If at any time it is desired to increase the tension of the same fence-wire at the same place, the pin F is withdrawn from the post, but not from the

openings D in the ears, and the drum is turned until the tension desired is attained, after which the pin F is again driven into the post. The function of the ears in addition to providing means to support the securing-pin E, is to provide means by which the drum may be gripped by the wrench, so as to rotate it.

The form of my invention shown in Fig. IV is operated in the same manner as described with reference to the other form, the only difference being that the pin E in this last form rotates in the opening in the post in which it is driven. In this latter form it is better to first bore a hole in the post a trifle smaller than the diameter of the pin E. The pin F after it is driven into the post serves as a double safeguard against the withdrawal of the pin E from the post. In Fig. I the upper wire is shown as being wholly supported by devices of my invention. The next wire has one post provided with an ordinary staple, the slack of the wire having been drawn up by a device of my invention secured to the adjoining post. The lowest wire in the panel is shown in the slackened position and supported only by common staples.

Numerous departures in construction may be made without departing from the limits of my invention.

In cases where the end of the wire is to be seized the end of the wire is first put through one of the openings D, and the wire is then bent around, so as not to slip, after which the pin F is inserted and the drum revolved, as already described.

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

1. In a wire tightening and holding device, the combination with a drum adapted to be rotatably mounted upon the wire-support, and provided with two ears having oppositely-disposed holes located in a line parallel with the axis of the drum, of a pin movable lengthwise in the said holes and between which and the drum the wire to be tightened is passed, substantially as described.

2. In a wire tightening and holding device, the combination with a drum provided with a peripheral groove adapted to receive the wire to be wound, of a longitudinally-movable locking-pin carried by the drum parallel with the axis thereof and located outside the groove in which the wire is carried, substantially as described.

3. In a wire tightening and holding device, the combination with a rotatable drum provided with a peripheral groove adapted to have wound therein the fence-wire, and provided also with two oppositely-located holes disposed in a line parallel with the axis of the drum and exterior to the portion of the groove occupied by the wire, of a locking-pin adapted to be inserted in the said holes for the purpose of locking the wire upon the drum and also adapted to be driven into the drum-support for the purpose of preventing rotation of the drum, substantially as described.

4. As an article of manufacture, a drum for a wire-tightening device comprising a peripherally-grooved drum provided with a central axial opening therethrough and also provided with two oppositely-disposed holes located respectively at the ends of the drum and in a line parallel with the drum-axis and outside the peripheral groove, substantially as described.

5. In a wire tightening and holding device, the combination with a drum the ends of which are provided with two oppositely-disposed holes located parallel to the drum-axis and outside the wire to be wound thereon, of a locking-pin adapted to be inserted in the said holes for engaging the wire and locking it to the drum and also adapted to be entered into the drum-support for the purpose of preventing rotation of the drum, substantially as described.

6. In a wire tightening and holding device, the combination with a supporting-pin, of a drum rotatably mounted thereon, the drum being provided with a hole at each end, the holes being oppositely disposed and located parallel with the supporting-pin and outside the portion of the drum adapted to receive the wire, and a longitudinally-movable pin located in the said holes for tying the wire to the drum and adapted to engage the support for the supporting-pin for preventing rotation of the drum, substantially as described.

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

JEROME W. MARTIN.

Witnesses:

WARREN D. HOUSE,

JNO. M. PHILIPS.