I. N. MORFORD.

WIRE FENCE MACHINE.

APPLICATION FILED JULY 14, 1909.

963,620.

Patented July 5, 1910.

Fig. 1.

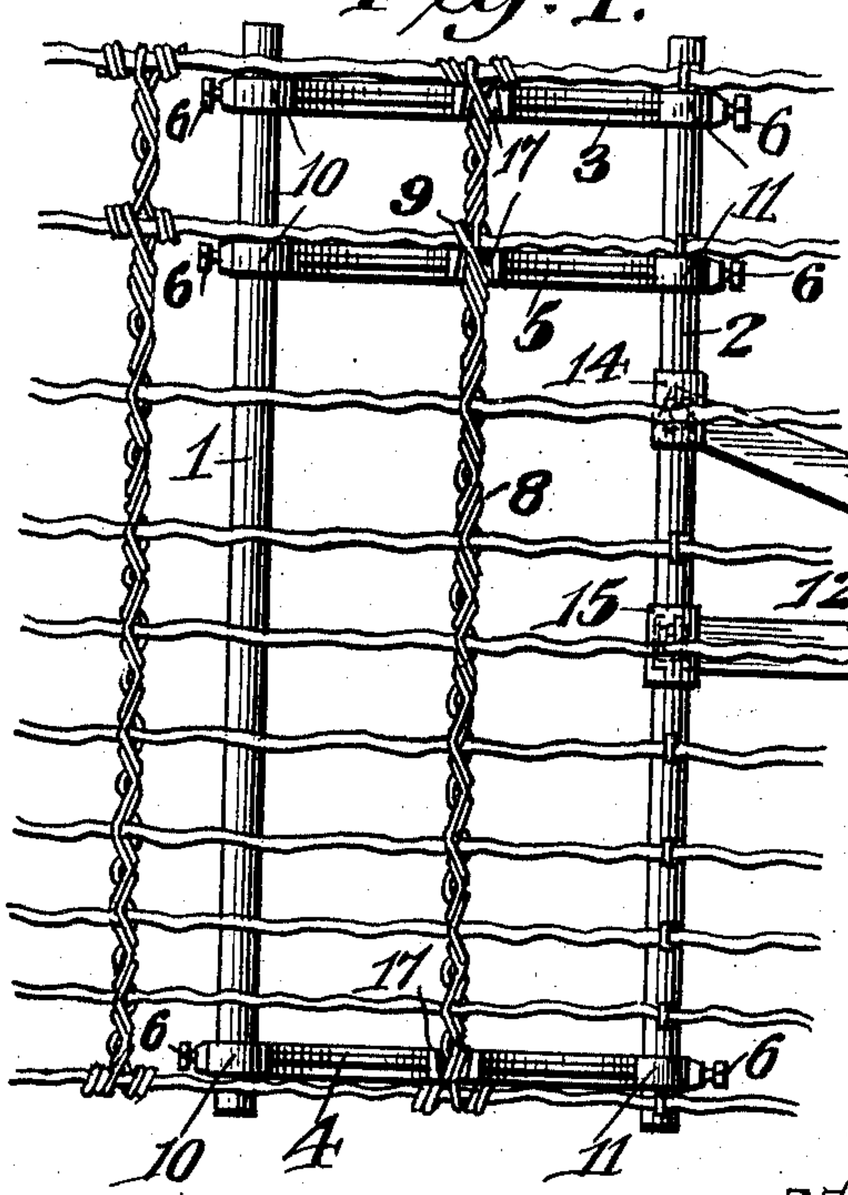


Fig. 4.

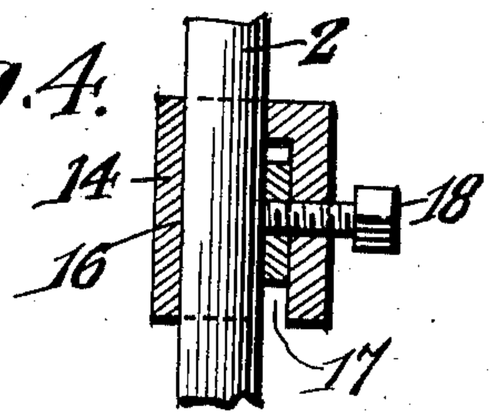


Fig. 5.

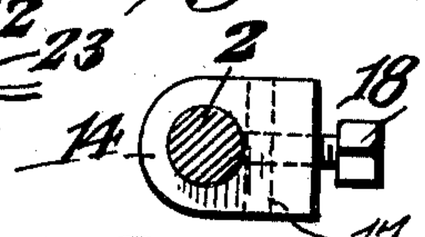


Fig. 2.

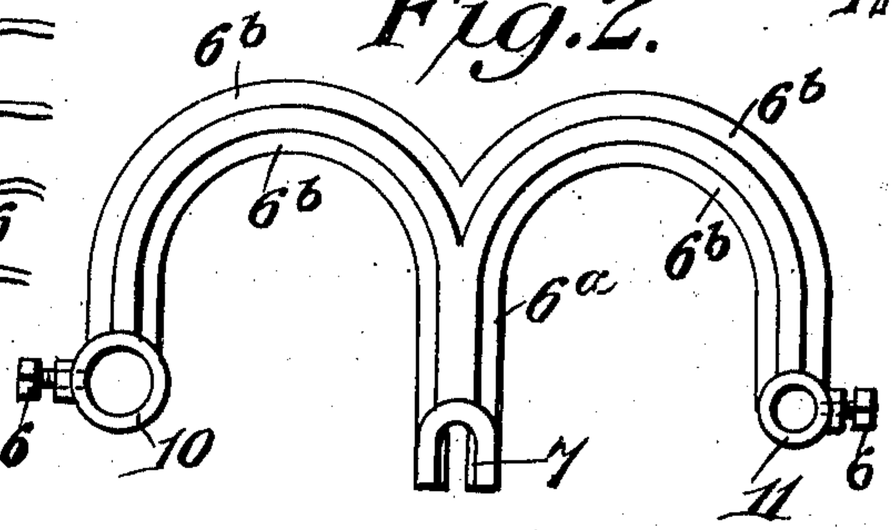


Fig. 3.

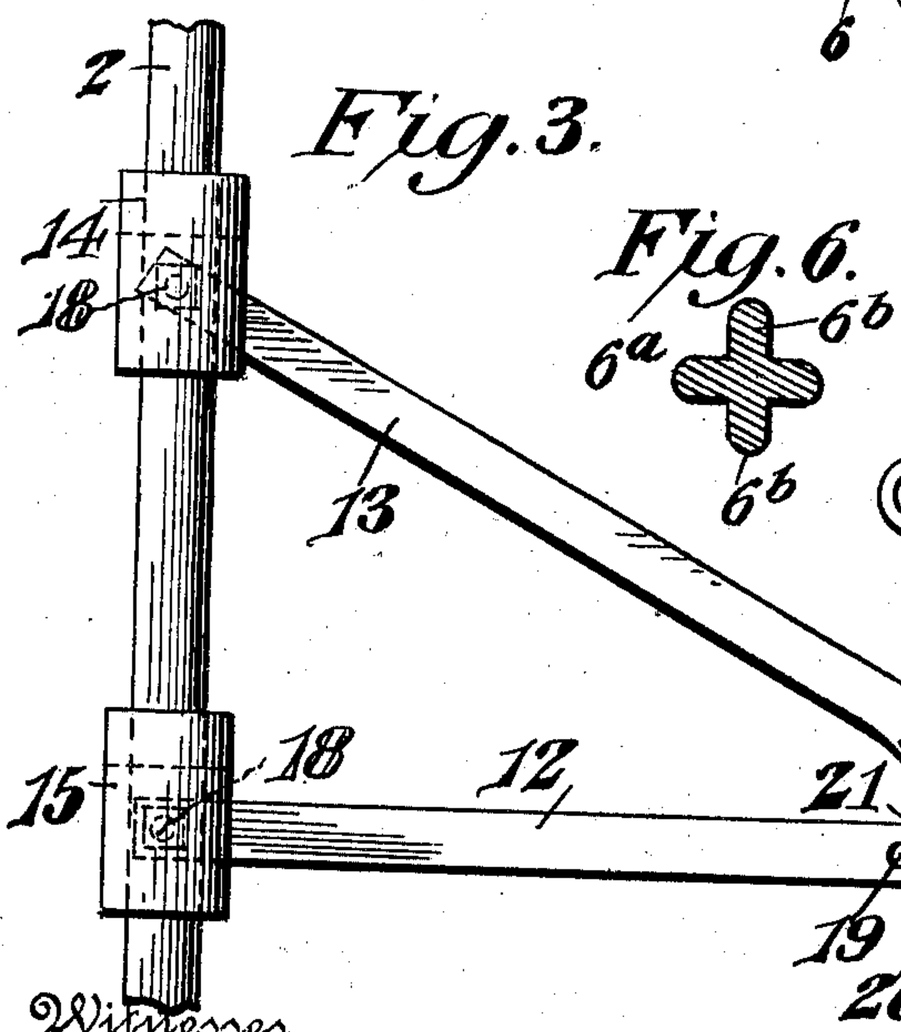
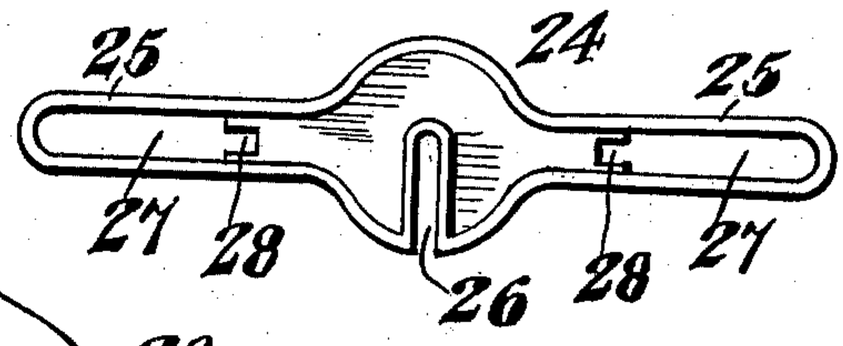


Fig. 6.

Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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WIRE-FENCE MACHINE.

963,620. Specification of Letters Patent. **Patented July 5, 1910.**

Application filed July 14, 1909. Serial No. 507,561.

To all whom it may concern:

Be it known that I, ISAAC N. MORFORD, a citizen of the United States, residing at Waynesville, in the county of Dewitt and State of Illinois, have invented a new and useful Wire-Fence Machine, of which the following is a specification.

The invention relates to improvements in wire fence machines.

The object of the present invention is to improve the construction of wire fence machines, more especially that shown and described in Patent No. 851,955, granted to me April 30, 1907, and to provide means for enabling a joint or hinge to be made in the vertical stay twisted by the machine.

A further object of the invention is to improve the construction for securing the wire fence machine to the line wires and for maintaining the former in a vertical position irrespective of the inclination of the line wires of the fence, and to enable the cross heads to be disengaged from the stay with greater facility than heretofore.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a side elevation of a wire fence machine, constructed in accordance with this invention and shown applied to a fence. Fig. 2 is a detail view of the bottom cross head. Fig. 3 is an enlarged detail view of the means for securing the machine to the line wires. Figs. 4 and 5 are detail views, illustrating the construction of the adjustable collars. Fig. 6 is a detail sectional view, illustrating the construction of the cross head. Fig. 7 is a detail view of the tool for twisting the stay.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 and 2 designate standards or uprights consisting of rods, either tubular or solid, and connected adjacent to their ends and at an intermediate point by top, bottom and intermediate cross heads 3, 4 and 5, consisting of castings and secured to the standards or uprights 1 and 2 by set screws 6, or other suitable fastening devices. The cross heads, which are of double semi-circular shape, are disposed horizontally and have curved sides and are provided with an intermediate centrally arranged arm or portion 6^a, cast integral with the cross heads and having a notched terminal forming a catch 7. The cross heads are reinforced throughout their entire length by inner and outer longitudinal ribs or flanges 6^b, located midway between their upper and lower edges, as clearly illustrated in Fig. 6 of the drawing. The notches or catches 7 of the cross heads are adapted to straddle a stay 8, as clearly shown in Fig. 1 of the drawing, and by employing the intermediate cross head 5, a joint or hinge 9 may be made in the stay. This will enable the top of the fence to be depressed or bent over without bending or kinking the stay. The notches 7 are tapered, the notches of the upper and intermediate cross heads being larger at the bottom than at the top, while the notch of the bottom cross head is reversely tapered and is larger at the top than at the bottom. The tapering notches hold the stay in position while the same is being twisted, and they cause the stay to be more neatly twisted around the contiguous line wires, and they also enable the cross heads to be more easily disengaged from the stay. The sides of the cross heads terminate in eyes 10 and 11, which adjustably receive the uprights or standards and which are adapted to slide on the same to enable the cross heads to be positioned properly with relation to the contiguous line wires. The eyes 10, which receive the standard or upright 1, are of greater diameter than the other eyes 11, as the standard 2 will through the twisting of the stay be forced against the line wires, and will be braced by the same, thereby enabling the standard or upright 2 to be made of less diameter than the standard or upright 1.

The standard or upright 2 is provided at intervals with hooks for engaging the line wires of the fence, as clearly illustrated in Fig. 1 of the drawing, and these hooks assist in holding the machine in engagement with the fence. The machine is adjustably connected with the fence and is maintained in an upright position irrespective of the inclination of the line wires by means of a longitudinal brace 12 and an inclined brace 13, connected at their inner ends to the

standard 2 and secured together adjacent to their outer ends, as clearly illustrated in Fig. 3 of the drawing. The inner ends of the braces 12 and 13, which are arranged at an angle to each other, are secured to the standard by upper and lower collars 14 and 15, each provided with a vertical bore or opening 16 for the reception of the standard and having a recess 17 for its brace. The collar and the brace are secured to the standard by means of a horizontal clamping screw 18, piercing the collar and the brace and engaging the standards, as clearly illustrated in Fig. 4 of the drawing. The recess or slot 17 is arranged adjacent to the standard, and consists of an enlargement of the lower portion of the bore or opening, and it enables the brace to fit against the standard 2. By this construction, the braces are firmly, securely and adjustably fastened to the standard 2. The outer end of the inclined brace is bent at a slight angle to the inner portion, and is arranged in an approximately vertical position, and it crosses the longitudinal brace at right angles to the same. The braces 12 and 13 are provided at their outer portions, where they cross each other, with series of perforations 19 and 20 for the reception of a bolt 21, which also secures a latch 22 to the longitudinal brace. The outer end of the longitudinal brace is provided with a notch or fork 23 in which one of the line wires is held by the latch 22. The bars or braces 12 and 13 are adjustable by means of the bolt 21 to arrange the said bars 12 and 13 at different angles to each other to hold the wire fence machine in a vertical position irrespective of any inclination of the line wires.

The stay is twisted between each of the line wires by means of a twisting tool 24, consisting of a central body portion and having opposite arms 25. The central portion is provided with a slot 26, extending from the center of the tool to one side thereof and adapted to receive the wires of the stay. The tool is rotated between the line wires and the standards to twist the stay in the well known manner. The arms 25 are provided with openings 27, and the twisting tool is equipped at the inner ends of the openings 27 with notches or recesses 28, to form a wrench for tightening the bolts or screws of the machine.

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

1. A wire fence machine including a pair of standards, and a cross head disposed horizontally and connecting the standards and provided with an intermediate arm having a terminal notch to receive a stay and adapted to engage the same adjacent to a line wire, said notch being tapered toward such line wire.

2. A wire fence machine including a pair of standards, and top, bottom and intermediate cross heads disposed horizontally and connecting the standards and provided with intermediate arms having terminal notches to receive the stay and adapted to engage the same adjacent to the top, bottom and intermediate line wires, said notches being tapered toward such line wires.

3. A wire fence machine including a standard, collars adjustably secured to the standard, angularly related braces connected at their inner ends to the collars and adjustably connected together at their outer portions, and means for connecting the outer portions of the braces with the fence.

4. A wire fence machine including a standard, collars adjustably arranged on the standard and provided with recesses, angularly related braces having their inner ends arranged in the recesses of the collars, fastening means mounted on the collars and piercing the braces and engaging the standard, means for connecting the outer portions of the braces and for connecting the same with the fence.

5. A wire fence machine including a standard, collars slidably arranged on the standard and provided with recesses, inclined and longitudinal braces having their inner ends fitted in the recesses and provided at their outer portions with perforations, clamping screws mounted on the collars and piercing the braces and engaging the standard, a fastening device passing through the perforations of the braces and adjustably connecting the same, and means for connecting the braces with the fence.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ISAAC N. MORFORD.

Witnesses:
E. E. NICHOLS,
W. D. SAMPSON.