(No Model.)

Z. R. KLING.

WIRE FENCE MACHINE.

No. 553,411. Patented Jan. 21, 1896.

Fig. 1,

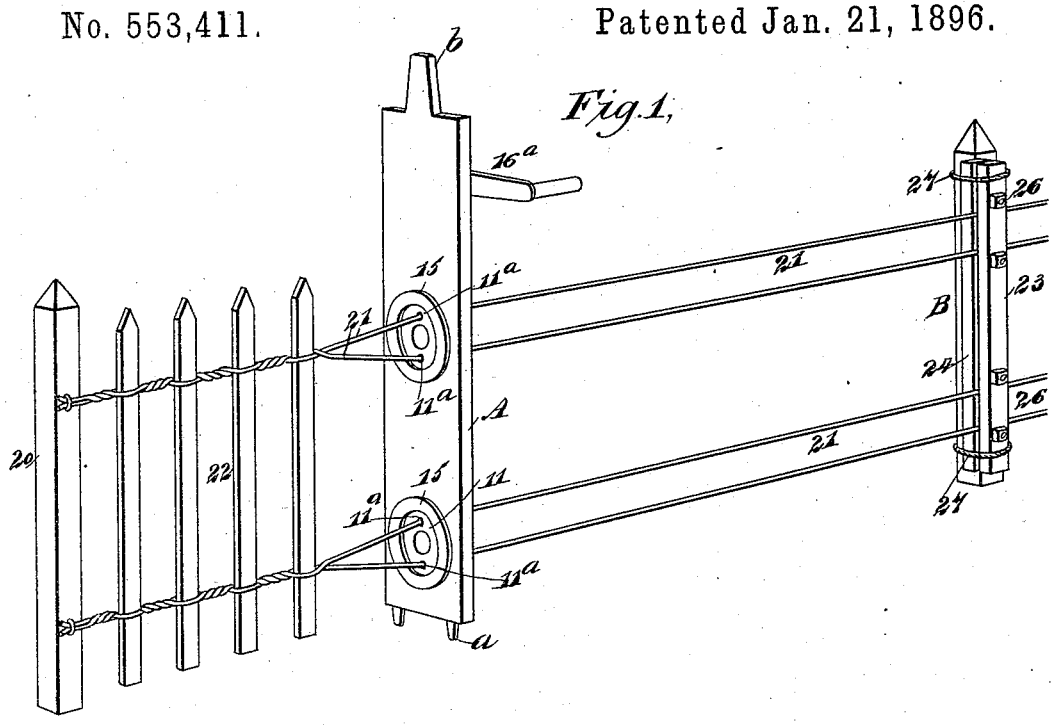


Fig. 2,

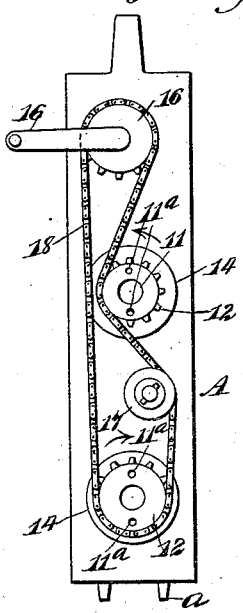


Fig. 3,

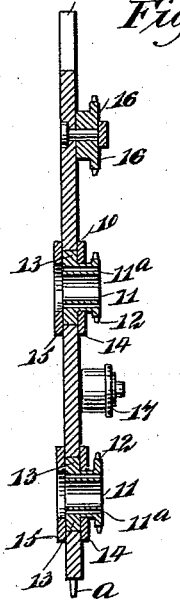
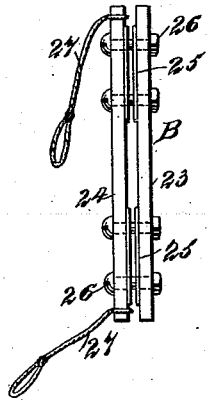


Fig. 4.



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ZACHARIAH R. KLING, OF LACLEDE, MISSOURI.

WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 553,411, dated January 21, 1896.

Application filed September 25, 1895. Serial No. 563,659. (No model.)

To all whom it may concern:

Be it known that I, ZACHARIAH R. KLING, of Laclede, in the county of Linn and State of Missouri, have invented a new and useful Improvement in Wire-Fence Machines, of which the following is a full, clear, and exact description.

My invention relates to a machine especially adapted for the construction of wire fences, and particularly that class of fences made up of a series of palings, posts, and wires attached to the posts and looped around the palings.

The object of the invention is to provide a device of simple, durable, and economic construction, through the medium of which two or more wires may be expeditiously and conveniently twisted in a manner to hold between them a paling or its equivalent, and to furthermore provide means whereby the wires may be kept stretched while being acted upon, the stretching device being temporarily attached to the post or other support over which the wires may be drawn.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a section of a wire fence, illustrating the application of the improved fence-making device. Fig. 2 is a front elevation of the twisting mechanism of the fence-constructing device. Fig. 3 is a longitudinal vertical section through the said wire-twisting mechanism, and Fig. 4 is a detail edge view of the device adapted to hold one end of the wires while they are being acted upon.

The twisting device consists of a board A or its equivalent provided preferably with spurs *a* at its lower end to enter the ground and a handle *b* at its upper end, the said board being of greater height than the height of the fence to be erected. In the aforesaid board A any desired number of openings 10 are made, preferably of a circular character, two of the said openings being shown in Figs. 2 and 3, and in each of the openings a tubular hub 11 is mounted to revolve, the said hub being provided with an exterior flange 13, since the openings 10 are of greater diameter than the body portions of the aforesaid hubs, as illustrated in Fig. 3.

The hubs extend beyond what may be termed the "front face" of the board, and have formed upon their forward or front ends each a sprocket-wheel 12, and the hubs of the aforesaid wheels are held in position in the board by attaching to the latter at the front and at the back rings 14 and 15, as is shown in Fig. 3. Each hub is provided with preferably two diametrically-opposing apertures or orifices 11^a, which extend through from one side to the other. Above the sprocket-wheels 12 attached to the tubular hubs 11 an ordinary sprocket-wheel 16 is journaled upon the forward face of the board, being provided preferably with an attached handle 16^a, by means of which it may be revolved, and between the two tubular or hubbed sprocket-wheels 12 a friction-pulley 17 is journaled upon the aforesaid board, and an endless (preferably link) belt 18 is made to pass over the upper solid sprocket-wheel, 16, one stretch of the belt being carried downward in contact with the lower tubular or hubbed sprocket-wheel, 12, the other stretch of the belt being carried over the friction-pulley 17 and thence upward against the upper hubbed or tubular sprocket-wheel, as is best shown in Fig. 2.

In constructing the fence two strands of wire 21 are attached to an end post 20, and the dual strands of wire are placed at predetermined distances apart, being secured to the posts, as shown in Fig. 1, by means of staples or equivalent locking devices. Each two strands of wire are then passed through the orifices 11^a in the tubular or hubbed sprocket-wheels 12, as shown in Fig. 1, the board A on the twisting device being adapted to slide along the aforesaid wires.

In order that the wires may be held practically taut while the device is in operation, a clamping mechanism B is employed. (Shown in Figs. 1 and 4.) This clamping mechanism consists of two bars 23 and 24, placed in parallel arrangement and at predetermined distances apart, and upon the top and bottom portions of opposing faces of the two bars wear-plates 25 are secured, adapted to serve

as jaws, and bolts 26 are passed through the two bars and their wear-plates, in order that as the wire is passed between the said plates or jaws by tightening up the nuts on the bolts 26 the wire will be held firmly between said plates. One or both of the bars may be and preferably is provided with ropes, cables, or chains 27, attached to the upper end of the rear bar, for example, and likewise the lower end of the same bar, and these ropes, chains, or cables are passed around an intermediate post, as shown in Fig. 1, and by fastening the said ropes to themselves or to a convenient support, the clamping device is secured temporarily to the post and the strands of wire are held stretched where they pass the aforesaid intermediate post.

When the crank-handle 16^a is revolved prior to placing any pickets 22 in position, the two wires 21 passed through each of the twisting-wheels 12 will be twisted, as is also shown in Fig. 1, whereupon the paling 22 is placed between the wires and the wires again twisted, forming thereby an upper and a lower twisting clamp or loop for the aforesaid paling; and this operation is continued until all the palings in a given section of fence have been placed in position, whereupon the clamping device is then moved to another post and the twisting of the wire and the setting of the palings are continued until practically the clamping device is again reached and overtaken by the twisting device above described.

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

1. A machine for constructing wire fences comprising a body portion having openings through it, tubular hubs having exterior flanges to fit into the openings in the body portion, sprocket wheels on forward projected ends of said hubs, the said hubs having longitudinal perforations for the passage of wires, the front and back rings on the hubs for holding them in position, the roller on the body portion, the sprocket wheel having a crank handle, and the driving chain, as and for the purpose specified.

2. In a device for stretching wire, the combination, with a plate or a support provided with spurs at its lower end adapted to enter the ground, and a handle at its upper end, of tubular hubs mounted to revolve in the said plate or support, each hub terminating at one end in a sprocket wheel, being provided also with diametrically opposing orifices extending through from face to face, a driving gear located above the upper orificed sprocket wheel, a friction roller located between the two orificed sprocket wheels at one side thereof, and a link belt passed around the upper or driving sprocket, thence upon one stretch around the lower orificed sprocket and over the friction roller, and thence around the periphery of the upper orificed sprocket adjacent to the uninterrupted stretch of the aforesaid link belt, as and for the purpose specified.

3. In a device for twisting wire, a holding mechanism, the same consisting of parallel clamping bars provided with jaws, bolts adjustably connecting the two bars, and a locking rope or cable secured to opposite ends of one of the bars and adapted to be passed around the support to which the bars are to be applied, as and for the purpose set forth.

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