JOHN SUTLIFF, SR., OF MOUNT AIRY, MISSOURI.

TENSION MECHANISM FOR FENCE-BUILDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 654,034, dated July 17, 1900.

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To all whom it may concern:

Be it known that I, JOHN SUTLIFF, Sr., a citizen of the United States, residing at Mount Airy, in the county of Randolph and State of Missouri, have invented new and useful Improvements in Fence-Building Apparatus, of which the following is a specification.

My invention relates to improvements in apparatus for building wire-and-picket fences, and contemplates the provision of an extremely simple and inexpensive apparatus adapted to be operated by a single person and one which is calculated to properly guide the wire and effectually prevent sagging of the fence incident to the construction thereof.

The invention will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a perspective view of my improved apparatus as it appears when in operation. Fig. 2 is a transverse section of one of the shuttles or twisters of the apparatus.

Referring by letter to the said drawings, A and B are the end posts of a section of fence, which are sunk in the ground at any desired distance apart.

C is a movable guide made up of a base c and an upright b, having two or more apertures e for the passage of wire strands D, and E is a frame which supports the mechanism, presently described, for holding the wire strands under tension. The said frame E comprises an upright d, adapted to be set in the ground and having semicircular notches e in its forward side with reference to the direction in which the fence is built, an upright f, arranged at the forward side of the post B and having semicircular notches g in its forward edge, and cross-bars h, of circular form in cross-section, which are interposed between and connect the uprights d, f, as shown.

The mechanism for holding the wire strands D under tension comprises winding-rollers i, having gudgeons j, journaled in the notches e, g of the uprights d, f, and also having hooks k on their peripheries and hand-grasps l, extending radially therefrom, levers m, which are arranged to bear upon the peripheries of the rollers i and are provided in their upper edges, adjacent to one end, with notches n to receive the cross-bars h, and are also provided in their upper edges, adjacent to their opposite ends, with a plurality of notches p and weights q, which have loops r, receiving the forward ends of the levers m and designed to be seated in the notches p thereof.

In practice the wire strands D, which are arranged in pairs about the proportional distance illustrated apart, are connected at one end to the post A and after being passed through the apertures c of guide C are wound to the extent desired upon the inner gudgeons j of the rollers i and are connected to the hooks k on said rollers, as shown. When the wire strands are thus fastened and the weights q are properly adjusted, the levers m, bearing on the peripheries of the rollers i, will hold the wire strands under sufficient tension to prevent sagging of the fence and yet permit of the wire strands being paid out as they are twisted at opposite sides of the pickets in a manner presently described. It will also be observed that by virtue of the plurality of notches p in each of the levers the weights q may be readily adjusted with respect to the levers to increase or diminish the tension under which the wire strands are held, as desired.

F F are twisters or shuttles which are movable on the wire strands and are designed to be rotated by hand. These twisters F respectively comprise a body s, having longitudinal grooves l in two opposite sides to receive the wire strands, wire-retaining staples u, which straddle the grooves l, and a handle v, which extends loosely through a transverse aperture w in the body and is adjustable with respect thereto as occasion requires.

In practice the wire strands D are passed through the staples u of the twisters or shuttles F prior to being connected to the post A, and the said twisters or shuttles are arranged between the said post A and the wire-guides C, as shown in Fig. 1. With the several parts thus arranged a wire-and-picket fence is constructed by interposing a picket between the strands D of each pair and also between the post A and the shuttles or twisters F and then rotating the twisters toward the right, so as to twist the strands upon each other, and thereby secure the picket in position. The twisters F are then moved forward and a second picket is interposed between them and the first twisted portions of
the pairs of strands, after which the twisters are rotated toward the left to again twist the strands and secure the second picket in position. This operation is repeated until the section of fence is completed and the wire strands D are connected to the post B, the guide C and shuttles F being of course moved forwardly as the building progresses. It will be appreciated from the foregoing that incident to the building of the section of fence the guide C maintains the pairs of wire strands at the desired distance apart and in alinement with the posts A B and that the tension mechanism holds the wires taut, so as to effectually prevent sagging of the fence, and yet is adapted to pay out the wire strands as the same are taken up by the twisting between the pickets. It will also be appreciated that while my improved apparatus is adapted when properly operated by a single person to build a long section of fence in a short space of time it is extremely simple and inexpensive in construction and may therefore be sold with profit for such a price as will place it within the reach of small farmers, manufacturers, and jobbers, which is a great desideratum in this class of inventions.

When desirable, a portable base-rail C', such as shown by broken lines in Fig. 1, may be employed as a slide for the movable guide C and also to support the pickets and keep the lower ends thereof at a uniform distance from the ground.

It is obvious that when desired the guide C may have three or more apertures c, and three or more rollers i may be arranged in a frame E, according to the number of pairs of wire strands in the fence to be built.

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

1. In a wire-and-picket-fence-building apparatus, a tension mechanism made up of a frame having uprights and cross-bars, rollers having gudgeons and also having hand-grasps and means for connecting wires to their peripheries, levers arranged above and bearing on the peripheries of the rollers and having notches receiving the cross-bars of the frame and also having notches at intervals in their upper edges adjacent to their forward ends, and weights hung from the forward portions of the levers, substantially as specified.

2. A wire-and-picket-fence-building apparatus having a tension mechanism comprising a frame having uprights and a cross-bar, a roller having gudgeons, and also having hand-grasps and means for connecting wires to its periphery, a lever arranged above and bearing on the periphery of the roller and having a notch receiving the cross-bar of the frame and also having a plurality of notches in its upper edge adjacent to its forward end, and a weight having a loop seated in one of the forward notches of the lever, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN SUTLIFF, Sr.

Witnesses:

WILLIAM HENRY SUTLIFF,
HATTIE SUTLIFF.