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Patented May 1, 1900.

J. A. BOWLES.

HAND OPERATING SLAT AND WIRE FENCE MACHINE.

(Application filed Jan. 11, 1900.)

(No Model.)

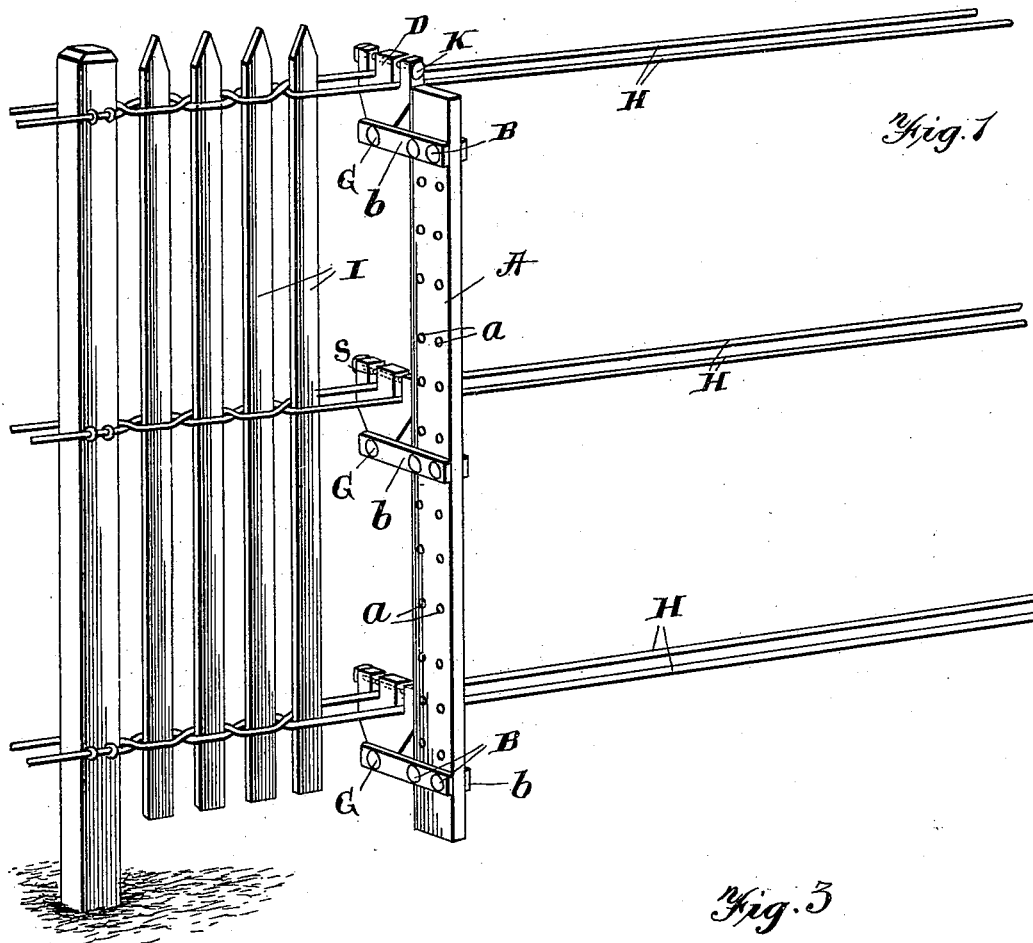


Fig. 2.

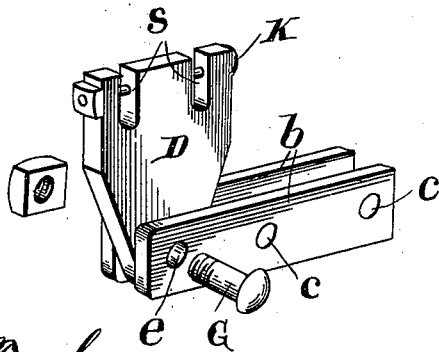
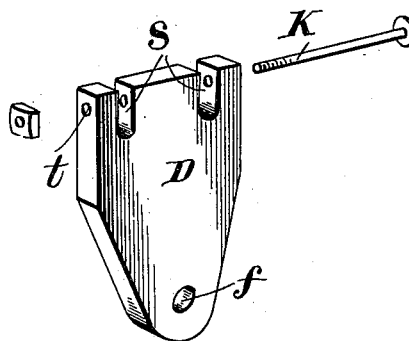


Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JAMES A. BOWLES, OF CASEY COUNTY, KENTUCKY.

## HAND-OPERATING SLAT-AND-WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 648,840, dated May 1, 1900.

Application filed January 11, 1900. Serial No. 1,129. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. BOWLES, a citizen of the United States, residing in Casey county, near Merrimac, in the county of Taylor and State of Kentucky, have invented new and useful improvements in Hand-Operating Wire-Fence-Weaving Machines, of which the following is a specification.

My invention relates to improvements in hand-operating wire-fence-weaving machines, and pertains to a machine or implement embodying a standard and particularly-shaped oscillating shuttles which are adjustably supported upon the said standard, all of which will be fully described hereinafter and particularly referred to in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a machine or implement embodying my invention, showing it in the process of weaving a picket fence. Fig. 2 is a detached view of the shuttle-supporting arms and the shuttle carried thereby. Fig. 3 is a detached perspective view of one of the oscillating shuttles.

The objects of my invention are to provide a simple, cheap, and effective hand wire-fence-weaving machine or implement in which there are a plurality of adjustably-supported oscillating shuttles, the shuttles being so supported that they will by engagement with the standard to which they are attached limit the vertical movements of the implement or machine, whereby when the implement or machine has reached the limit of its upward or downward movement the wires will be supported in a horizontal plane to receive between them the picket, the movement of the implement being limited by the engagement of the shuttles with the standard, and to provide an improved means for supporting the shuttles adjustably upon the standard, whereby the machine is adapted to receive as many shuttles as may be desired, according to the number of wires of which the fence is composed, and also to enable the shuttles to be adjusted upon the standard, according to the desired space, between the twisted strands of which the fence is composed when completed.

Referring now to the drawings, A is a standard, which is preferably flat in cross-section, as shown, and the said standard preferably

consists of wood for the purpose of lightness, though it may consist of any desired material. This standard A is provided with a parallel vertical series of bolt-receiving perforations *a*, the said perforations being any desired distance apart. They are here shown as quite close together, though the distance may be varied without departing from the principle of my invention.

Situated at opposite sides of the standard A are the pairs of shuttle-supporting arms *b*, the said pairs of arms being provided with the perforations *c* a distance apart corresponding with the distance between the perforations in the standard A and adapted to register therewith. Passing through the perforations in the shuttle-supporting arms *b* and the registering perforations *a* in the standard A are the removable bolts or screws B, by means of which the said shuttle-supporting arms are rigidly clamped in a right-angled position in respect to the standard A and at any desired longitudinal adjustment thereon, as will be readily understood. The outer ends of these shuttle-supporting arms *b* are provided with the registering shuttle bolt-openings *e*, and the inner ends of the elongated vertically-arranged shuttles D are provided with bolt-openings *f*, adapted to register with the bolt-openings in the outer end of the shuttle-supporting arms *b*. Passing through these bolt-openings in the outer ends of the shuttle-supporting arms *b* and the openings at the inner end of the vertically-arranged shuttles B are suitable bolts G, by means of which the said shuttles are pivotally connected with the outer ends of the shuttle-supporting arms *b*.

Attention is particularly called to the construction of the shuttle D. These shuttles consist of plates D, (preferably metal,) which are placed edgewise between the projecting ends of the shuttle-supporting arms *b* and have their outer ends sufficiently broad to separate the wires H, which constitute the strands of the fence to permit the passage therebetween of the pickets I when the said wires are placed within the wire-receiving inwardly-extending slots *s*, formed in the outer wide ends of the shuttles D. These slots *s* have their outer ends extending to the outer broad ends of the shuttles D and are adapted to receive the wires constituting the strands

of the fence, as clearly illustrated, and the shuttles D are either made sufficiently thick throughout their length, as here shown, to have formed through the broad ends thereof and adjacent to the edge of the ends the transversely-arranged bolt-openings *t*, the said bolt-openings intersecting or crossing the outer ends of the slots *s* for the purpose of locking the wires within the said slots, and thus preventing them from becoming detached from the machine while in operation. Passing through these perforations of the shuttle are the wire-holding bolts K, which are removable for the purpose of permitting the placing of the wires within the said slots, and when situated therein the bolts are passed through the said shuttle-openings, and thus lock the wires in position therein. Especial attention is also called to the fact that the bolt-openings *e* in the projecting ends of the shuttle-supporting arms *b* are a distance from the adjacent edge of the standard A practically equal to half the width of the shuttle, whereby when the shuttles are either in the upward or the downward position (the positions assumed by them in the weaving operation) the edges of one or more of the enlarged ends thereof will rest against the adjacent edge of the standard A, and thus limit the upward and downward movement of the machine, and thus insure the positioning of the wires in a horizontal plane, as clearly illustrated in Fig. 1, to receive the pickets between them. The shuttles thus serve as a means of limiting the vertical movement of the implement or machine, and this is so for the reason that the shuttles are held between the shuttle-supporting arms *b* in a line with the edge of the standard A, whereby one or more of them will abut against the adjacent vertical edge of the standard and limit the movement of the shuttles, and consequently the movement of the machine, for the purpose before stated.

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

1. A fence-weaving machine or implement,

comprising a standard provided with two vertically-arranged series of transverse openings, 50 a plurality of pairs of transversely-arranged shuttle-supporting arms having transverse bolt-openings a distance apart equal to the horizontal distance between the vertically-arranged bolt-openings of the standard, bolt-clamping members passing through the said 55 standard and shuttle-supporting-arm openings, whereby the shuttle-supporting arms carrying the shuttles are longitudinally adjustable and removable from the said standard A, 60 the shuttle-supporting arms projecting beyond one edge of the standard, and oscillating shuttles pivotally supported between the projecting ends of the shuttle-supporting arms, substantially as described. 65

2. A fence machine or implement comprising a standard, pairs of laterally-projecting shuttle-supporting arms bolted to the standard, oscillating shuttles having their inner ends pivotally supported between said shuttle-supporting arms, said shuttles having in their outer faces longitudinally-arranged wire-receiving slots and transverse bolt-openings extending through the shuttle and intersecting the outer ends of the longitudinally-arranged wire-receiving slots, and a bolt passing through said opening, whereby the wire is held in the longitudinally-arranged wire-receiving slots, substantially as described. 70 75

3. A shuttle for a fence-weaving machine 80 consisting of a flat plate having a transverse bolt-opening in its inner end, longitudinally and inwardly extending wire-receiving slots in its outer end, its outer end having a transverse bolt-opening intersecting the outer ends 85 of the wire-receiving slots, and adapted to receive a bolt for retaining the wires within the slots, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 90 witnesses.

JAMES A. BOWLES.

Witnesses:

M. C. BRANSOM,  
L. F. YOUNG.