

(No Model.)

2 Sheets—Sheet 1.

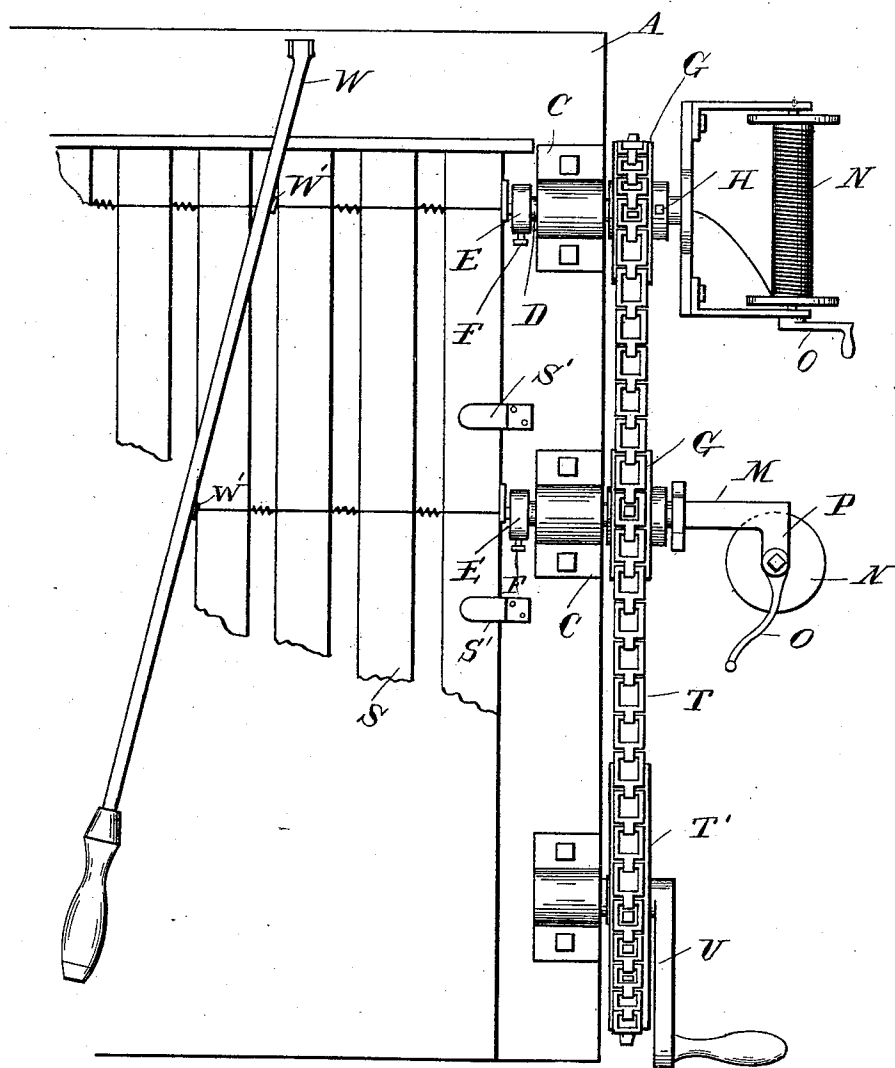
M. S. CADWELL.

SLAT AND WIRE FABRIC WEAVING MACHINE.

No. 479,487.

Patented July 26, 1892.

Fig 1.



Inventor

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By *Wm. B. Magner* *For*
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Witnesses
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2 Sheets—Sheet 2.

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Fig 2.

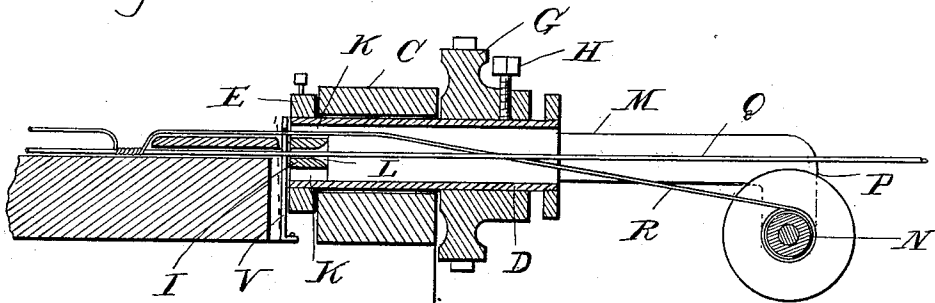


Fig 1.

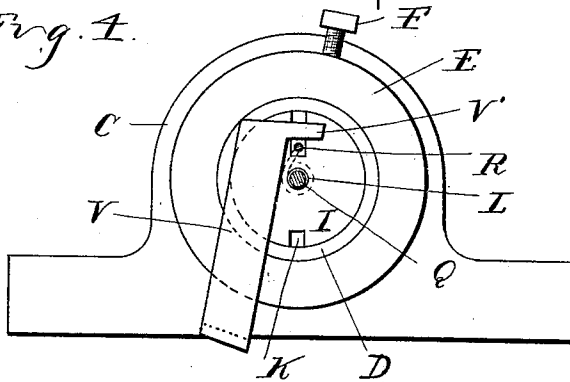


Fig 5.

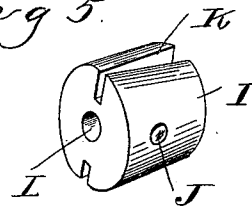
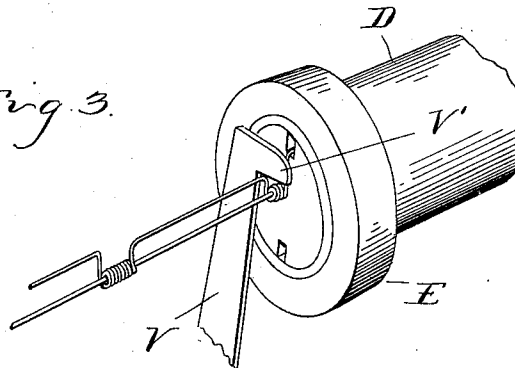


Fig 3.



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UNITED STATES PATENT OFFICE.

MARVIN S. CADWELL, OF LANSING, MICHIGAN.

SLAT-AND-WIRE-FABRIC-WEAVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 479,487, dated July 26, 1892.

Application filed March 18, 1892. Serial No. 425,375. (No model.)

To all whom it may concern:

Be it known that I, MARVIN S. CADWELL, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Wire-and-Slat-Fabric-Weaving Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in wire-and-slat-fabric-weaving machines, and to that class of machines especially intended for use in the manufacture of packages, such as baskets, crates, barrels, &c.

15 The invention consists in the peculiar construction of the twisting mechanism, the wire-feed mechanism, and, further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

20 In the drawings, Figure 1 is a plan of the machine. Fig. 2 is a central longitudinal section through one of the twister-wheels and frame. Fig. 3 is a detached perspective view of the twister-wheel. Fig. 4 is a front elevation thereof. Fig. 5 is a detached perspective view of the twister-block.

25 A is the frame, preferably a rectangular wooden frame of suitable size and shape to support the fabric while it is being manufactured. Upon this frame are secured the bearings C, in which are journaled the twister-wheels. These twister-wheels preferably consist of a cylinder D, preferably a pipe or tube, on the inner end of which is secured a collar E by means of a set-screw F.

30 Upon the opposite end of the tube is secured the sprocket-wheel G by means of the set-screw H, the sprocket-wheel and collar, being at opposite ends of the bearing, preventing any longitudinal end motion of the tube. At the forward end of the tube is secured the twister-block I, preferably by means of the engagement of the set-screw in the aperture J in the side thereof. This twister-block is provided at opposite sides with the tapering grooves K and with a tapering central aperture L. The outer end of the tube D extends beyond the sprocket-wheel and has secured to it a frame M, having the spool or

spindle N journaled in its outer end, the shaft of which is provided with a crank O. This spindle is arranged at one side of the tube D, preferably in the ends of the offsets P of the frame.

My machine is designed to construct a fabric of slats and wire in which there is a straight wire upon one side of the fabric and a binding-wire looped over the slats and wound around the straight wire between the same.

In the drawings, Q represents a straight wire and R the flexible wire which is wound about the spindle N and passes through one of the apertures or slots K, while the wire Q passes through the central aperture L in the head or block.

S represents the slats.

T is a sprocket-chain connecting the sprocket-wheels on the twisters and also the drive-sprocket wheel T', which is provided with a crank-handle U, by means of which a rotary motion is imparted to the twisters.

35 The parts being thus constructed and the slats S being placed in front of the machine against the guides or stops S', the wire Q being passed beneath the slat and the wire R above it, the operator imparts motion to the twisters by means of the crank U, which will cause the binding-wire to coil about the central or connecting wire to any desired extent, the number of twists in the wire determining the spaces between the slats.

40 In order to make a perfectly-tight coil, I secure a spring-arm V in front of each twister-wheel, extending up across the same slightly to one side of the center and with the overhanging finger V' arranged at a point just beyond the points at which the binding-wire comes through the twister-head. The effect of this is that as soon as the twister-wheel begins to move a sharp angle is made in the wire, which impinges against the front edge of this arm. The coil passes down beyond the spring, which is thereby moved out a sufficient distance to allow this wire to pass, the tension of the spring acting to force the coil firmly against the head. As the next coil is formed it is forced against the first one, insuring a perfectly-tight coil, which makes more symmetrical work, beside saving the

wire and making a firmer connection. When the requisite number of twists are obtained, the slat is withdrawn, another one is placed in position, and the operation repeated.

- 5 In order to force the slats tightly together, so as to leave no loose motion, I employ a lever W, pivoted to the top of the frame and extending across the same with suitable lugs or projections W', arranged to straddle the
10 wire and pass down beside the slats, so that the fabric already woven may be moved laterally and crowded up against the new slat, which is inserted into the loop to be woven in. By making the tapering apertures through
15 the twister-block I can more readily thread it.

It will be observed that my twister-wheels turn continuously in the same direction, and that the spools carrying the wire turn with the wheels, thereby preventing any twisting
20 of the wire.

While I have shown two twister-wheels, arranged to make two strands of binding-wires upon the slats, it is evident that one alone may be employed or more than two.

- 25 What I claim as my invention is—

1. In a slat-and-wire-fabric-weaving machine, the combination of the frame, the bearings thereon, and the twister-wheels journaled in said bearings, such wheels being

composed of the outer tubes D, collars E at 30 one end of the tubes, sprocket-wheels G at the opposite ends of the tubes, and twister-heads I, secured in the forward ends of the tubes, substantially as described.

2. In a slat-and-wire-fabric-weaving ma- 35 chine, the combination of the frame, the bearings thereon, the twister-wheels journaled therein and comprising the sleeves D, the collars E at the forward end, the sprocket-wheels G at the rear ends of the bearings, the twister- 40 heads I, detachably secured at the forward end, the frames M, secured to the rear end, having the offset portions P, and the wire-spools N, journaled in said offsets, substantially as described. 45

3. In a slat-and-wire-fabric-weaving machine, the combination, with the twister head and frame, of the spring-arm V, arranged in front of the twister-head to press the wire to the head, substantially as and for the pur- 50 pose described.

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

MARVIN S. CADWELL.

Witnesses:

M. B. O'DOGHERTY,
N. L. LINDOP.