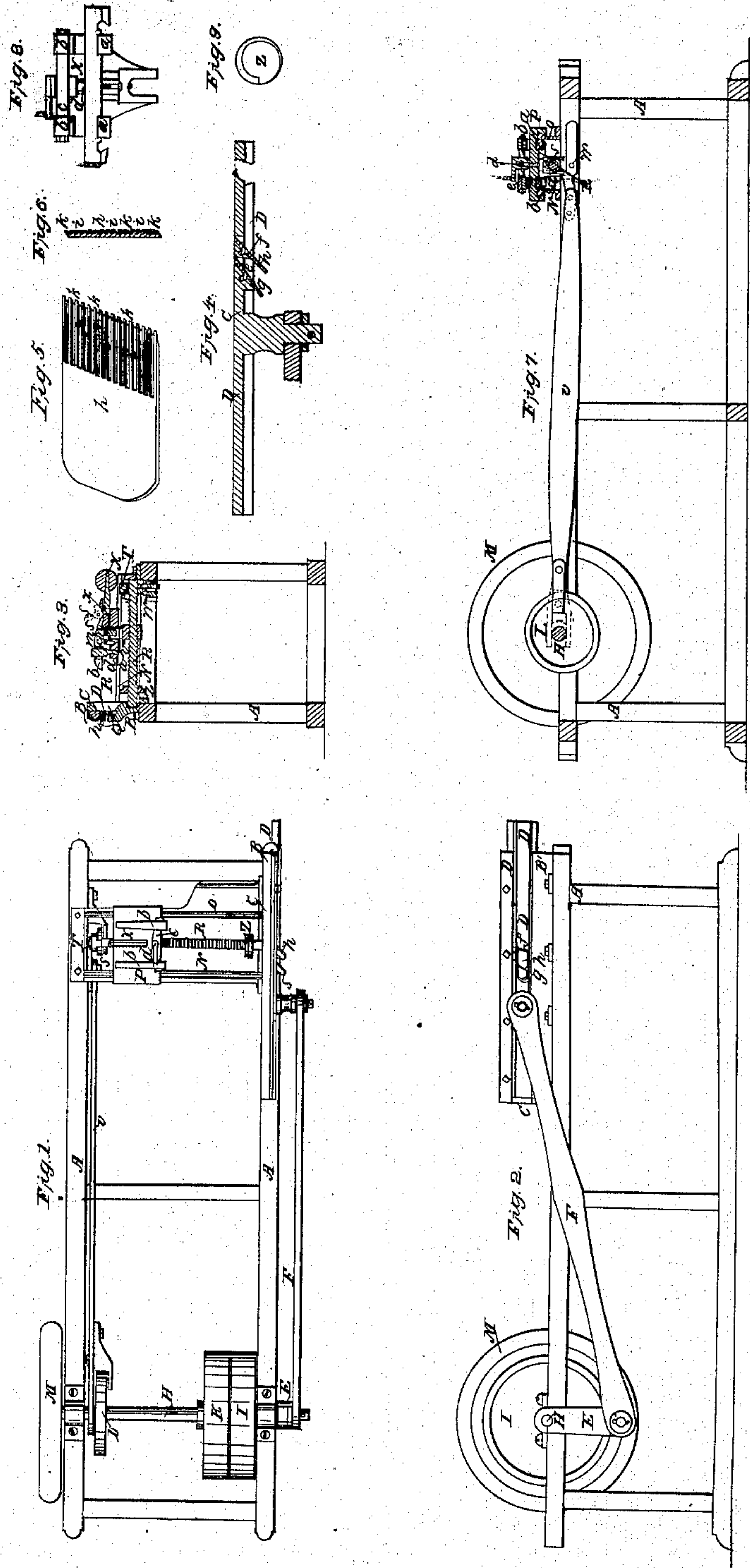


*J. & G. W. Prescott,  
Slivering Wood.*

*N<sup>o</sup> 10,893.*

*Patented May 9, 1854.*





# UNITED STATES PATENT OFFICE.

JONATHAN PRESCOTT AND GEORGE W. PRESCOTT, OF BOSTON, MASS.

## MACHINE FOR REDUCING WOOD TO SLIVERS.

Specification forming part of Letters Patent No. 10,893, dated May 9, 1854.

*To all whom it may concern:*

Be it known that we, JONATHAN PRESCOTT and GEORGE W. PRESCOTT, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Machine for Making Stuffing for Mattresses; and we do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view of our said machine. Fig. 2 is a front side elevation of it. Fig. 3 is a transverse and vertical section of it, taken through its feeding-carriage and the feeding-screw thereof. Fig. 4 is a horizontal section of the plane-stock and plane-irons. Fig. 5 is a side view of the grooved plane-iron. Fig. 6 is a cross-section of it. Fig. 7 is a vertical, central, and longitudinal section of the machine.

In the drawings above mentioned, A represents the main frame for supporting the operative parts of the mechanism, such frame being constructed in any proper manner and of any suitable material. It has a set of slideways, B B', applied to a perforated plate, C, elevated vertically on the top of the frame, as seen in the drawings. Between these slideways the cutter or plane-stock D is placed and made to move horizontally, while its cutting-face is arranged in a vertical plane or thereabout, the said cutter stock being sustained by the slideways.

The reciprocating rectilinear movement of the cutter-stock may be obtained through means of a crank, B, and a connecting-rod, F, the connecting-rod being suitably jointed to the crank and the cutter-stock, while the crank is made to project from a driving-shaft, H, that carries a fast pulley, I, a loose pulley, K, a cam, L, and a fly-wheel, M, all arranged as seen in the drawings.

Transversely of the machine and at right angles to the plane of movement of the cutter-stock are two horizontal and parallel rails, N O, whose position is represented in the drawings, such rails serving to support a feeding-carriage, P, which is moved on them either toward or away from the cutter-stock, as occasion may require.

The plate which sustains the slideways of the

cutter-stock is perforated, as seen at Q, so as to enable the piece of wood carried by the feeding-carriage to be borne up against the cutter-stock. The said feeding-carriage is provided with two stationary jaws, a a, as seen in Fig. 8, which denotes a front elevation of the feeding-carriage, such jaws being arranged to project from the front edge of the carriage, as seen in the drawings. Over these two jaws are respectively placed two movable jaws, b b, that are united by a cross-bar, c, that is made capable of being elevated or depressed by means of a screw, d, the same being for the purpose of sustaining a piece of wood to be reduced, the position of such piece of wood being denoted by dotted lines at R.

The plane-stock is provided with two mouths, e f, for the reception of two plane-irons, g h. The plane-iron g is formed with a straight cutting-edge, while the plane-iron h is grooved, as seen at i i i in Figs. 5 and 6, so as to convert its cutting-edge into a series of reducing-cutters, k k k, each of which during its action on the piece of wood plows or cuts a groove into the wood and removes a shaving from the wood equal in dimension to the grooves so made. It not only performs the function of removing a shaving, but, owing to the particular position of its cutting-edge, as well as that of its outer surface, it not only cuts the wood with a drawing-stroke, but it curves the shaving in a helix. To effect this cutting of the wood with a drawing-stroke and the curling of the shaving removed, the outer face of the plane-iron is made to stand at an angle in two directions with respect to the inner plane surface or side of the cutter-stock—that is to say, it stands at an angle not only inclined to a vertical plane passing transversely through the cutter-stock and at an acute angle to such stock, but it also stands at an acute angle with a horizontal plane passing through the cutter-stock. This will readily be observed by examination of the drawings. Such an arrangement of each plane-iron not only necessarily gives to its cutting-edge an inclination to the vertical, such as will cause it to cut with a drawing-stroke, but at the same time it gives to the external surface of the cutter in action such an inclination with respect to the surface of the wood cut by it as will cause the shav-



ing removed by the cutter to be curled or reduced to a helix.

When a plane-iron has its cutting-edge standing at right angles to the path or direction in which it is moved, it will remove a shaving and give to said shaving a spiral bend like that of the mainspring of a watch. Now such a bend as this is not what is sought to be made by our machine, and not such as will be sufficient to impart to the shaving the elasticity that may be required to render it useful as bed-stuffing.

Our machine, as said before, gives to it a helix curved bend or "curl," as it may be termed, and while the front cutter or plane-iron removes a series of curled shavings from the piece of wood the rear cutter, which is not a grooved one, performs the operation of cutting away the tongues left between the grooves in the wood and reduces such tongues to curled shavings.

Now, we would remark that we are well aware that a plane-stock has had applied to it a series of scoring-knives and a plane-iron, the scoring-knives being placed in advance of the plane-iron, and made simply to cut into the wood in parallel lines without removing any part of it, the whole amount of wood removed being separated from the block or piece of wood by means of the plane-iron. This is an entirely different operation from that carried on by the cutter of our machine, as the forward cutter or grooved plane-iron of said machine performs the function of not only cutting into the wood, but of removing shavings from it at the same time, and it cuts away from the block of wood during a forward motion of the plane-stock one-half the amount of wood to be removed, the remainder being planed off by the rear cutter. By this process of operating the wood is not compacted or pressed together, as it would be by scoring-knives, the action of such scoring-knives by so compacting it being such as to prevent it to a great extent from being curled by the plane-iron, particularly if the wood is very dry.

Transversely of the machine and under the feeding-carriage is arranged a feeding-screw, R, on which is a ratchet, S, such ratchet being fixed to the screw and moved with an intermittent rotary motion by means of an impelling rocker-pawl, T, that turns on a screw-shaft as a fulcrum, and has a reciprocating movement imparted to it by means of a connecting-rod, U, actuated by the cam I. A retaining-pawl, W, is placed underneath the ratchet. The feeding-carriage supports a weighted lever, X, that turns on a fulcrum, m, and is connected to a sliding block, Y, by means of a connecting-link, n. The said sliding block Y is supported by and underneath the feeding-carriage, and so as to play freely upward and downward. It is formed to rest

on the feeding-screw, and carries one or more small projections or chasers, r r, which, when the block rests on the screw, is made to enter between the threads of the screw, and so that when the screw is revolved while these projections are between its thread a movement of the feeding-carriage toward the plane-stock will be produced. By means of the weighted lever X the block Y may be raised above or lowered down upon the screw, as circumstances may require. The said lever X carries a small tripping-rest, s, which, when the lever is depressed, takes the position as seen in Fig. 3; but when the lever is elevated it turns by its own weight and takes the position as denoted by dotted lines in Fig. 3, it serving, under these circumstances, to maintain the elevation of the lever, and this by resting on the top of the feeding-carriage and bearing against the lever. This tripping-rest is formed as a lever, as seen in the drawings, and made to turn on a fulcrum or pin, t, extended through the lever X, the said tripping-rest being inserted in a slot, u, formed in the lever. The feeding-screw is provided with a scroll-cam, Z, an inner side view of which is represented in Fig. 9. This scroll-cam is placed near the front end of the screw, and is so fixed to the screw as to rotate with it. There is a small projection, v, extended from the front side of the block Y, and when this projection passes over the periphery of the scroll-cam such scroll-cam, during its revolution and by its pressure against the projection, will elevate the block Y, and so as to arrest the further feeding forward of the feeding-carriage.

Having thus described our machine, we would remark that we claim—

1. The grooved or grooving plane-iron, as used in combination with and in front of the common or shaving plane-iron, and so arranged that by their operation one after the other they both shall remove the shaving from the wood.
2. The arrangement of the planes so that each shall cut not only with a drawing-stroke, but shall curl the shavings in helices, as specified.
3. In combination with the feeding-carriage and the feeding-screw, the movable straddle or sliding block Y and the scroll-cam of the screw, the same being made to operate together, substantially as specified.
4. The tripping-rest, as combined with the weighted lever and the feeding-carriage, and used as specified.

In testimony whereof we have hereunto set our signatures this 2d day of February, A. D. 1854.

JONATHAN PRESCOTT.  
GEO. W. PRESCOTT.

Witnesses:

R. H. EDDY,  
F. P. HALE, Jr.