A. S. Gear,

Moulding Machine.

No. 97,188. Patented. Nov. 23. 1869.

Fig. 1.

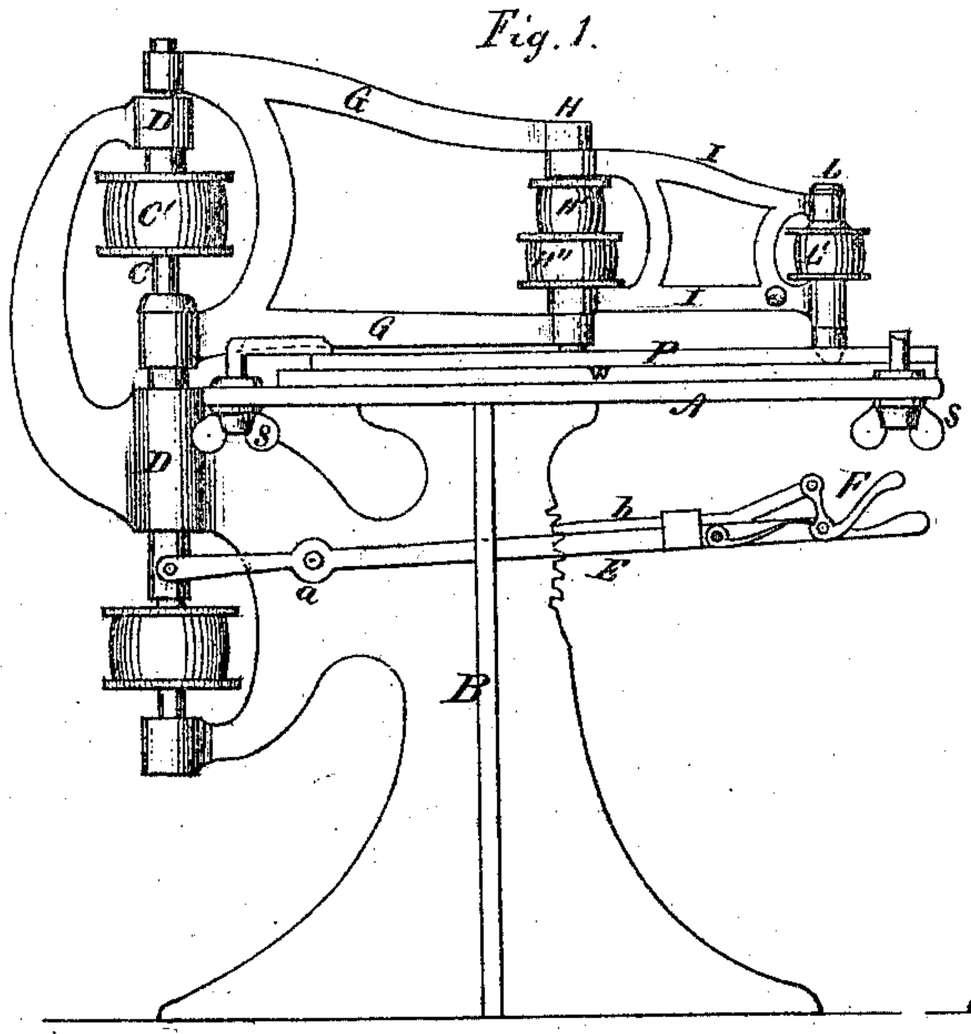


Fig. 2.

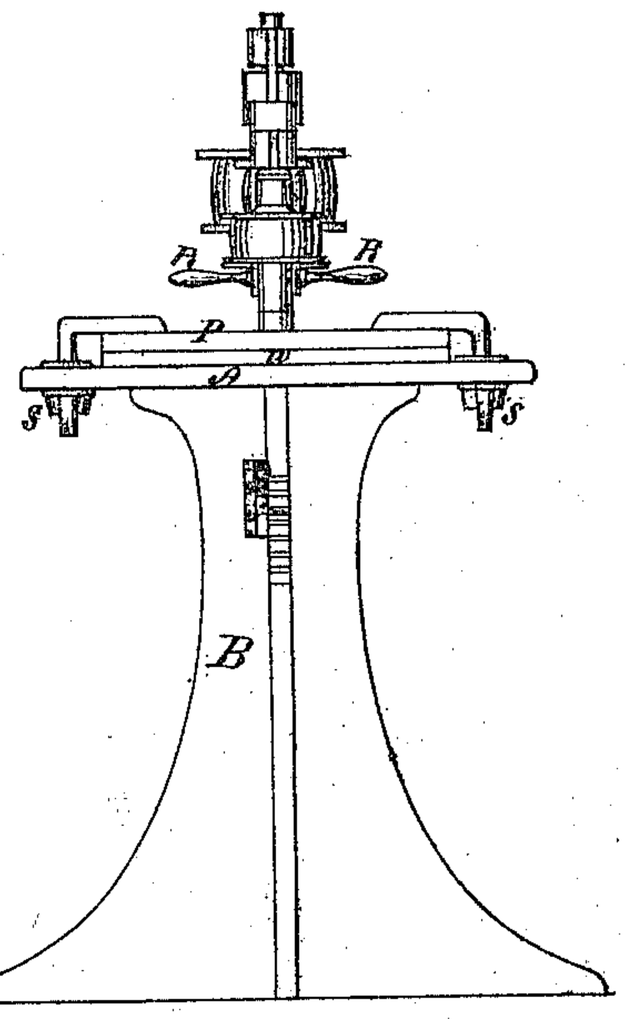


Fig. 3.

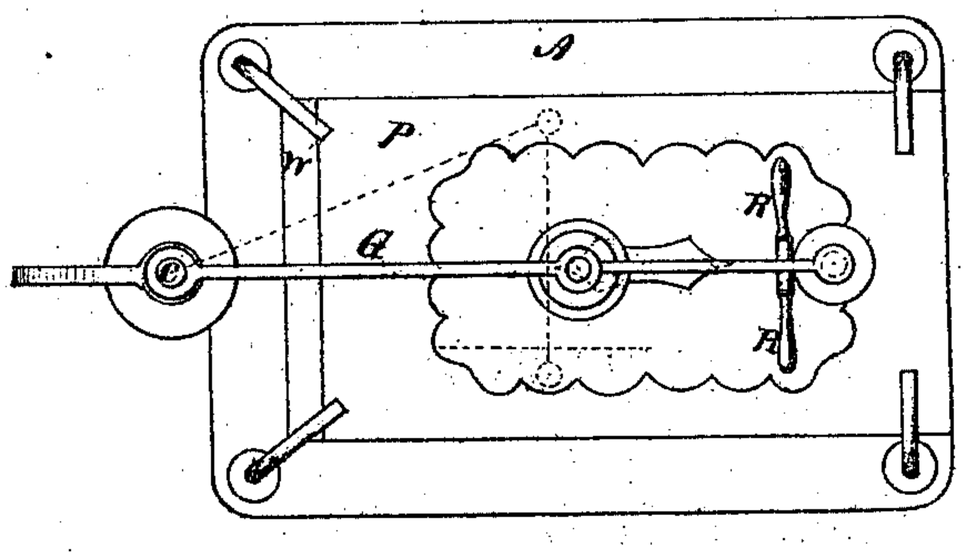
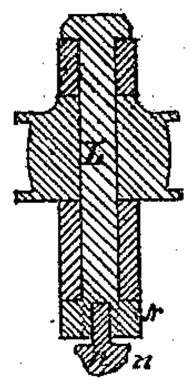


Fig. 4.



Witnesses.
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J. H. Shumway

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By his Attorney.
John E Earl

UNITED STATES PATENT OFFICE.

A. S. GEAR, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. **97,188**, dated November 23, 1869.

To all whom it may concern:

Be it known that I, A. S. GEAR, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Wood Molding and Paneling Machine; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a front view; and in Fig. 3, a top view.

This invention relates to an improvement in molding-machines, the object being to recess the surface of the wood to be wrought, in order to form a panel thereon, and at the same time to mold the edge of the recess; and the invention consists in a vertical cutter-spindle arranged in a jointed frame, and attached to the driving-shaft, with carrying-pulleys arranged at the joint, so that the cutter-spindle may have a universal movement over the surface to be wrought, combined with a form or pattern held upon the wood to govern the form of the panel.

To enable others skilled in the art to construct and use my invention, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the table, arranged upon a support, B; C, the driving-shaft, supported vertically in bearings D D, and so as to be raised up or lowered down therein by means of a lever, E, having its fulcrum at *a*, and held in position by a latch, *b*, the said latch operated by a lever, F, as seen in Fig. 1, so that by taking hold of the lever E and clamping the lever F down the latch *b* is withdrawn from the notch on the frame and the lever raised or depressed, as the case may be, and when at the required elevation the latch flies back into the corresponding notch in the frame.

To the driving-shaft, above the table, a frame, G, is hung, which supports the shaft H, upon which is arranged a pulley, H′, corresponding to a pulley, G′, on the driving-shaft, so that a belt extending around the two pulleys will cause the pulley H′ to revolve when the driving-shaft is revolved.

To the shaft H another swinging frame, I, is fixed, carrying the cutting-spindle L, and on the cutter-spindle is arranged a pulley, L′, and onto the shaft H a corresponding pulley, H″, from which a band extends to the pulley L′. By this construction the cutter-spindle may be swung over the surface of the table, retaining its vertical position and elevation, and revolving the same into whichever position it is turned.

The raising or lowering of the shaft of the lever E adjusts the elevation of the cutter-spindle.

The cutter-spindle, as illustrated in Fig. 4, is formed with a detachable guide, N, above the cutters *n*. The object of this guide is to work against the pattern and govern the line or movement of the cutter.

W is the wood-surface which is to be wrought. It is laid upon the table, and over this the pattern P is placed, the pattern being first cut to the form which is desired for the edge of the recess, as seen in Fig. 3. Placed on the table, the pattern and wood to be wrought are clamped by any suitable device, here represented as by clamping-screws S.

For convenience of moving the cutter-spindle frame, I fix thereto handles R R. The operator, when the machine is in motion and properly adjusted, places his hands upon the two handles and moves the cutter within the pattern, so as to cut away the surface of the wood, the pattern governing the line of movement around the edge. Patterns are applied whenever any portion of the original surface is to be retained. The guide N on the cutter-spindle works against the edge of the pattern, and the cutters are constructed to give whatever form or mold it is desired for the edge. By thus governing the cutters the operator can adapt the movement of the cutter to the nature of the wood which he is cutting. If, having cut one depth, it is desired to cut still another by the same pattern—that is to say, so as to make a "double sink" in the panel—different-sized guides N may be applied, one after the other, to accomplish the desired result.

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

1. In combination with the driving-shaft C and jointed swinging frame G and I, arranged thereon, carrying the cutter-spindle L, the table A and pattern P, arranged so as to clamp the work W upon said table, and so that the said spindle may be moved over the surface of the work, as described, guided by the said pattern, substantially as and for the purposes set forth.

2. In combination with the above, the adjusting-lever E, operating so as to vary the elevation of the spindle L, substantially as set forth.

A. S. GEAR.

Witnesses:
A. J. TIBBITS,
J. H. SHUMWAY.