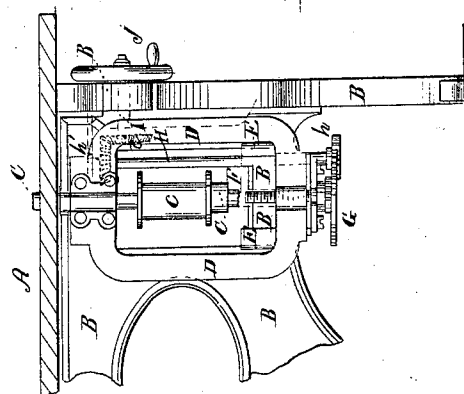
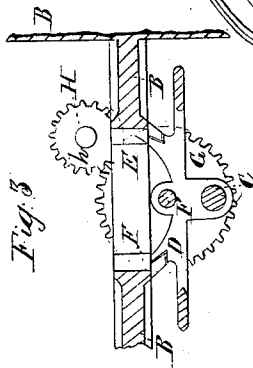
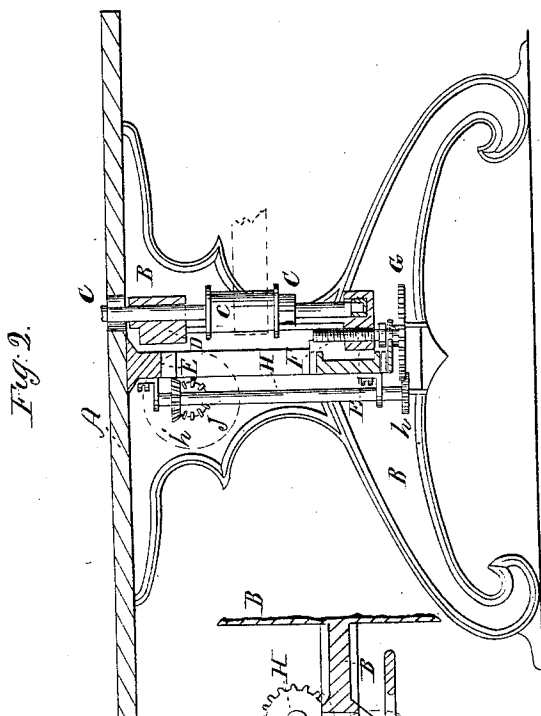


J. P. Grosvenor,
Wood Molding Machine.
No 81,997. Patented Sep. 8, 1868.



Witnesses:
J. C. Kerson.
C. A. Patti.

Inventor:
J. P. Grosvenor.
By *Reynolds & Co.*
Attorneys.

United States Patent Office.

J. P. GROSVENOR, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 81,997, dated September 8, 1868.

IMPROVEMENT IN MOULDING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. P. GROSVENOR, of Lowell, in the county of Middlesex, in the State of Massachusetts, have invented a new and improved Machine for Planing and Moulding Irregular Forms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 2 is a vertical cross-section.

Figure 3 is a horizontal section of the sliding frame and gearing detached.

The object of this invention is to obtain a simple and inexpensive attachment to machines for moulding irregular forms, by which the operator, while leaning over the table of the machine, and closely inspecting the operation of the cutter, will be enabled to adjust the cutter-head up or down to any required degree, without removing his eye from his work.

In machines for-moulding, planing, &c., heretofore in use, the cutter-head has been made adjustable vertically by means of a sliding frame, operated by a hand-screw, set-screws, or some similar device. Such hand-screw has, however, been placed under the table, with no means for operating it, except by leaving the work and stooping down to adjust the screw. Meanwhile the work is suspended, and perhaps considerable delay and difficulty are experienced in getting the parts to their proper position again for continuing the operation of the machine.

This machine is for the purpose of avoiding all these difficulties, and of enabling the workman to adjust his cutter-head during the operation of the machine.

In the drawings, A is the table, and B B the supporting-frame of the machine, and C is the mandrel to which the cutter-head is attached, having on it a pulley, c, by which it is driven. This mandrel bears in a vertically-sliding frame, D, which moves up and down in a socket or guides, E E, and can be adjusted and held at any desired elevation by means of a screw-shaft, F, which has its fixed bearing in the guide-frame, and screws through a lug on the sliding adjustable frame, thereby moving the latter vertically. On the lower end of the screw-shaft is a spur-wheel, G, gearing into a smaller spur-wheel, h, on the lower end of an upright shaft, H. h' is a small bevel-wheel, on the upper extremity of the shaft H, gearing into a similar wheel, i, on the end of a horizontal shaft, I, which passes through and bears in the frame B of the machine, terminating under the edge of the table A, in a convenient position to be easily within reach of the workman while bending over his work and closely examining the operation of the cutter-head. J is a hand-wheel or crank, by which the shaft I can be rotated at pleasure.

The operation of this device will hardly need further description. It is evident that, by turning the hand-wheel J, the cutter-head can be raised or depressed at pleasure, without the necessity of the operator's taking his attention from his work for a moment, and during the very midst of the process of moulding the most delicate forms and lines, the cutter-head can be adjusted without in the slightest degree interrupting the work.

I do not claim broadly the use of hand-wheels for the purpose of adjusting cutters, as I am aware that they have heretofore been used upon a variety of machines, but never to my knowledge have they been applied and arranged as I propose.

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

The described arrangement of the hand-wheel J, at the side of the machine, under the edge of the table A, the bevelled gearing h' i, shaft H, pinion-wheels h G, screw F, vertically-sliding mandrel-frame D, and guides E, as herein set forth, for the purpose specified.

To the above specification of my invention, I have signed my hand, this 13th day of April, 1868.

J. P. GROSVENOR.

Witnesses:

CHAS. A. PETTIT,
SOLOM C. KEMON.