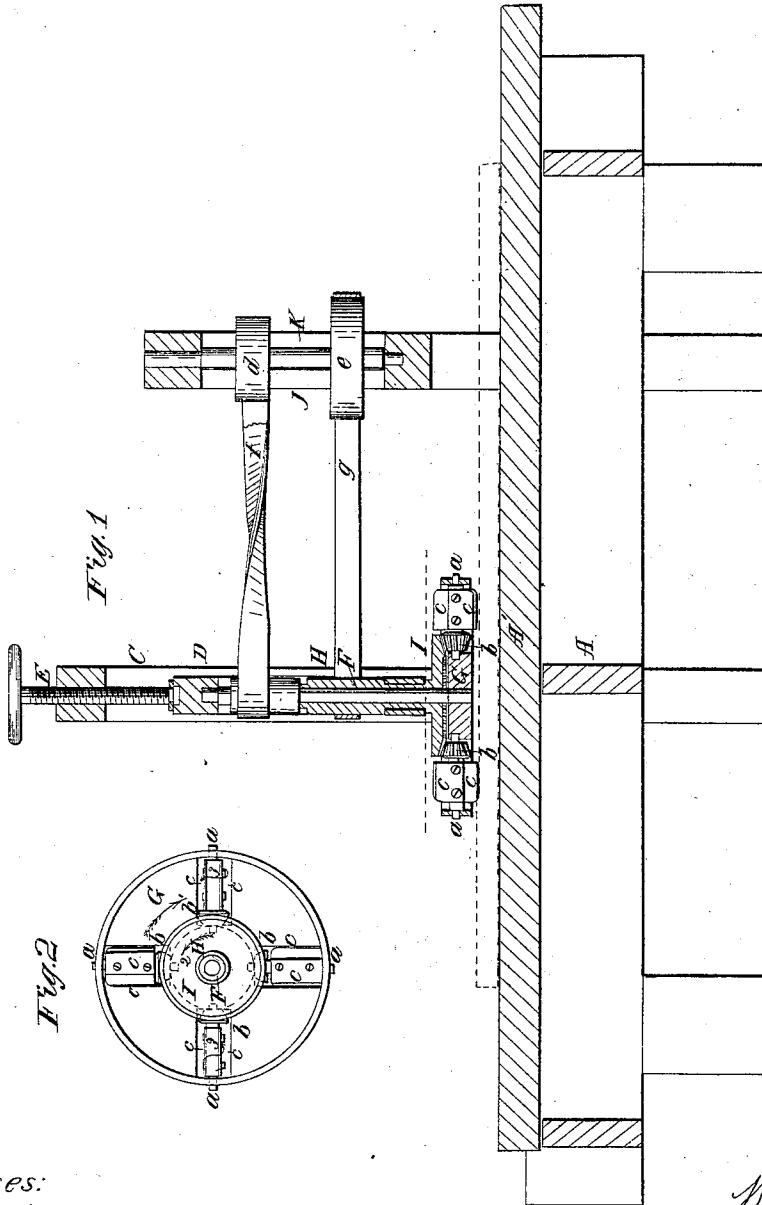


*W. N. Manning,
Wood Planing Machine.*

N^o 29,089.

Patented July 10, 1860.



*Witnesses:
J. C. Combs
R. S. Spence*

*Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM N. MANNING, OF SALEM, MASSACHUSETTS.

PLANING-MACHINE.

Specification of Letters Patent No. 29,089, dated July 10, 1860.

To all whom it may concern:

Be it known that I, W. N. MANNING, of Salem, in the county of Essex and State of Massachusetts, have invented a new and

5 Improved Planing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—
10 Figure 1 is a side sectional view of my invention. Fig. 2 is a detached plan view of the cutter head.

Similar letters of reference indicate corresponding parts in the two figures.

15 This invention relates to an improvement in that class of wood-planing machines in which a rotary cutter head is used, the cutters being fitted in a circular disk, as, for instance, in the Daniells's machine.

20 The object of the within described invention is to produce a smoother cut than has been hitherto done by the class of machines aforesaid and at the same time perform the work equally as rapid.

25 The invention consists in placing radially within a rotating cutter head a series of rotating cutters substantially as hereinafter described, whereby the cutters have two movements, to wit: an independent rotating
30 one on their own axes, and the one produced by the rotation of the head in which they are placed.

To enable those skilled in the art to fully understand and construct my invention I
35 will proceed to describe it.

A represents a horizontal framing on which a bed-piece A', is placed, and C represents a vertical frame attached to frame A, the former having a sash or gate D,
40 fitted in it, which may be adjusted vertically by a screw E.

Within the sash or gate D, there is placed a vertical arbor F, having a circular disk G, attached to its lower end, and on the
45 arbor F, there is placed a hollow or tubular arbor H, which has a toothed wheel I, at its lower end.

Within the disk G, there is placed radially four shafts a, at equal distances apart.
50 These shafts are allowed to rotate freely in the disks G, and they have each a pinion b, at their inner ends, which pinions gear into the wheel I.

On each shaft a, there are placed two

cutters c, c, the cutters being at opposite 55 sides of the shafts, and having their cutting edges parallel therewith, with the exception of the outer ends which are rounded in order to avoid the scoring of the stuff which would otherwise occur,—see more particu- 60 larly Fig. 1.

J is a vertical frame also attached to the framing A, and having the driving shaft K, fitted within it. On the shaft K there are placed two pulleys d, e, around which cross 65 and straight belts f, g, respectively pass, the cross belt f, passing around the arbor F, of the disk G, and the straight belt g, passing around the hollow arbor H, of the wheel I, as shown clearly in Fig. 1. 70

The operation is as follows: The stuff to be planed, shown in red outline in Fig. 1, is placed on the bed-piece A', and moved underneath the disk G, and the shaft K, is rotated by any convenient power. From the 75 shaft K, the two shafts F, H, are rotated in reverse directions by means of the cross and straight belts f, g, and the disk G, rotates in the direction indicated by arrow 1, while the wheel I, rotates in the direction 80 indicated by arrow 2. The cutters c, c, are rotated by means of the gearing I, b, in the direction indicated by arrows 3, and plane the work with a smooth clean cut, the cutters c, on account of their rotation cannot 85 have their cut influenced by the grain of the wood or inequalities of surface, as is the case where the ordinary stationary cutters are attached to the disk G. At the same time the work will be performed equally as rapid 90 as by the old machines.

I do not claim separately the employment or use of rotary cutters irrespective of the arrangement herein shown or their connection with the rotating disk, as described, for 95 rotary cutters, are in common use for planing wood; but

Having thus described my invention, what I do claim as new, and desire to secure by Letters Patent, is:— 100

The combination of the rotary cutters c, and rotating disk G, arranged to operate as and for the purpose set forth.

WM. N. MANNING.

Witnesses:

E. K. BROWNE,
J. C. WEBSTER.