

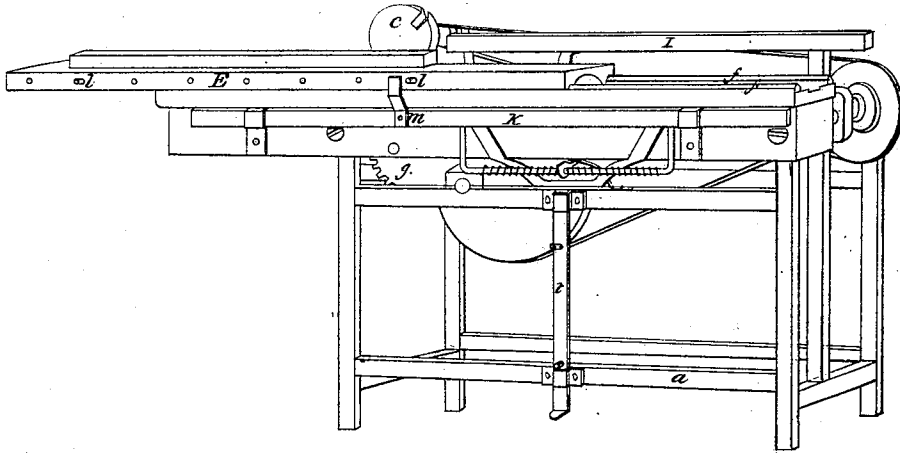
*G. H. Mansfield,*

*Moulding Machine.*

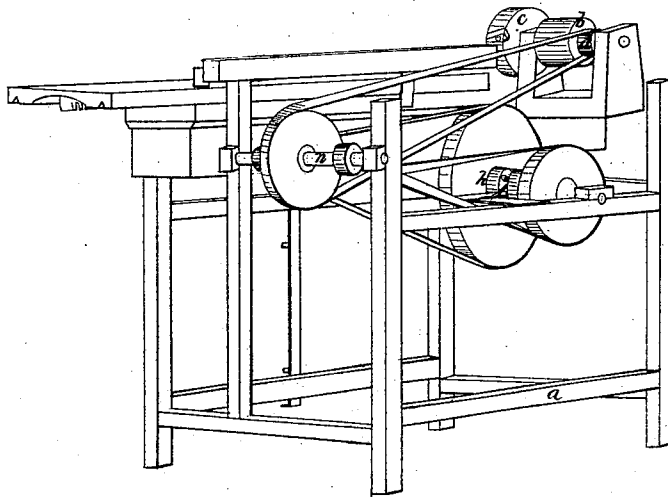
*No. 102,842.*

*Patented May 10, 1870.*

*Fig. 1.*



*Fig. 2.*



*Witnesses.*

*J. B. Brand*  
*N. B. Brand*

*Inventor.*

*George H. Mansfield.*

# United States Patent Office.

GEORGE H. MANSFIELD, OF CONCORD, NEW HAMPSHIRE.

Letters Patent No. 102,842, dated May 10, 1870.

## IMPROVEMENT IN PLANING-MACHINES.

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

Know all men by these presents:

That I, GEORGE H. MANSFIELD, of Concord, in the county of Merrimack and State of New Hampshire, have invented a new and useful or improved Machine for Jointing and Squaring the Edges of Lumber for Glue-Joints and for other purposes; and I do hereby declare the same to be fully described in the following specification, reference being had to the annexed drawings as forming a part of this description, in which—

Figure 1 is a front view of the machine.

Figure 2 is a rear view of the machine.

*a a* is the frame of the machine, which should be substantially constructed, to resist the vibration of the operating parts.

*b* is the driving-pulley, which is placed on the shaft which is attached to the machine, from which motion is communicated to the operating parts, which are more fully shown by fig. 2.

*c c* is the cutter-head, which is provided with suitable knives for cutting the pieces to be jointed, and which is to be either shrunk or screwed onto the end of the same shaft on which the driving-pulley is placed.

The knives or cutters are firmly secured to the cutter-head by means of bolts, which are screwed into the cutter-head through the holes in the cutters, the holes through these cutters for the reception of these bolts, being elongated in the direction of the length of the cutters, to allow the necessary adjustment of the cutters.

The table *e* is provided with grooves in its under side, which fit onto the slides *f f*, and the cog-wheel *g*, on the shaft *h*, matches into the rack attached to the under side of the table, and when the machine is in motion the table is moved back and forward past the cutter-head by means of the cog-wheel *g*.

The lumber to be jointed is placed on the table against the guide *l*, and, as the table moves forward, the piece is jointed whilst passing the cutter-head.

The guide *l* is also adjustable in the line with the face of the cutter-head, so as to regulate the thickness of the shaving to be cut.

On the shaft *h* is also a clutch-pulley, *j*, (known to mechanics,) to which is connected the shipper-bar *k*.

The pins *l l*, in the side of the table, when the table is in motion, hit against the projecting piece *m* attached to the shipper-bars, and the clutch-pulley reverses the motion of the table, causing it to travel back, ready to receive and carry forward another piece of lumber to be jointed.

The side of the table is also provided with holes at regular distances from each other, which will receive the pins that move the shipper-bars which are to regulate the distance the table is to travel back and forth for different lengths of pieces to be jointed.

It will be seen, by reference to fig. 2, that motion is communicated by means of the belt from the pul-

ley *d* to the shaft *n*, from which motion, by means of belts, is communicated to the shaft *h*, on which is placed the clutch-pulley *j*, and an intermediate gear-wheel, which matches into the cog-wheel that connects with the rack that supplies motion to all parts of the machine.

The table *e* can be moved back and forward on the slides *f f* by means of a screw instead of a rack and pinion cog-wheel without materially affecting the operation of the other parts of the machine, if desired to use it, and with but little difference in the cost of construction.

The lever *t*, when raised up, will throw the clutch between the pulleys, and stop the table at any point. Whilst the table is coming back the rest of the machine will still be in motion, and, by pressing the bar *t* down, it will throw the clutch into gear and give the table motion again.

This machine can be used to advantage in squaring timber, and with greater facility than with the Daniel's planer, and, by means of placing a beveled piece on the table, on which to lay the piece to be jointed, any desired bevel can be made.

It can also be used to cut miter joints as well as straight and square glue-joints, and for numerous purposes of jointing and squaring lumber.

I am aware that a machine for making glue-joints is already in use, having a cutter-head and table which moves on slides past the cutter-head, operated by a weight, to which is fastened a rope or strap, attached to the end of the table and passing over a wheel, the weight extending down through the floor, the object of which is to move the table forward on which is placed the piece to be jointed, which, when jointed, the table is pulled back by hand. But these machines are very unhandy. Besides, the slides have to be extended beyond the machine so far as to make the machine about sixteen feet long, and take up more room than manufacturers have to spare. A machine necessary to do the same length of work, made according to my invention, will occupy but about eight in length, and the great saving of room is an important matter to those who have occasion to use a machine of this kind.

It will be seen that my machine is different from all other machines used for making glue-joints, in the fact that it is self-feeding and very compact.

What I claim as my invention, and desire to secure by Letters Patent, is—

The frame *a*, carrying the cutter-head *c*, guide *l*, reciprocating table *e*, with its stops *l*, in connection with tappet *m*, reversing-bar *k*, clutch *j*, and shaft *h*, when all the parts are constructed and operated as and for the purpose specified.

GEORGE H. MANSFIELD. [L. s.]

Witnesses:

J. B. RAND,  
N. B. RAND.