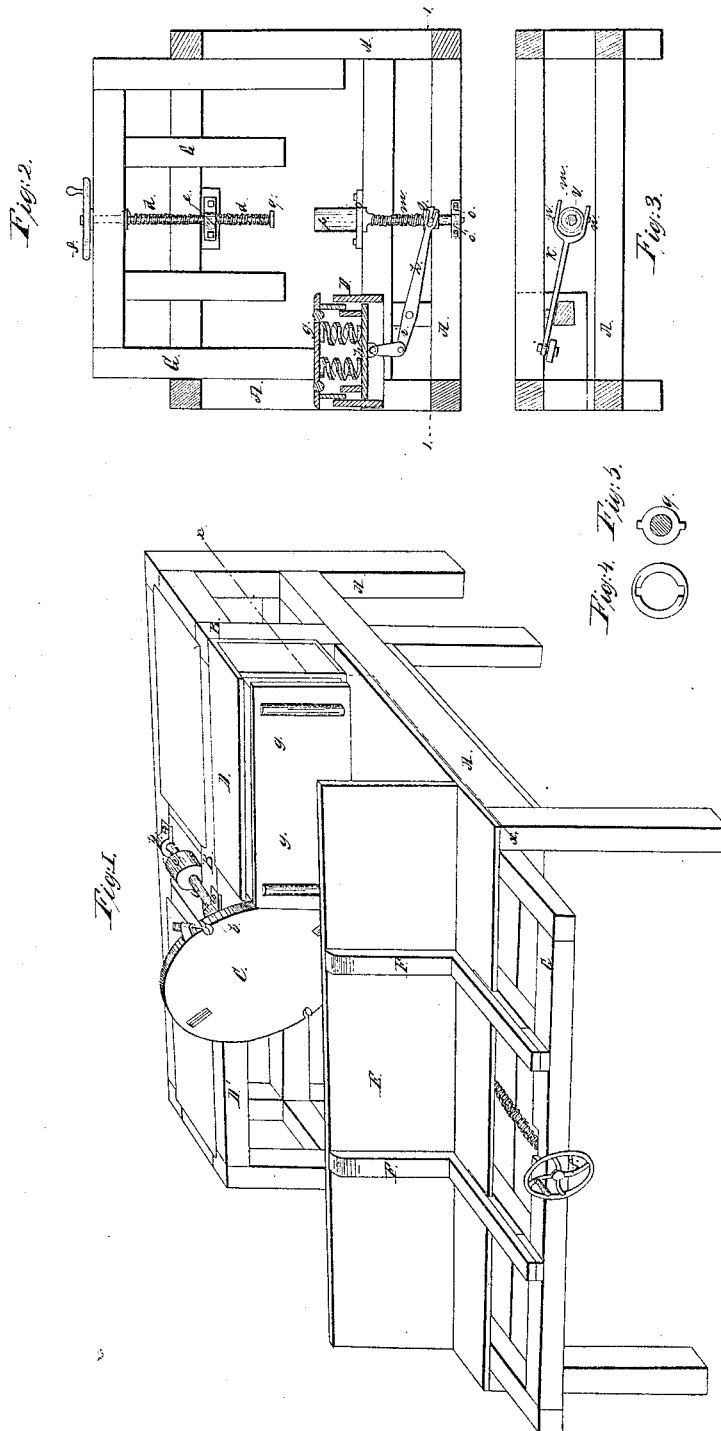


*H. Jeter,*  
*Wood Planing Machine.*  
*No. 6,829.* *Patented Oct. 30, 1849.*



# UNITED STATES PATENT OFFICE.

HUGH JETER, OF LEXINGTON, KENTUCKY, ASSIGNOR TO JETER AND WATSON.

## PLANING-MACHINE.

Specification of Letters Patent No. 6,829, dated October 30, 1849.

*To all whom it may concern:*

Be it known that I, HUGH JETER, of Lexington, in the county of Fayette and State of Kentucky, have invented a new and useful Improvement in Planing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the machine, Fig. 2 is a plan of the machine, with those portions above the line  $x x$  of Fig. 1 removed, Fig. 3 is a vertical section at the line 1, 1, of Fig. 2, and Figs. 4 and 5 end views of portions of the device for adjusting the springs.

Whereas in planing machines it is desirable that the lumber should be out of wind when acted upon by the cutters, and as it requires a much less pressure to produce this result in thin boards than in heavy planks; now the nature of my invention consists in so arranging the springs which act upon the lumber in the machine, that they shall adapt themselves to its thickness, the pressure being light for thin boards, and proportionally heavy for thick boards or plank.

In the drawing A represents the frame of the machine made of timbers which form a bench upon which the remaining portions of the machine are mounted. On one side of this bench a frame B is erected to support the shaft ( $a$ ) of the cutter wheel C, and the spring case D, one of which may precede and a second follow the cutter wheel (at D'). The cutter wheel (C) is a disk containing roughing and finishing cutters, it is mounted upon one extremity of a shaft ( $a$ ) extending transversely across the frame B and running in bearings ( $b, b$ ) supported by it. A belt pulley ( $o$ ) is attached to the shaft which receives motion from the prime mover. Immediately facing the cutter wheel, and parallel with its moving face is the sliding rest (E) by which the lumber is supported. This rest is firmly supported by knees F, which also connect it with a sliding frame G, beneath the top of the bench, by which the rest is moved and guided perpendicularly from or toward the plane of the cutter wheel. The sliding frame is moved by a set screw ( $d$ ) connected with it, and working in a stationary nut ( $e$ ) attached to the main frame. A hand wheel,  $f$ , or crank is secured to the extremity of the screw projecting beyond the sliding frame G by which it is turned.

The springs which hold the lumber firmly while passing through the machine, and which take it out of wind, are contained in a case (D) attached to the frame B which supports the shaft of the cutter wheel the front ( $g$ ), and back ( $h$ ) of this case are both movable, the springs are attached to them, and act to force the front from the back. The front of the case which acts upon the face of the lumber may be furnished with rollers to diminish the friction. The back  $h$  of the case is connected with the short arm ( $i$ ) of a lever whose opposite arm ( $k$ ) is forked to embrace the nut  $l$  of a screw  $m$  whose axis is in the same line as that of the set screw  $d$ . This nut is prevented from turning with the screw by pins  $n$  in its periphery which are received in slots in each prong of the forked arm  $k$ , of the lever. The screw turns in bearings  $o o'$  attached to the main frame A, and is prevented from moving endwise in either direction by collars on each side of its bearings  $o$ . To the end of the screw nearest the set screw a slotted pipe ( $p$ ) is attached, the face of which is shown in Fig. 4; the ends of these slots at the mouth of the pipe are flared in one direction to receive more easily the arms of a cross head  $q$ , attached to the inner extremity of the feed screw  $d$ . As the set screw is turned to place the rest at a proper distance from the cutters to receive boards which require less pressure to take them out of wind than the maximum which the springs are capable of exerting, the cross head enters the pipe, and its arms striking the straight sides of the slots turn the screw attached to it in the same direction as the set screw, and move the nut  $l$  toward the pipe  $p$ ; the motion of the nut acting through the lever  $k, i$  connected with the back of the spring case moves it from the rest and thus lessens the pressure of the springs acting upon the lumber. By turning the set screw in the opposite direction to place the rest farther from the cutters, the nut  $l$  moving the back of the spring case toward the rest increases the pressure of the springs in proportion to the thickness of the lumber. As it is useless to employ an increasing pressure for lumber above a certain thickness, the length of the slotted pipe is equal to this thickness.

It will be perceived that by this arrangement the pressure of the springs is graduated to the thickness of the lumber, being heavy with thick lumber and light for thin

boards; and this graduation is especially necessary in those machines which are intended for shop use, where it frequently happens that the consecutive boards vary  
5 greatly in thickness. If the machine were not adjustable, and the pressure was suited to plank it would not only require unnecessary power to pass thin boards through it, but would disfigure and break them. While  
10 if it were adjusted for thin boards the pressure would not be sufficient to hold plank firmly against the rest.

The machine has also the advantage of great simplicity in the construction of all

its parts, thus diminishing the chance of  
breakage and reducing the cost of repairs. 15

Having thus described my invention and the means of operating it, what I claim therein as new and desire to secure by Letters Patent is— 20

Graduating the pressure applied to the lumber on the rest in proportion to its thickness, substantially as herein set forth.

HUGH JETER.

Witnesses:

THOS. H. JONES,

JOHN B. PAYNE, Jr.