

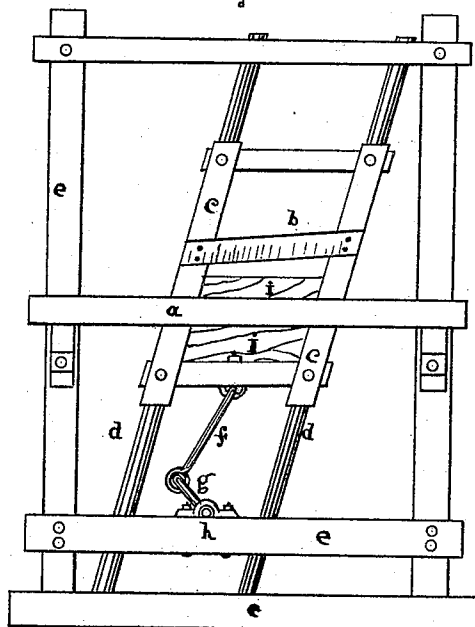
V. GROOM.

MACHINE FOR CUTTING BARREL HEADING.

No. 177,331.

Patented May 16, 1876.

Fig. 1.



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VINCENT GROOM, OF HECTOR, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING BARREL-HEADINGS.

Specification forming part of Letters Patent No. **177,331**, dated May 16, 1876; application filed September 21, 1874.

To all whom it may concern:

Re it known that I, VINCENT GROOM, of the town of Hector, Schuyler county, New York, have invented an Improvement in Machines for Cutting Barrel-Headings, of which the following is a specification:

My object is to make a satisfactory and useful heading for casks and barrels by steaming bolts or sections of wood, and cutting them into suitable thicknesses by a knife set in a frame; and my invention will be apparent as I describe it.

Figure 1 is a front elevation of my machine, and is considered sufficient to explain my invention.

In Fig. 1, *a* is a bed or breast plate or board, on which the section, billet, or bolt of wood rests while being cut; and *b* is the cutting-knife, set in the movable frame *c*, which frame slides on the obliquely-inclined rods or guides *d*, which rods are held fast in the general frame *e* of the machine. The knife-gate *c* is moved by the pitman *f*, which is put in motion by the crank *g* on the shaft *h*, which shaft has a fly-wheel, and a pulley with belt, or gear-wheel; and by any one of these connection is made to the steam-engine, water-wheel, or other source of power.

It will be noticed that the knife *b* is not set parallel to the bed *a*, but one end—as the left-hand end—is lower than the other end, and this is for the purpose of commencing a raking cut on one end of the bolt. This raking cut, thus commenced and continued, is changed by a penknife or whittling cut, caused by the inclination of the guide-rods *d*. Thus both the raking or drawing cut, by the obliquity of the knife, and the whittling cut by the guide-rods operating together, render the cut smooth, easy, and a success, as practice with my machine has amply proven. Backward from the knife is the panel or stop *i*, which is adjusted from the knife the thickness of the heading to be cut. The width of the knife-gate is such that the bolt can go in between the side pieces of the gate against the panel, and by pushing the wood bolt or blank on the bed *a* against the panel or stop, the thickness of the heading is gaged as the machine rapidly cuts the bolt; and as by the descent of the knife-frame the top of the panel

descends below the bed-board, and at the same time the bolt of wood is cut through by the knife, the pieces of heading fall back of the machine, out of the way of the next cut of the bolt, and thus the cutting goes on until the bolt is exhausted.

The process I use is as follows: I steam the bolts of wood until soft. I then apply one side or edge of the bolt to the knife, and by light cuts smooth this side or edge of the bolt. I then place the side thus smoothed or trued on the bed-board, and square and joint by the knife a second side, thus securing one of these two edges or sides as a jointed one for the edges of the heading when joined in the head of the barrel. Two sides of a bolt are all that often are needed to be trued. But if the bolt appears irregular or unsound, then I apply the same means for squaring and jointing a third side of the bolt, leaving one side in the rough.

It will be apparent that as I have the bed at right angles to the guide-rods, and the rods straight and true, as also the knife, the bolt, at this stage, is with two or three edges or surfaces jointed and squared to each other. In case of two trued surfaces, I place one on the bed and the other against the panel, and proceed to cut up the bolt, and thus get heading with two broad surfaces and one jointed edge, or heading fitted for the turning-machine, with but one edge rough; and in case of three surfaces trued, I place the middle surface, or the surface between the two other trued surfaces, toward the knife and panel, and push the bolt into the frame against the panel or stop, when the knife cuts off slices of heading, gaged accurately in thickness, and with edges jointed and square, as before, but having both of its edges jointed, and thus secure three desirable things: first, clean smooth surfaces on both sides of the heading, which is not the case with sawed headings; second, square jointed edges ready for barrel-making, thus saving the cost of the ordinary jointing and planing machines; and, third, heading with uniform thickness. And experience with my machine shows that it does these things, and cuts easily varied thicknesses from half to an inch and a half or more in thickness.

It is not the general art of cutting steamed

wood that my invention relates to; but to the specific one of cutting barrel-heading, to do this well and successfully. The other advantages and uses of my invention are apparent to those skilled in the art to which it appertains.

I do not claim a shingle or other wood cutting machine, which has a stop-guide connected with the table; but

I claim—

The reciprocating gate *c*, sliding upon the oblique rods *d d*, and carrying the oblique knife *b*, and stop or gage panel *i*, for regulating the thickness of the heading, in combination with the horizontal table or bed *a*, substantially as shown and described.

VINCENT GROOM.

Witnesses;

S. J. PARKER,

E. B. STULL.