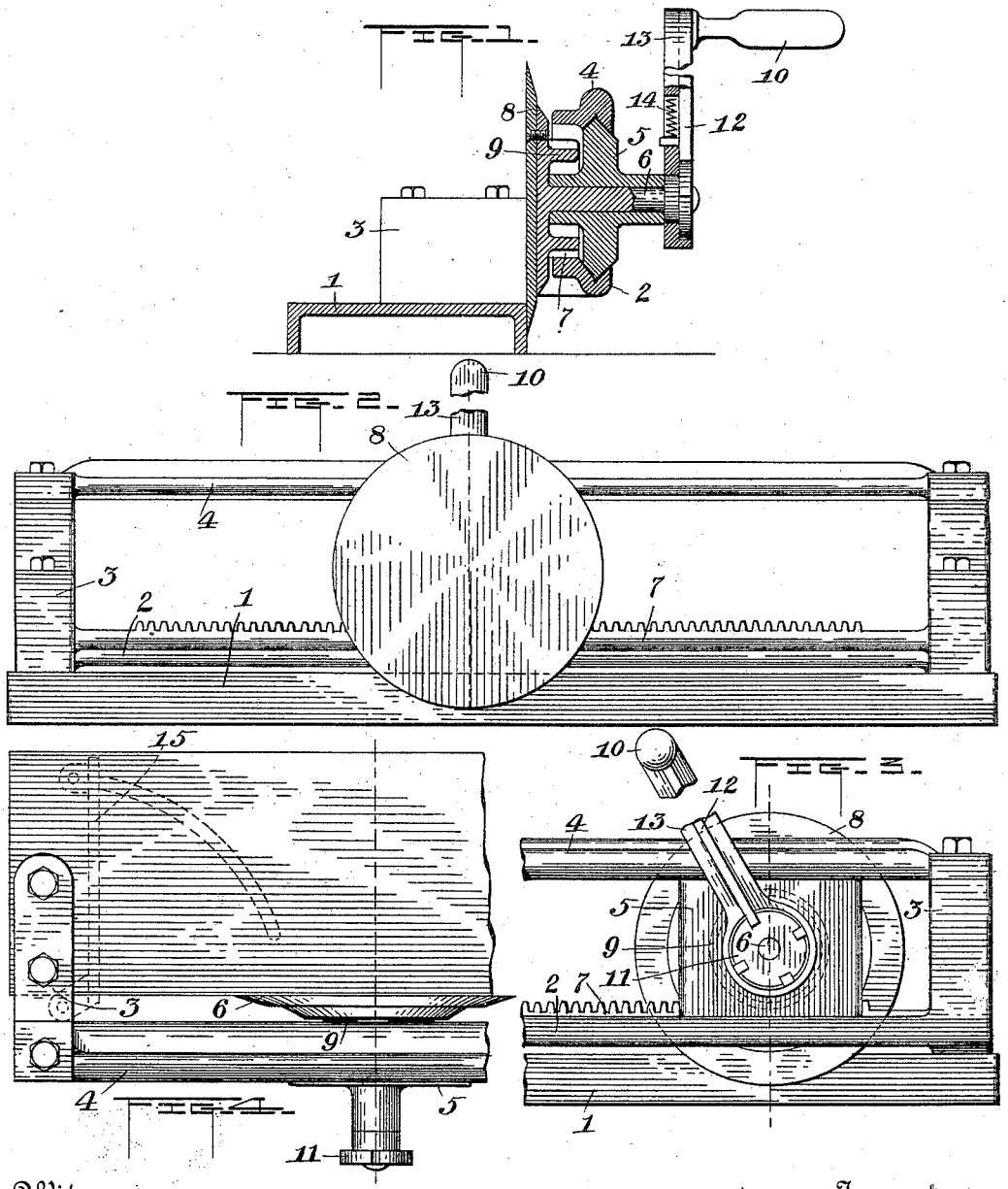
(No Model.)

W. B. BOAZ.

TRIMMING MACHINE.

No. 456,879. Patented July 28, 1891.



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UNITED STATES PATENT OFFICE.

WILLIAM B. BOAZ, OF HAMILTON, OHIO, ASSIGNOR OF ONE-HALF TO F. & L. KAHN & BROTHERS, OF SAME PLACE.

TRIMMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 456,879, dated July 28, 1891.

Application filed January 12, 1891. Serial No. 377,561. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. BOAZ, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Trimming-Machines, of which the following is a specification.

This invention pertains to improvements in that class of trimming-machines employed by pattern-makers and other wood-workers in trimming miters, butt-joints, and other edges of pieces of wood by hand-power operations.

My improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a vertical transverse section of a machine exemplifying my improvements; Fig. 2, a front elevation of the same; Fig. 3, a rear elevation of the same, or about half the length of the machine; and Fig. 4, a plan showing about half the length of the machine, the hand-lever or crank being omitted from the last-mentioned view.

In the drawings, 1 indicates the bed-plate, having a true flat top surface and a straight rear edge; 2, a lower guide member disposed to the rear of the bed-plate and parallel with its rear edge; 3, brackets projecting forwardly from the guide member and bolted to the bed-plate, as indicated in Fig. 4, so that the guide member can be adjusted to and from and parallel with the rear edge of the bed-plate and then firmly secured; 4, a top guide member disposed over the lower guide member and bolted thereto at its ends, the guiding elements being illustrated as of V-shaped bearing-section; 5, a cross-head fitted to slide in the guides endwise of the bed-plate, the bolting of the top guide member to the lower one permitting the guideway to be adjusted to a proper fit upon the cross-head as wear takes place, the cross-head carrying a bearing having a horizontal axis above the top surface of the bed-plate and parallel with that surface and at right angles to the plane of the rear edge of the bed-plate; 6, a spindle journaled in this cross-head bearing; 7, a rack formed upon the lower guide element, with its teeth projecting upwardly; 8, a disk-cutter secured to the front end of this spindle, this cutter having a flat front face and having a bevel upon its rear face to produce an acute peripheral cutting-edge, the lower portion of this cutter projecting below the upper surface of the bed-plate, while the flat face of the cutter comes against or very near to the rear edge of the bed-plate; 9, a gear on the cutter-spindle, gearing with the rack on the guides; 10, a handle or crank on the rear end of the spindle, by means of which the spindle and cutter and gear may be rotated; 11, a ratchet or notched disk fast on the rear end of the spindle; 12, the arm to which the handle 10 is attached, the inner end of this arm or tongue engaging any selected notch in the disk 11; 13, the body of the hand-lever or crank freely journaled on the spindle and forming a housing for the handle-tongue 12, which tongue is capable of sliding a trifle radially in the crank-body 13; and 14, a spring housed in the crank-body and tending to press the tongue 12 inwardly, so that its point will engage one of the notches of the ratchet-disk.

By turning the crank the cutter will be rotated, and at the same time the pinion will cause the cutter to be moved along the bed-plate toward one end of the machine. The cutter, therefore, has a movement of rotation and advance, the periphery of the cutter having a rotary movement at higher speed than its movement of advance. A piece of wood laid upon the bed-plate against one of the brackets and projecting a trifle to the rear of the bed-plate in advance of the cutter becomes subjected to the action of the rotating and advancing cutter and slices may be shaved off of the wood. The action of the cutter is that of a knife-edged toothless saw, the advance of the cutter serving to feed it along as the cutting progresses. The work done is extremely smooth and free from all splintering, and the machine has a capacity for taking surprisingly heavy cuts with smooth results.

It is usual in machines of this general class to provide the bed-plate with one or more fences, against which the wood may be placed instead of against the end brackets, as above mentioned, such fences being adjustable to various angles for mitering, &c. Such fences may, if desired, be employed in connection

with my machine, as indicated in dotted line at 15 in Fig. 4.

For convenience in operation it is desirable that the crank project upwardly within convenient reach of the operator's hand. The general position of the crank would be controlled by the width of the piece of wood being operated upon. In order that the position of the crank may in a general way be fixed independent of the width of the work, I arrange the crank to be adjusted around the spindle. This is done by shifting the tongue 12 into a selected notch in the disk 11 in an obvious manner. Wear of the cross-head in the guides is compensated for by readjusting the upper guide member where it is secured by bolts to the structure of the lower guide member. The guide is adjusted into parallelism with the bed-plate by shifting the brackets on the bed-plate.

I claim as my invention—

In a trimming-machine, the combination, substantially as set forth, of a bed-plate, a guideway and rack parallel therewith, a cross-head fitting said guide and having a bearing, a spindle journaled in said cross-head bearing, a disk-cutter secured to said spindle and having a flat front face and acutely-beveled periphery projecting below and against the edge of said bed-plate, a gear connected with said spindle and engaging said rack, and a hand-crank connected with said spindle.

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