(No Model.) 2 Sheets—Sheet 1.

R. C. BROWN.

MACHINE FOR TURNING ROSETTES AND THE LIKE.

No. 418,161. Patented Dec. 31, 1889.

Fig. 1.

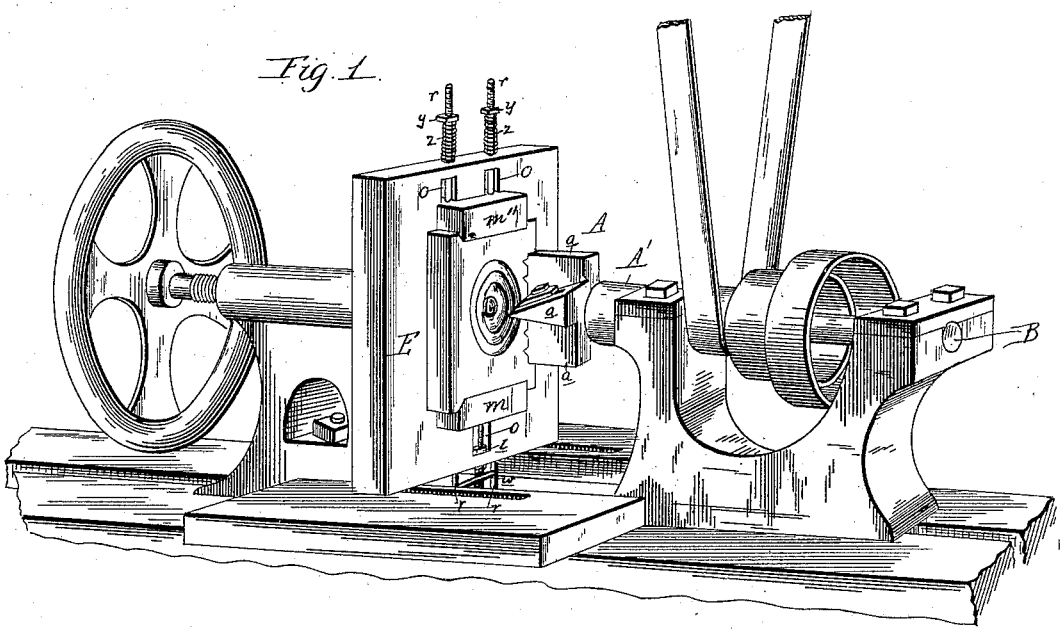


Fig. 2.

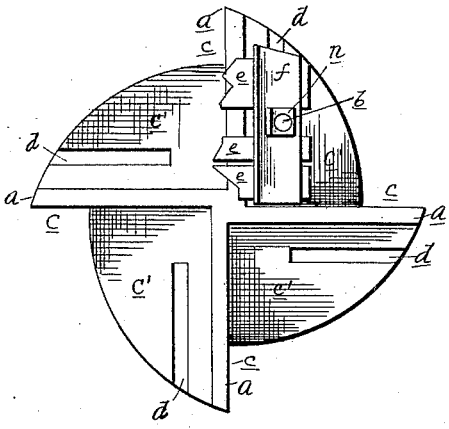


Fig. 3.

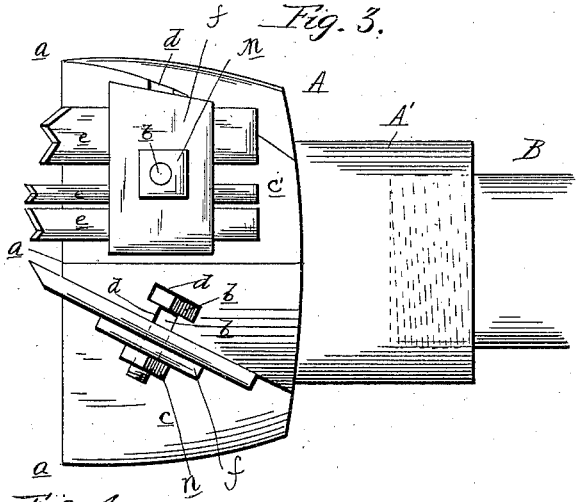
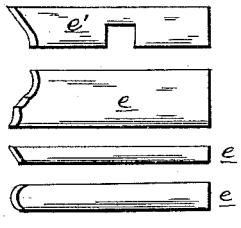


Fig. 4.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

R. C. BROWN.

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Fig. 5.

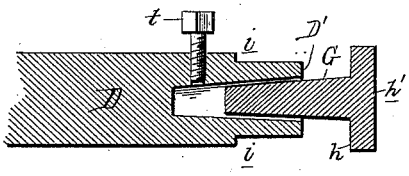


Fig. 6.

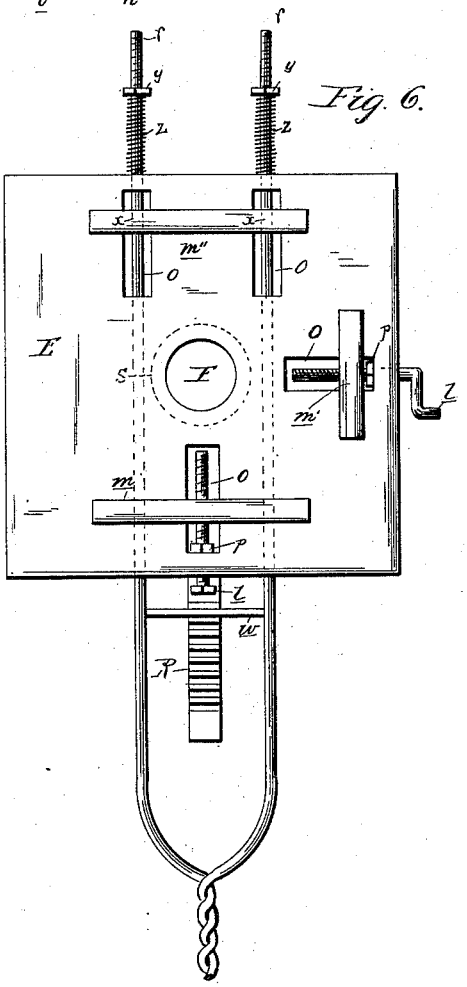
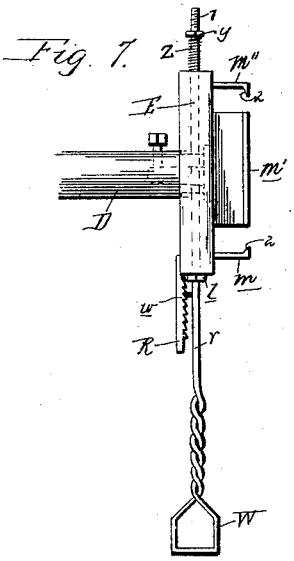


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

RUSH C. BROWN, OF OSHKOSH, WISCONSIN, ASSIGNOR OF ONE-HALF TO CARLTON F. YOUMANS, OF SAME PLACE.

MACHINE FOR TURNING ROSETTES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 418,161, dated December 31, 1889.

Application filed April 1, 1889. Serial No. 305,602. (No model.)

To all whom it may concern:

Be it known that I, RUSH C. BROWN, a citizen of the United States, residing at the city of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Machines for Turning Rosettes or the Like; and I do declare the following to be full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in a wood-turning lathe with appliances and machinery added to adapt it to the turning of rosettes, corner-casing blocks, or the like; and the objects of my improvements are, first, to increase the speed and accuracy with which the articles above named may be made; second, to increase the variety, and, third, to provide a smoother cutting. I attain these objects by the structure and mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the lathe. Fig. 2 is an end view, and Fig. 3 a side view, of the knife-head. Fig. 4 shows some of the forms and shapes of knives used. Fig. 5 is a side sectional view of portion of the tail-stock, showing manner of attaching the face-plate. Fig. 6 is a front or end view of the face-plate and connections, and Fig. 7 a relatively-smaller view of the same.

Similar letters refer to similar parts throughout the several views.

In my invention the rosette-block is held stationary by the tail-stock of the lathe and the cutting-knives revolve with the head-stock or shaft.

A is the knife-head, with a shank A′, screwing onto the head-stock or shaft B, Fig. 3.

In Fig. 2 the knife-head is supposed to turn to the left, and in Fig. 3 from the observer.

The head A is cleft or cut so as to form arms or wings *a a a a*, converging to the center on the end face, and each arm extending rearward at right angles with the face on the side that the head is running toward *c c c c* and upon an outward incline on each opposite side *c′ c′ c′ c′*. The knives *e e e* are set upon the inclined sides of the arms of the head, and may be set upon one or more of the inclines. Fig. 2 shows the knives upon one incline only. These knives are fastened and held upon each incline by means of the bolt *b*, the head of which slides into the slot *d*, which is cut transversely in each incline. Each bolt passes up through the plate *f* above the knives, and by means of the nut *n* this plate is screwed down tightly against the knives, so as to engage and fasten them in position. Any of the knives may be notched similar to *e′*, Fig. 4, so as to pass around the bolt.

By means of the above-described fastening of the knives I am enabled to use sectional or separate knives and to adjust them to any desired position upon the incline, or relative to each other. I can use several separate knives upon each incline and adjust them to a great number of different positions relative to each other, so as to make an almost endless variety of rosettes.

E, Figs. 6 and 7, is the face-plate, and F an opening in the center to admit the end of the tail-stock D. The back of the face-plate E rests against the shoulders *i i*, and the tail-pin G being inserted the head *h* fits into and against the circular shoulder *s*, Fig. 6, to hold the plate, as shown by the dotted lines, Fig. 7. The face of the pin-head *h′* is even with the surface of the face-plate, and the inside surface of the head *h* fits and rests against the end of the tail-stock at D′, Fig. 5. The thumb-screw secures and fastens the pin G in place.

m m′ m″ are adjustable sliding bars or arms fitting into and sliding in openings *o o o o* in the face-plate, and engage and hold the rosette-block in position against the plate for cutting. The side and bottom bars *m′ m* are adjusted forward and back from the center by means of the thumb or hand screws *l l*, which turn in collars attached to or integral with the face-plate at *p p* and screw through each slide or arm. The top slide or arm *m″* is adjusted and moved toward the center by

means of the rods *r r*, attaching thereto at *x x*, and passing from the top down through perpendicular openings in the plate E. These rods are joined or twisted together below the frame of the lathe and terminate in a foot stirrup or treadle *w*.

In operating the machine I first slide the rosette-block in upon the lower arm or bar *m*, which has been adjusted to center the block perpendicularly, and against the side bar *m'*, which is adjusted to center the block laterally. Then by pressing down with the foot upon the treadle *w*, I bring the top bar *m''* down to engage the block and hold it in position, and the cross-piece *u* catches in one of the cogs of the ratchet-bar R to retain it, and the springs *z z* at the tops of the rods are at the same time compressed. Then by means of the tail-screw of the lathe P, I move the block toward and upon the knives until it is finished. Then in the same manner, moving the block away from the knives, I loosen the treadle by pushing it away from the ratchet-bar R, and the rods *r r* are raised by the springs *z z*, at the same time raising the bar *m''* to release the rosette block. The nuts *y y* screw onto the tops of the rods *r r* and down sufficiently to adjust the power of the springs properly. The sliding bars or arms *m m' m''* are beveled upon the inside, engaging edges 2 2 2, Fig. 7, so as to adapt them to blocks of a varying or different thickness.

I claim as an important feature of my invention the inclination of the knives in the direction toward which the knife-head turns, thereby providing an inclined cut across the grain of the wood, which renders it much smoother and requires no finishing or sanding.

By my adjustment of knives an almost endless variety of rosettes can be turned, and by the mechanism above described great speed can be attained both in the revolution of the knives to cut the rosette and in the withdrawal, replacement, and adjustment of blocks.

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

1. In a machine for turning rosettes or the like, a rotary cutter-head carrying sectional cutters, the cutting-edges lying in the plane of the material operated upon to form circular grooves in the same, the several sections being adjustable toward or from the axis of rotation to vary the size of the rosette, and being interchangeable to vary the design.

2. In a machine for turning rosettes or the like, a gripping device for the block to be operated upon, comprising two supporting-arms adjustable to and from the center, a clamping-bar normally retracted from the center by a spring, a presser-rod for forcing the clamping-bar toward the center so as to grip the block, and a detent for locking it in variable positions of adjustment, as and for the purpose described.

3. In a machine for turning rosettes or the like, a gripping device for the block to be operated upon, comprising a recessed stock D and co-operating pin G, face-plate E, adapted to be clamped thereby, adjustable supports *m m'*, clamp-bar *m''*, arm for operating it, and detent for locking the arm in variable positions of adjustment when clamping a block.

4. In a machine for turning rosettes or the like, a face-plate for a tail-stock provided with adjustable supporting and gripping bars for holding a block to be operated upon, said bars being provided with interiorly-beveled walls, whereby they are adapted to grip blocks of different thicknesses.

In testimony whereof I affix my signature in presence of witnesses.

RUSH C. BROWN.

Witnesses:
C. F. YOUMANS,
W. W. WATERHOUSE,
CHARLES J. SCHMITT.