(No Model.)

G. D. GILLETTE.

ROTARY CUTTER FOR WOODWORKING.

No. 544,432. Patented Aug. 13, 1895.

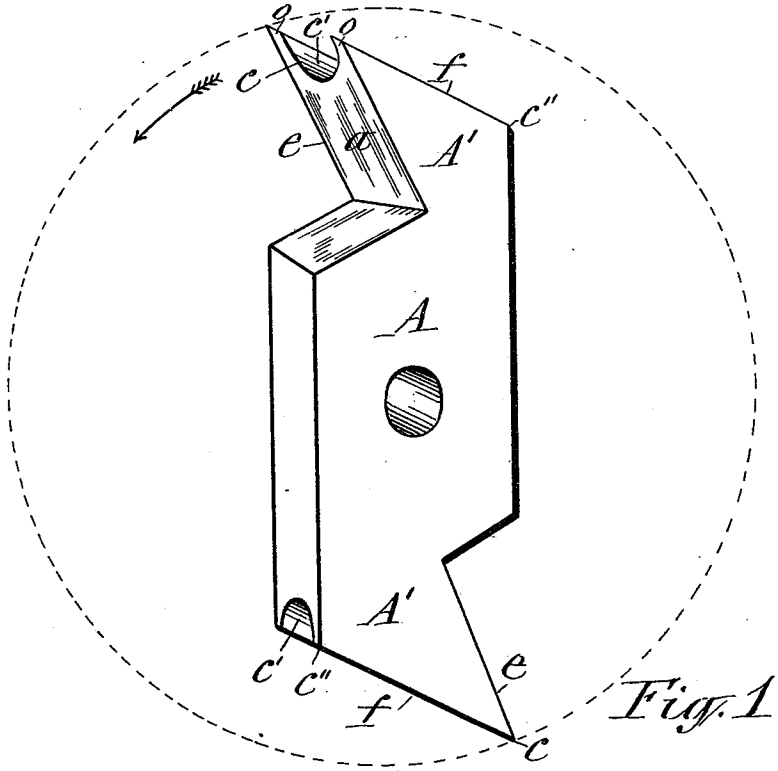

Fig. 1

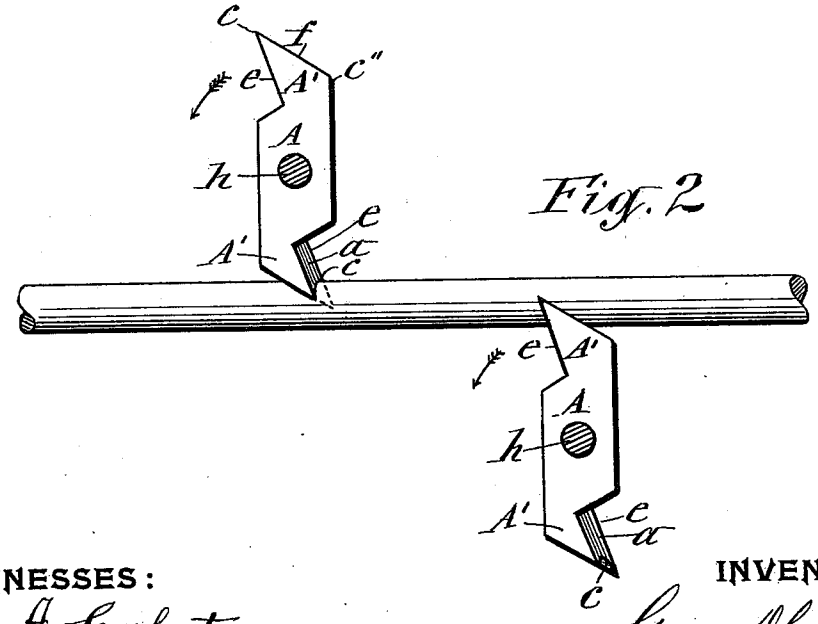

Fig. 2

WITNESSES:

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GEORGE D. GILLETTE, OF OSWEGO, NEW YORK.

ROTARY CUTTER FOR WOODWORKING.

SPECIFICATION forming part of Letters Patent No. 544,432, dated August 13, 1895.

Application filed April 6, 1895. Serial No. 544,710. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. GILLETTE, of Oswego, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Rotary Cutters for Woodworking, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of rotary cutters which are employed for operating on a wooden board or plank for forming moldings or bars of different shapes therefrom.

The object of the invention is to provide a rotary cutter which shall be capable of making heavy cuts of most any desired shape without danger of slivering the wood or heating the cutter by frictional contact with the wood and which shall also present its cutting-edges in such positions as to permit them to be readily ground and sharpened when required without altering the shape of the cut subsequently produced in its operation; and to that end the invention consists of a cutter-head having cutting-wings each formed with a front face inclining rearward from the outer end of the wing and beveled uniformly from one side of the wing to the opposite side thereof and reverse from the bevel of the companion wing, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a detached perspective view of a rotary cutter embodying my invention, and Fig. 2 is a side view of two of said cutters mounted on parallel arbors and shaped to form window-shade rollers or other analogous cylindrical bars from a board or bar passing between said cutters.

A represents the cutter-head which is formed with the cutting-wings A′ A′ and preferably in one piece of steel. Each of these wings is formed with the front face *a*, inclining rearward from the outer end of the wing. The peripheral face *f* of the wing is sloped inward from the front face *a*, and the junction of said faces form the cutting-edge *c*.

My invention is more particularly designed for forming in an expeditious and accurate manner cylindrical bars, such as window-shade rollers, curtain-poles, dowels, &c., and for that purpose I form the periphery or outer face *f* of each wing A with the central longitudinal groove *c′* of semicircular shape in cross-section and extending to the front face *a* and presenting thereat the semicircular shaping-edge *c* and straight narrow cutting-edges *o o* at opposite sides of said shaping-edge.

By mounting on two parallel rotary mandrels *h* two sets of the aforesaid cutters disposed contiguously side by side and of such diameters as to cause the narrow cutting-edges *o o* of each set of cutters to cut half-way through a board passing between the two sets of cutters a plurality of cylindrical sticks are formed in one operation. It will be observed that in this manner I am enabled to manufacture shade-rollers and analogous cylindrical bars far more expeditiously and much cheaper than by the old process of the hollow-auger system, which makes only one roller at a time from a previously-square stick.

To effectually guard against slivering the wood and heating the cutter by frictional contact with the wood, as well as to give clearance for the shavings or sawdust, I slope the peripheral faces of the cutting-wings A′ from the cutting-edges *c* and *o o* rearward to *c″*, as shown in Fig. 1 of the drawings, and I form each of said wings with the side shaving or clearing edge *e* on the front face *a* by beveling said face uniformly from one side of the wing to the opposite side thereof, the bevel on one wing being reverse from that on the other wing, as shown. Said front face thus presents all the cutting-edges *c c* and *o o* of the wings in such positions as to allow them to be sharpened at one operation by subjecting said face to the action of the grinding or sharpening tool.

The aforesaid bevel of the front face *a* causes the cutting-edge *c* to stand slanting, so as to produce a draw-cut, which obviates the liability of slivering the wood and produces a smooth surface.

What I claim as my invention is—

1. The cutter head A having two wings A′, each formed with a front face —*a*— beveled laterally and reversely to that of the opposite wing so as to have clearing edges —*e*— at alternate front side corners, an outer face —*f*— grooved longitudinally and centrally, and a draw-cut cutting edge at the angle be-

tween said faces comprising narrow side edges —*o*—*o*— and an interposed shaping edge —*c*— at the forward end of said groove, substantially as and for the purpose set forth.

2. The cutter head A having wings A′, each formed with a front face —*a*— beveled laterally and reversely to that of the next adjacent wings and having a clearing edge —*e*— at its front corner, an outer edge —*f*— grooved longitudinally and centrally, and a draw-cut cutting edge at the angle between said faces comprising straight oblique narrow side edges —*o*—*o*— with the one at the outer end of the clearing edge farther from the center than the other one, and an interposed shaping edge —*c*— at the forward end of said groove, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name this 28th day of March, 1895.

GEORGE D. GILLETTE. [L. S.]

Witnesses:
B. W. BURLEIGH,
CHAS. A. BENTLEY.