(No Model.)

S. K. WHITE & D. H. BACON.

CUTTER HEAD FOR WOOD TURNING MACHINES.

No. 503,632. Patented Aug. 22, 1893.

Fig. 1.

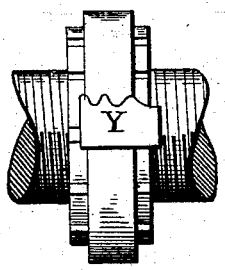


Fig. 2.

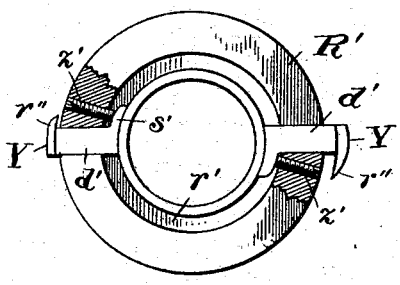


Fig. 3.

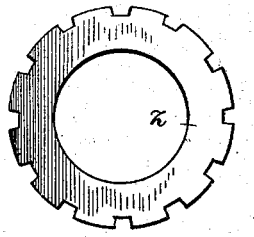
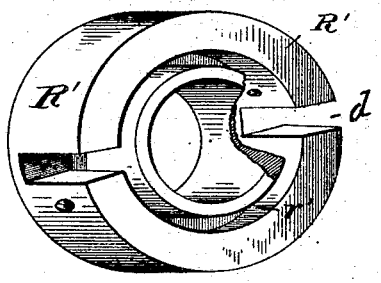


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL K. WHITE, OF CHICAGO, ILLINOIS, AND DANIEL H. BACON, OF NEW YORK, N. Y.

CUTTER-HEAD FOR WOOD-TURNING MACHINES.

SPECIFICATION forming part of Letters Patent No. 503,632, dated August 22, 1893.

Original application filed January 5, 1892, Serial No. 417,051. Divided and this application filed January 3, 1893. Serial No. 457,129. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL K. WHITE, residing at Chicago, in the county of Cook, in the State of Illinois, and DANIEL H. BACON, residing in the city, county, and State of New York, citizens of the United States, have invented certain new and useful Improvements in Cutter-Heads for Wood Turning Machines, of which the following is a specification, the same being a division of an application filed by us January 5, 1892, Serial No. 417,051.

Our invention consists in an internally grooved cutter head, in which the enlarged shank of the cutter is loosely inserted in the internal groove and is kept pressing against the outer edge of said groove by centrifugal force, during the revolution of the cutter head.

One form of our invention is shown in the accompanying drawings, in which—

Figures 1, 2 and 3 are enlarged details of the improved cutter head. Fig. 4 is a perspective view of the cutter head without the cutter.

Same letters indicate similar parts in the different drawings.

This cutter head consists of any desired number of internally grooved disks, to each of which one or more knives may be secured. These disks may be of the same or different diameter, as desired, and may be separated or not by dummy disks, that is, disks without any cutting blades, if desired, all of them being pressed firmly toward the shoulder near the end of the spindle, by a spring. As is well known to those acquainted with the art of wood turning, the character of the baluster, chair leg, &c., which is cut, the number of projections and depressions given to it and so on, will correspond largely with the pattern, which is made by the fanciful arrangement of these cutter carrying disks and dummies.

The internally grooved cutter head consists primarily of disks R′, provided with the internal groove r', connected with the outside of the disk by the slot d. In this groove and slot is secured the cutter Y, which is composed of a shank d', which fits closely in the slot d, its projecting base s' resting in the internal groove r'; and its upset head r'' is made of any desired shape and suitably sharpened to do the necessary amount of cutting of the wood. The internal groove r' is made considerably deeper than the projecting base s' of the cutter, so that when the binding plates Z, Fig. 3, are placed against the open side of the disks R′, and the cutter head thus formed is mounted on the cutter head spindle, the centrifugal force generated by the revolution of the spindle tends to keep this projecting base s' pressing against the outer limit of the groove; and hence the upset head of the cutter would be at the farthest possible distance from the center of revolution, and thus compensation for wear is made. When the knives are new, the set screw z', running through the disk, into the groove r', presses against the projecting base s' of the cutter and counterbalances the centrifugal force; but as the outer surface of the cutting lathe is ground away by repeated sharpening, the loss of material is compensated by gradually withdrawing the set screws z', and thus allowing the centrifugal force to act in keeping the edge of the cutting tool at a distance from the center of the revolution, as above described.

We claim—

The above described cutter head, which consists of a disk provided with internal grooves, in which the enlarged shank of the cutters is loosely inserted, and which grooves are of greater depth than said enlarged shank, whereby said shank constantly tends to press against the outer edge of said grooves, under the action of centrifugal force, during the revolution of the cutter heads, and provided with a compensating device, whereby the loss of material caused by sharpening the cutter is compensated by allowing said enlarged shank to approach nearer the edge of the groove, in proportion to the amount of said loss, substantially as described and shown.

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