(No Model.) 2 Sheets—Sheet 1.

A. M. BAGBY.

FINISHING TOOL FOR WOOD SHAPING MACHINES.

No. 602,612. Patented Apr. 19, 1898.

Fig. 1.

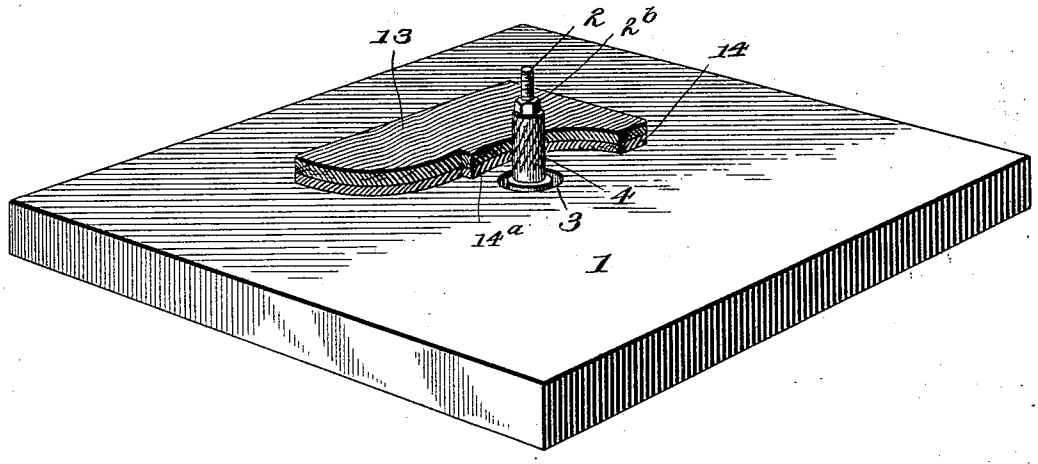
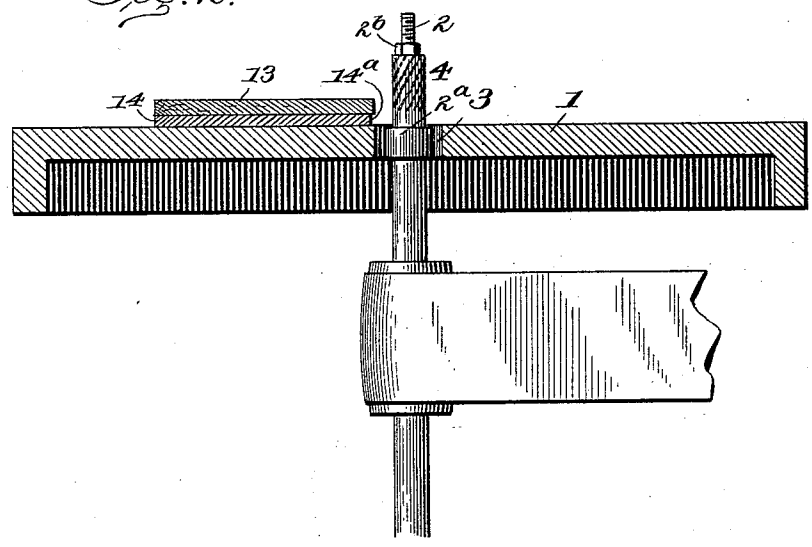


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

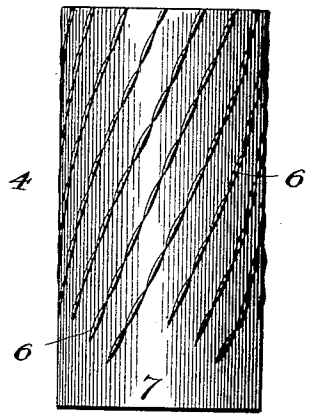


Fig. 4.

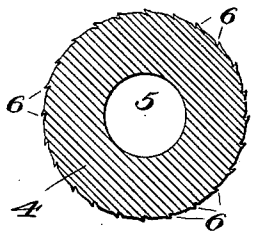


Fig. 7.

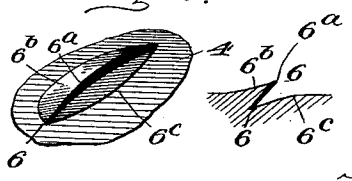


Fig. 5.

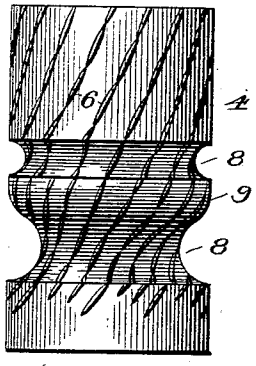
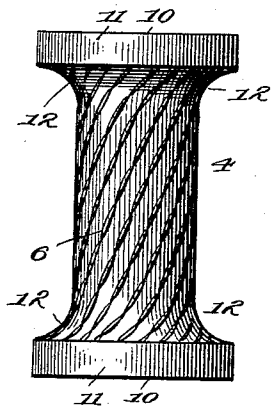


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALEXANDER M. BAGBY, OF OPELIKA, ALABAMA, ASSIGNOR OF ONE-HALF TO W. A. ANDREWS, OF SAME PLACE.

FINISHING-TOOL FOR WOOD-SHAPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 602,612, dated April 19, 1898.

Application filed August 7, 1897. Serial No. 647,464. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER M. BAGBY, a citizen of the United States, residing at Opelika, in the county of Lee and State of Alabama, have invented certain new and useful Improvements in Finishing-Tools for Wood-Shaping Machines; and I do hereby declare the following to be a 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.

My invention relates to improvements in devices for shaping and dressing or finishing the edges of woodwork and preparing the same for the reception of oil, paint, or varnish.

The object of the invention is to provide a simple, cheap, and efficient tool adapted to take the place of sand-belt machines, sand-rolls, &c., and also to dispense with hand labor, which, on account of the delicate operation of finishing elaborate scrollwork and the like, is still in a large measure employed, and thus cheapen the cost of production of the article.

A further object is to provide a tool which is adapted for finishing edge surfaces of different configuration and which requires no special machine for its mounting, but is adapted to be operatively mounted upon the rotatable spindle of an ordinary wood-shaping machine or the spindles of machines employed for other purposes.

With these and other objects in view the invention consists in a tool of the class described embodying certain novel constructions, as will be hereinafter more fully described, and particularly set forth in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a wood-shaping machine having my invention applied thereto; Fig. 2, a central vertical section of the same. Fig. 3 is a side elevational view of the tool on an enlarged scale; Fig. 4, a cross-sectional view of the same. Figs. 5 and 6 are embodiments of my invention adapted for beading, rounding, beveling, and other special work; and Fig. 7, an enlarged detail perspective view illustrating the form of smoothing and finishing tooth.

Referring now more particularly to the accompanying drawings, 1 represents the bed or table of a wood-shaping machine, and 2 the rotatable spindle thereof projecting through and vertically adjustable in the usual manner in the table-orifice 3.

My improved dressing or finishing tool comprises a cylindrical body 4, having the longitudinal opening 5, by which it is adapted to be fitted on the spindle. The circumference of said cylinder is provided with diagonally-arranged rows of teeth 6, extending from one end thereof, but terminating short of the other end, leaving a smooth or toothless face 7, the purpose of which will be hereinafter described. The said teeth 6 are formed by punching or cutting the metal of which the cylinder is made previous to tempering and bending or displacing one of the side edges of the cut portion upward to form a broad tooth. The tooth thus formed has a broad, slightly inwardly-curved cutting edge 6^a, beveled on its under side, and an upwardly-curved or convexed body portion 6^b, and the edge 6^c of the opening at the base of the tooth is beveled, from which point said opening gradually decreases in depth, as illustrated in Fig. 7. These teeth in operation do not file or rasp the wood, but have a slight shaving action thereon, and the peculiar construction of the teeth and diagonal disposition of the rows of same effect rapid clearance or insure that the dust or shavings removed from the wood will be conducted to one side by the centrifugal action of the rapidly-rotating tool and gumming or choking of the teeth prevented.

The construction of tool disclosed in Figs. 1, 2, and 3 is adapted for smoothing or finishing up simply. In Fig. 5 I have shown this tooth constructed with parallel circumferential grooves 8, forming a central boss 9, of the same diameter as the body of the tool, for operating upon the beads and grooves of intaglio or sunken beaded work, while in Fig. 6 the body of the tool is cylindrical throughout and provided at each end with an integral collar 10, having a smooth outer face 11, constituting the equivalent of the faces 7 of the forms of tool illustrated in Figs. 1 to 5, inclusive, and a curved or beveled inner side face 12, over which the rows of teeth extend. This latter construction of tool is employed for

rounding or beveling off the corners or corner edges of woodwork while the toothed body portion of the cylinder is dressing or finishing up the plane surface of the edge. By this it will be seen that the different forms of tool herein shown and described are adapted to act upon edge surfaces of different configuration, and thus I do not limit myself to making the body of the tool of any specific shape or contour.

In use my improved tool is mounted upon the spindle 2 of the wood-shaper and rests upon a collar 2^a thereon and is firmly clamped against independent movement by a nut 2^b, a bushing, key, or any other suitable fastening means, or it may be mounted upon the rotating spindle of any other machine, and said spindle is then rotated at a rapid rate—say from three thousand to five thousand revolutions per minute. The shaped edge of the board or piece of woodwork 13 as roughly cut out by the saw is then brought into contact with the tool and held in contact therewith until all irregularities of surface are removed and said edge is perfectly true, finished, or smoothed ready to receive the oil, paint, or varnish. As the tool is made of tempered steel it will operate readily upon ragged or imperfectly-sawed surfaces, which could not be reduced and finished by a sand-belt machine or sand-roll without frequent renewal of the surface thereof or by hand work without much labor and loss of time. Under ordinary conditions my improved tool, which can be manufactured and sold for a small sum, will last a month when in constant use, and thus it will be seen that by its use the cost of finishing wood articles will be materially reduced and valuable time saved.

An important feature of my tool lies in its capability of being used upon any kind of machine having a rotating spindle and in its simplicity and cheapness as compared with sand-belt and sand-roll machines.

The smooth face 7 of the tool enables the employment of a form or pattern 14 with the article being finished. When the edge of said article is reduced and finished in accordance with the contour and configuration of the guide edge 14^a of the said form 14, the smooth face 7 will not injure or reduce the form when coming in contact with said guide edge.

I am aware that heretofore it has been proposed to employ rotary files for finishing metal, and to such I make no claim, as it is obvious that my improved wood-finishing tool has no filing or rasping action whatever and that such devices could not be employed for the purpose for which my invention is intended.

It will thus be seen that I have provided a tool which is simple and cheap in construction and simplifies the operation of dressing or finishing wood articles, thus lessening the cost of production of the same.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. A tool for dressing or finishing edge surfaces of wooden articles, comprising a cylindrical body provided with diagonal rows of teeth integral with the body and projecting outward therefrom, the teeth in each row being independent but arranged in close relation to each other, substantially as described.

2. A tool for dressing or finishing edge surfaces of wooden articles, having a cylindric body portion formed with a longitudinal opening, and having its outer face provided with diagonal rows of teeth, extending from one end and terminating short of the other end thereof so as to leave a smooth-surfaced face, the teeth in each row being independent, but arranged consecutively in close relation to each other, substantially as described.

3. A tool for dressing or finishing wood, comprising a cylindric body portion formed with an opening and provided on its periphery with diagonal rows of teeth, each tooth having a broad cutting edge 6^a and an upwardly curved or convexed body portion 6^b, the edge 6^c of the opening at the base of said tooth being beveled and the opening below the cutting edge gradually increasing in depth from said edge 6^c, said diagonal rows of teeth extending from a point adjacent one end of the tool and terminating short of the other end thereof, so as to leave a smooth-surfaced or untoothed face, substantially as described.

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

ALEXANDER M. BAGBY.

Witnesses:
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CALVERT C. HINES.