No. 824,589. PATENTED JUNE 26, 1906.

J. W. RUTH & D. HARDEN.

KNIFE FOR WOOD PLANING MACHINES.

APPLICATION FILED JAN. 24, 1906.

Fig. 1.

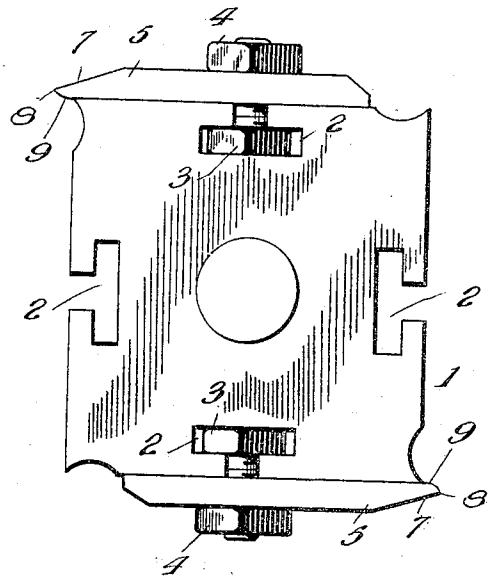


Fig. 2.

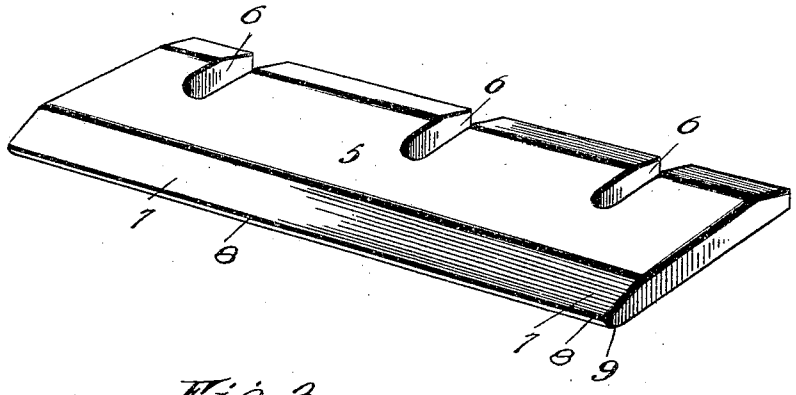
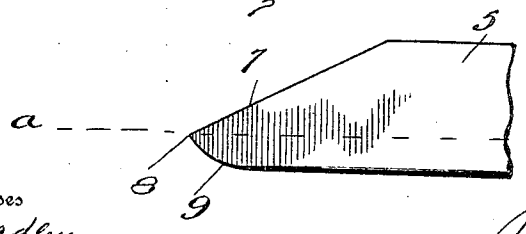


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN W. RUTH, OF EAST HUNTINGDON TOWNSHIP, WESTMORELAND COUNTY, AND DAVID HARDEN, OF EVERSON, PENNSYLVANIA.

KNIFE FOR WOOD-PLANING MACHINES.

No. 824,589. Specification of Letters Patent. Patented June 26, 1906.

Application filed January 24, 1906. Serial No. 297,676.

To all whom it may concern:

Be it known that we, JOHN W. RUTH, residing at East Huntingdon township, in the county of Westmoreland, and DAVID HARDEN, residing at Everson, Fayette county, State of Pennsylvania, citizens of the United States, have invented new and useful Improvements in Knives for Wood-Planing Machines, of which the following is a specification.

Our invention relates to knives for planing-machines; and it consists in providing a convex or rounding edge below the cutting edge.

We have found by practical experience that with a knife having this characteristic a superior and peculiarly advantageous result is accomplished when operating on such high-class wood as curly birch, bird's-eye maple, &c. We have found that the convex edge tends to crush and break the chips so promptly that the cutting edge does not pull the wood and mar the cut surface.

Other objects and advantages will be hereinafter referred to, and particularly pointed out in the claims.

In the drawings, Figure 1 is an end view of a rotary cutter-head with our invention applied thereto. Fig. 2 is a detail enlarged perspective view of one of the knives. Fig. 3 is an enlarged detail end view of the knife.

The numeral 1 represents a rotary cutter-head formed with undercut grooves 2, in which operate the heads of bolts 3, which, in conjunction with the nuts 4, hold the knives 5 in position on the head.

Each knife is flat and formed with slots 6 and is provided with a long upper-beveled portion 7, which terminates in a cutting edge 8 on a line *a*, drawn through the knife about one-third of its thickness. The edge of the knife between edge 8 and the bottom is convex in formation, as shown at 9, the edge projecting out beyond the face of head 1, as usual in this class of cutters.

Our sole invention resides in providing the convex edge 9 in contradistinction to a concave or flat edge. In operation on high-grade as well as particular other kinds of wood, where it is difficult to cut against the grain without disfiguring the surface, we find that the convex edge prevents the tearing and ripping of the shavings or chips of the wood. We believe this is true because of the tendency of the edge 9 to promptly crush, break, and remove the chip before it acquires length sufficient to hang on the knife. In other words, the chips as they are peeled from the surface are crushed by being turned outwardly and are as a result quickly broken and turned off, so that the knife cannot pull them from the wood, and so tear into the same.

What we claim is—

1. As a new article of manufacture, a planing-knife having a cutting edge from which extends a flat beveled surface toward the top of the knife, and a convex face extending from the cutting edge to the base of said knife.

2. As a new article of manufacture, a planing-knife having a cutting edge from which extends a beveled surface toward the top of the knife, and a convex face extending from the cutting edge to the base of said knife.

3. A planer or molding-head knife having a cutting edge from which extends inwardly a convex edge face.

In testimony whereof we have affixed our signatures in presence of two subscribing witnesses.

JOHN W. RUTH.
DAVID HARDEN.

Witnesses:
CARL H. CULLER,
JOHN M. PYLE.