

(No Model.)

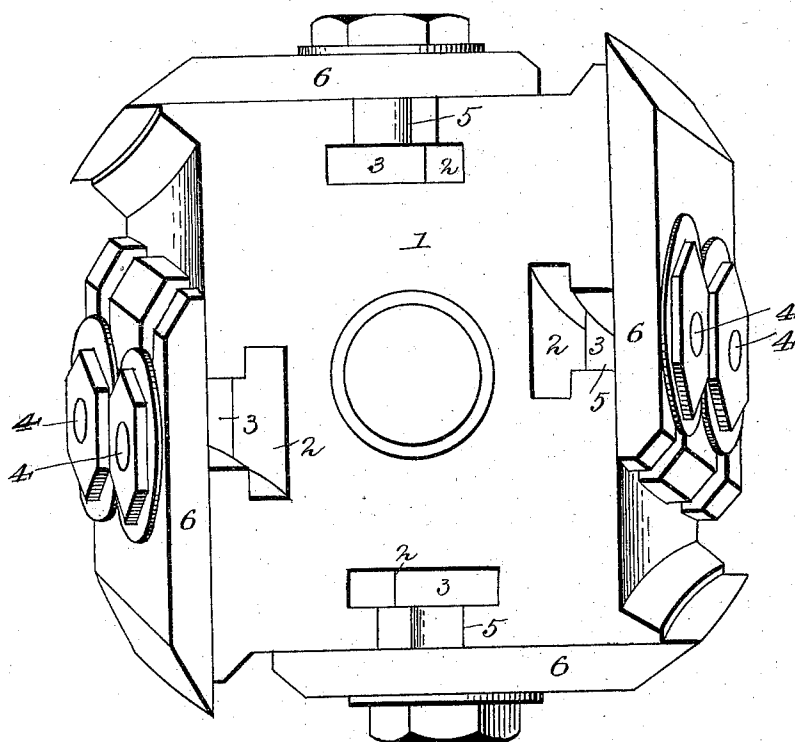
2 Sheets—Sheet 1.

S. J. SHIMER.
CUTTER HEAD.

No. 555,743.

Patented Mar. 3, 1896.

Fig. 1.



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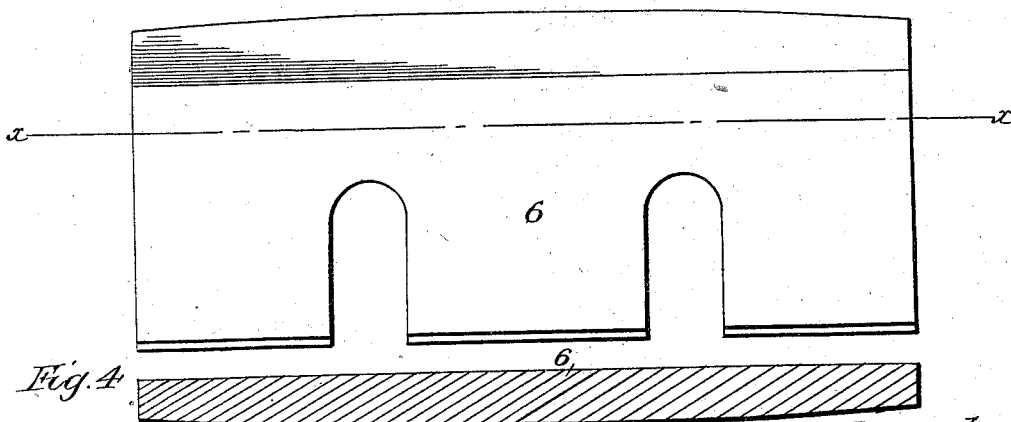
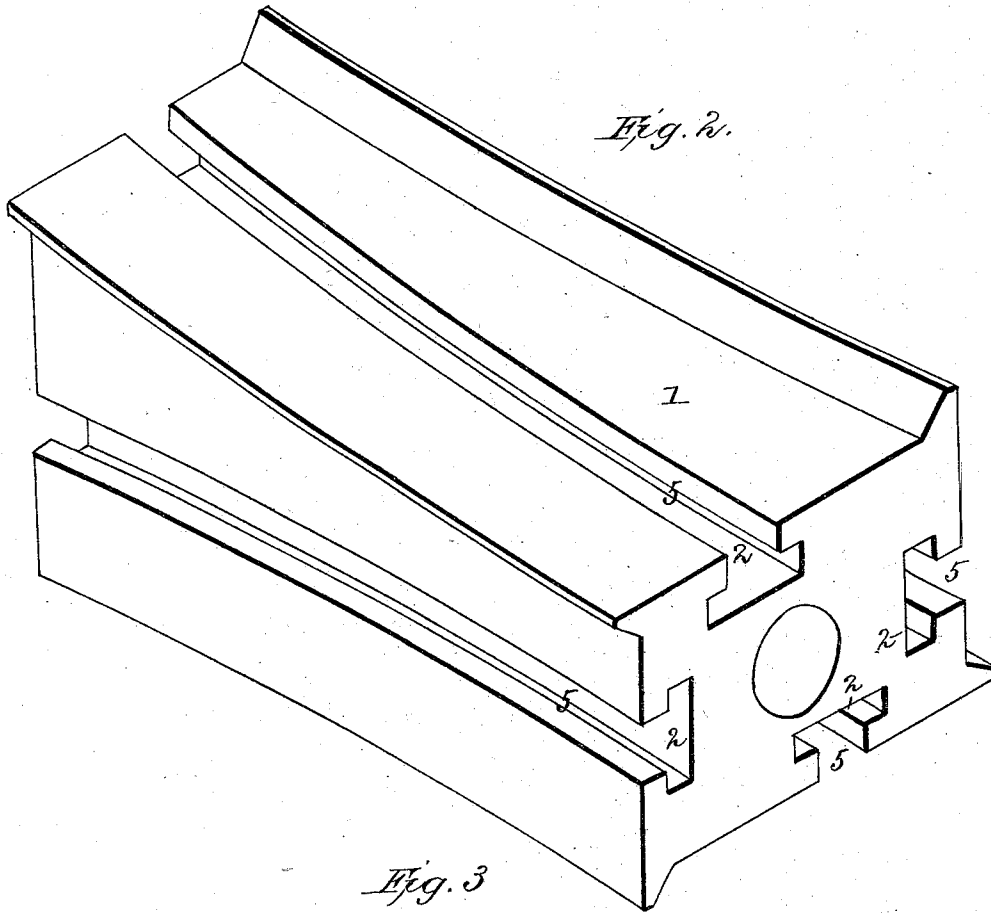
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2 Sheets—Sheet 2.

S. J. SHIMER.
CUTTER HEAD.

No. 555,743.

Patented Mar. 3, 1896.



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UNITED STATES PATENT OFFICE.

SAMUEL J. SHIMER, OF MILTON, PENNSYLVANIA.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 555,743, dated March 3, 1896.

Application filed December 31, 1895. Serial No. 573,966. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. SHIMER, a citizen of the United States, and a resident of Milton, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Cutter-Heads; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to cutter-heads for wood-planing machines of that class or description in which said heads are formed with four trapezoidal sides or faces, as in the application for Letters Patent filed by me of even date herewith, Serial No. 573,965, and with which are to be used knives having their under sides convexed from the center to each end, as in the application for Letters Patent filed by me November 27, 1895, Serial No. 570,287.

The present invention consists in the combination, with a cutter-head having four trapezoidal transversely-concaved faces or sides, of the knives having the inner or under sides convexed from the center toward each end, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is an end view of a cutter-head constructed in accordance with my invention, the knives being in place. Fig. 2 is a perspective view of the head, the knives being removed. Fig. 3 is a plan view of one of the knives. Fig. 4 is a longitudinal section of the same.

In the said drawings, the reference-numeral 1 designates a rotary cutter-head having a central aperture for the mandrel by which it is rotated. This cutter-head has four trapezoidal sides or faces alternately arranged and inclining inward and outward of the axial line of the head, and made concave or in the form of a segment of an ellipse in longitudinal section—that is to say, two opposite sides of the head are inclined on a curved line

from one end of the head, while the other faces or sides are inversely inclined on a correspondingly-curved line, or slanting from the same end of the head they incline toward the axial line of the head. Each of the sides or faces is formed with a T channel or groove 2, in which are seated the angular heads 3 of screw-bolts 4. These bolts pass through slots 5 in knives 6, the under or inner sides of which are convexed from the center toward the ends, so as to correspond with the concave seats, sides or faces of the cutter-head. The cutting-edges of the knives are curved in the form of a segment of an ellipse.

The object of convexing the under or inner sides of the knives to facilitate the operation of grinding is set forth in my application Serial No. 570,287, while the purpose of concaving the sides or faces of the cutter-head is to allow the knives to snugly fit or seat thereon, so that they will in practice make the same cut as in the invention described in my application of even date herewith.

I do not claim herein the knife having the convex under or inner side and the cutting-edge in the form of a segment of an ellipse, as such is claimed in my application Serial No. 570,287, hereinbefore referred to.

Having thus fully described my invention, what I claim is—

1. As an improved article a cutter-head having four trapezoidal, transversely-concaved sides or faces, substantially as described.

2. The combination with a cutter-head having four trapezoidal, transversely-curved faces or sides, of the knives secured thereto having their under or inner sides convexed from the center toward the ends and the cutting-edge curved in the form of a segment of an ellipse, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

SAMUEL J. SHIMER.

Witnesses:

AUGUST PETERSON,
E. P. BURKET.