No. 641,864. Patented Jan. 23, 1900.

G. JOHNSON, Jr.

CUTTER FOR WOOD PLANING MACHINES.

(Application filed June 15, 1898.)

(No Model.)

Fig. 1.

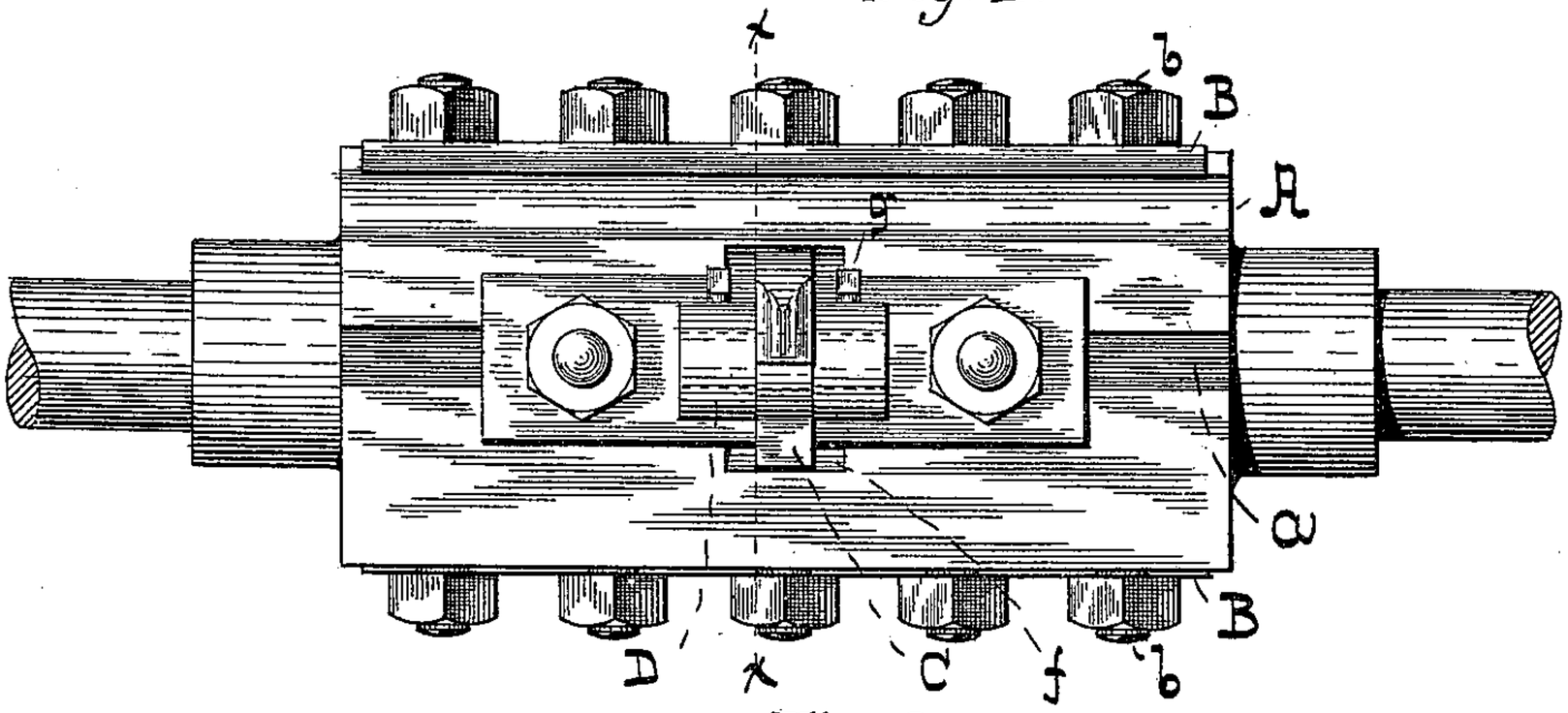


Fig. 2.

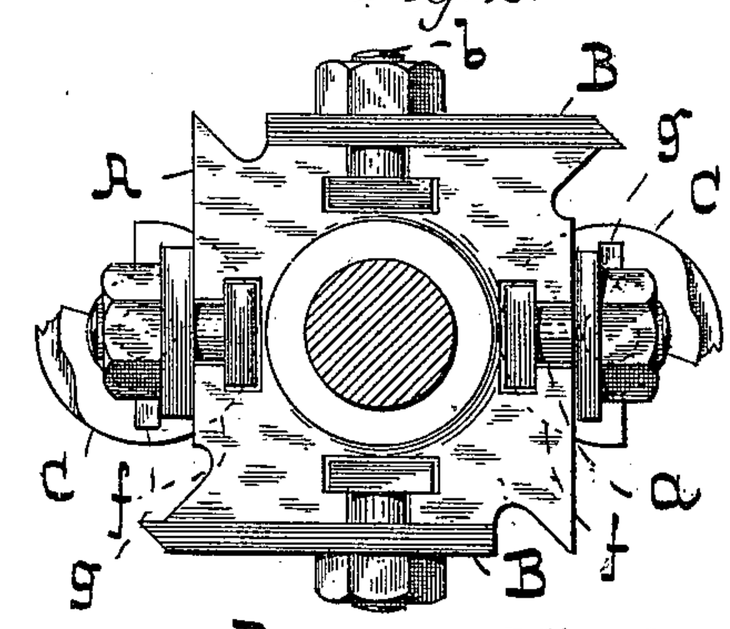


Fig. 4.

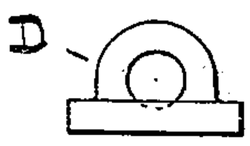


Fig. 5.

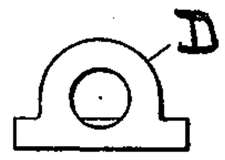
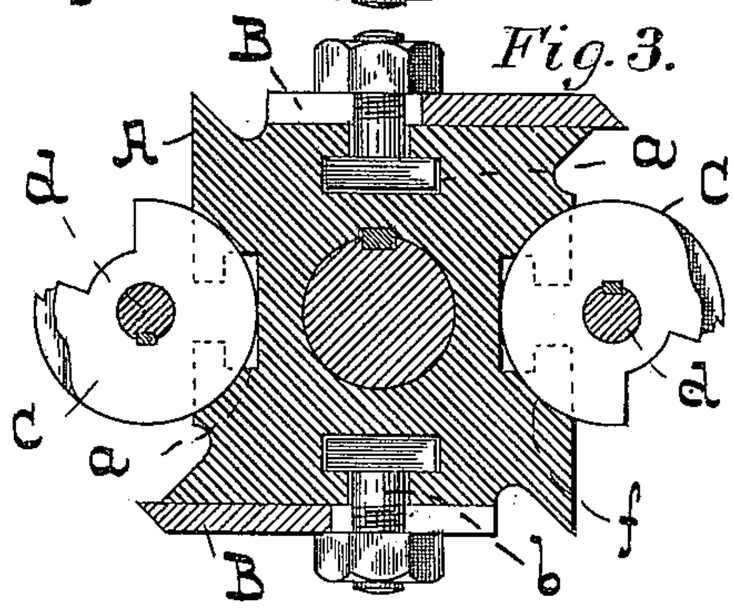


Fig. 3.



-WITNESSES-

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UNITED STATES PATENT OFFICE.

GREENLEAF JOHNSON, JR., OF BALTIMORE, MARYLAND.

CUTTER FOR WOOD-PLANING MACHINES.

SPECIFICATION forming part of Letters Patent No. 641,864, dated January 23, 1900.

Application filed June 15, 1898. Serial No. 683,527. (No model.)

To all whom it may concern:

Be it known that I, GREENLEAF JOHNSON, Jr., of the city of Baltimore, in the State of Maryland, have invented certain Improvements in Cutters for Wood-Planing Machines, of which the following is a specification.

The object of this invention is the construction of a cutter whereby a plank is surfaced, channeled, and cut down to the center thereof midway of the channel, so that when the said cutter is employed in connection with a similar one situated at the opposite side of the plank the plank is cut into boards the adjoining edges of which have tongues.

The said invention consists in a cutter-head having one or more fixed surfacing-knives and one or more knives adapted to cut a channel and which also cut down centrally of the channel to the center of the plank. The channeling and separating knives are adjustable longitudinally of the cutter-head, so that a variation in the respective widths of the boards produced may be effected, as will hereinafter fully appear.

In the further description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is an exterior side view of the improved cutter. Fig. 2 is an end view of Fig. 1. Fig. 3 is a section of Fig. 1, taken on the dotted line *x x*. Figs. 4 and 5 are end views of a part of the cutter hereinafter described.

Referring now to the drawings, A is the cutter-head, of a general rectangular shape, as seen from either end thereof, and provided, as is usual, with T-slots *a* for the knife-holding bolts *b*.

B B are ordinary surfacing-knives secured to the head A by means of the bolts *b* before referred to. These surfacing-knives preferably extend the whole length of the head, as shown in Fig. 1.

The cutters or knives which serve to channel the plank and separate it centrally of the channel into boards are denoted by C, and they are of the same general character as those shown and described in my application for cutters for wood-planing machines, Serial No. 634,551, filed April 30, 1897, to which reference should be made. The cutters or knives shown herein are of the annular description, or one of the forms illustrated in the said application, and like them their cutting edges effect three independent cuts, the first to the upper surface of the tongue, the second to a point below the surface of the tongue, and the third a depth equal to the distance from the upper surface of the plank to the center of the tongue, the various cutting edges striking the plank successively in the order named, as fully set out in the said application. The annular cutters C are keyed on shafts or spindles *d*, supported in bearing-boxes D, bolted to the head A, and they are sunk in recesses or rabbets *f*, which they fit closely, as shown in Fig. 3. By this construction the cutters or knives C are supported against inward deflection independently of their shafts or spindles. The recesses or rabbets *f* are longer than the width of the cutters C. Consequently the cutters, with their bearing-blocks D, may be shifted longitudinally of the head to vary the respective widths of the boards produced from the plank.

The shape of the bearing-blocks D will be understood by reference to Figs. 4 and 5, which show reverse end views of one of them.

Independent movement of the annular cutters and their shafts or spindles is prevented by set-screws *g*, which pass through the bearing-blocks into the shafts.

I claim as my invention—

A pair of cutters, oppositely placed, to surface a plank and reduce it into two boards with tongues at their adjacent edges, at one operation, each one of which comprises a surfacing-cutter, and a cutter adapted for adjustment longitudinally of the cutter-head, having three cutting edges, viz., the first to cut a shallow rectangular channel, the second which projects beyond the first and is provided with hollow sides and is narrower than the first, adapted to cut to near the center of the tongue, and the third which projects still farther and has hollow sides which cut in continuation of the second, to penetrate to the center of the tongue, the last two edges being set back from the first in the order named, so as to cut independently, substantially as specified.

GREENLEAF JOHNSON, JR.

Witnesses:
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