

Sheet 1, 2 Sheets.

G. Maulick.  
Planing Saw.

N<sup>o</sup> 93,631.

Patented Aug. 10, 1869.

Fig. 1.

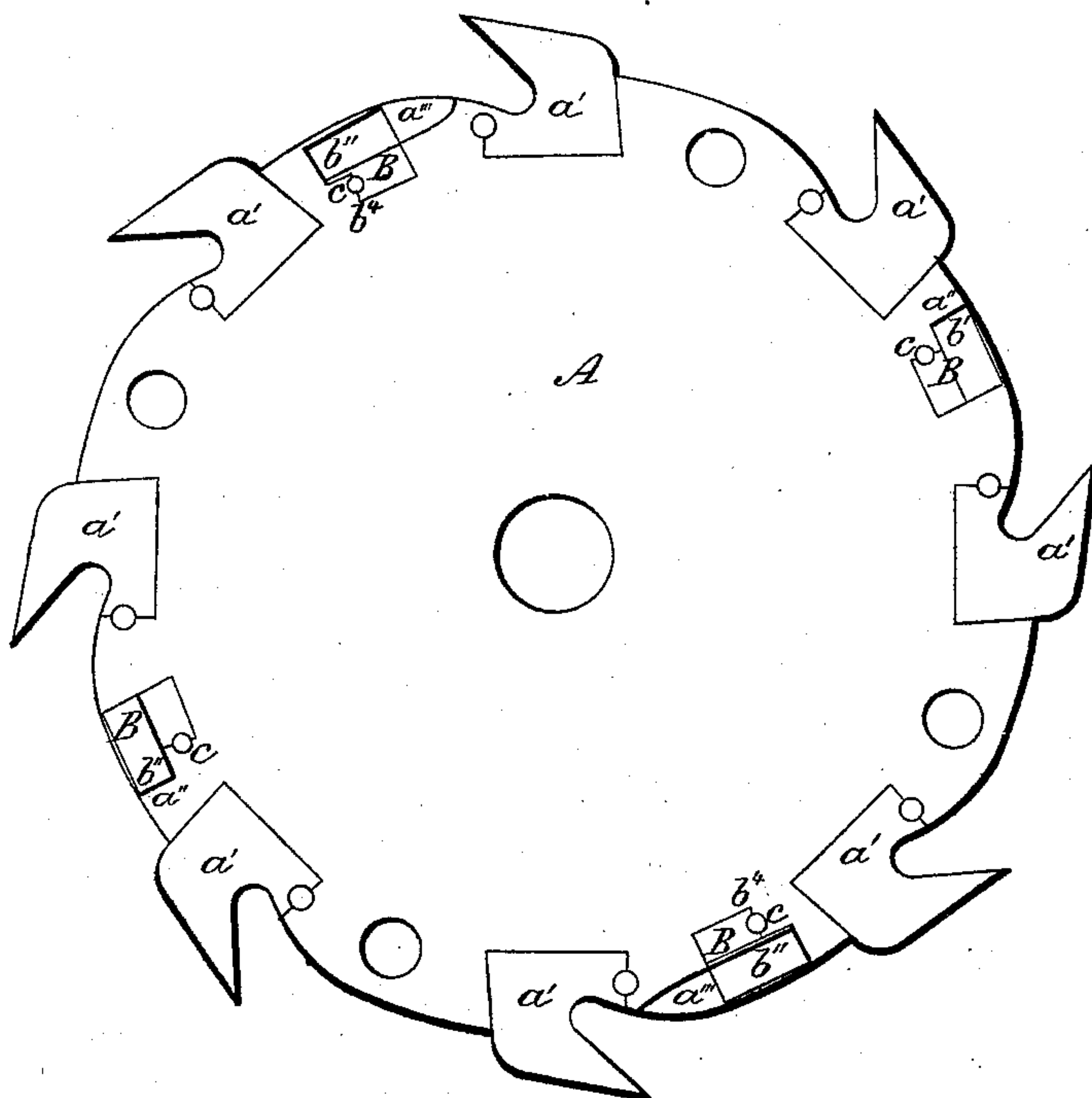


Fig. 2.

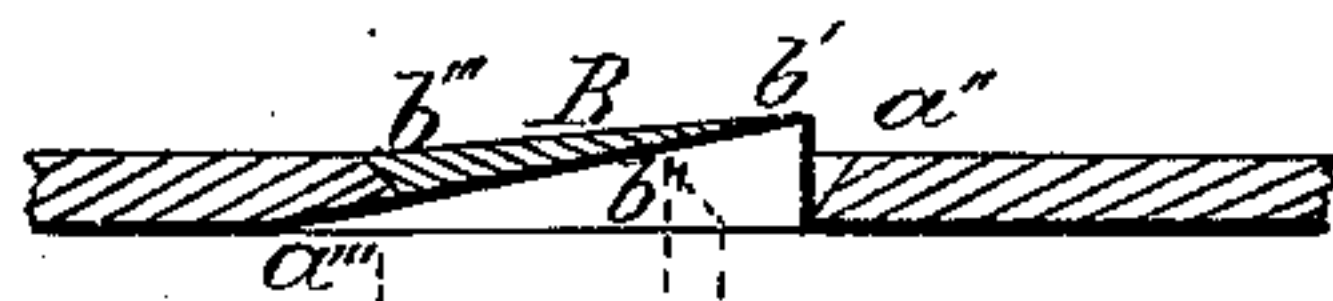


Fig. 3.



Witnesses  
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Sheet 2, 2 Sheets.

G. Maulick.

Planing Saw.

N<sup>o</sup> 43,631.

Patented Aug. 10, 1869.

Fig. 4.

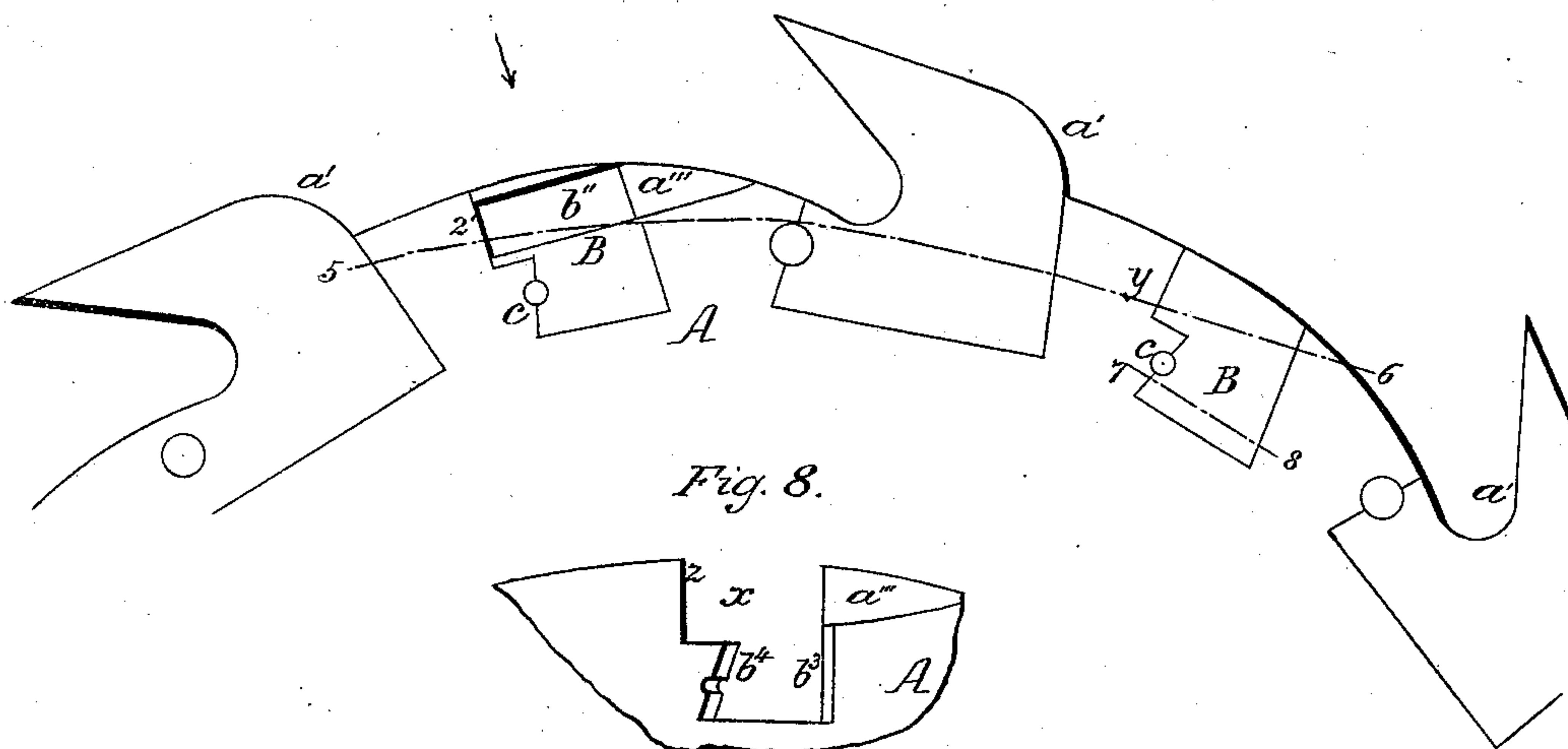


Fig. 8.

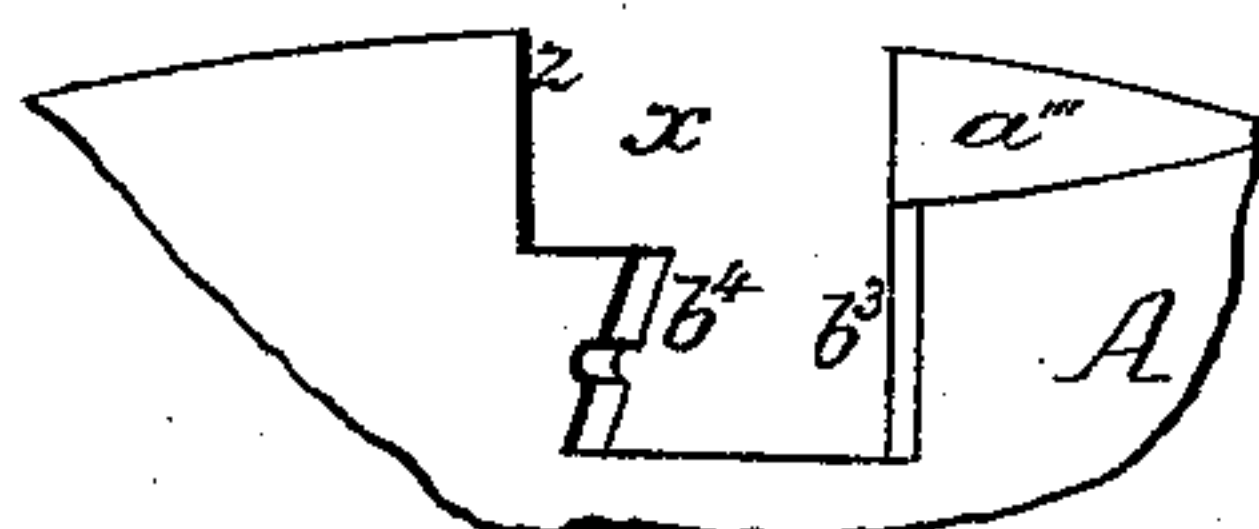


Fig. 5.

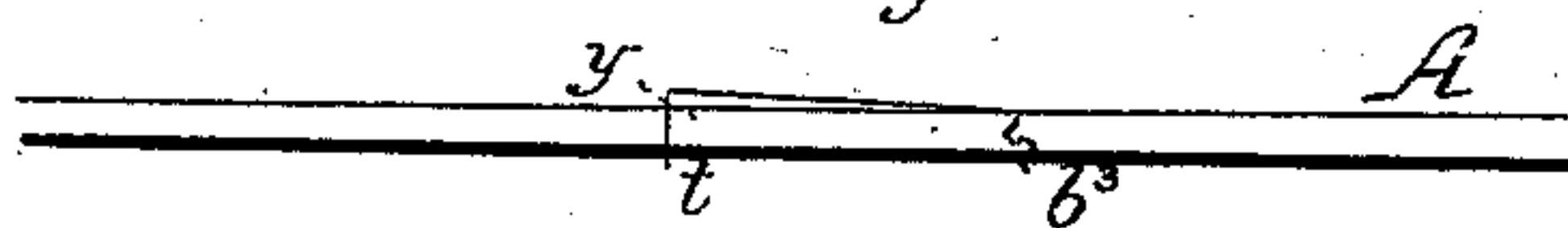


Fig. 6.

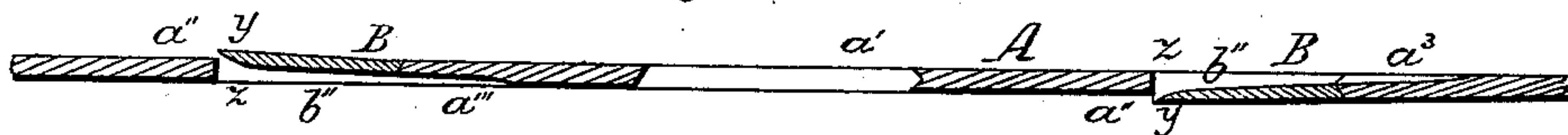


Fig. 7.



Witnesses

Bruce Moulton.  
Wm. H. Morrison.

Inventor.

Gottlieb Maulick



# United States Patent Office.

GOTTLIEB MAULICK, OF TRENTON, NEW JERSEY, ASSIGNOR TO HIMSELF AND THOMAS P. MARSHALL, OF SAME PLACE.

Letters Patent No. 93,631, dated August 10, 1869; antedated August 6, 1869.

## IMPROVEMENT IN PLANING-TEETH FOR SAWS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GOTTLIEB MAULICK, of Trenton, Mercer county, New Jersey, have invented an Improvement in Saws; and I do hereby declare the following to be a full, clear, and exact description of the same.

My improvement consists of certain sharp-edged "bits" or "planers," so arranged upon the blade of a saw that as the latter penetrates a strip of wood, the roughened surfaces produced by the cutting-operation of the saw will be effectually smoothed by the action of the bits or planers.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1, Sheet No. 1, is a face view of a circular saw, with my improvement;

Figure 2, a section, drawn to an enlarged scale, on the line 1-2, fig. 1;

Figure 3, a section on the line 3-4, fig. 1;

Figure 4, Sheet No. 2, a side view of part of the saw, drawn to an enlarged scale;

Figure 5, an edge view, looking in the direction of the arrow, fig. 4;

Figure 6, a section on the curved line 5-6, fig. 4;

Figure 7, a section on the line 7-8, fig. 4; and

Figure 8, a detached view of part of the saw.

A is the blade of a circular saw, at regular distances round the edge of which are inserted detachable teeth  $a'$ .

Between the teeth, at regular intervals in the periphery of the saw-blade, are openings,  $x$ , adapted for the reception of L-shaped bits or planers B, one arm of each of which is dovetailed, to fit a similarly-shaped portion of the opening  $x$ , and the rear edge of each bit is grooved, and the front edge of the dovetailed portion is bevelled, to fit the V-shaped edge  $b''$  and bevelled edge  $b^4$  of the opening  $x$ .

Owing to the inclination given to the edges  $b^4$ , and to the corresponding edges of the bits, the latter can be inserted only from the side of the saw toward which the edge  $b^4$  is bevelled, and the edges of adjacent openings are bevelled in contrary directions, so that adjacent bits must be inserted from opposite sides of the blade.

Each bit is secured in its place, after adjustment, by a rivet,  $c$ , and the front edge  $y$  of the outer portion of each bit is sharpened from one side, so as to form a cutting-edge and a channel,  $b''$ , which extends across the face of the bit, and communicates with a channel,  $a''$ , formed in the face of the saw, and extending to

the throat of the saw-tooth immediately at the rear of the bit, and the upper edge of the bit is sharpened, to form a cutting-edge,  $t$ , at right angles to the edge  $y$ .

The outer portions of the bits or planers are bent laterally, so that each cutting-edge  $y$  shall project slightly beyond that side of the saw-blade opposite to that from which the bit was inserted.

The edge  $z$  of each opening  $x$  is parallel to the cutting-edge  $y$  of the planer, which, however, is such a distance from the edge  $z$  as to form a narrow throat or passage,  $a''$ , for the shavings which are planed, by the action of the bits, from the newly-cut surfaces, as the saw passes into the wood, the said surfaces being thus rendered smooth and even.

The shavings detached by the planers pass through the recess  $b''$  and  $a''$ , into the throats of the saw-teeth, from which they are discharged with the sawdust, the wedging of the blade, by the chips planed from the wood, being thus prevented.

Inasmuch as the edges  $z$  and the cutting-edges  $y$  of the planers are parallel to, and but a short distance from each other, the packing or indenting of the faces of the wood, which occurs when there is a large passage in front of the cutting-edge  $y$ , is prevented.

As the cutting-edges of the planers extend to, or nearly to the edge of the saw-blade, they will smooth the wood before the two newly-cut surfaces have been separated sufficiently to interfere with the proper action of the bits, a result which cannot be obtained when the planers are secured at a distance from the edge of the saw-blade, while the planers are confined much more steadily in their position than would otherwise be possible.

As the planers can only be inserted from the side of the blade opposite to that from which the cutting-edges project, each planer has a lateral bearing on the blade, so that it cannot be forced outward further from the edge of the blade, thereby increasing the thickness of the shaving, and producing rough or uneven surfaces on the wood.

I do not claim a cutter having a V-shaped recess in the rear edge, adapted to the sharpened edge of the opening in the saw-blade; but

I claim as my invention, and desire to secure by Letters Patent—

The arrangement of the planers B upon a saw-blade, as herein described.

GOTTLIEB MAULICK.

Witnesses:

BENJ. MORISON,  
WM. H. MORISON.