A. Bee,

Saw.

No. 60,827. Patented Jan. 1, 1867.

Fig. 2.

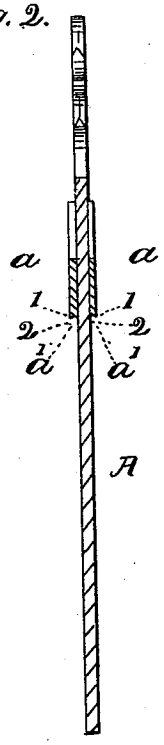
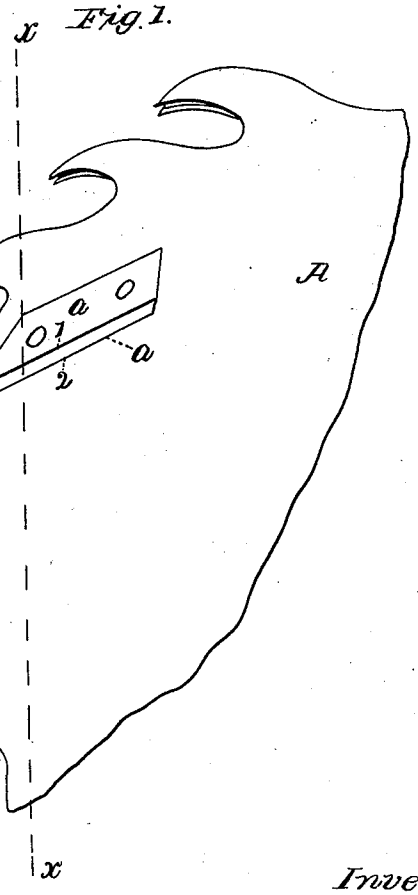


Fig. 1.



Witnesses:
Chas. G. Smith.
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per
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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

United States Patent Office.

ASA BEE, OF WHITE OAK, WEST VIRGINIA.

Letters Patent No. 60,827, *dated January* 1, 1867.

IMPROVEMENT IN 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, ASA BEE, of White Oak, in the county of Ritchie, and State of West Virginia, have invented a new and useful Improvement in Saws; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, reference being had to the accompanying drawings, which are made a part of this specification, and in which—

Figure 1 is a perspective view of a portion of a saw illustrating my invention.

Figure 2 is a section on the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a saw, either straight or circular, having plane-bits applied to its opposite sides for the purpose of smoothing the sides of the kerf by removing the roughness and asperity which result from the action of the saw. The improvement consists in forming the front or under cutting side of the bit with a gutter or groove having the form of an arc in its transverse section and adapted to prevent the tendency of the fibre or cuttings to press against the side of the saw and force the bit away from the latter, as is the case with the ordinary saw-planers, which are bevelled so as to leave a groove or channel, bounded on one side by the face of the saw-blade and on the other by the cutting edge of the bit. The groove, formed in the manner proposed by me, also enables each bit to be formed with two cutting edges, so that when the effective or acting edge becomes dull by use the bit may be transferred to the opposite side of the saw, thereby bringing the sharp and as yet inactive cutting edge into requisition.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe it in detail.

To both sides of the saw-blade A I attach plane-bits *a* for the pupose of removing the roughness by shaving off the projecting fibres from the sides of the kerf. The front or under cutting side of each plane-bit *a* is formed with a groove, *a'*, having the form of an arc in its transverse section, as shown in fig. 2. This groove extends throughout the entire length of the plane-bit, along its front or cutting side, so that as the fibres are removed from that side of the kerf by the cutting edge 1 of the plane-bit, said fibres enter the groove or gutter *a'* and are discharged behind the bit into the kerf in consequence of the inclination of the bit relatively to the plane of the saw's motion. It will be seen that the groove or gutter through which the shavings are thus discharged is formed entirely in the cutting side of the bit, instead of being bounded on one side by the cutting edge 1 and on the other side by the face of the saw-blade. So far as my knowledge extends, the plane-bits, as applied to saws, have invariably been constructed with the usual bevelled edge, so that when applied the space between the cutting edge of the planer and the face of the saw-blade constitutes the passage through which the shavings are discharged. It is manifest that under this old method of construction the shavings which enter the discharge passage have a constant tendency to crowd together, clog, and spring or force the bit away from the saw. In the use of my planer this objection is obviated from the fact that the shavings do not come directly between the face of the saw-blade and the cutting edge of the planer, and hence have no tendency to spring the bit. Under my mode of construction the opposite sides of the groove *a'* both form cutting edges, so that when the edges 1 of a set of planers shall become dull by use the planers at the opposite sides of the saw-blade may be transposed, the cutting edges 2 being thereby brought into requisition and made to act upon the face of the board.

I am aware that saw teeth have been constructed with a cutting and grooved edge for the purpose of planing the log as the saw passes through the kerf, and I do not wish to be understood as claiming anything having reference either to the teeth or the saw in themselves.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

I claim the plane-bit or iron *a* when constructed with a groove or gutter *a'* and secured to the blade of a saw, substantially as and for the purpose specified.

ASA BEE.

Witnesses:

ALEX. A. C. KLAUCKE,

JOHN A. WIEDERSHEIM.