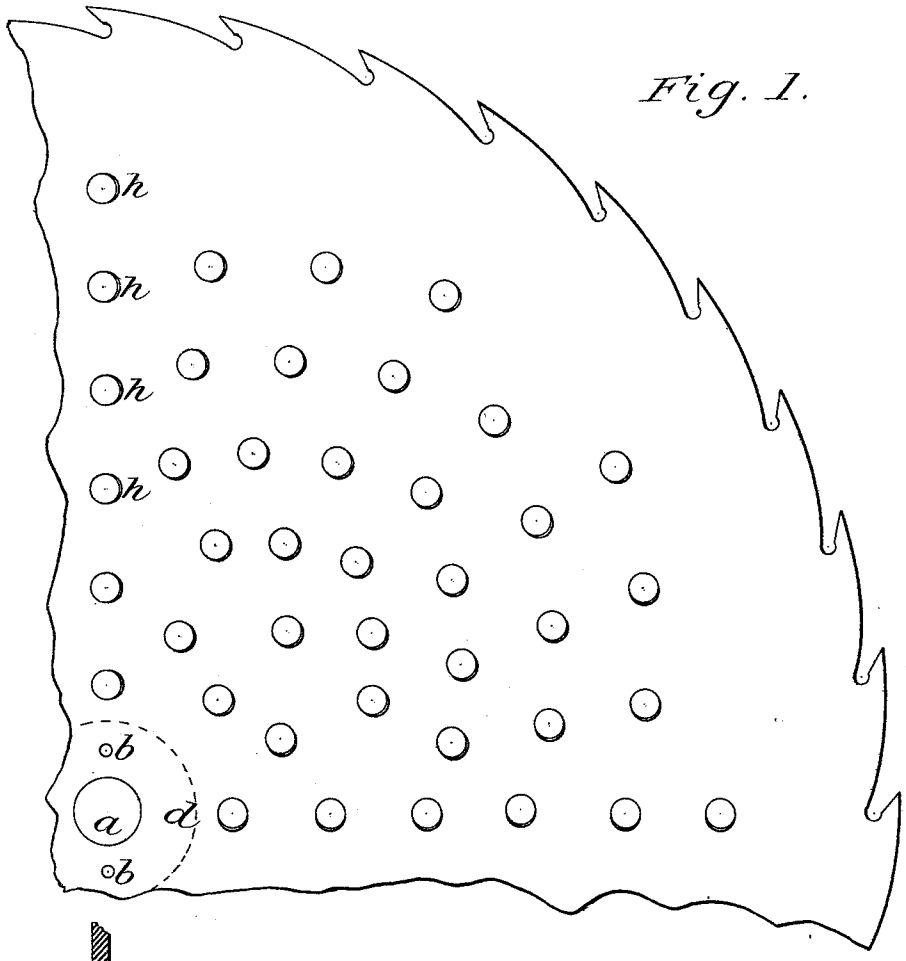
W. P. MILLER.
Circular-Saw.

No. 213,439. Patented Mar. 18, 1879.

Fig. 1.



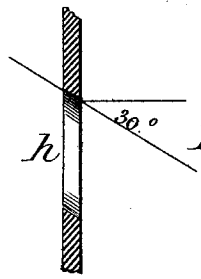


Fig. 2.

Attest:

David M. Edsall

Chas. P. Buehler

Inventor:

Warren P. Miller

UNITED STATES PATENT OFFICE.

WARREN P. MILLER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CIRCULAR SAWS.

Specification forming part of Letters Patent No. **213,439**, dated March 18, 1879; application filed July 1, 1878.

To all whom it may concern:

Be it known that I, WARREN P. MILLER, of the city of Brooklyn and State of New York, have invented a new and useful Improvement in Circular Saws, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side view of one-fourth of a circular-saw plate pierced with circular holes, representing my invention; Fig. 2, a cross-section of saw-plate, full thickness, and hole full size, lined to the proper angle, for the purpose hereinafter described.

The object of my invention is to furnish a method or device which will prevent a circular saw for cutting timber from heating by contact with the wood while working.

In the drawings, *a* is the mandrel-hole; *b b*, holes for lug-pins. *c c c* are the teeth. *h h h h* are circular holes through the body of the plate, including all the space between the line of the collar *d* to within five or six inches of the teeth. The size and number of holes and the distance between the outer holes and the throats of the teeth are determined by the size of the saw.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I provide a plate, in the usual form, with mandrel and lug-pin holes, also teeth in the best approved shape; then locate the ventilating-holes and punch out; then pass a serrated reamer through each, so as to bevel their sides, front, and rear alternately, and on a line with their rotation, and at an angle with the plate, as shown in Fig. 2. The plate is next hardened, tempered, ground, smithed, and finished in the usual way.

It will be readily understood that while the saw is driven with the usual high velocity a rapid current of air will run through each of the beveled holes, and carry off with it all heat that may be generated whenever the sides of the plate come in contact with the timber.

I do not herein claim, broadly, a circular-saw plate pierced with beveled holes; but

What I claim as new, and desire to secure by Letters Patent, is—

A circular-saw plate pierced with holes, beveled front and rear, substantially in the manner and for the purpose shown and described.

WARREN P. MILLER.

Witnesses:
DAVID M. EDSALL,
CHAS. P. BUCKLEY.