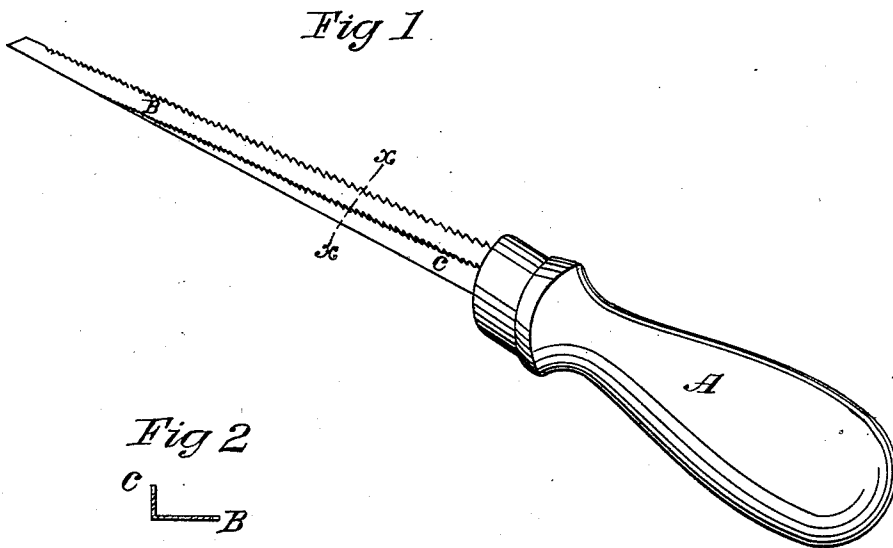


J. L. Warren,
Hand Saw.
N^o 84,722. Patented Dec. 8, 1868



Witnesses:

H. S. Sprague
John Mercier

Inventor.

John L. Warren
by his atty. H. S. Sprague

United States Patent Office.

JOHN L. WARREN, OF DETROIT, MICHIGAN.

Letters Patent No. 84,722, dated December 8, 1868.

IMPROVEMENT IN SAWS.

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

Know all men:

That I, JOHN L. WARREN, of Detroit, in the county of Wayne, and State of Michigan, have invented a new and useful Improvement in a Double-Edged Angle-Saw; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

The nature of this invention consists in constructing a saw, so that both edges are cutting-edges, while they are so arranged that they operate at any desired angle, relative to each other, for the purpose of cutting dovetails, or other similar work, when a saw of this description may be required. It may be used either by hand, or by being attached to any suitable machinery for driving it, perpendicularly or horizontally.

The drawings show substantially, and better than I can describe in language, the form of construction.

Figure 1 is a perspective view of my invention, with a handle, for use without machinery.

Figure 2 is a sectional view of the same, upon the line *x x* in fig. 1.

The same letters indicate like parts in each figure.

A represents the handle.

B and C are the two cutting-edges of the saw, the one standing at right angles with the other, as shown in fig. 2.

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

The construction of a saw, substantially as described, with two cutting-edges, the one operating at any desired angle relative to the other.

JOHN L. WARREN.

Witnesses:

H. S. SPRAGUE,
JOHN MERCIER.