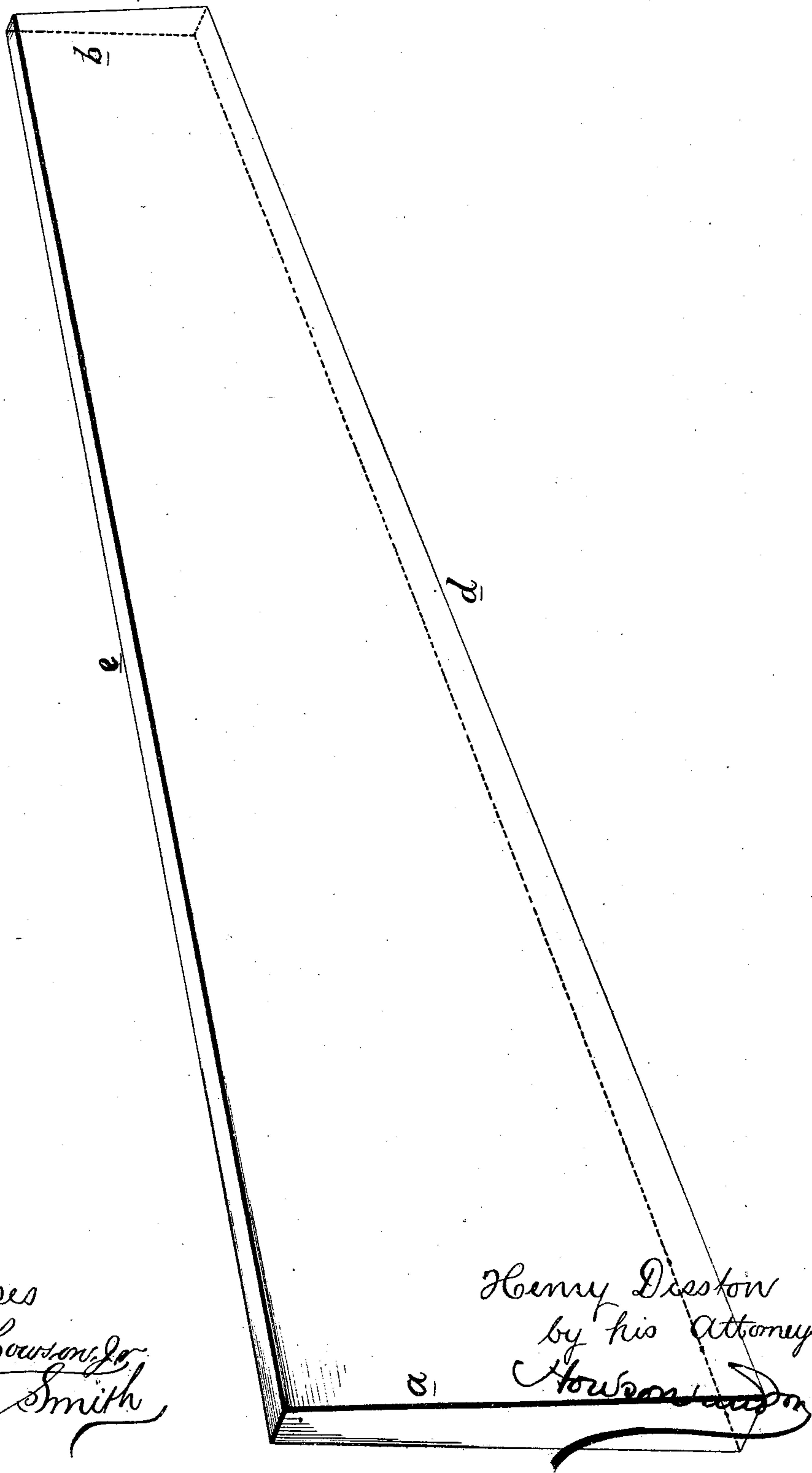


H. DISSTON.
SAW-BLADE BLANKS.

No. 181,650.

Patented Aug. 29, 1876.



Witnesses
Harry Howson, Jr.
Harry Smith

Henry Disston
by his Attorney
Howson

UNITED STATES PATENT OFFICE.

HENRY DISSTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SAW-BLADE BLANKS.

Specification forming part of Letters Patent No. **181,650**, dated August 29, 1876; application filed January 21, 1876.

To all whom it may concern:

Be it known that I, HENRY DISSTON, of Philadelphia, Pennsylvania, have invented an Improved Saw-Blade Blank, of which the following is a specification:

The object of my invention is to furnish saw-manufacturers with saw-blade blanks, which are of better quality than those hitherto made, and which can be more cheaply converted into finished blades than common blanks.

All saw-blades of the better class must be thickest at the butt *a*, (see accompanying drawing,) and must have a gradual taper from this butt to the outer end *b*. The blade must also be thicker at the cutting-edge *d* than at the back edge *e*. In order to impart this desired taper to the blade, it has been usual heretofore to make the blank of a flat piece of sheet-steel, of uniform thickness throughout, and, after strengthening and tempering the blank, to grind it to the desired taper. This is a tedious and costly operation. If accomplished by hand, the process must be conducted by expert artisans, who receive high wages, and, if by machinery, the latter is of the most expensive character. In both cases, costly imported grindstones are used, the cheaper stones quarried in this country being unfit for the purpose.

Another objection to the usual plan of grinding is the waste of metal, and the removal from the plate of the skin, and the consequent deduction from the toughness of the blade.

I discard the usual grinding operation, as far as the reduction of the blade to the desired taper is concerned, and impart this taper by rolling the plate, using for the purpose the well-known eccentric rolls, or, in place of the

latter, any system of rolling appliances by which the desired result may be attained.

A number of blanks thus prepared may be bound together in bundles or packages, and sold to manufacturers in the same manner as bundles of ordinary blade-blanks; and the manufacturer, instead of using costly machinery and grindstones, and employing artisans at high wages, may, by the aid of unskilled workmen, smooth the surface of the blade without removing the entire skin, and this may be accomplished by cheap grindstones, emery-wheels, or other grinding or polishing appliances.

My improved blade-blanks, therefore, tend to economize the manufacture of saws of a superior quality.

The saw-blade may be rolled to the desired taper while the metal is hot; or the plate may be first annealed, and then rolled while it is cold, care being taken to thoroughly cleanse the annealed plate before cold-rolling, which condenses the blade, and imparts to it a toughness enhanced by the presence of the skin.

I claim as my invention and as a new manufacture—

A saw-blade blank made tapering from the butt to the outer end, and from the front to the back edge, and retaining on its faces the skin due to rolling, as herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY DISSTON.

Witnesses:

HARRY SMITH,
HARRY HOWSON, Jr.