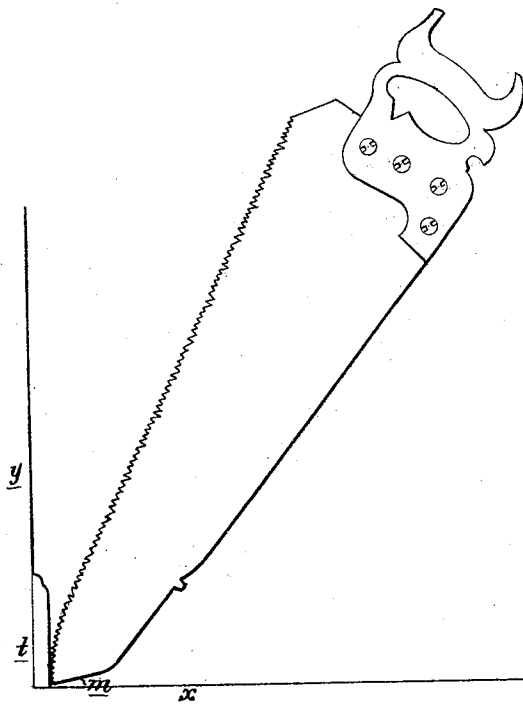


*Disston & Hill,*

*Hand Saws.*

*No. 111,619.*

*Patented Feb. 7. 1871.*



**WITNESSES**

*Wm. A. Steel,*  
*John Parker.*

*Henry Disston and*  
*T. V. Hill*

*by their Atts.*  
*Howson and Son*

# United States Patent Office.

HENRY DISSTON AND THOMAS OATES HILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO HENRY DISSTON & SON, OF SAME PLACE.

Letters Patent No. 111,619, dated February 7, 1871.

## IMPROVEMENT IN SAWS.

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

We, HENRY DISSTON and THOMAS OATES HILL, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an improved Hand-Saw, of which the following is a specification.

### *Nature and Object of the Invention.*

Our invention consists in an improvement in hand-saws, too fully described hereafter to need preliminary explanation.

### *Description of the Accompanying Drawing.*

The figure in the accompanying drawing is a side view of our improved hand-saw.

### *General Description.*

In ordinary hand-saws the cutting-edges are straight or nearly so; that is, the ends of all the teeth coincide with a straight line touching the edges of the first and the last teeth.

Our improvement consists in combining in one a common hand-saw for general use and a rip-saw.

The manner in which we accomplish this will be best observed on reference to Figure 1, in which the teeth *a a* are similar to those of a common saw, while the teeth *b* are similar to those of a rip-saw, the front edge *f* of each of these teeth being at right angles or thereabout to the edge of the blade, while the rear edge *h* has a greater inclination than the edges of the common teeth *a*.

Adjacent to each of the ripping-teeth *b* is a tooth, *i*, which may be termed a combination of a ripping and a common tooth.

It is not essential that the ripping-teeth should be interposed among the ordinary teeth precisely in the manner shown, or that they should be of the precise shape specified, as any of the ripping-teeth now in use may be combined with the common teeth. It is to be preferred, however, that the ripping-teeth should be fewer in number than the common teeth.

A saw having teeth arranged substantially as described possesses all the advantages of a common saw, while it can be used with great effect as a rip-saw.

Another advantage possessed by the teeth arranged as described is, that one file will serve to sharpen both the ordinary and ripping-teeth.

The second part of our improvement consists in rounding the cutting-edge of a hand-saw at and near the outer end of the blade, as shown in the drawing, which also illustrates the advantage of this part of my invention.

We will suppose the line *x* to represent the floor of a room, the line *y* being the wall and the projection *t* the skirting, which we will suppose it to be necessary to

sever. The difficulty of cutting this skirting with an ordinary hand-saw having a continuous straight cutting-edge will be readily understood, and the facility with which the same duty can be accomplished by a saw rounded at and near the outer end of the blade will also be understood without explanation other than that afforded by the illustration.

It will be understood that the end of the blade is beveled, as shown, so as to permit the above use of the rounded edge.

Many other instances in which this improvement will prove of great advantage will readily suggest themselves to those familiar with the use of hand-saws.

The teeth at this rounded portion of the edge of the saw may be of the ordinary character, and it may be advisable to make them somewhat finer than the other teeth of the saw.

Another advantage of our improvement may be explained as follows:

In using an ordinary saw, especially for ripping purposes, the blade frequently escapes from the cut in the lumber, into which cut the blade must be re-inserted.

These accidents result in more or less delay in the operation of sawing, and cause much annoyance to the operator.

The rounded edge at and near the outer end of the blade will in a great measure obviate this difficulty, as the blade thus formed is not so likely to leave the cut or to be buckled as the blade of an ordinary hand-saw.

On the downward stroke of the saw the tapering outer end of the blade serves as a guide to direct the saw in its outer course.

It may be remarked that, as regards the thickness of the blade, the latter has the usual gradual taper from the handle, where it is thickest, to its outer end.

The blade has also the usual taper from the cutting-edge, where it is thickest, to the rear edge.

### *Claim.*

A hand-saw, having the cutting-edge of the blade rounded at and near its outer end, as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HENRY DISSTON.  
THOMAS OATES HILL.

Witnesses:

A. H. SHOEMAKER,  
HARRY SMITH.