

W. Clemson,

Saw Gage.

No. 10,229.

Patented Mar. 29, 1870.

Fig. 1.

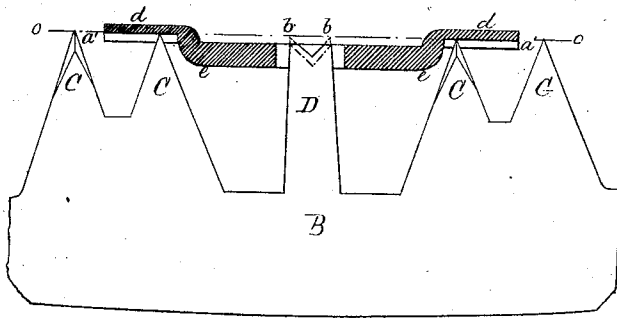
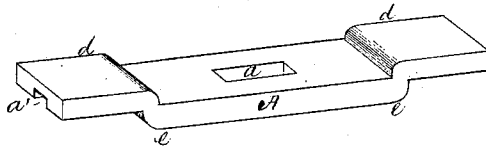


Fig. 2.



Witnesses:

Isaac D. Sailer  
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Inventor:

William Clemson  
By his attorney N. Crawford

# United States Patent Office.

WILLIAM CLEMSON, OF MIDDLETOWN, NEW YORK.

Letters Patent No. 101,229, dated March 29, 1870.

## IMPROVEMENT IN SAW-GAUGES.

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

### To whom it may concern:

Be it known that I, WILLIAM CLEMSON, of Middletown, in the county of Orange and State of New York, have invented certain useful Improvements in Gauges for Filing the Teeth of Cross-cut Saws, of which the following is a specification.

In the drawings—

Figure 1 is a sectional side view of a saw and the gauge in position, and

Figure 2 is a perspective view of the gauge.

A represents the gauge;

B, a section of a cross-cut saw;

O O C C, the usual scoring or cutting-off teeth of a cross-cut saw;

D is a double-clearer tooth, having the two sharp points *b b*;

*a* is a slot or mortise through the center of gauge A; and

*a' a'* are longitudinal grooves in the ends of the gauge.

In cross-cut saws as now generally used, having scoring-teeth that are alternately set in opposite directions, and filed sharp, so as to successfully cut off the fiber of the wood at each side of kerf, which is just wide enough to clear the saw from pinching in the kerf, and having clearing-teeth, which are filed to be shorter, or in other words, do not project so far from the saw-plate as the scoring-teeth by the depth of the cut of the scoring-teeth, there is a difficulty in filing off the points of the clearing-teeth so that all the clearing-teeth shall have the same length of projection, or that the points of all the clearing-teeth shall have the same projection with relation to the extreme points of the scoring-teeth, as, without such accuracy of relation of the projection of the scoring-teeth with the clearing-teeth, the saw will not cut evenly its whole length, will not run steadily, nor cut at all parts of its length the same; and in order to furnish a ready and easy means of overcoming this difficulty this invention is now sought out and made practical; and

The invention consists in the special construction of the gauge, adapted to be used upon a saw, whereby the clearing-teeth may be reduced to their proper length.

The gauge A is made from a bar of steel, in the form seen in fig. 2, the middle portion being depressed at *e e* below the top of the bar at its ends at *d d*, and so as to have the shape as seen in working position in fig. 1.

On the under side of the two ends *d d* are longitudinal grooves, made centrally in the width of the gauge.

These grooves rest upon the tops of the scoring-teeth, while the double-pointed clearing-tooth D passes

through the mortise *a* in the center of the depressed part of the gauge, the top of which, when the gauge is in position, is just as much below the line *o o*, which line represents the top of the points of the scoring-teeth and the bottom of the grooves in the ends *d d* of the gauge A which rest upon the points of the scoring-teeth, as the clearing-teeth should be shorter than the said scoring-teeth, as seen in fig. 1.

If the points *b b* of the clearing-teeth project above the top of the gauge when placed as above described, and as seen in fig. 1, they will be filed off by drawing the file upon them until they are reduced to be even with the top of the middle part of the gauge, when the proper shape may be given to the two points *d d* by filing, or otherwise dressing them to their proper shape, as seen in dotted lines in fig. 1, which will give the right projection to all the clearing-teeth, and so as that the saw will work evenly and truly, as well as to cut and clear freely and without "chattering" or clogging.

The gauge may be constructed without the groove *a' a'*, but for those who are not experienced in its use, the grooves form the means of holding the gauge better upon the teeth of the saw.

The mortise or slot *a* should be large, so as to fit loosely on the clearing-tooth D, and be free to adjust itself to the teeth and the direction that the file may give it, as persons not in the habit of using a file do not always reciprocate it at right angles with the side of the saw-plate, nor are the reciprocations of the file in inexperienced hands always parallel; but generally such persons give the file such a motion as to file the top of the points a little convex, and, by giving a loose fit to the gauge upon the tooth D, the gauge will roll a little and prevent the file from giving a convex or inclined finish on the tops of the clearing-teeth, as they should be perfectly at right angles with the sides of the saw-plate.

The face or upper side of the depressed part of the gauge will be hardened, which will prevent its being cut away by contact with the file, as the file must in every instance dress the clearing-points off even with the top of the gauge.

By the use of this gauge, as shown and herein described, the points of the scoring-teeth are protected from being damaged by the file while reducing the clearing-teeth to their proper length.

The gauge is simple in construction and in its use, easily understood and applied to use, and costs but little.

I am aware that gauges for filing the clearing-teeth of cross-cut saws to the proper length have been in use, and such gauge is described in a patent granted to A. E. Hoffman, February 9, 1869; but while said gauge described in that patent will do what mine is

intended to do, yet mine is cheaper in its construction, requiring less metal, is less cumbersome, has a broader surface by which to gauge the length of the tooth, which prevents the file from cutting away the gauge itself, and tends to guide the file to cut the point of the tooth at right angles to the side of the saw-blade.

Having thus fully described my invention,

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

As a new article of manufacture, the saw-gauge A, constructed in the manner above described.

WILLIAM CLEMSON.

Witnesses:

ELISHA P. WHEELER,  
EDWARD M. MADDEN.