

H. A. LANMAN.

Saw.

No. 92,846.

Patented July 20, 1869.

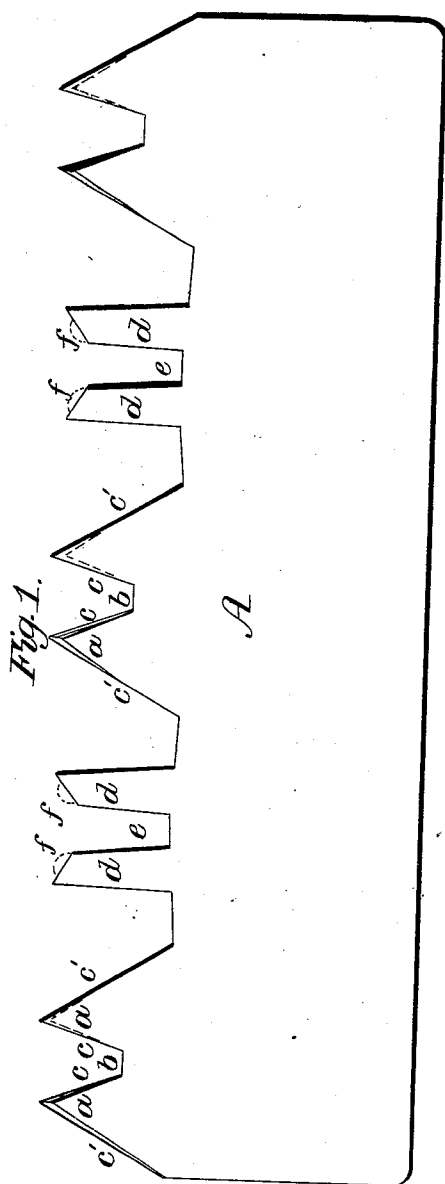


Fig. 2.



Witnesses:
W. Campbell
Edwin H. H. H.

Inventor
H. A. Lanman
by
Mason H. H. H.

United States Patent Office.

HENRY A. LANMAN, OF COLUMBUS, OHIO, ASSIGNOR TO HIMSELF,
AND JAMES OHLEN, OF SAME PLACE.

Letters Patent No. 92,846, dated July 20, 1869.

IMPROVEMENT IN SAWS.

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

To all whom it may concern:

Be it known that I, HENRY A. LANMAN, of Columbus, in the county of Franklin, and State of Ohio, have invented a new and useful Improvement in Saw-Clearers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a face view of a saw, with the improved clearers.

Figure 2 is an edge view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of my invention consists in improving the clearers of saw-blades by setting them apart, or dividing them, so that a clear space is left between each pair, such space being below the bevel top sides of the clearers, as shown in my drawings.

My improved clearers give greater room for saw-dust and chips, but their greatest benefit is experienced in filing the clearers to a proper condition for use, as they can be filed without the formation of a gum between the clearers, as is experienced in filing clearers which are separated by a V-shaped notch, or by cutting a crotch in the saw-blade.

To make myself fully understood, I will say that I cut out all the metal between the clearers from the inner termini of the bevels down to a point which will be intersected by a curved or straight line, extending from the corners or lowest ends of one pair of the teeth to the corners or lowest points of another pair of teeth, which metal, if left, would form gums in filing the bevelled edges or top sides of the clearers with plane-faced files, and, by being removed, will allow chips and dust to escape freely upward from the chisel-edges during the act of sawing.

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

It is generally admitted that saws, having a combination of clearing-teeth with cutting-teeth, will cut much faster than saws which are made upon any other plan. But notwithstanding the superiority of such saws, they are comparatively little used, on account of the difficulty of keeping them in working-order, as hitherto-constructed, they being mostly required by farmers and backwoodsmen, who have neither the mechanical knowledge nor skill requisite for this purpose.

The object of my invention is to so construct such saws that they can be readily understood, and kept in good order by almost any person, and, at the same time, to provide for lessening the labor and wear of files used in sharpening the teeth, and affording greater facility in using the plane-faced files, and in

keeping to the edges of the teeth and clearers, so as to reduce them uniformly at base and point.

In the accompanying drawings *a a* represent the cutting-teeth or fleams, which are arranged in pairs and set in opposite directions, as shown in figs. 1 and 2; these teeth are of that kind known as the Morpreg teeth, and they are separated by a space, *b*, so that a flat-face file can be conveniently and properly used upon the angles *c c* in sharpening or dressing one side of each tooth, without reducing the teeth more at the points than at their bases.

The opposite edges or outer angles, *c' c'*, of these teeth, *a a*, are extended into the blade *A* much further than the edges or angles *c c*, for the purpose of leaving between each pair of cutting-teeth a space great enough for two clearers or raking-teeth, *d d*, which latter have a space, *e*, between them, extending down fully to their bases, as shown in fig. 1.

These two clearers *d d* are not set, but remain flat on their sides, and are designed for removing dust and chips from the kerf, and cutting or planing down the ridge left in the middle of the kerf by the cutting-teeth *a*, during the operation of sawing.

The tops or outer edges of these clearers *d d* are bevelled or dressed so as to form chisel-edges, *f f*, which will cut or clear in opposite directions, as the saw is moved back and forth through a log; that is to say, the cutting-edges of each pair of clearers are bevelled in opposite directions.

It will be seen that the triangular cutting-teeth *a a* are so arranged relatively to each other, and also to the clearers *d d*, and that these clearers are so arranged relatively to each other and to the cutting-teeth, that a flat-face file can be applied to the edges of both sets of teeth in such manner that they can be dressed uniformly with very little experience and care. The bases of the clearers being much nearer the back of the saw than the bases of the cutting-teeth, it will be seen that the saw will not require gumming, for when these clearers become too short by dressing, the cutting-teeth having been proportionably reduced, the saw-blade will be worn so much as to require re-setting, or so much worn that it is of no further use.

The use of two independent clearing-teeth, arranged as shown, with a space, *e*, between each pair of clearers, extending from their bases to the inner termini of their top bevel sides *f f*, renders the sharpening or dressing of them a very simple operation, and, by having the clearers so spaced, a person can press equally on both sides of a flat file in the operation of dressing them, and hence will remove no more metal from their points than from their heels; consequently these teeth can all be kept of an equal length throughout the length of the saw-blade, inasmuch as the clearers are not designed to perform a like office to that of the

cutting-teeth, but are only designed to succeed these teeth and clear the kerf. Their points do not reach a plane touching the points of the cutting-teeth. This relation of the points of both sets of teeth should be preserved in sharpening or dressing them.

The dotted lines, on the points of the teeth, or clearers *d*, shown in fig 1, are designed to represent projections which may be made on these teeth for the purpose of preventing their angular points taking too deep a hold in the wood while sawing. These projections form bearings and serve as gauges for the points of the clearing-teeth.

I do not claim clearers formed by cutting a V-

shaped crotch in the saw-blade, as they are common; but—

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

The clearers *d d*, separated below their bevelled top sides *f f*, down to a point which will be intersected by a curved or straight line, extending from the corners or lowest ends of one pair of the teeth to the corners or lowest ends of another pair of teeth, substantially as described.

Witnesses:

HENRY A. LANMAN.

FRANCIS COLLINS,
J. T. HOLMES.