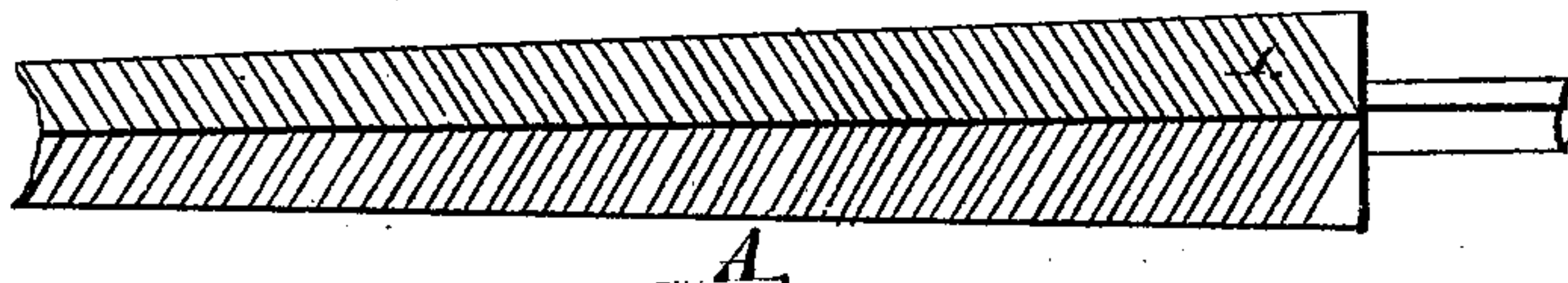


W. Roberts,

File.

No. 90784.

Patented June 1. 1869.



Witnesses:
Henry C. Houston
Wm. Franklin Seavey

Inventor:
Wm Roberts
Perat. W. H. Clifford

United States Patent Office.

WILLIAM ROBERTS, OF BLUE HILL, MAINE.

Letters Patent No. 90,784, dated June 1, 1869.

IMPROVED SAW-FILE.

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, WILLIAM ROBERTS, of Blue Hill, in the county of Hancock, and State of Maine, have invented a new and useful Diamond Saw-File; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use my invention, reference being had to the accompanying drawings, forming part of this specification, in which is shown a side view of my invention at A, and a section at B.

The purpose of my invention is to produce a file, by the use of which saws can be more easily, quickly, and regularly filed and sharpened than by the use of the common file, of one not specially designed for this particular purpose.

In filing saws with the file in ordinary use, it is necessary to file each side of a given tooth separately, and the evenness and regularity of the stroke are, of course, not at all times under the control of the operator. Moreover, by reason of the shape of the tool, and the fact that it is regulated solely by the hand of the operator, the attrition is quite variable.

My invention seeks to obviate these objections, by producing a file of such construction as will enable the user to file with more rapidity, and make the cuttings the same throughout.

I effect this by giving the file-blade the shape shown in the drawings, more particularly in the section at B.

The file-blade is thickest at the centre thereof, and the two faces on the same side of this thickest portion are inclined to each other, till they meet at the edges.

It will be observed that these inclined faces will fill a space similar in shape to the spaces between the teeth of a saw.

Thus the operator is enabled, at the same time, to

file and sharpen both the front edge of one tooth and the rear of the next successive one.

Regularity in the spaces between the teeth, and in the shape of the same, as well as uniformity in the cutting-edges, is attained by this invention.

The size, depth, and exact shape of the spaces can all be regulated by the size of the tool and the inclination of its sides.

Two sets of cutting-sides being furnished, to wit, 1 and 2, when one is worn, the other can be employed.

The cutting-edges, or corrugations on the sides are drawn diagonally, so as to afford better facilities for removing the shavings, or filings from the teeth of the saw, by making a drawing cut, and to prevent shaking or vibration of the teeth, while submitted to the operation of the tool.

Still further, the body of the file-blade is larger in the middle of its length, or grows larger as you approach the handle thereof.

Now, the inclined cutting-edges, or corrugations, by their direction, tend to keep the file down in the spaces between the teeth, and, by the forward motion of the tool, the larger part being forced into the said spaces, of course the cutting-power is increased, by the combination of said diagonal lines and the said increasing thickness of the blade.

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

The improved saw-file, made as described, and combining the features herein set forth, for the purposes specified.

WILLIAM ROBERTS.

Witnesses:

JOHN A. STEVENS,
AUGUSTUS STEVENS