

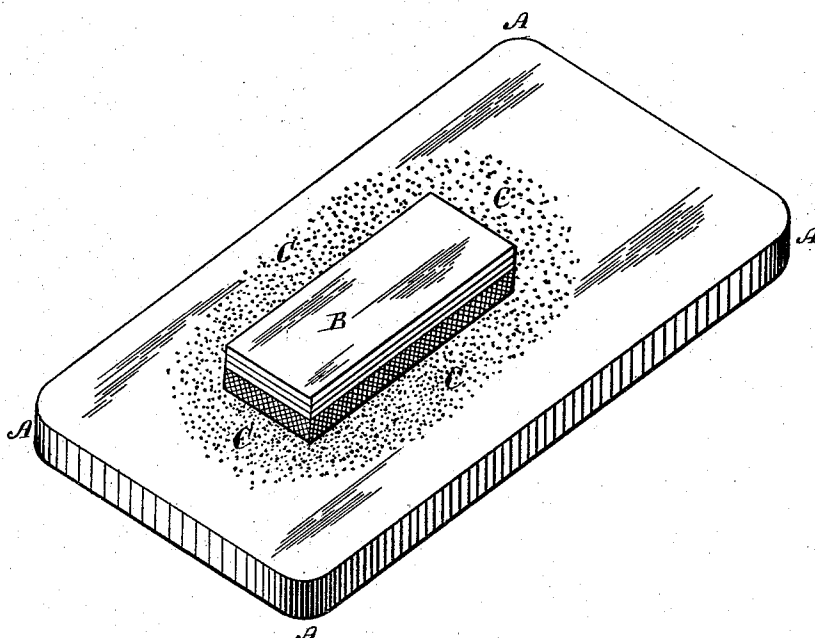
(No Model.)

J. RENSHAW.

METHOD OF REVIVIFYING ABRADING SURFACES.

No. 257,612.

Patented May 9, 1882.



Witnesses.

Inventor.

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JOSEPH RENSHAW, OF HARTFORD, CONNECTICUT.

METHOD OF REVIVIFYING ABRADING-SURFACES.

SPECIFICATION forming part of Letters Patent No. 257,612, dated May 9, 1882.

Application filed August 22, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH RENSHAW, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Dressing Surfacing-Blocks; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

Like letters in the drawing indicate the same parts.

My improvement relates to a new method of dressing the surfaces of blocks made of emery or other similar materials, so that they shall be a perfect plane and at the same time possess all the cutting and grinding qualities of the material in its most perfect form.

Blocks for surfacing, to be used in the manner of files made of metal, and also blocks for grinding edge-tools, have been heretofore made of a mixture of emery and a cementing substance, which holds the emery together in a body. These blocks, after using a short time, become glazed on the surface from metal deposited between the grains and from the wear of the material, so that they become glazed and smooth and incapable of performing their functions. The surface is in the condition of spent emery-cloth, as to the condition of the emery, and, in addition, the fine particles of metal entering the block gives the surface a smooth polish, which renders the implement of no use or value. For the reasons above stated, although such blocks have been manufactured, they have never come into practical use, and such tools, after a very short use, have become unserviceable and have been laid aside. The same material has been used for grinding successfully with rapidly-revolving wheels; but the slow motion by hand has not been a practical operation.

The object of my improvement is to provide a way of removing the glazed surface of spent emery and leave the block in its most perfect state for cutting, and at the same time make it a perfect plane, so that it will be a much more accurate and useful tool for dressing flat surfaces of metal than any of the usual means now employed.

My invention consists in the use of loose emery in the form of sharp grains upon a flat metal surface or table as a means of removing the surface of the spent block.

In the accompanying drawing, illustrating my invention, A is a flat metallic tablet having its top surface made perfectly plane.

B is a block, made of emery or corundum and a cementing material to hold the grains together in the usual manner.

C represents loose grains of emery or corundum lying upon the plate A. This should be placed upon the plate in sufficient quantity to about cover the surface used with a single layer of grains. These should be somewhat coarser than the emery in the block, and should be perfectly free and loose, so that they can roll and not cut the metal of the plate. The loose emery used in this way, while it does not cut the metal plate, cuts off and removes the surface of the block. This it does by the moving upper points of the grains of emery, while the lower points adhere to the metal plate and only roll upon it.

To operate my invention and dress the surface of a spent surfacing-block, the plate A is laid upon some support in a horizontal position and the grains of emery placed upon it. The block is then placed face down upon the loose emery and moved about, so as to both rotate and move horizontally, with a view to bring all the different points in contact in the customary manner of grinding plane surfaces. The operation can be repeated until the block is expended.

Blocks dressed in this manner can be used to form or grind plane surfaces upon metals and finish them perfectly flat—an operation which is very difficult when done by files in the usual manner.

What I claim as my invention is—

The herein-described method of removing the spent surface from surfacing-blocks by means of a metallic plate and grains of cutting material rolling on said plate, substantially as set forth.

JOSEPH RENSHAW.

Witnesses:

THEO. G. ELLIS,
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