

DAVID MOSMAN.

Improvement in Tools for Matting Metal Surfaces.

No. 126,408.

Patented May 7, 1872.

Fig. 1.

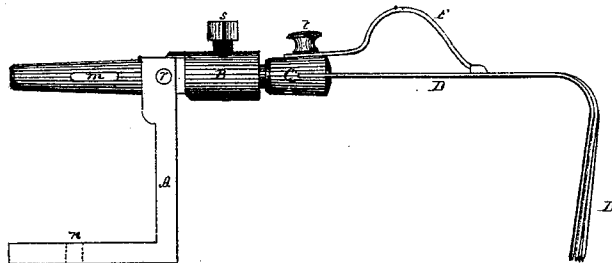


Fig. 2.

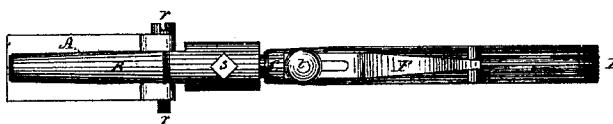
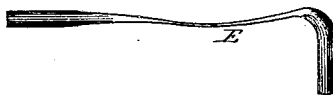


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

DAVID MOSMAN, OF WEST MERIDEN, CONNECTICUT.

IMPROVEMENT IN TOOLS FOR MATTING METAL SURFACES.

Specification forming part of Letters Patent No. 126,408, dated May 7, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, DAVID MOSMAN, of West Meriden, in the county of New Haven and State of Connecticut, have invented a new and useful Device for Giving a Satin Finish or Matted Surface to Metals; 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 figures indicate the same parts.

Heretofore this sort of finish has been given to metallic surfaces by means of revolving brushes composed of metallic wires. These have been usually made in "tufts," or a series of round brushes have been hung to a hub or central portion in such a manner that the centrifugal force of the revolution threw them out in nearly radial lines. The ends of the wires are usually cut off square, so as to leave the edges sharp. The metal to be operated upon has been held in such a position that the ends of these wires, in revolving rapidly, strike upon the surface and give it the matted appearance known as satin finish. This is much the same as the effect produced by the tool called a "mat," used in chasing metals by hand.

My invention consists in a device for performing the same operation and producing the same result in a better, cheaper, and more rapid manner.

In the accompanying drawing, Figure 1 shows a side view of my improved device. Fig. 2 shows a top view of the same. Fig. 3 shows a single tool or mat adapted to be used in my improvement.

A is the support of the apparatus. B is an oscillating bar, turning on the pin *r* so that its ends are free to move up and down. C is the shank of the tool, which fits into a recess in B, and is held in place by a set-screw, *s*. D is the tool, as shown in Fig. 1. It is composed of a number of steel or other metallic wires sharpened to a point. E is another form of tool or mat, likewise fitting into B. This has the working-face indented or roughened like the face of the similar hand-tool used in chasing

metals. The tools D and E are made to spring in the horizontal portion, so as to strike the desirable kind of blow and accommodate themselves to the form of the surface worked upon. F is a spring, attached to the shank C by means of the thumb-screw *t*. This spring is adjustable, and can be moved so as to give it different degrees of stiffness. It is so arranged that it can be turned to one side when the tool is to be used upon very soft metal, or it is not desired to make deep indentations. When used without the extra spring F, the elasticity of the wires forming the tool D is sufficient to give the desired effect. *m* is an elongated slot in the rear portion of the tool-holder B, in which a crank-pin moves, so that its revolution gives an oscillating motion to the part B. *n* is an aperture for bolting the apparatus to a firm support. My improvement can be attached to a common lathe by securing the part A to the tool-rest, and attaching a small crank to the revolving spindle, which works in the slot *m*, and gives it a rapid motion up and down. Motion can be given to B in any other convenient manner, as by connecting the rear end of B to an ordinary crank by means of a connecting-rod.

The operation of my invention is as follows: A rapid oscillating motion being given to the part B, the tool D moves up and down with a rapid reciprocating movement, so as to strike a series of rapid blows with the points of the several wires forming the tool D. The metal to be operated upon is held upon a rest under the points of the tool, and moved about so that the whole surface shall be operated upon where it is desired to give it the matted surface. An uneven surface of metal is best operated upon by the tool formed of wires, as shown at D, the elasticity of each wire causing it to follow the irregularities of the object worked upon. When the surface is plain, the tool shown by E can be used, and different effects given to the metal by having differently-formed faces to the tools. The ends of the wires in the tool D can also have different shapes to give different effects. They may be pointed, as shown in the drawing; or they may be flat, with a circular edge, or made with angular corners. They may also strike square with the surface operated upon, or may be set at an angle, so that the

corners or edges shall strike first instead of giving a direct blow.

Claim.

What I claim as my invention is—

1. The elastic tool D, composed of a number of wires, substantially as herein described.

2. The spring F, in combination with the tool D, for increasing its elastic power, substantially as described.

3. The oscillating bar B, in combination with an elastic striking-tool, D or E, substantially as herein set forth.

4. The herein-described device A B C D, for operating upon metallic surfaces in the manner herein specified.

DAVID MOSMAN.

Witnesses:

LEVI E. COE,

ORVILLE H. PLATT.