(No Model.)

J. E. EMERSON.

TOOL FOR TRUING EMERY WHEELS.

No. 262,655. Patented Aug. 15, 1882.

Fig. 1.

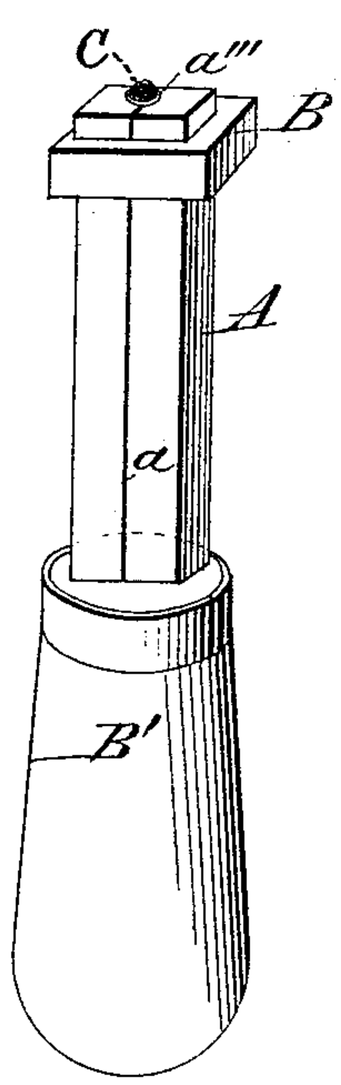


Fig. 2.

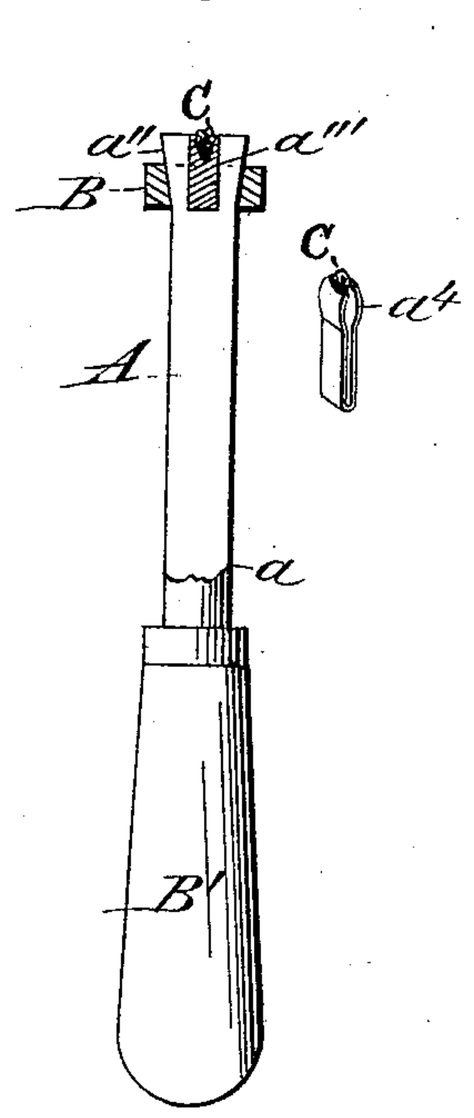
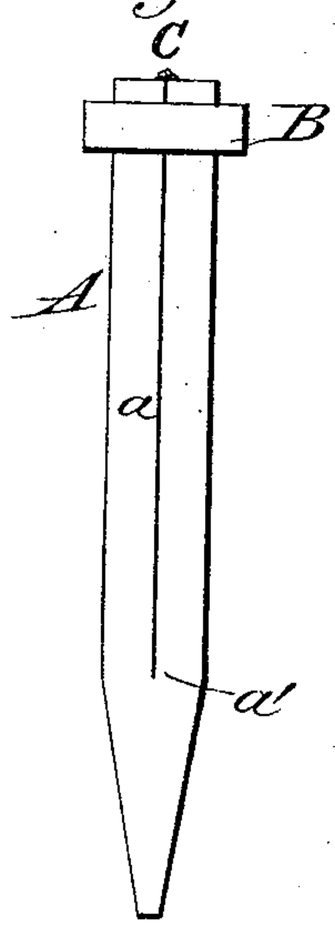


Fig. 3.



Attest:
F. H. Schott
H. A. Daniels

Inventor.
James E. Emerson
By F. N. Cranford
atty.

UNITED STATES PATENT OFFICE.

JAMES E. EMERSON, OF BEAVER FALLS, PENNSYLVANIA.

TOOL FOR TRUING EMERY-WHEELS.

SPECIFICATION forming part of Letters Patent No. 262,655, dated August 15, 1882.

Application filed April 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. EMERSON, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Tools for Truing Emery-Wheels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to produce an improved tool for truing emery-wheels and other analagous things—a tool that can be used as a hand-tool or can be placed in a tool-stock and used in a lathe; and it consists in the construction of the tool, as will be fully hereinafter described.

In the drawings, Figure 1 represents the body of the tool in a square form. Fig. 2 represents the same body in a round form; and Fig. 3 represents the tool without the handle, and when in that condition it can be used in a tool-stock of a lathe.

A represents the body of the tool, which is of metal, either square or round in cross-section, and is slitted from its outer end centrally, as at *a*, to a point at *a'*, where the two parts are firmly welded together. The outer end of the body A is a trifle larger in diameter than at a short distance therefrom, as seen in Fig. 2 at *a''*. At the outer ends of the two parts of the body A and centrally therein, and upon each side of the slit *a*, is formed a cavity, *a'''*, which cavity is of any desired form to fit the cutting-point, which in this instance is a diamond, a carbon, or other hard substance, and its setting or casing a^4.

B is a sliding clamping-sleeve, that surrounds the body A, whether square, round, or other form in cross-section, the forward side of the opening being a trifle larger in diameter than the inner, or so as to fit upon the enlarged diameter of the body A as it is forced toward the outer end of the body A, as seen in Fig. 2.

B' is the removable handle into which the tang of the body is driven when used as a hand-tool, and when desired the handle may be removed and the tang of the body placed in a tool-stock of a lathe, and there used as an ordinary tool for turning or truing any body that needs the use of such tool to perfect it.

C is a diamond or carbon inserted and held in the soft-metal setting a^4, (sheet-copper preferred,) by wrapping or inclosing the diamond or carbon within the soft metal, then giving a pressure to the soft metal by soft or yielding surfaces, so as to press the soft-metal casing to conform to all the irregularities of surface upon the diamond or carbon, and the soft metal will be compacted upon every part of the diamond or carbon, when the diamond C and its casing of soft metal can be embedded in the cavity *a'''* by pressure in the same manner as described in Patent No. 167,882, granted to me September 21, 1875, and when so embedded the sleeve or ring B is driven forward, which holds the diamond or carbon firmly in its seat.

If the diamond or cutter C becomes worn and a new one has to be inserted, the clamping-sleeve B is driven toward the handle, when the outer ends or jaws are free to be forced apart, and the diamond, with its inclosed casing, can be removed from the cavity and a new diamond or cutter, with its casing, can be inserted and held in the same manner as was the first one.

A tool holding a diamond-point to cut or true a revolving stone or emery-wheel in the form and by the construction described has the advantage over other forms in this: There are no screw-heads that project from and prevent the tool from being turned to present the best cutting-edge of the diamond. It is stronger by reason of the sliding ring surrounding and holding the jaws upon the cutter at the point where the greatest strain comes. There are no screw-holes to weaken the holder.

I am aware that diamonds have been held between two adjacent and independent plates by means of holding-screws in tools for turning or truing wheels; but such tools are liable to become useless by reason of the screw-threads becoming worn or destroyed by rust, when the plates or jaws will separate and the diamond will be loose therein; or it may fall out and be lost.

I am also aware of Patent No. 154,025 for a tool in which a diamond is held; but such tool is entirely different in construction from mine,

more difficult to construct, consequently costing more, and I lay no claim to such construction. Nor do I claim the manner of setting the diamond in soft metal; but

What I do claim as my invention is—

A tool for truing emery-wheels or other like hard substances, consisting of the combination of the split body A, having cavity a''' and a projecting diamond, C, resting in a casing, a^4, therein, and the clamping-sleeve B, all constructed to operate as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES E. EMERSON.

Witnesses:

A. E. BRUCE,

C. P. WALLACE.