J. Dickinson,

Dressing Stone.

No. 91,312. Patented June 15, 1869.

Fig. 1.

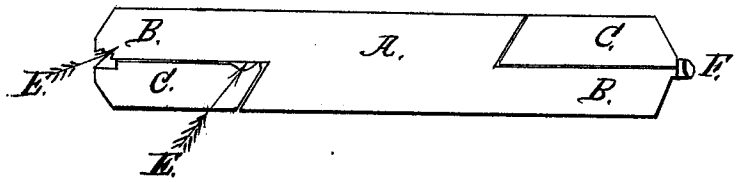


Fig. 3.

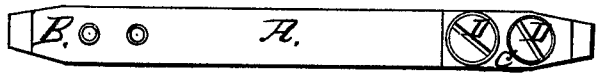


Fig. 2

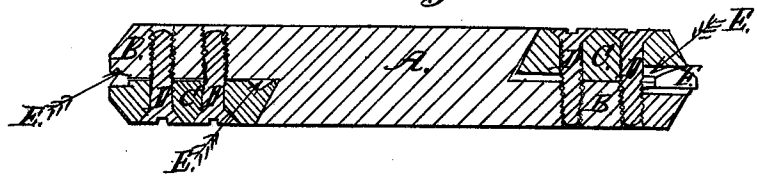


Fig. 4.



Fig. 5.



Witnesses.
C L Barrett
Franklin Barrett.

Inventor.
John Dickinson

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D C.

United States Patent Office.

JOHN DICKINSON, OF BAY RIDGE, NEW YORK.

Letters Patent No. 91,312, *dated June* 15, 1869.

IMPROVED TOOL FOR HOLDING DIAMONDS FOR DRESSING STONE.

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, JOHN DICKINSON, of Bay Ridge, Kings county, and State of New York, have invented certain new and useful Improvements in Tools or Instruments for Holding Diamonds or Mineral Carbon, for Dressing, Cutting, or Turning Stone, Metal, or other hard substances; and I do hereby declare that the following is a full description of the same.

The object of my invention is to make an adjustable mineral carbon, or diamond-holder tool or instrument, used in dressing or cutting stone and other substances.

In the ordinary way of setting diamonds or mineral carbons for such purposes, they are inserted in a cavity formed in the end of a piece of metal, and the metal then drawn in around the mineral carbon, or are secured in the cavity by packing with a soft metal.

By this means, the mineral carbon or diamond becomes a permanent fixture in the tool, and can never expose but one cutting-point or face.

In mineral carbon, in their natural, pebbly-like spherical shape, and when very small, like "glaziers' sparks," this mode of setting answers for many purposes.

But the recently-acquired knowledge of the great value of mineral carbon as a stone-cutter or dresser, and their great cost, makes it necessary that they should be made to serve in as many ways as practicable to obtain cutting-faces or points thereon, so as to avoid the great expense of having as many different tools with mineral carbon in them, as required for the different kind of work they are to be applied to.

To accomplish this object was the purpose of my invention of the "new manufacture of artificially-shaped mineral carbon;" and the object of my present invention is to construct and adapt a tool to the various "artificial" conformations of the mineral carbon, so that the single mineral carbon, thus "artificially" formed, may be set in the tool at pleasure of the operator, with a different cutting-face, according to the different work it is to be applied to; and

The nature of my invention consists in setting or adjusting mineral carbon or diamonds for dressing or cutting stone, and other hard substances, in a metal tool or instrument, having an adjustable jaw or jaws, with angular cavities therein for the reception of the cutter, and the holding it firmly in its place in the tool while being used, by means of binding-screws, or other equivalent device.

But to describe my invention more particularly, I will refer to the accompanying drawings, forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figure 1 is a side view of the tool or instrument for holding the mineral carbon, wherein the adjustable jaw is formed at both ends of it, to show the various forms of the cavities therein for receiving the base of the mineral carbon.

Figure 2 is a longitudinal cut section of the same.

Figure 3 is a plan view of the same.

Figures 4 and 5 are views of opposite ends of the tool or instrument.

Letter A represents the body or shaft of the tool or instrument, which may be made of brass, steel, or any other suitable metal, as may be desired, or of metal and wood, or other material, combined.

The end (or ends, where a double tool is intended to be made) is cut away, or down to about half the depth of the tool, and about an inch, more or less, lengthwise from the end of the tool, so as to form as it were a fixed or permanent jaw, B.

Upon this permanent jaw is fitted an adjustable jaw, C, made of metal, and of corresponding shape with the permanent jaw.

This adjustable jaw may be hinged to the permanent jaw, or have a projecting point or tongue at its back end, so as to engage into or with the permanent jaw, to hold them squarely together.

For the purpose of binding the jaws together, binding-screws, D, are inserted through them.

By this means they can be made to bite or hold the mineral carbon F in between them, in the angular cavities E, with the greatest possible firmness.

To prevent the risk of splitting or fracturing the mineral carbon, or their loosening in the angular cavities, composition metal may be packed in the cavities, or other material, so that however tight the jaws are drawn together by the binding-screws, they will serve only to hold the mineral carbon more securely, without risk of fracturing them.

It will be obvious that by this method of securing mineral carbon in tools or instruments for cutting or dressing stone and other substances, that it makes the mineral carbon much more valuable, because of the facility of resetting to make available its several faces or cutting-angles, when, if permanently set in the tool, like the glaziers' diamonds, but one face or angle could be made available, and therefore would require several mineral-carbon cutters to answer the same purpose as one cutter "artificially" shaped, and used in my improved adjustable mineral-carbon holder or tool.

It will also be obvious that the shape and size of the angular cavities in the jaws of the tool will be varied according to the size of the mineral carbon, its shape, and the purposes or uses to which it is to be applied.

As a general rule, the cavities are intended to conform with the "artificial" shapes I have invented and described in my application for a patent for the "new manufacture of artificially-formed wedge-shaped min-

eral carbon," in contradistinction to unmanufactured or natural-shaped mineral carbon, and therefore intend to adapt the one to the other, when fitting up the tool for the different purposes to which it is to be applied.

Having now described my invention, I will proceed to set forth what I claim, and desire to secure by Letters Patent.

An adjustable diamond or mineral-carbon holder, consisting of the metallic block A, provided with fixed jaws B, and reversible jaws C, suitably notched at their ends, and held in place by screws D D, or their equivalents, all constructed as described, and for the purpose set forth.

JOHN DICKINSON.

Witnesses:

C. L. BARRITT,

FRANKLIN BARRITT.