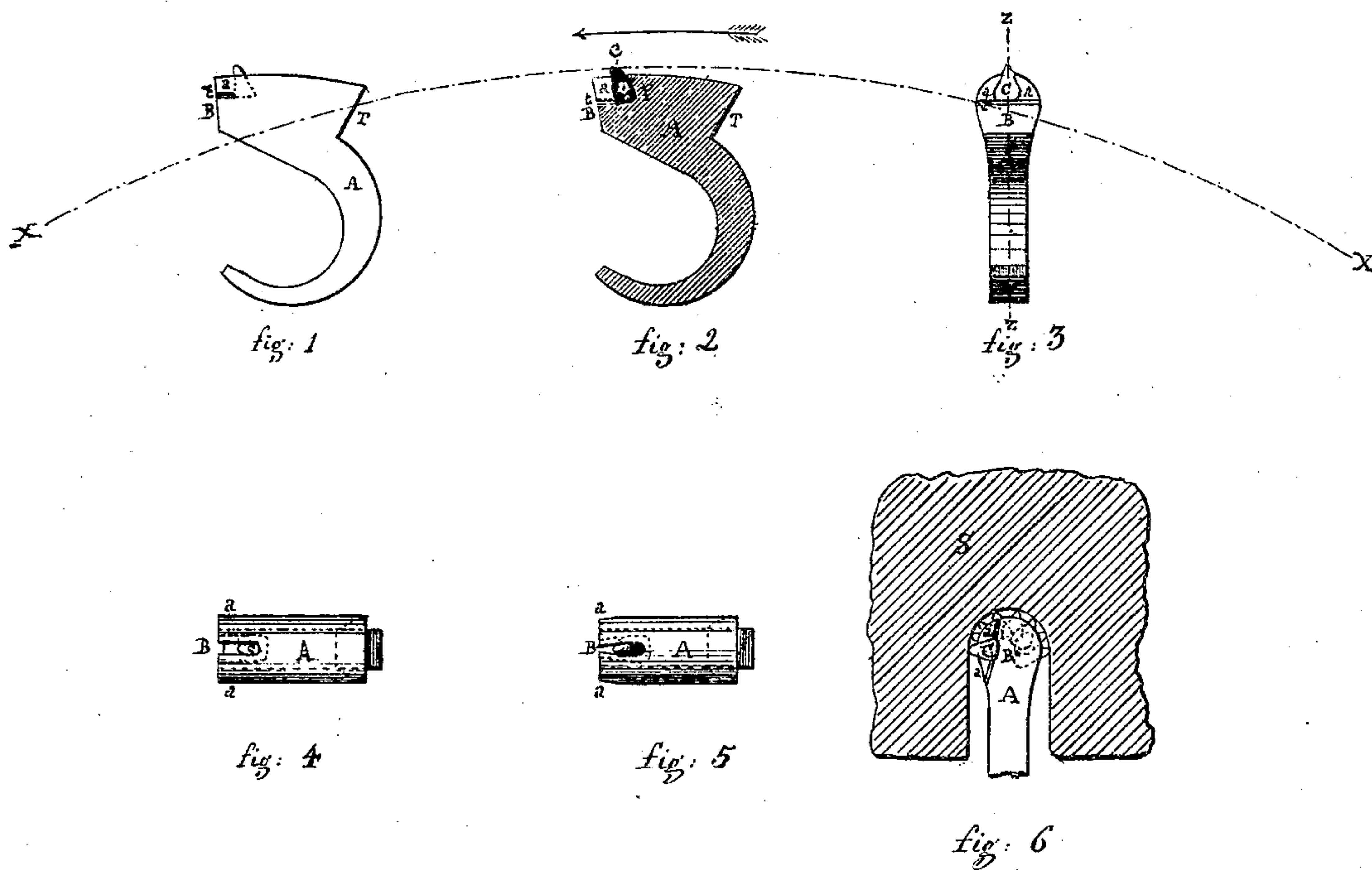


*H. & J. L. Young,
Carbon Tool.*

No. 95,866.

Patented Oct 12, 1869.



Witnesses { *John Bell*
W. Langumbe Hubert

Inventors { *Hugh Young*
James L. Young

United States Patent Office.

HUGH YOUNG, OF MIDDLETOWN, CONNECTICUT, AND JAMES L. YOUNG,
OF NEW YORK, N. Y.

Letters Patent No. 95,866, dated October 12, 1869.

IMPROVED CARBON-TOOL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, HUGH YOUNG, of Middletown, in the county of Middlesex, State of Connecticut, and JAMES L. YOUNG, of New York, in the county and State of New York, have invented certain Improvements in Mineral Carbon-Tools; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming part of this our specification, in which—

Figure 1 represents a side view of a block, with mineral carbon inserted on our improved plan;

Figure 1 is a sectional view of the same through the line *z z*;

Figure 3 is a front view; and

Figures 4 and 5 are top views of the same.

Figure 6 is a front view of blocks, with mineral carbon point inserted, showing how they are to act upon the stone S, to make a cut.

This invention relates to that class of tools for cutting stones, metals, or other hard substances in which mineral carbons are used for cutting-points; and

It consists in an improved mode of inserting the carbons into said tools, whereby the said mineral carbons are better braced, and more substantially fastened than by any of the modes now used.

We make the front part B of the block at an angle with the line of motion X X, so as to be nearly parallel to the resultant of said line of motion coming from the cutting-point; and in order to obtain a cavity for inserting the mineral carbon, which will present a counterpart of all the irregularities thereof, we make a slot or opening in the front part B and on the top part of the block, giving to that slot the proper dimension and shape, to allow the mineral carbon to slide in from the front B, but foremost and downward, and point upward.

By having this cavity opened by two sides, top and front part, we can make it more exactly to correspond to the irregular shape of the stone, as well for the

lower part or base as for the back part and sides of the stone.

We are, by this reason, able to place the stone in such position that the resultant line of resistance, coming from the cutting-point, shall fall nearly in the centre of the but of the carbon, and yet have all the resisting parts bear fully upon the metal of the block A, properly chased for the purpose.

When this cavity is finished, we coat it inside with a thin layer of red lead, or other plastic cement, and we insert the mineral carbon, or other hard stone, from the front, and push it back until it is perfectly home.

To prevent the mineral carbon from slipping forward, we make to the front part B of the block A a cut, *t*, with a fine saw, on a level with the bottom of the cavity, and, with suitable instruments, we bend the two lips *d d* of the block A slightly inward, as indicated by our drawings, where fig. 4 shows the block before the lips *d d* are closed, and where fig. 5 exhibits the lips *d d* closed in upon the slotted hole.

We do not claim the use of mineral carbon, or other hard stones, for the purpose of cutting or dividing stones, metals, or other substances; but

What we do claim as our invention, and desire to secure by Letters Patent of the United States, is—

The improved mode of inserting mineral carbons, or other hard stones, in tools for cutting stones, metals, or other substances, from the front side B of the block A, instead of inserting the same from the top part, or that part of the block through which the cutting-point is to project, as is now done, and this we claim for any shape or size of mineral carbon, or other hard stones, when done substantially in the manner, and for the purpose herein set forth.

HUGH YOUNG.
JAMES L. YOUNG.

Witnesses:

JONA. BELL,
H. GENGEMBRE HUBERT.