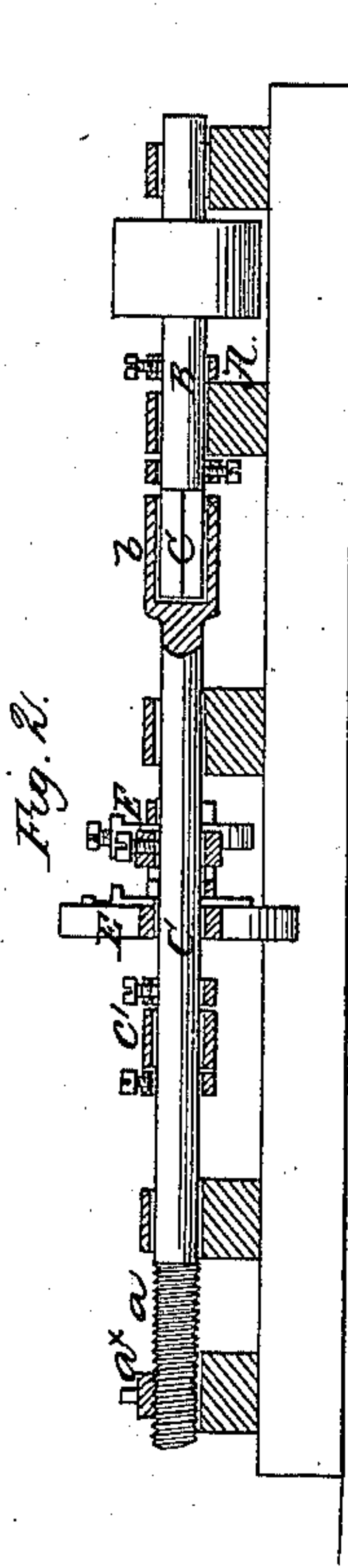
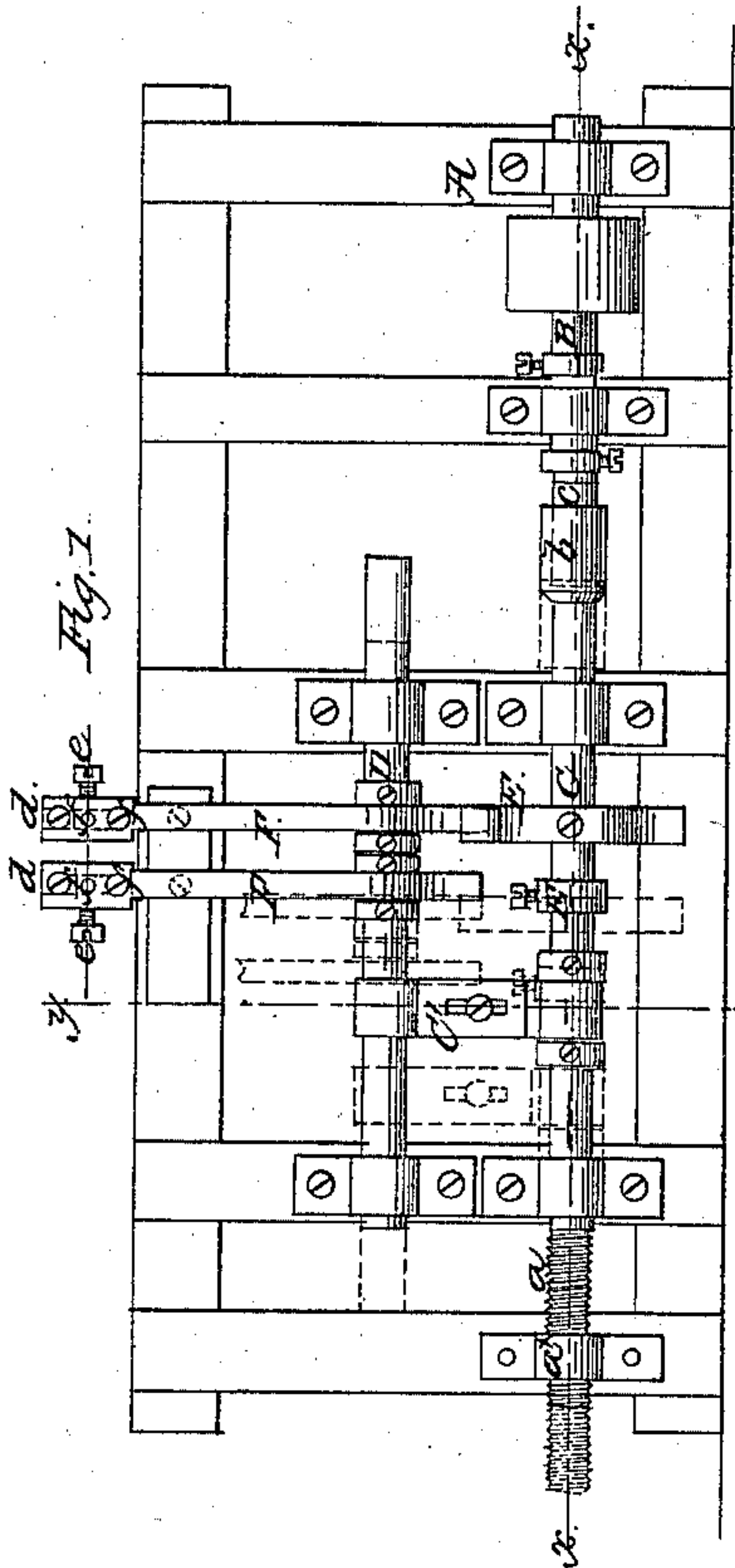
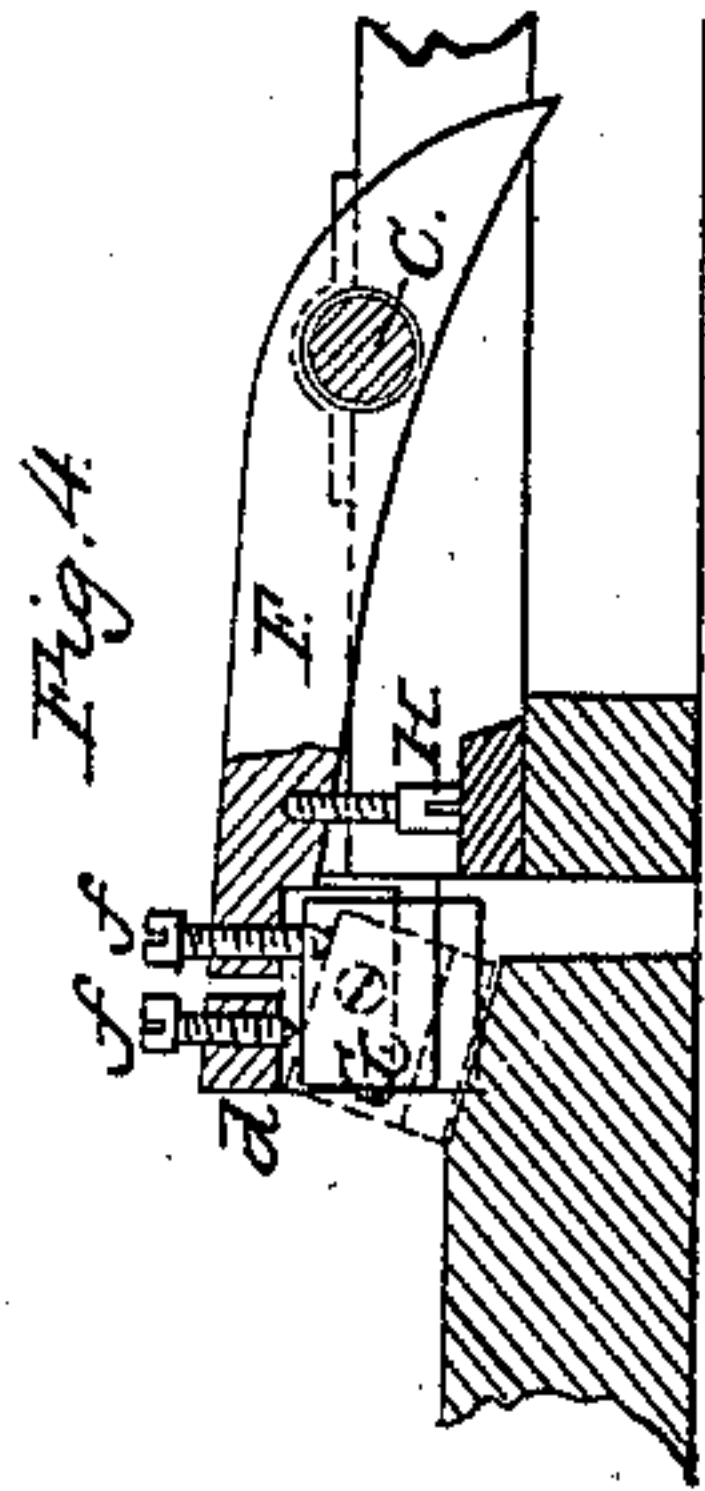
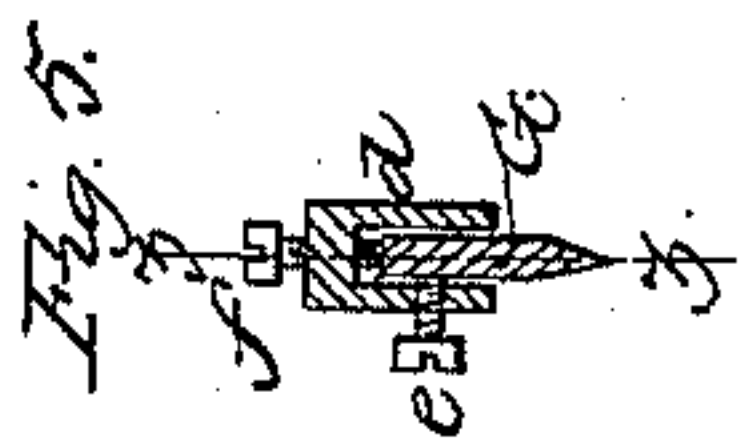
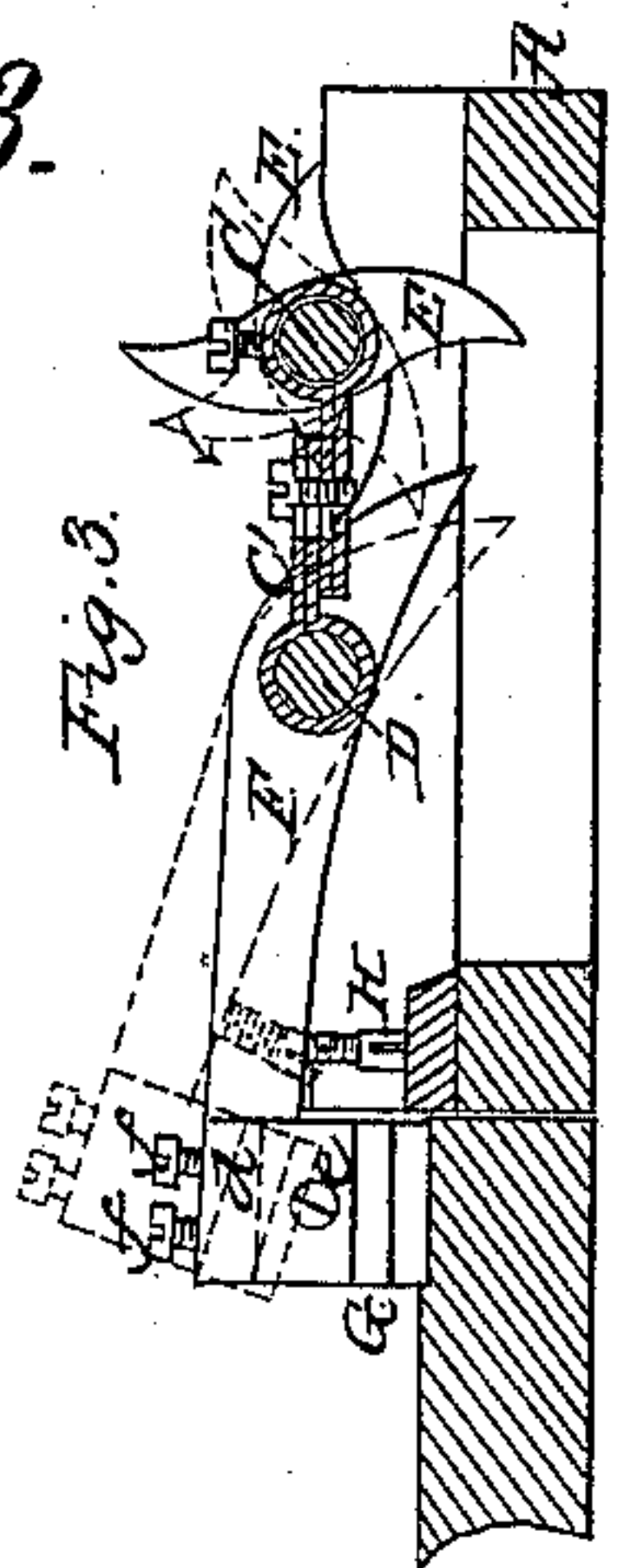


E. H. Lewis,

Dressing Stone.

N^o 33,253.

Patented, Sep. 10, 1861.



Witnesses:

J. A. Coombs
H. T. Trench

Inventor:

E. H. Lewis
by M. M. D.
Atty.

UNITED STATES PATENT OFFICE.

EZRA H. LEWIS, OF KINGSTON, NEW YORK.

IMPROVEMENT IN STONE-DRESSING MACHINES.

Specification forming part of Letters Patent No. 33,253, dated September 10, 1861.

To all whom it may concern:

Be it known that I, EZRA H. LEWIS, of Kingston, in the county of Ulster and State of New York, have invented a new and Improved Device for Dressing or Cutting Stone for Building or Similar Purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention. Fig. 2 is a longitudinal vertical section of the same, taken in the line $x x$, Fig. 1. Fig. 3 is a transverse vertical section of the same, taken in the line $y y$, Fig. 1. Fig. 4 is a longitudinal section of one of the axes, taken in the line $z z$, Fig. 5. Fig. 5 is a transverse section of the same, taken in the line $x' x'$, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a novel and improved means for feeding the axes over the stone under operation.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular frame, on which a horizontal driving-shaft B is placed, and C is a shaft which is placed on the frame A in line with the shaft B. The shaft C has a screw a at one end of it, and this screw works in a half-nut a^* . The opposite end of shaft C is provided with a socket b , which receives a square c at the inner end of the driving-shaft B. (See Figs. 1 and 2.)

D is a shaft, which is placed on the frame A parallel with the shafts B C. The shaft D, as well as the shaft C, is allowed to slide in its bearings, and the two shafts C D are connected by a strap or link c' .

On the shaft C there are placed two wipers E E, having reverse positions relatively with each other, and on the shaft D and in line with the wipers E E of the shaft C there are fitted two arms F F. The arms F F extend beyond the front side of the frame A, and each has a box d on it to receive an ax or cutter G, which may be constructed in the usual way—to wit, a piece of steel of rectangular form and brought to an edge at one side by two basils, as shown clearly in Fig. 5. The

axes or cutters are secured in the boxes $d d$ by set-screws $e e$, which are fitted in the sides of the boxes, and the axes or cutters may be adjusted more or less angularly in the boxes $d d$ by set-screws $f f$, which pass into the heads of the boxes $d d$. This will be fully understood by referring to Fig. 4, in which it will be seen that an ax or cutter G is adjusted in its head in an oblique position. Each arm F has a screw H in its under side, as shown in Figs. 3 and 4. These screws serve as stops and determine the depth of the cut of the axes or cutters.

The operation is as follows: The stone to be operated upon is properly adjusted underneath the axes or cutters and the shaft B is rotated by any convenient power. Motion is communicated to shaft C from B in consequence of the square c of shaft B fitting in the socket b of shaft C. As the shaft C rotates, the wipers E E act upon the arms F F and elevate the axes or cutters G G, the latter falling by their own gravity and acting upon the stone as the ends of the wipers pass the arms. As the axes or cutters are thus operated, they are fed along by means of the screw a of shaft C and the nut a^* , and when the axes or cutters have arrived at the end of their cut the socket b will have been moved beyond or off from the square c and the rotation of shaft C stopped. The length of square c , and consequently the longitudinal sliding movement of shaft C, is equal to the distance between the axes or cutters G. In order to repeat the operation of the axes or cutters, the half-nut a^* is raised free from the screw a and the shaft C shoved back, so that the socket b of said shaft will cover the square c of shaft D.

The cutting of oblique or beveled faces on the stones by a simple adjustment of the axes or cutters is a valuable feature of the invention, as it greatly facilitates the adapting of the machine to various kinds of work.

The feed movement of shaft C is determined by the pitch of screw a .

The device as a whole is extremely simple and efficient. Any number of axes or cutters may be used as circumstances may require.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The two rotating and sliding shafts C D, connected as shown and operated from the driving-shaft B by means of the square c and socket b, the shafts C D being provided, respectively, with the axes or cutters G and the wipers E E, and the shaft C provided with the screw a, working in the half-nut a*, all com-

bined and arranged to operate as and for the purpose set forth.

EZRA H. LEWIS.

Witnesses:

D. I. DECKER,
WM. TOWNSEND.