

(No Model.)

M. GREER.  
Stone Dressing Machine.

No. 233,090.

Patented Oct. 12, 1880.

Fig. 1.

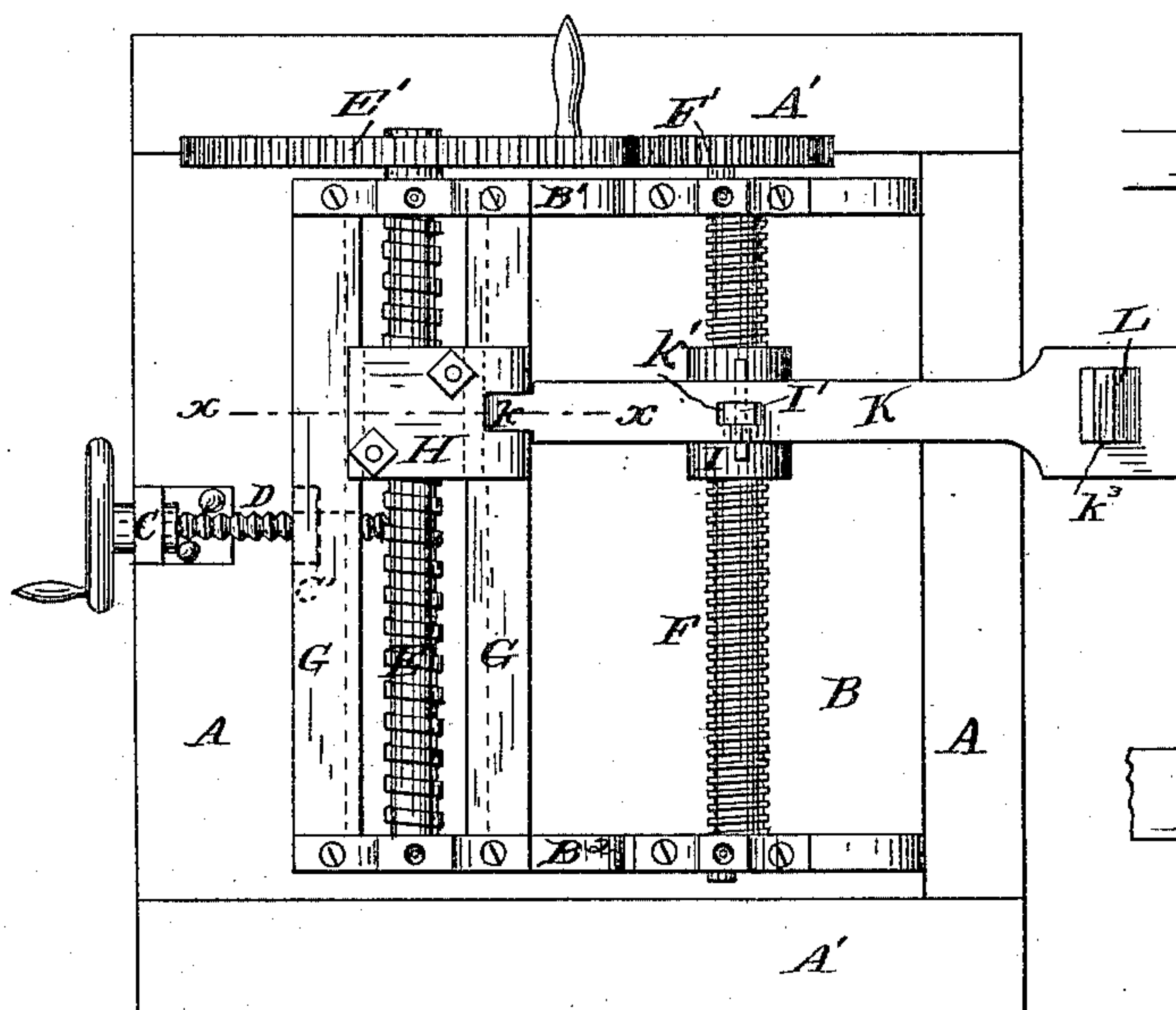


Fig. 7.

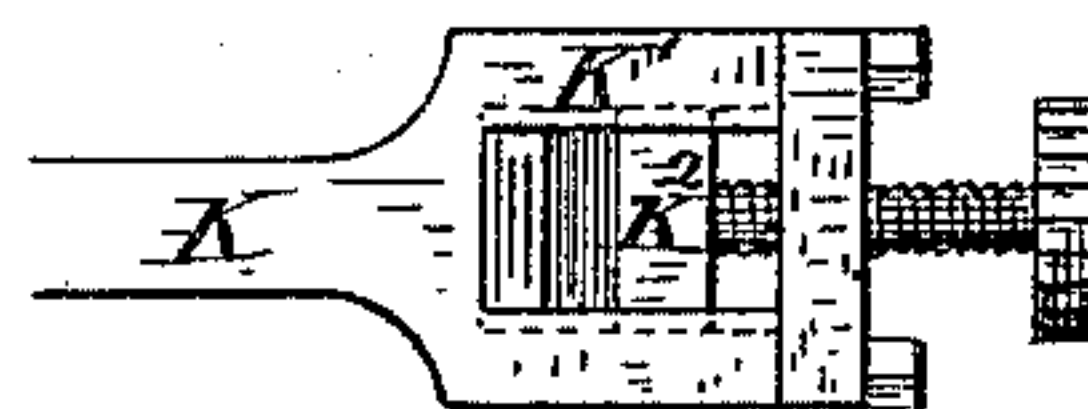


Fig. 6.

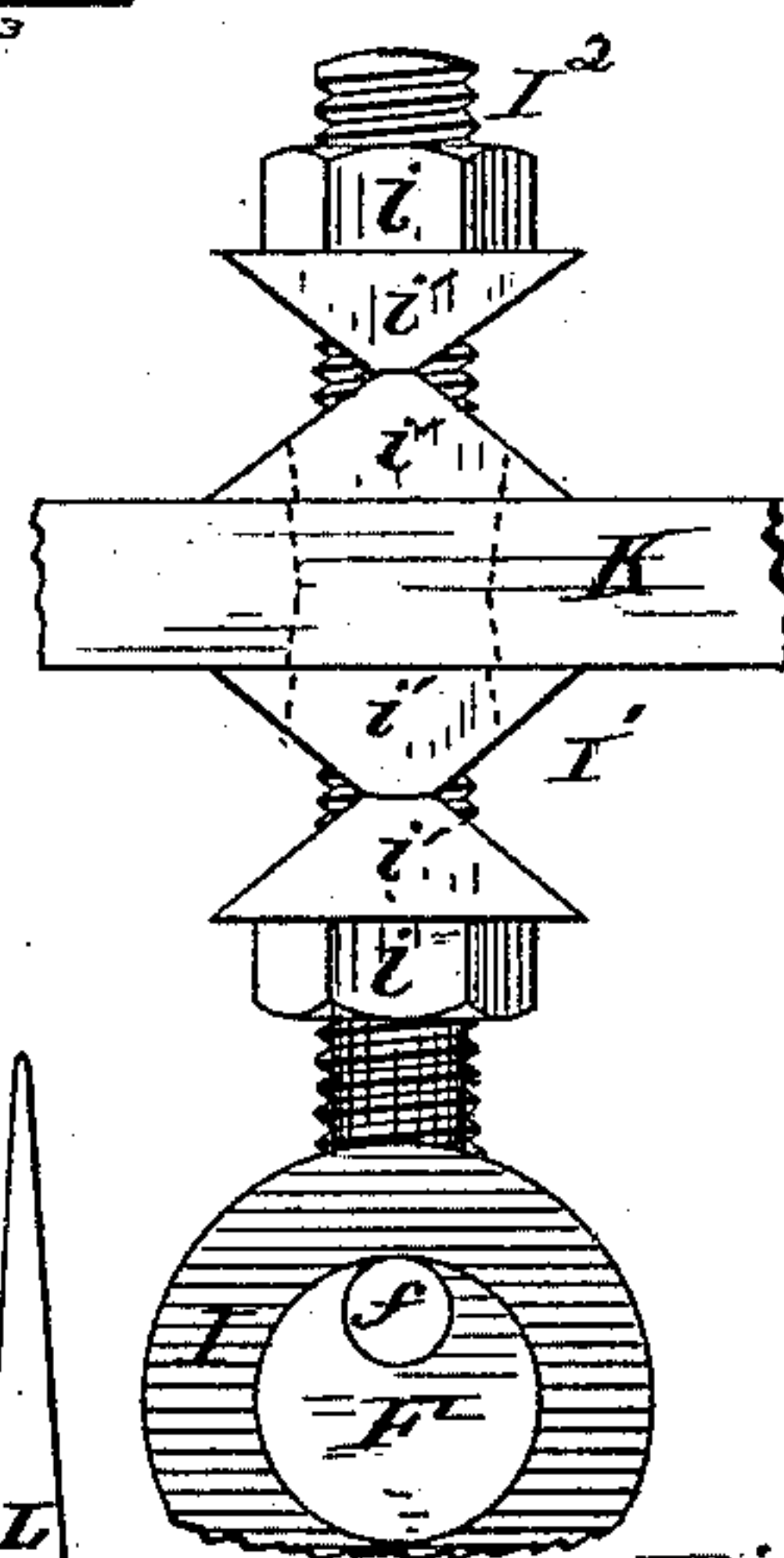


Fig. 4.

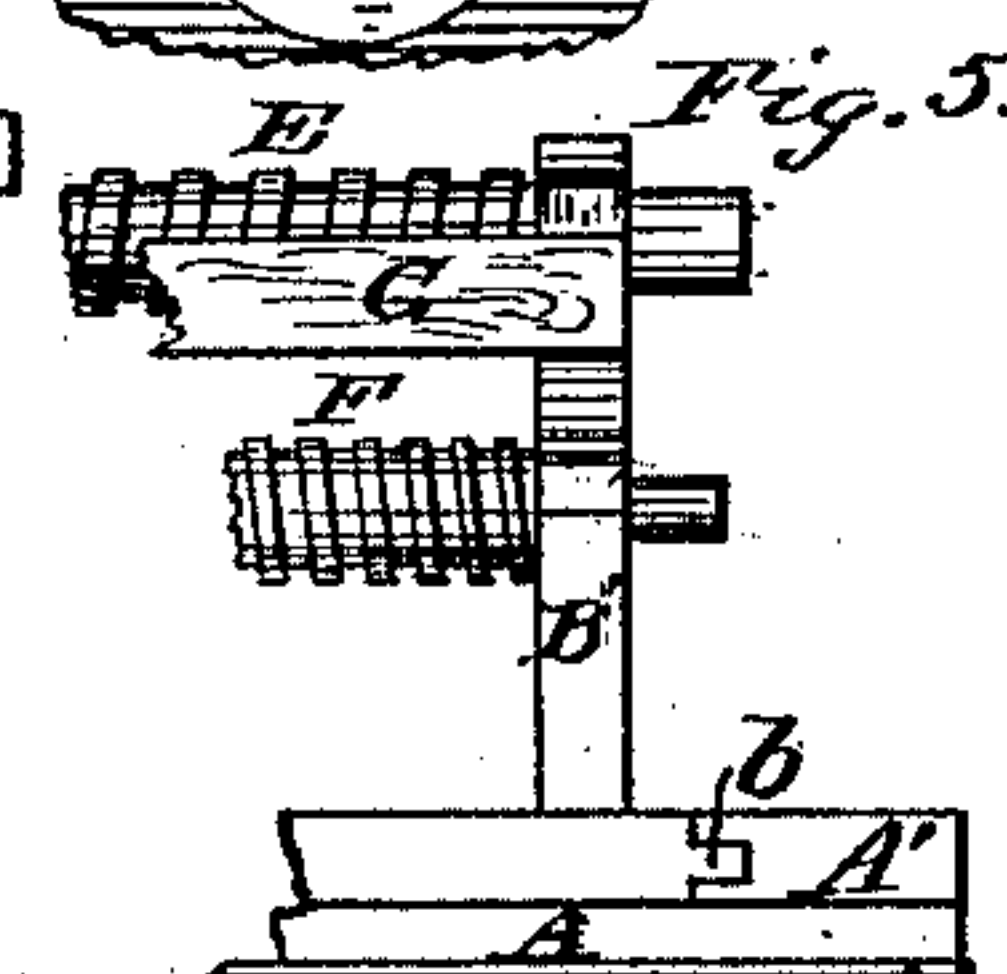
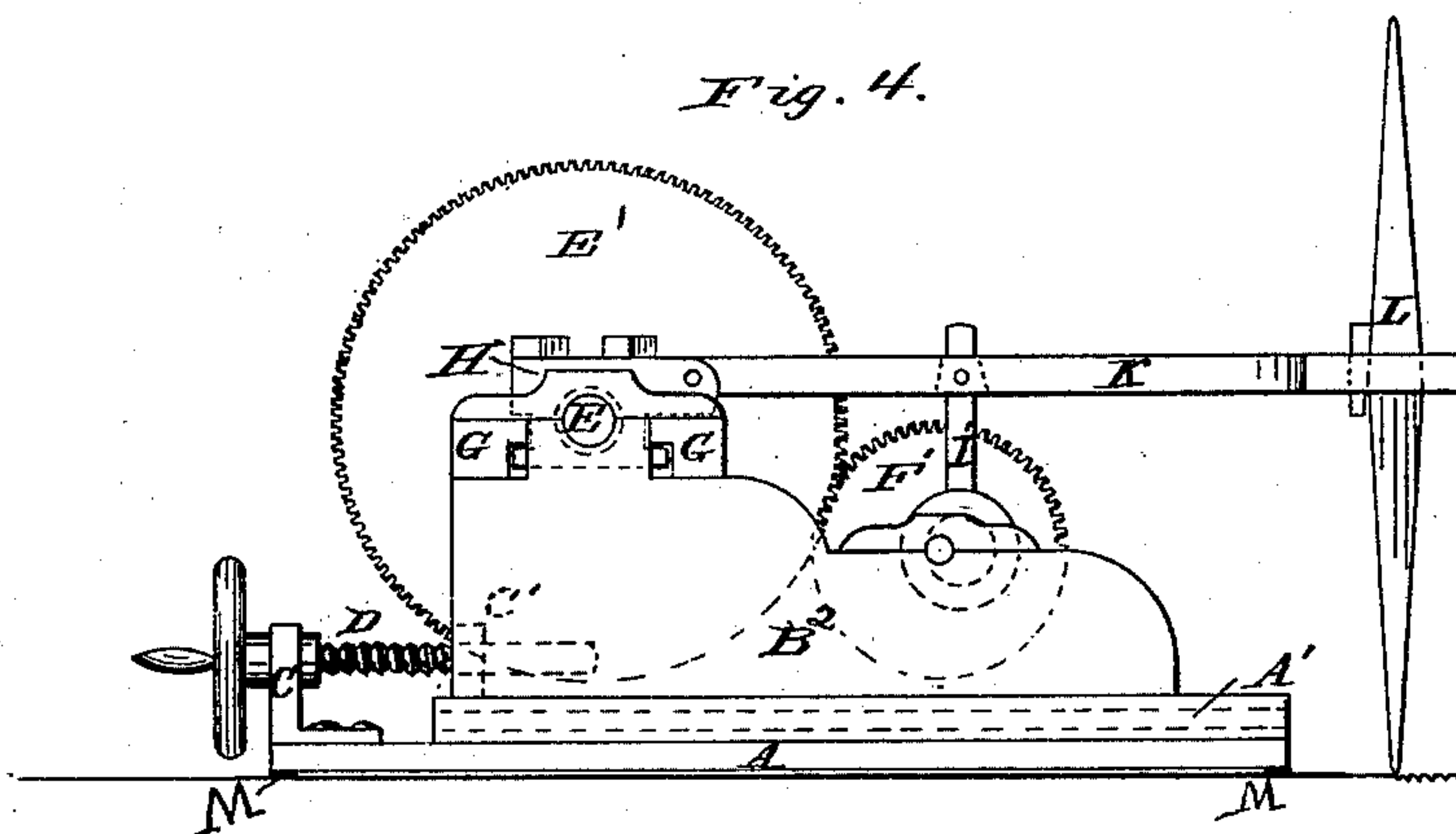


Fig. 2.

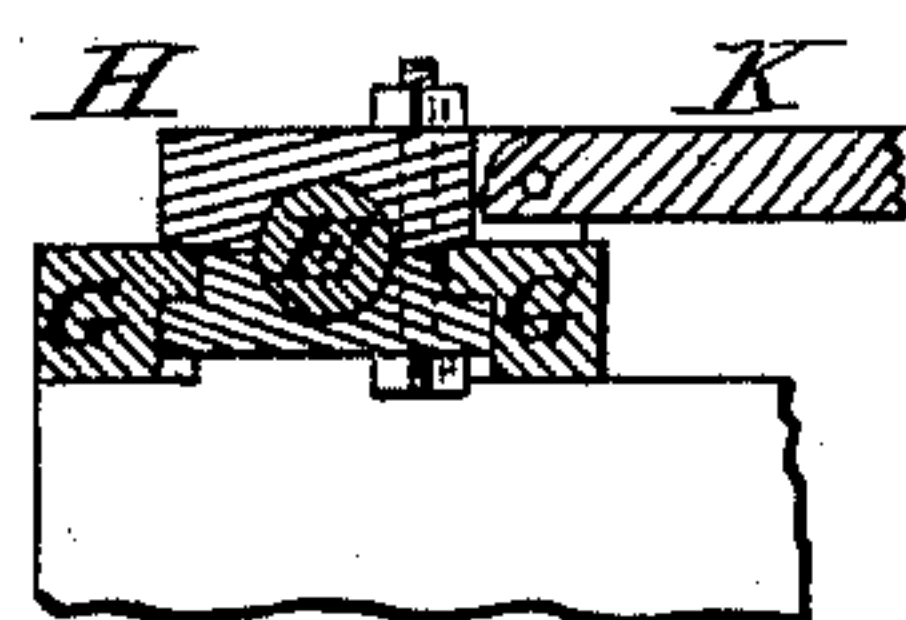
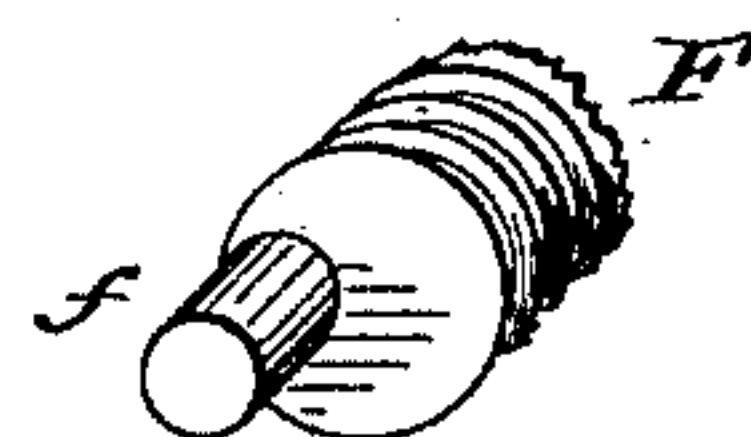


Fig. 3.



Witnesses:

M. W. Low  
J. S. Barker.

Inventor:

Martin Greer  
by Charles and Geo. A. King  
attys



# UNITED STATES PATENT OFFICE.

MARTIN GREER, OF BOLIVAR, MISSOURI.

## STONE-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 233,090, dated October 12, 1880.

Application filed August 11, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN GREER, a citizen of the United States, residing at Bolivar, in the county of Polk and State of Missouri, have invented certain new and useful Improvements in Stone-Dressing Machines; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a top-plan view of my improved stone-dressing machine. Fig. 2 is a cross-section of the head-block for the pick-handle and its supporting-ways on line  $x x$ , Fig. 1. Fig. 3 is a perspective view of a part of the screw-rod which reciprocates the pick. Fig. 4 is an end elevation. Fig. 5 is a front elevation of one end, part of the machine being broken away. Fig. 6 illustrates, on an enlarged scale, a modified form of the devices for connecting the pick-handle to the reciprocating mechanism. Fig. 7 illustrates a modified form of devices for holding the pick in the handle.

In the drawings, A represents a bed-plate which is stationary while the machine is in operation. A' A' are sills or flanges on the upper side of this plate. There are longitudinal grooves on the inner sides of these sills to guide the moving parts.

The operative parts of the machine are supported on a sliding carriage composed of the horizontal plate B and uprights or standards B' B<sup>2</sup>. At the edges of the plate B there are tongues  $b$ , adapted to fit in the grooves in sills A'.

C represents a standard rising from the stationary plate A, and C' a standard (shown in dotted lines, Figs. 1 and 4) on the sliding plate B. D is a screw-rod mounted in the standards C C', and engaging by means of its thread with a threaded aperture in the latter; though, if desired, the rod may be rigidly attached to the standard C', and be constructed to engage with the standard C. The number of threads to the inch on the rod is preferably sixteen, (16,) and hence by rotating the rod once the sliding carriage can be thrust forward or back

the one-sixteenth of an inch. There may be two or more of these adjusting-rods, if desired.

E and F represent screw-shafts, mounted parallel to each other on standards B' B<sup>2</sup>, the former being provided with a right-handed and the latter with a left-handed thread. The shaft F is preferably constructed with four threads to the inch, while shaft E has but two.

E' is a crank spur-wheel on the end of shaft E, and F' a spur-pinion on shaft F, the former being of a diameter twice that of the latter and having twice the number of cogs.

G G are ways attached to the top of the standards B' B<sup>2</sup>, in close proximity to the shaft E, and parallel therewith.

The journals  $f$  of shaft F are eccentric to the shaft, so that the shaft while revolving shall also have a rising-and-falling or reciprocating motion imparted to it.

H is a sliding block mounted and reciprocating on the ways G G. It has a central screw-threaded aperture, whereby it engages with the screw-shaft E.

I is another block, or a collar traveling on shaft F, it being provided with a central screw-threaded aperture. I' is a rod attached to the upper side of the block or collar I.

K represents the handle to which the pick is attached. At its inner end it is pivoted to the sliding block H by means of a tongue,  $k$ , or in any preferred manner.

$k'$  is an aperture, through which passes the rod I', and by means of which the handle is connected with the block I. I prefer to form the rod I with a screw-thread, as shown at I<sup>2</sup>, Fig. 6, so that it can be raised and lowered any distance desired for adjusting the throw of the pick; and I prefer also to attach the rod I' to the pick-handle K by means of nuts  $i i$  and intermediate tapering or diamond-shaped blocks  $i' i'$ , which will permit the handle and rod I to adjust themselves properly in position relative to each other while the handle is in motion. The handle and rod may, however, be connected by a pin passing through them, or in any other suitable manner.

The handle K is enlarged at the outer end to form a support for the pick.  $k^2$  is an aperture in the enlarged part to receive the pick L. I prefer to make the enlarged part in two por-



tions,  $K' K^2$ , joined together, so that the pick L can be readily clamped in place; or the head may be made in one piece and provided with a set-screw bearing against the pick.

5 This machine is especially adapted to the dressing of millstones, and it is operated in the following manner: It is first placed in proper position to bring the pick over that part to be dressed or cracked. Power is then ap-  
10 plied to the wheel  $E'$  and the shafts E and F are set in motion. The block I is carried along the shaft F by the screw-thread, and at the same time it is caused to rise and fall by the eccentric movement of the shaft, carrying  
15 with it the handle K, and thus imparting the desired motion to the pick. The shaft F makes two revolutions while the shaft E makes one; but as the number of threads on shaft F is twice that on shaft E, it will be seen that the  
20 blocks H and I will travel with the same speed, and as the threads run in opposite directions said blocks will travel in the same direction. It will be further seen that while the blocks H and I are moving one inch the shaft  
25 F makes four revolutions, resulting in four strokes of the pick while it is moving one inch. This construction enables me to dress the stone very rapidly and accurately.

30 After the pick has been moved from the center to the skirt of the stone the carriage is advanced by the adjusting-rod D, and the motion of wheel E is reversed, carrying the pick back toward the center, and these operations are repeated until the carriage  $B B' B^2$  has reached  
35 the limit of its forward movement. The machine is then moved to another part of the stone, where the operations are continued.

In order to prevent the plate A from slipping on the stone, I attach rubber to the bottom, as shown at M, which, by greatly increasing the friction, prevents accidental displacement.

What I claim is—

1. In a stone-dressing machine, the combination, with a rising and falling pick, of the block I, the screw-shaft F, which reciprocates the pick both horizontally and vertically, the block H, and the screw-shaft E, substantially as set forth.

2. The combination, with the rising and falling pick and a handle hinged at its inner end, of the block I and the connecting-rod  $I'$ , flexibly attached to the pick-handle, substantially as and for the purposes set forth.

3. The combination, with a rising and falling pick, of the blocks H and I, the screw-shafts E and F, rotating in opposite directions, and carrying, respectively, the wheels  $E'$  and  $F'$ , said wheels being arranged to engage directly with each other, substantially as and for the purposes set forth.

4. The combination, with the rising and falling pick, of the handle K, the block H, pivoted to the handle, the ways G G, the block I, the eccentrically-revolving shaft F, engaging with the block I, and the shaft E, engaging with the block H, substantially as set forth.

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

MARTIN GREER.

Witnesses:

P. M. BURNS,  
F. A. AFFLECK.