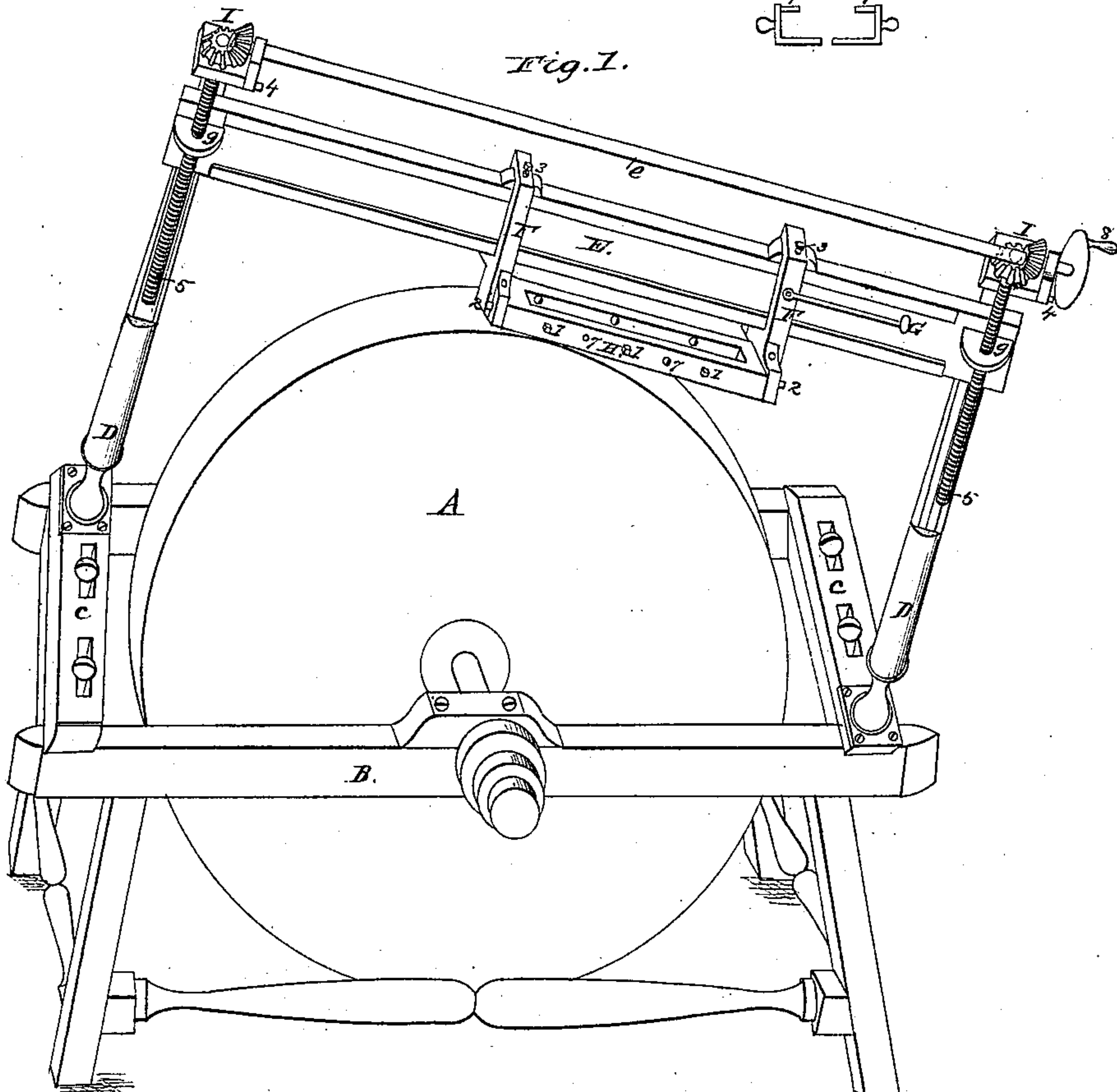
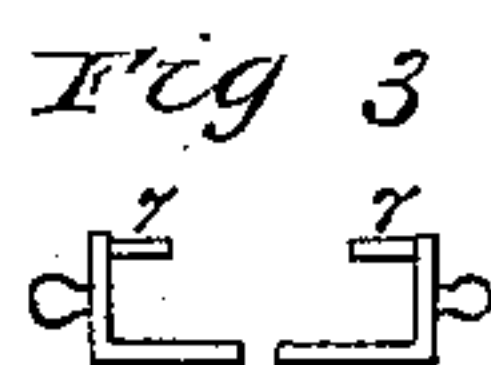
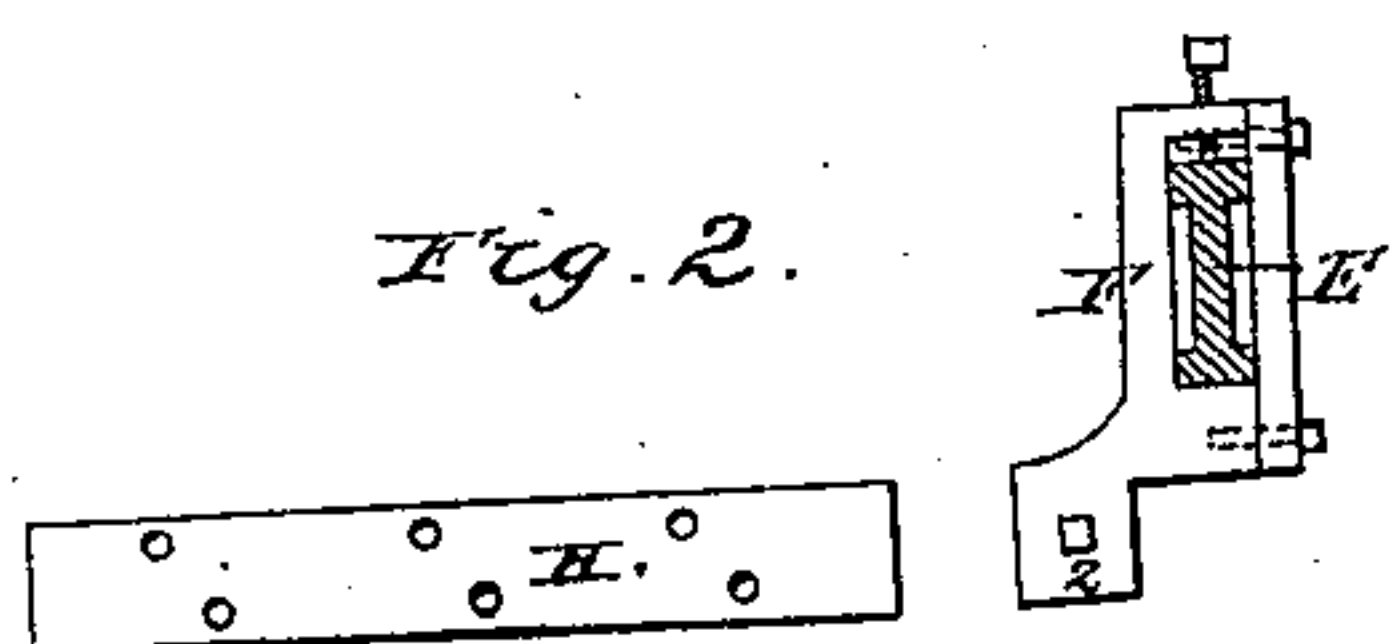


*Lissenden & Lacy,  
Edge-Tool Grinder.*

*N<sup>o</sup> 39,054.*

*Patented June 30, 1863.*



Witnesses:

*Conrad Furst  
Dand Bradley*

Inventors:

*Geo Lissenden  
John Lacy*

# UNITED STATES PATENT OFFICE.

GEORGE LISSENDER AND JOHN LACEY, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN HOLDERS OF TOOLS FOR GRINDING.

Specification forming part of Letters Patent No. **39,054**, dated June 30, 1863; antedated March 1, 1863.

*To all whom it may concern:*

Be it known that we, GEORGE LISSENDEN and JOHN LACEY, of Chicago, Illinois, have invented a new and improved machine for holding iron or steel while being ground to a true surface on a grindstone; and we hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and letters and figures of reference marked thereon, forming a part of this specification.

Figure 1 is a perspective view. Fig. 2 is a view of the back side of the clamp H, a side view of the slide F, and a cross-section of the guide E. Fig. 3 shows the rests 7 7.

A B, Fig. 1, represent a grindstone and frame.

C C are pieces fastened on each end of the frame by bolts passing through slots therein and into the frame, so as to admit of sliding to the right or left, which allows the iron to be ground to be brought parallel to the plane or side of the stone, or at any required angle across the edge of the same.

D D are two posts with caps on the top and slots in the upper part, standing on the slides at opposite corners of the frame and supporting the guide, &c.

E is a guide, a cross-section of which is seen in Fig. 2. On each end of the guide E is a lug, 9 9. Opposite each lug is a bolt, which passes through the slot in the post D, with a nut and screw to clamp it to the post.

F F are slides, moving freely on the guide E and holding the clamp-block H. A side view of F is shown in Fig. 2.

H is a clamp for holding the iron to be ground. It is fastened to the slides F F by the bolts or journals 2 2, by which means it can be turned to any required vertical angle to the edge of the stone. The back side of the block H has a double set of screws, as shown in Fig. 2, the screws 1 1 1, in front, coming between those in the back side, as indicated by the crosses in Fig. 2. By this means a plane or curved piece of iron can be held with equal firmness.

I I are sets of bevel-gear. One wheel of each set is connected to the screws 5 5, which run through the caps of the posts, and the lugs 9 9 on the guide E act as nuts for raising the same. The other two wheels are con-

nected by the bar e to the crank 8. By turning the crank, the guide E and clamp H can be raised and lowered at pleasure by means of the screws 5 5.

6 is a handle attached to the slide F to push the clamp and iron forward.

7 7, Fig. 3, are rests. The short part is round to fit the holes 7 7 in the block H. The long part goes under the slot in the clamp, and forms a rest for the iron until it is properly fastened by the set-screws 1 1 1. They are then taken out of the way.

This machine is operated as follows: After the iron to be ground is put in and fastened, as described, the guide and clamp are lowered by the screws 5 5 until the iron is a little below the top of the stone, then it is pushed forward until the iron passes over the stone. It is then drawn back and lowered a little more, and the operation repeated as often as required.

We do not claim the peculiar shape of the clamp H, as this is made for the manufacture of plows, for grinding the joints between the share and mold-board, or for grinding the edges of iron straight and true.

The shape of the clamp may be varied indefinitely to suit different kinds of work.

The object to be attained is to grind edges or surfaces true on a stone that now have to be done with a file or planing-machine; and

What we claim as our invention, and wish to secure by Letters Patent, is—

1. The movable bed-pieces C C, posts D D, and guide E, constructed, combined, arranged, and operating substantially as set forth.

2. The clamp H, constructed substantially as described, turning on journals 2 2, and suspended from the guide E by means of the pendent slides F F, as and for the purpose set forth.

3. The stone A, frame B, adjustable bed-pieces C, posts D, with their adjusting-screws 5, the guide E, clamp H, and pendent slides F, constructed, combined, and arranged substantially as described.

GEORGE LISSENDEN.  
JOHN LACEY.

Witnesses:

CONRAD FURST,  
DAVID BRADLEY.