

N. GOODER & B. LAVIN.
Machine for Punching or Shearing.

No. 196,576

Patented Oct. 30, 1877.

Fig. 1.

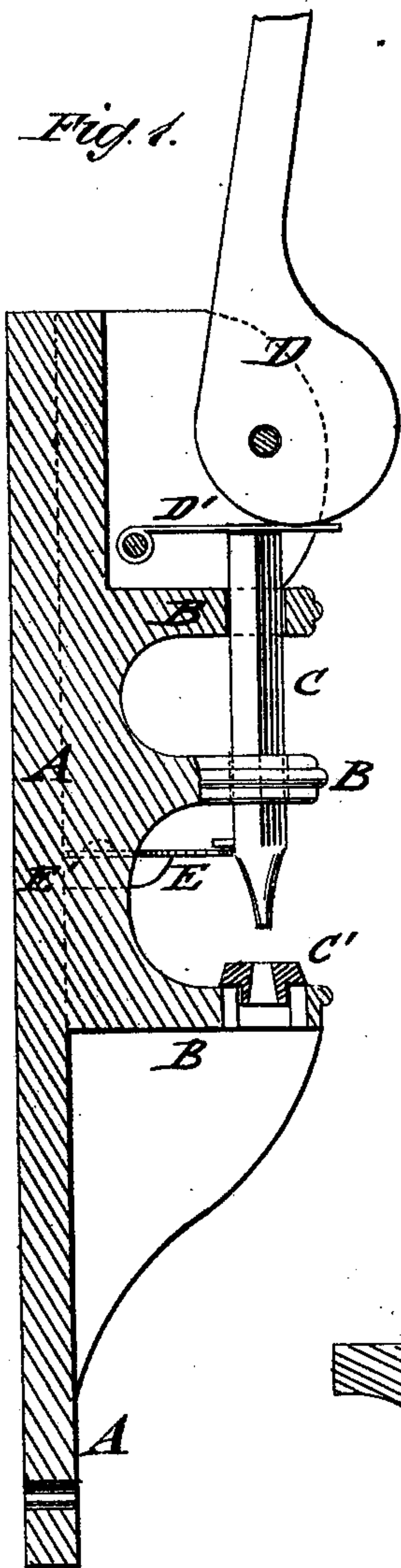


Fig. 2.

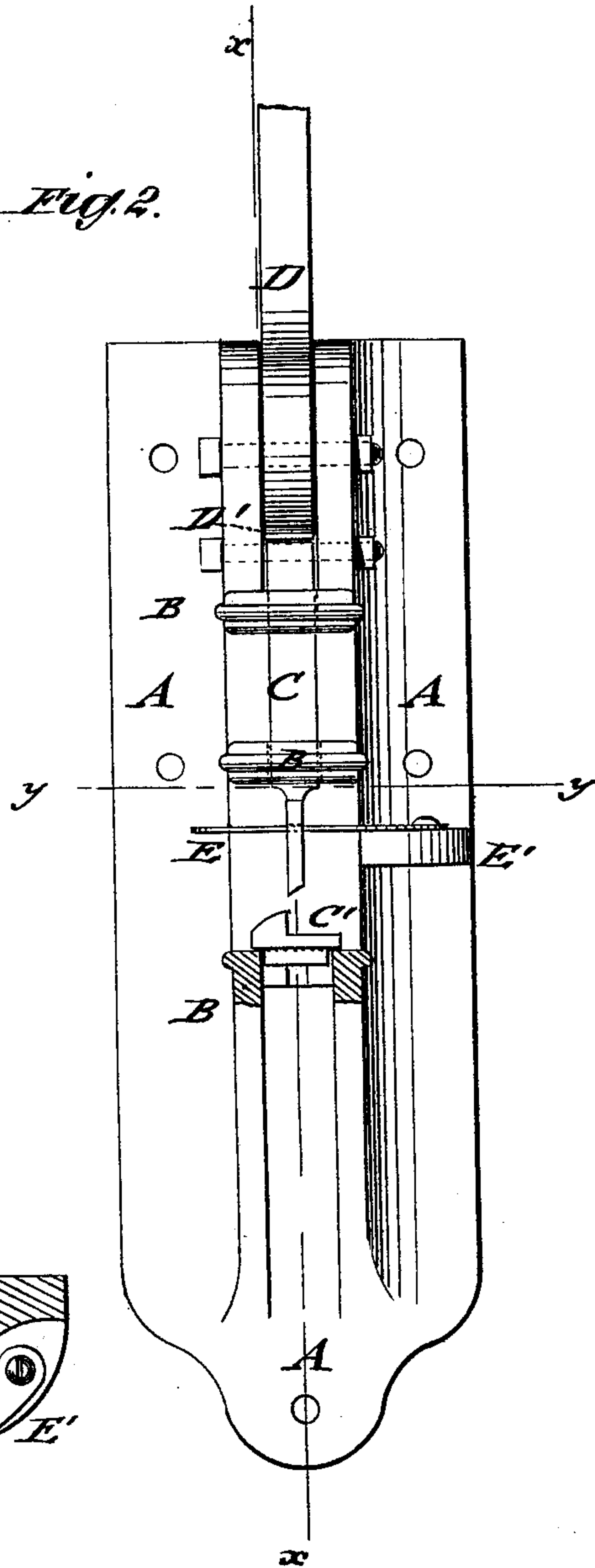
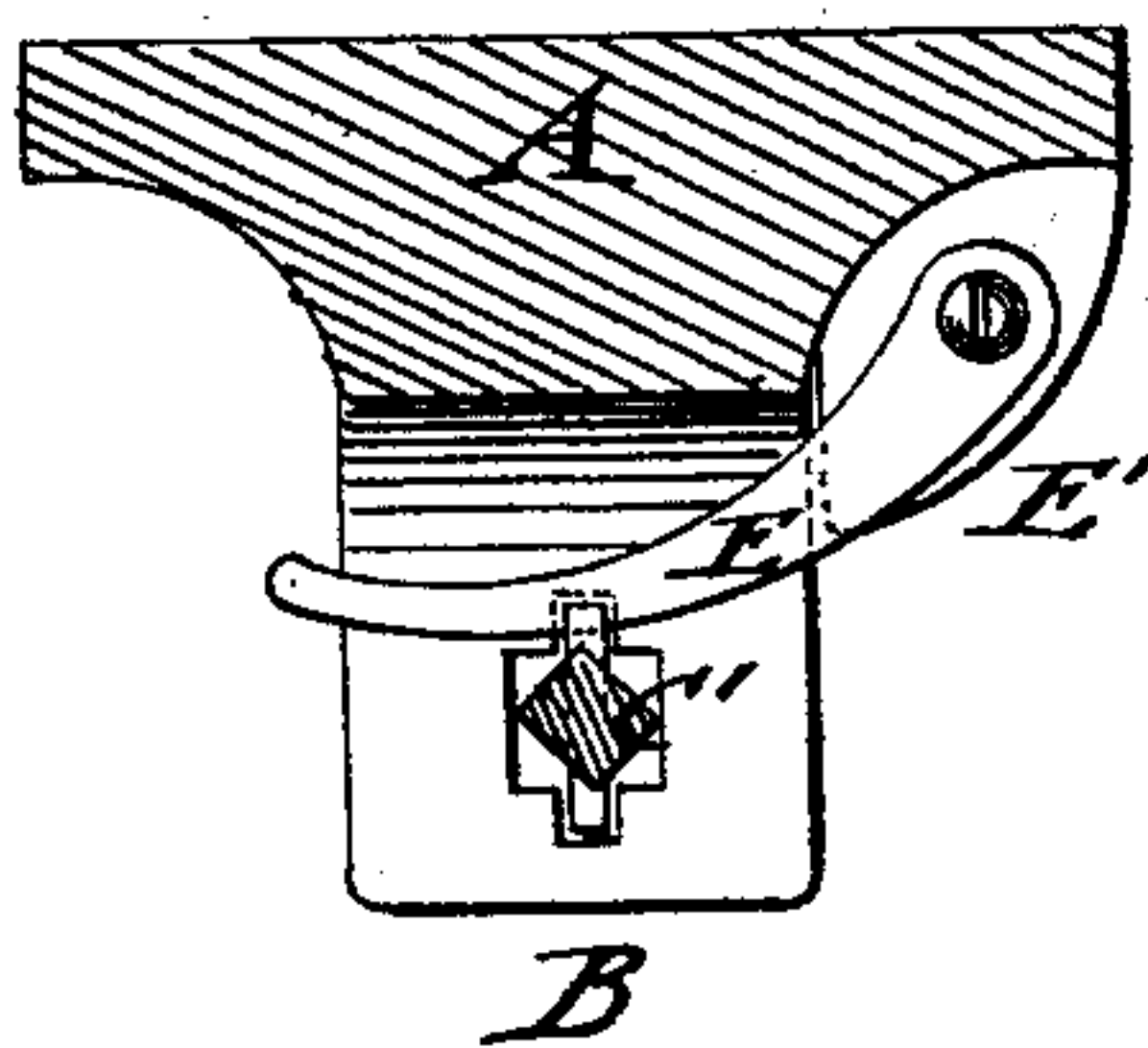


Fig. 3.



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NIMROD GOODER AND BERNARD LAVIN, OF KANSASVILLE, WIS.

IMPROVEMENT IN MACHINES FOR PUNCHING OR SHEARING.

Specification forming part of Letters Patent No. **196,576**, dated October 30, 1877; application filed September 1, 1877.

To all whom it may concern:

Be it known that we, NIMROD GOODER and BERNARD LAVIN, of Kansasville, in the county of Racine and State of Wisconsin, have invented a new and Improved Machine for Punching or Shearing, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section on line *x x*, Fig. 2; Fig. 2 a front elevation, and Fig. 3 a horizontal section on line *y y*, Fig. 2, of our improved punching and shearing machine.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved machine for punching or shearing metal for blacksmiths' shops, and other purposes; and it consists of a vertical frame, with brackets for guiding the vertically-sliding punch, cutter, or other interchangeable tool, and with a bottom bracket for the die or fixed cutter, the sliding tool being operated by an eccentric cam-lever bearing on a hinged pressure-equalizing top plate of the tool, and being returned by a strong spring pivoted to a side bracket of the main frame.

In the drawing, A represents the supporting-frame, of suitable strength, that is firmly attached in upright position to a post or to the wall of the blacksmith's or other shop.

The main frame A has horizontal brackets B, of which the upper brackets serve for the purpose of guiding the interchangeable punching, shearing, or other tool C, while the lowermost bracket B forms the seat for the corresponding die or fixed cutter-plate C'.

The upper brackets have square guide-recesses for the shanks of the tools, and the lower bracket a square recess for the dies or

cutters, which are readily interchanged, according to the size of holes to be punched or work to be done.

The operating cam-lever D is pivoted eccentrically to the frame A, above the upper guide-bracket B, and brought to bear on a hinged plate, D', that rests on the upper shank end of the punching or shearing tool C, so as to equalize the pressure on the tool in carrying down the cam-lever. The lower part of the sliding tool is engaged by a strong spring, E, that is pivoted to a side bracket, E', of the main frame A, and that raises the punch after punching.

The spring engages either a projecting pin of the punch or a recess of the same, and admits the easy changing of the tools, by simply pushing back the spring, when the tool will drop through the recess of the lowermost bracket, so that another tool may be put in.

The machine admits cold punching, shearing, and other work, in convenient and handy manner, being of strong construction and, on account of its simplicity, readily kept in repair. Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of a vertically-guided and interchangeable tool with the pivoted actuating cam-lever and interchangeable equalizing-plate acting on the top of the tool, and with a pivoted spring engaging the lower part of the tool, substantially as and for the purpose specified.

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