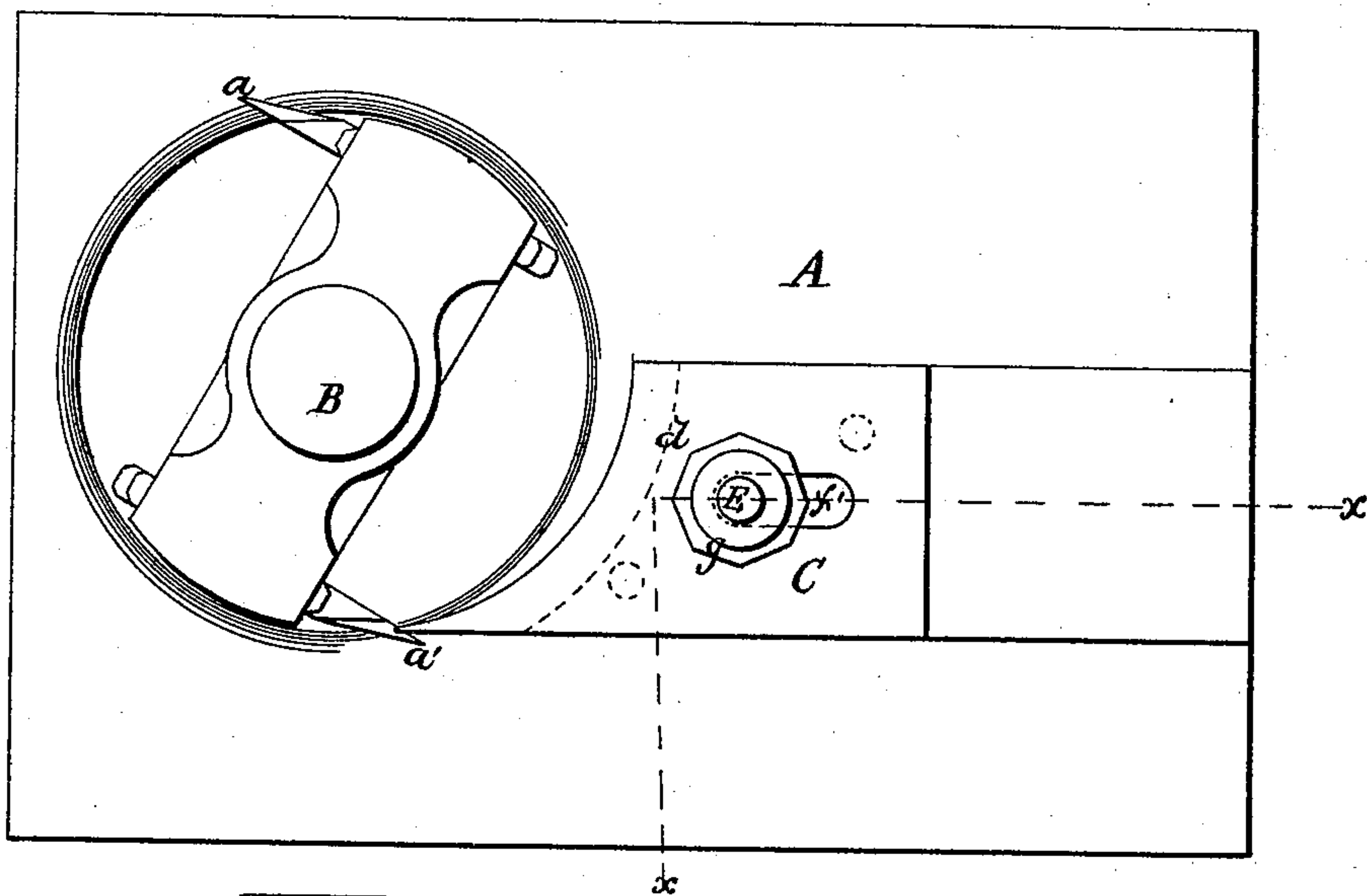


P. CARDIFF.  
Guide for Matching-Machines.

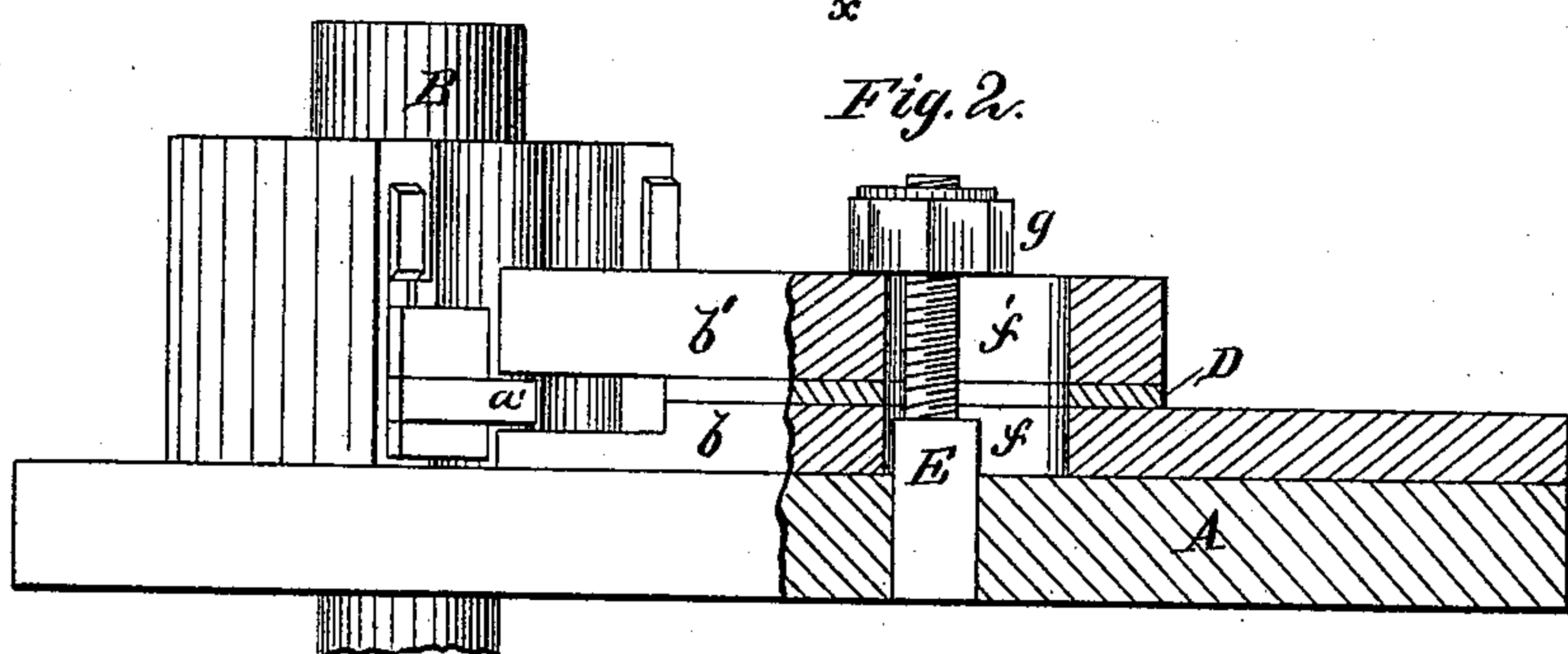
No. 211,699.

Patented Jan. 28, 1879.

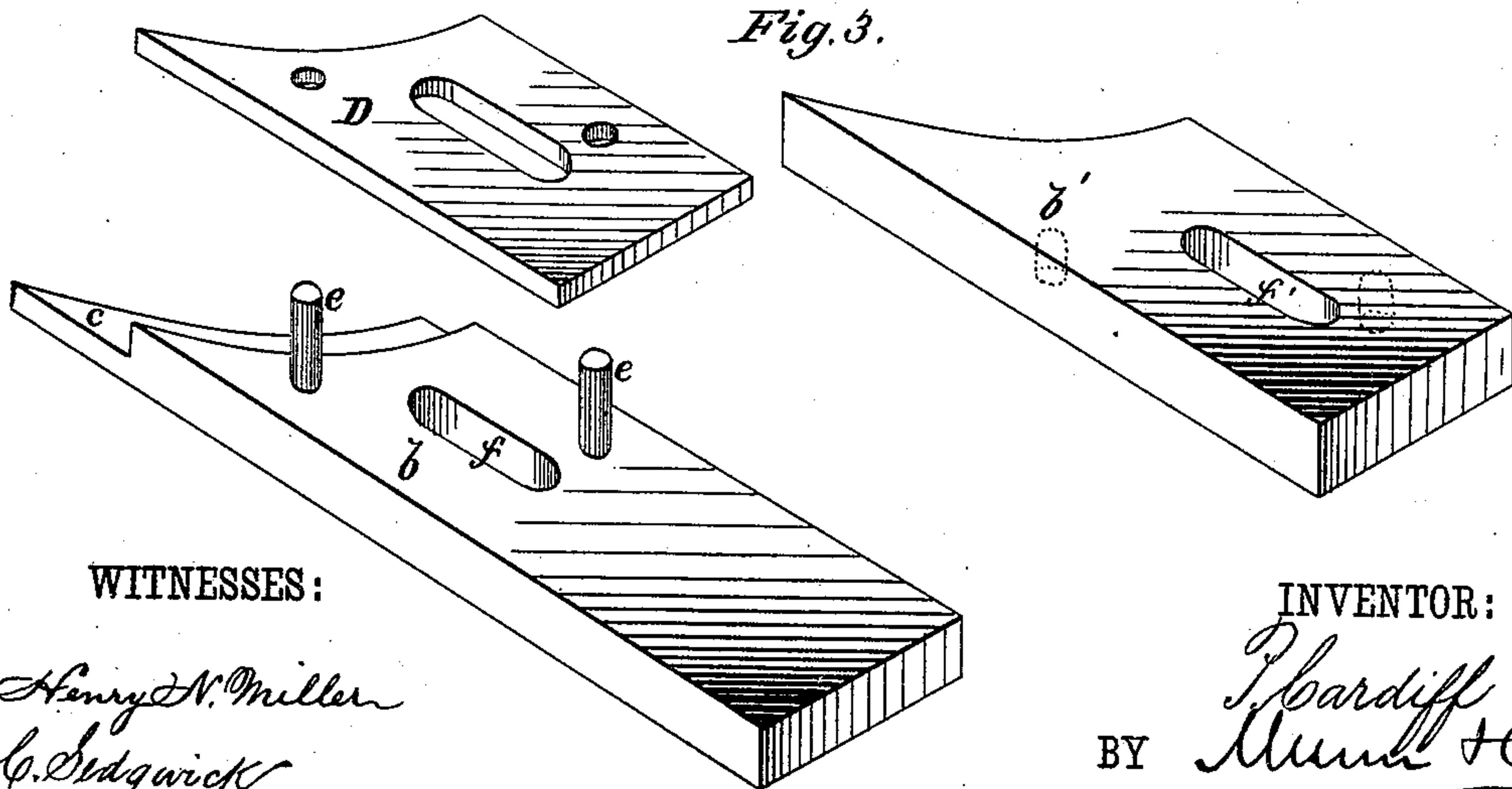
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

PATRICK CARDIFF, OF MARSHFIELD, OREGON, ASSIGNOR TO HIMSELF AND JONATHAN M. ADAMS, OF SAME PLACE.

## IMPROVEMENT IN GUIDES FOR MATCHING-MACHINES.

Specification forming part of Letters Patent No. **211,699**, dated January 28, 1879; application filed November 7, 1878.

*To all whom it may concern:*

Be it known that I, PATRICK CARDIFF, of Marshfield, in the county of Coos and State of Oregon, have invented a new and useful Improvement in Guides for Matching-Machines, of which the following is a specification:

The object of this invention is to prevent the planer-knives from splitting the edges of the boards or breaking them when coming in contact with knots.

It consists in providing the guide with an eccentric groove, through which the grooving-knife passes, the projecting sides of the groove being approached near to the edging-knives, the said groove being capable of enlargement to adapt it to receive knives of various sizes.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan of a matcher-head with my improved guide attached to the bed-plate of the machine. Fig. 2 is a section of the same on line *x x*, Fig. 1. Fig. 3 represents perspective views of the two parts of the guide and shim for separating the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the bed-plate of the machine, and B is one of the matcher-heads, carrying the grooving-knives *a a'*.

The guide is designated by the letter C. It is composed of two parts, *b b'*, the ends of which adjacent to the matcher-heads being cut into segments of circles eccentric to the axis of the head B. The end of part *b* is likewise rabbeted, as shown at *c*, so that when the two parts are placed together a groove is formed in the end of the guide next the head, said groove being eccentric to the axis of the head, as indicated by the dotted lines *d* in Fig. 1.

Dowel-pins *e e* are inserted in the part *b* of the guide, and in the part *b'* are corresponding holes. A slot, *f*, is also made in part *b*, and a similar one, *f'*, in part *b'*.

D represents a shim, provided with a slot and holes corresponding to those in the pieces *b b'*, which is placed between the said pieces,

to increase the width of the groove to suit the width of the knives in the head.

The guide is secured to the plate A by a bolt, E, fixed in the plate and passed through the slots in the pieces *b b'*, a nut, *g*, being screwed on the bolt when the pieces are placed in position, securing them between it and the bed-plate, as clearly indicated in Fig. 2. By means of this nut and bolt the distance of the guide from the matcher-head can be adjusted so as to accommodate it to longer and shorter knives.

The operation of my invention is as follows: The guide is adjusted so that the ends will be within about a thirty-second ( $\frac{1}{32}$ ) of an inch of the edging-knives, the grooving-knife entering the groove in the guide. In this way, when a board is passed through the matcher, the edge will be guided and supported to within so short a distance of the edging-knives that there will be no liability of the sides of the groove splitting off, as is so commonly the case where the old form of guide is used. That could not be adjusted beyond the space occupied by the grooving-knife. Consequently between that point and the edging-knife it was unsustained, the result being that, when running across the grain or over knots, the knives split the edges and broke them to a great extent.

To increase the width of the groove it is only necessary to insert between the pieces *b b'* one or more shims, according to the width desired.

Owing to the eccentricity of the groove in the guide to the axis of the matcher-head, considerable space is allowed between the bottom thereof and the circle described by the knives. Consequently there is no danger of the groove becoming choked.

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

1. As an improvement in guides for matching-machines, the guide C, composed of parts *b b'*, which, when placed together and secured by bolt E to bed-plate A, form a groove adjacent to the matcher-head, to receive the grooving-knives *a a'* in their movement, substantially as described.



2. As an improvement in guides for matching-machines, the guide C, provided with a groove in the end adjacent to the matcher-head, that enables it to be moved up to the edging-knives, so as to just clear the same when the machine is in operation, whereby support is afforded to the board, so that there is

no liability of the edges being split or broken by the knives, substantially as described.

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Witnesses:

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