

(No Model.)

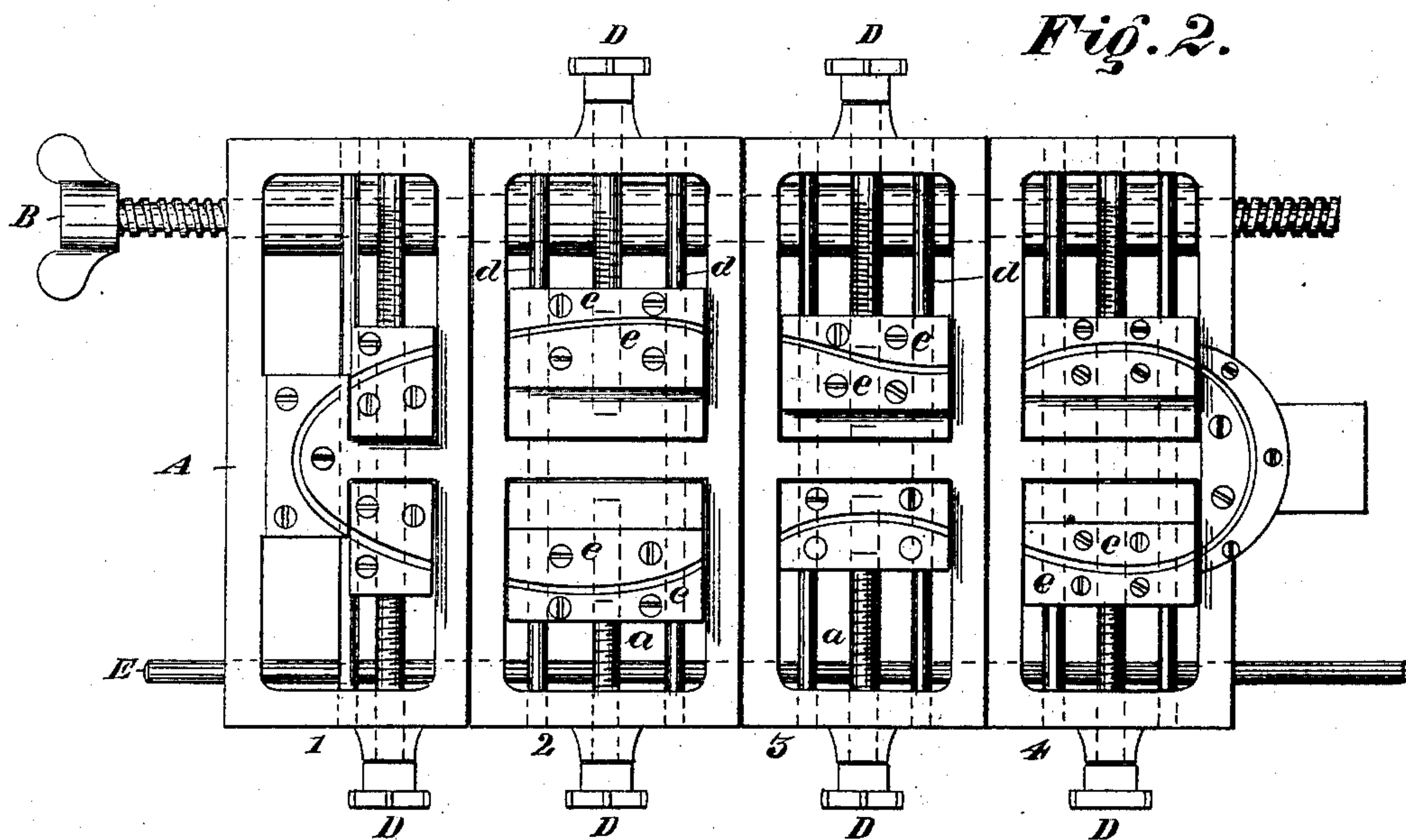
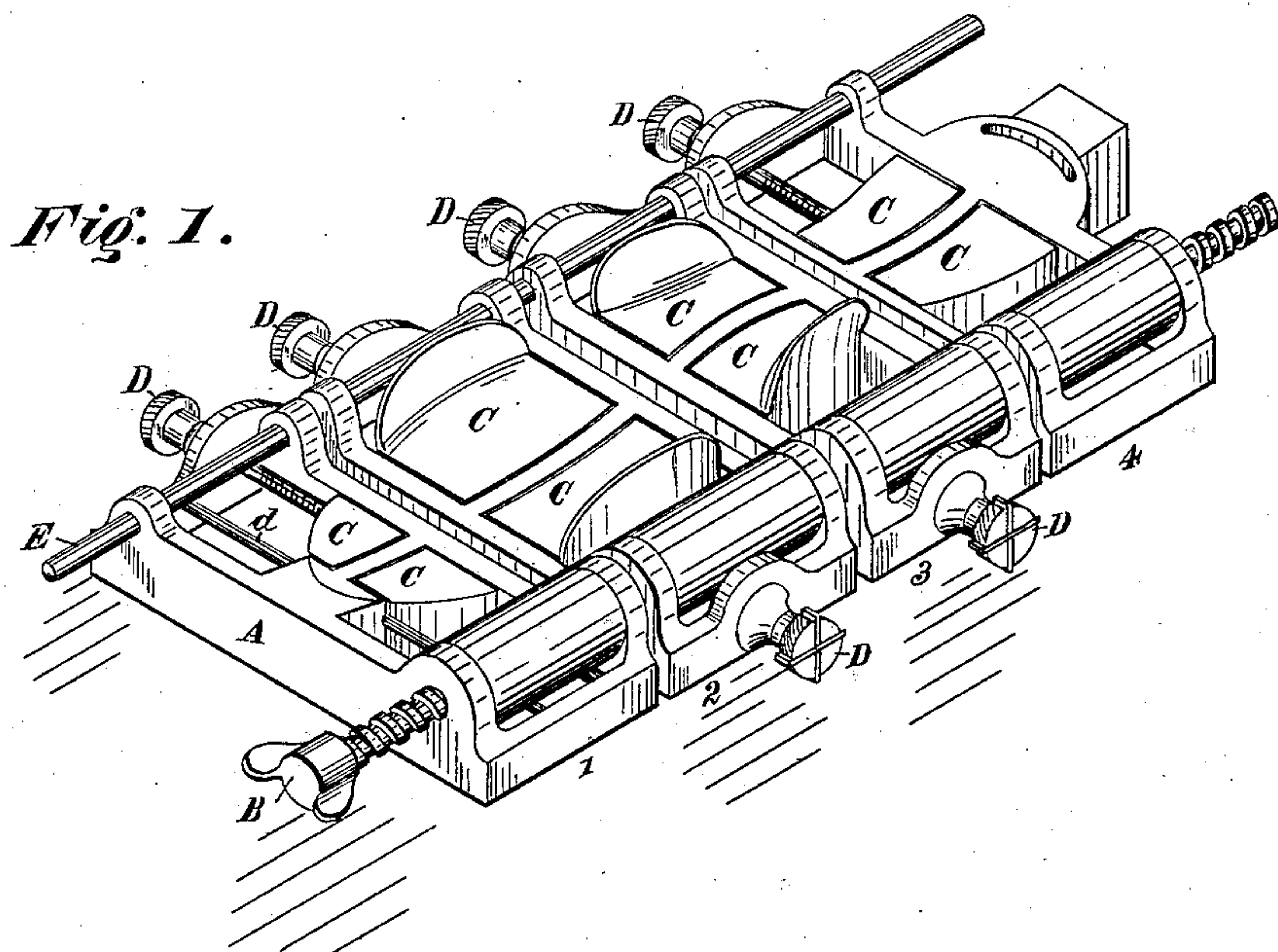
2 Sheets—Sheet 1.

A. S. ADLER.

APPARATUS FOR GRADING AND CUTTING SOLES.

No. 341,204.

Patented May 4, 1886.



Witnesses :

Edward A. Osee,  
H. B. Applewhite,

Inventor.

Abraham S. Adler  
per atty  
A. H. Evans & Co.

(No Model.)

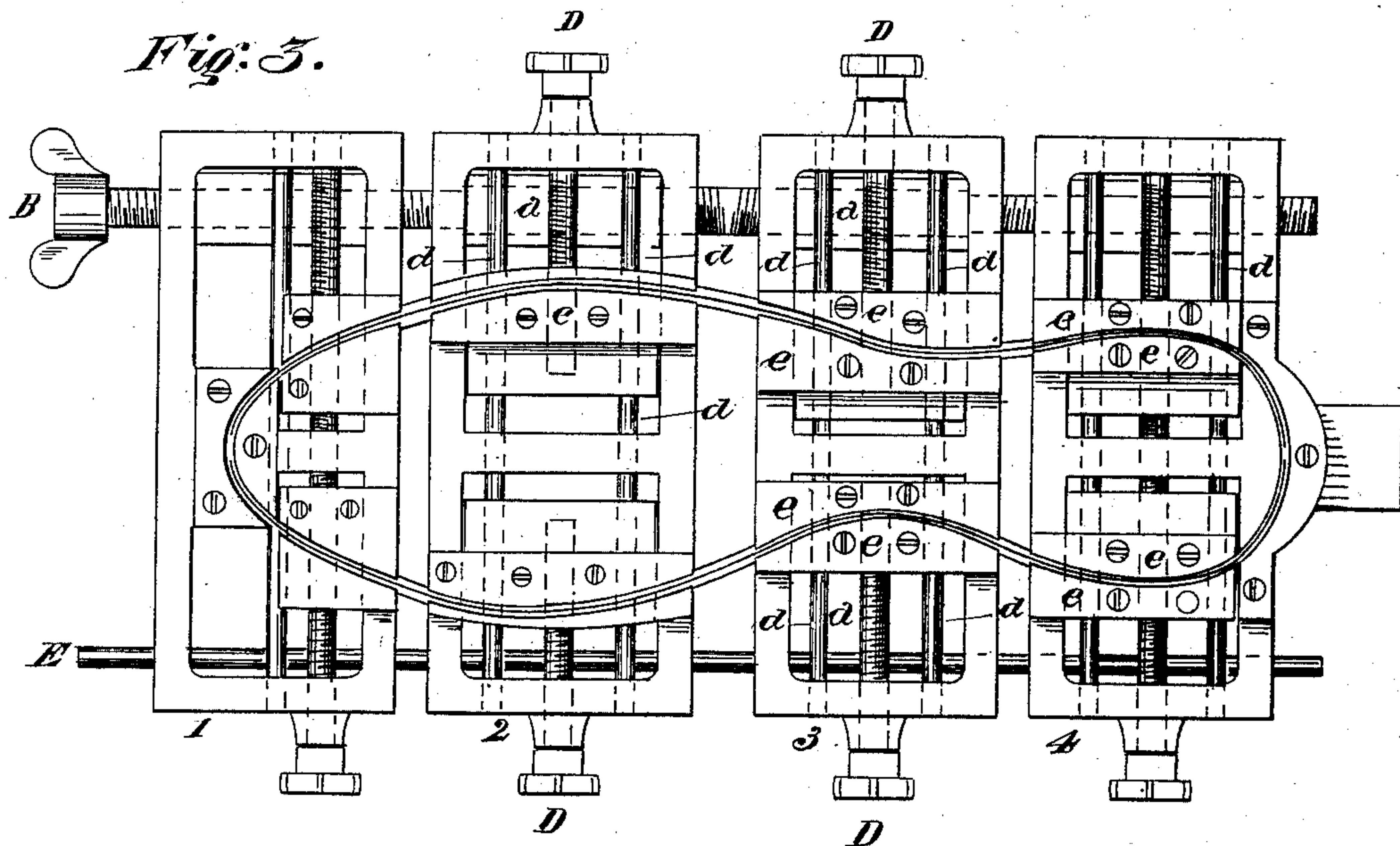
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A. S. ADLER.

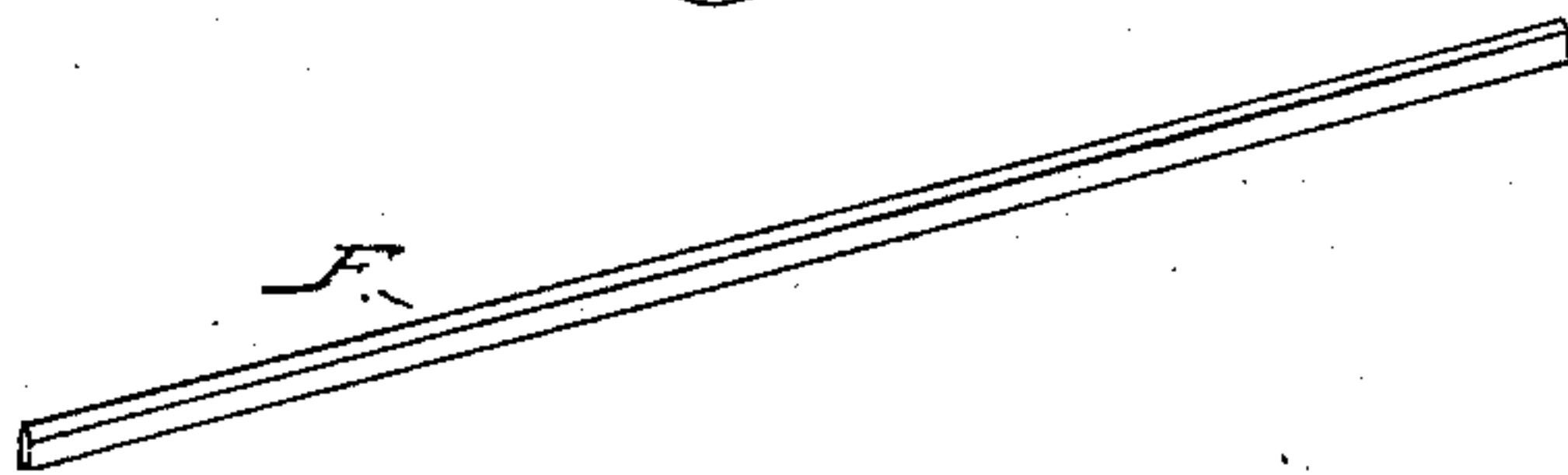
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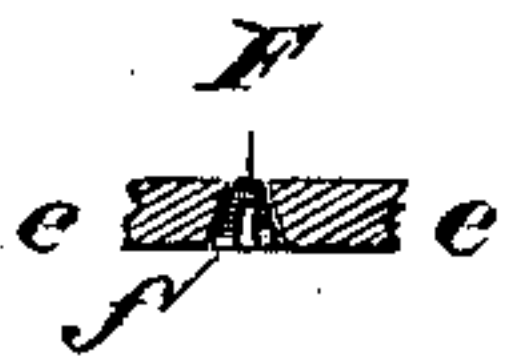
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*Fig. 5.*



*Fig. 4.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

ABRAHAM S. ADLER, OF BALTIMORE, MARYLAND.

## APPARATUS FOR GRADING AND CUTTING SOLES.

SPECIFICATION forming part of Letters Patent No. 341,204, dated May 4, 1886.

Application filed March 6, 1886. Serial No. 194,212. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM S. ADLER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Improvement in an Apparatus for Grading and Cutting Soles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a perspective view of one face of my apparatus. Fig. 2 shows the reverse face without the cutting-instrument. Fig. 3 is the same view with the knives in position. Figs. 4 and 5 are details, to be referred to.

My present invention relates to an apparatus for grading and cutting soles for shoes; and it consists in the several combinations of devices hereinafter described and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the drawings, A represents the frame-work of my improved apparatus, divided into the four sections, 1, 2, 3, and 4, held in position and operated by the screw B. This screw is constructed with a varying pitch, as shown in Fig. 3, the larger diameter being that portion of the screw connecting sections 2 and 3, and whereby these two sections are separated from each other twice the distance that the other sections are separated by the same movement of the screw B. The object gained by this local difference in the pitch of the screw B is the preservation of the proportion of the soles when graded for the different sizes of shoes—an important point, which will be readily understood and appreciated by any one skilled in the art to which this invention appertains. By this means, when grading the length of the sole for a larger sized shoe, the increased length of the sole is properly distributed along its whole body, according to the laws governing the natural growth of the foot. The several sections are recessed at *a a*, as shown in Figs. 2 and 3, and in these recesses are fitted

the blocks C, sliding on the guide-rods *d* and governed by the screw-bolts D, whereby I am enabled to adjust the width of the sole to any desired size of shoe.

On the opposite side of the frame-work to the screw B, I insert the guide-rod E, passing through the several sections, thereby securing an even and parallel movement of the several sections when being acted on by the screw B.

Fig. 2 represents the reversed face of my apparatus, and arranged (after the size has been properly graded) to receive the flexible blade F, which fits into the dovetailed groove *f*, formed between the removable plates *e*, which are secured by screws to the sliding blocks C. The adjacent faces of these plates *e* are beveled on their under edges, so as to form the groove *f*, in which the flexible blade F fits snugly and moves freely as it is passed from heel to toe, cutting any desired sole from the leather without the use of a pattern.

If desired, the plates *e* may be extended so as to meet above the section-frames, and thus form a continuous channel for the travel of the flexible blade around the sole.

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

1. In an apparatus for grading and cutting leather, the frame A, divided into recessed sections, in combination with the screw B, having threads of variable pitch, substantially as herein described.

2. The frame A, divided into recessed sections, and screw B, having threads of variable pitch, in combination with the sliding blocks C and screws D, substantially as and for the purpose set forth.

3. The frame A, divided into recessed sections, a screw for operating said sections, the blocks C, and screws D, in combination with the plates *e* and flexible blade F, all constructed and arranged to operate substantially as and for the purpose described.

ABRAHAM S. ADLER.

Witnesses:

ALEXANDER FRANK,  
SIMON ROSENBERG.