

JOHN S. PALMER.

Improvement in Machines for Rolling Stock for Finger Rings.

No. 124,971.

Patented March 26, 1872.

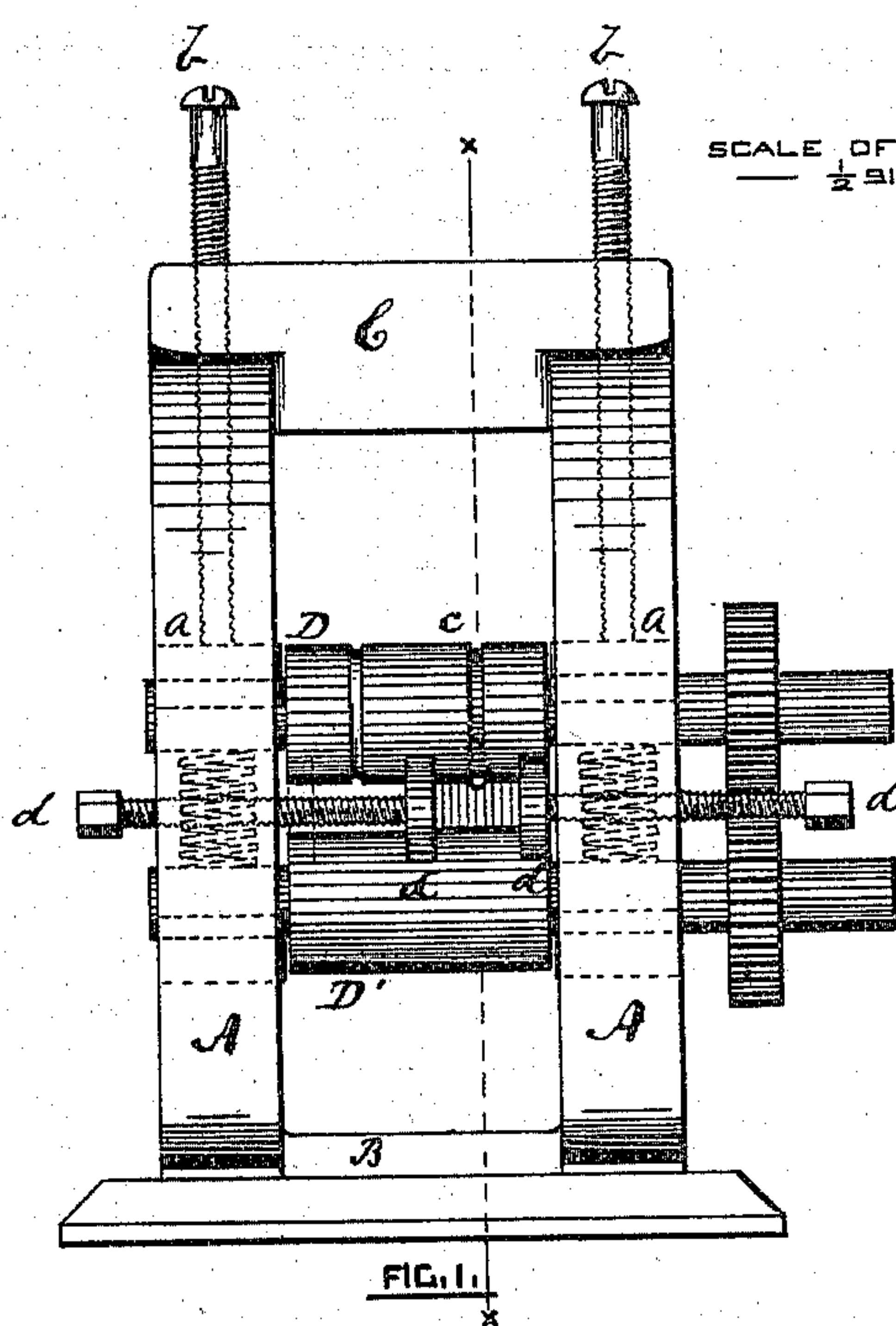


FIG. 1.

SCALE OF MACHINE & DIES  
— 1/2 SIZE OF MODEL —

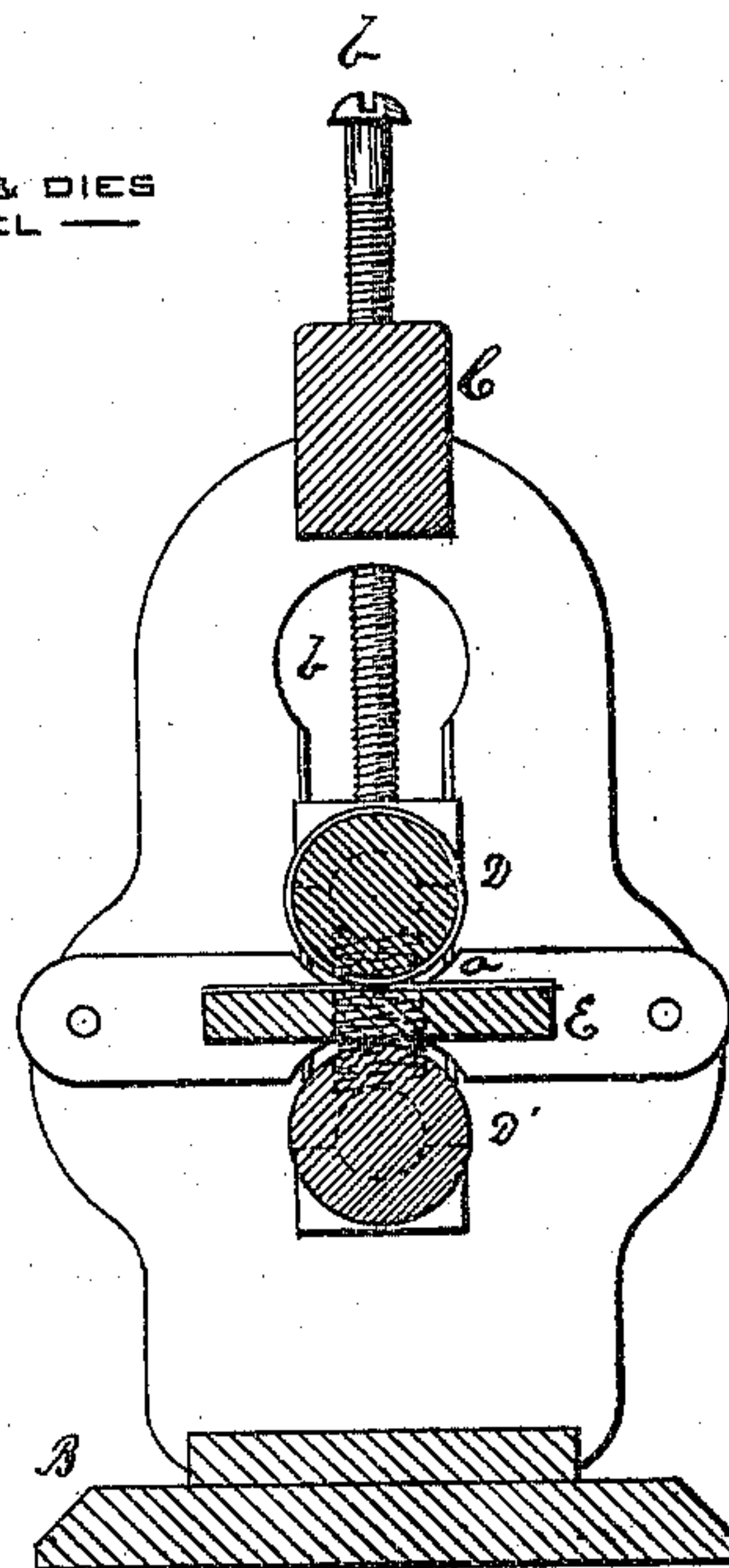


FIG. 2.

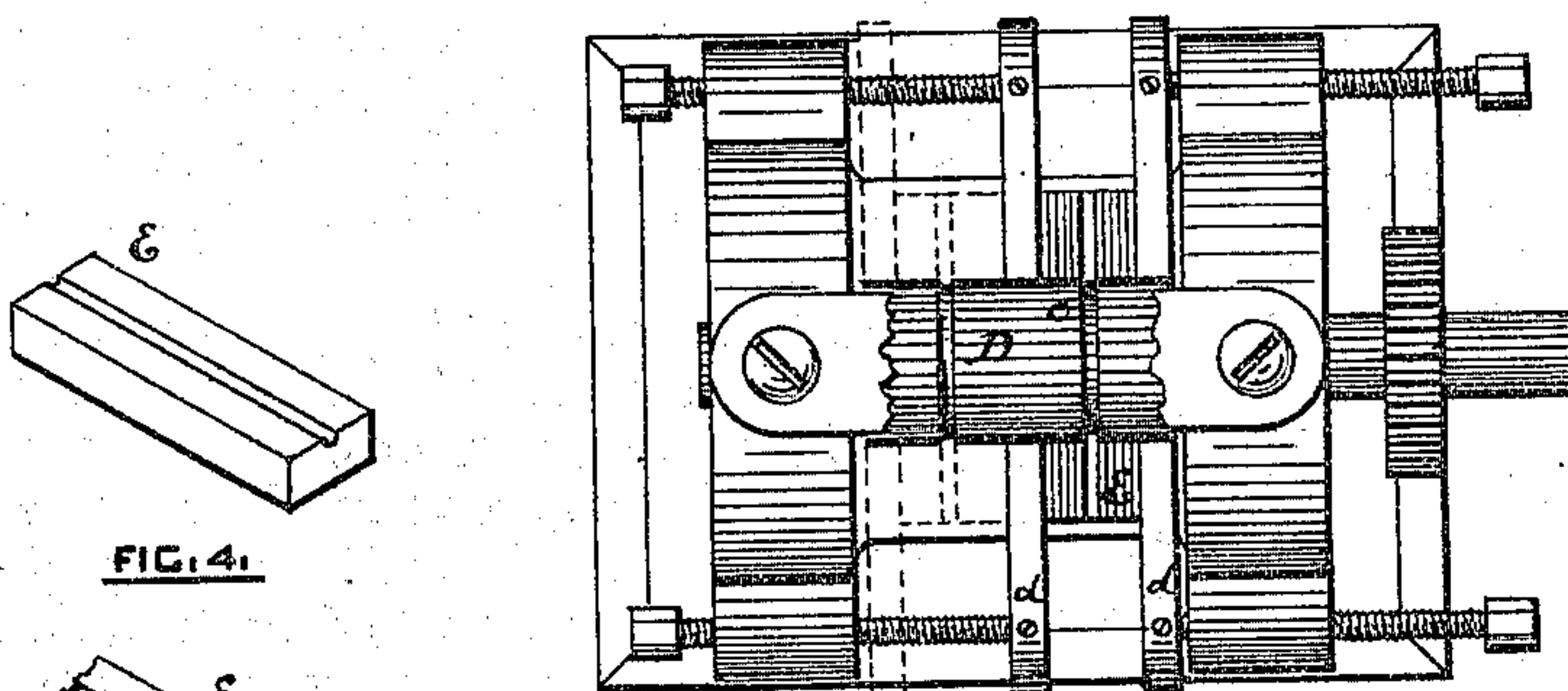


FIG. 3.

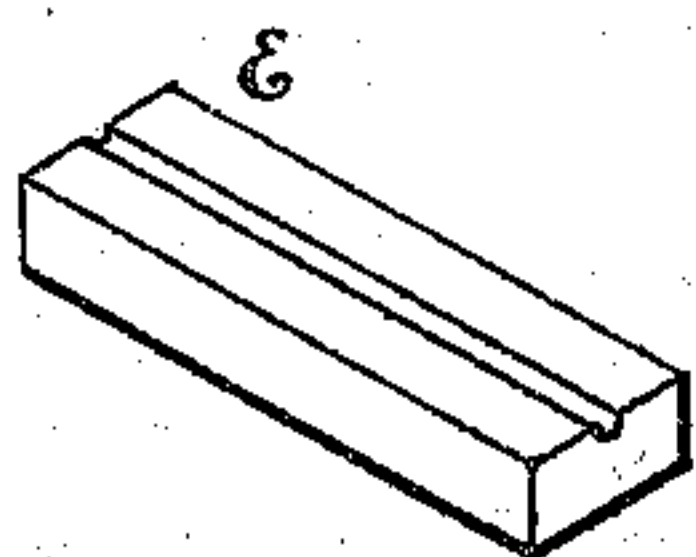


FIG. 4.

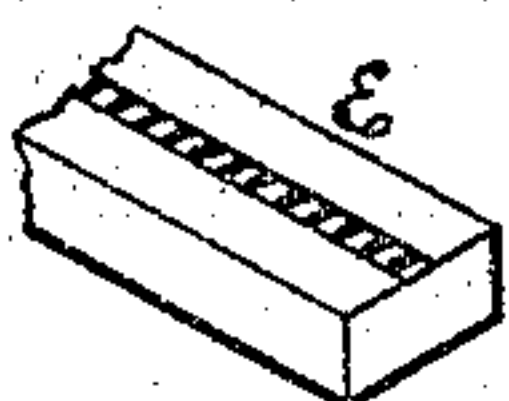


FIG. 5.

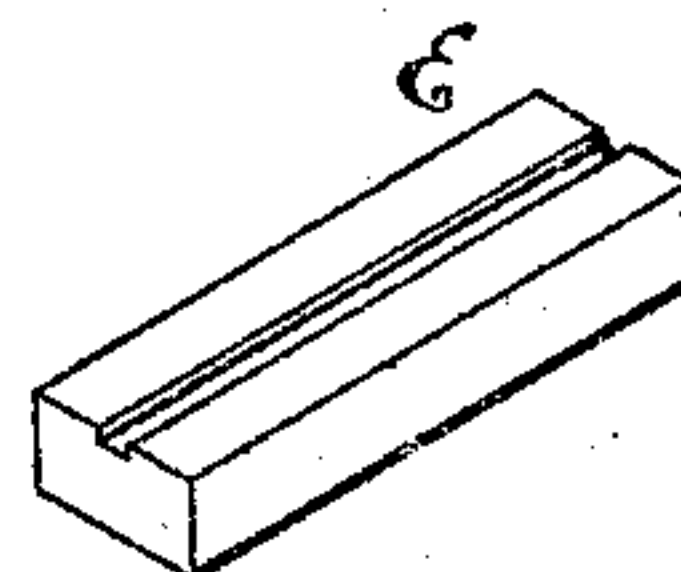


FIG. 6.

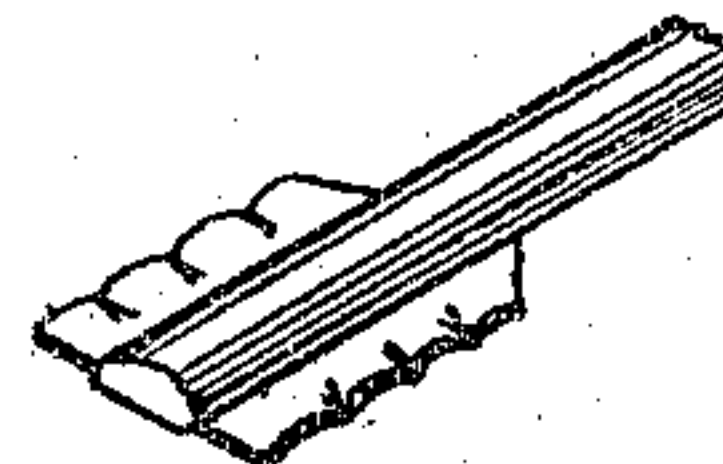


FIG. 7.



FIG. 8.

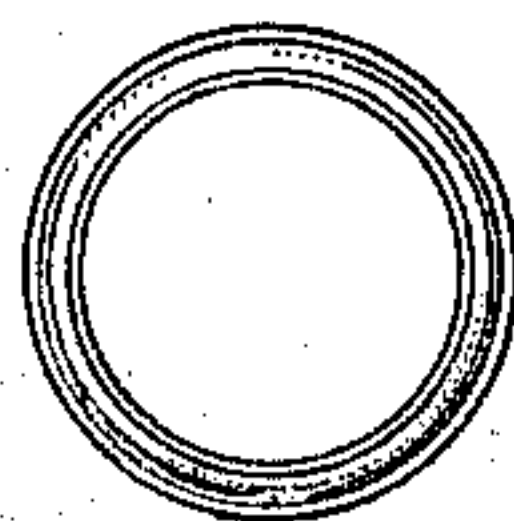


FIG. 9.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN S. PALMER, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN MACHINES FOR ROLLING STOCK FOR FINGER-RINGS.

Specification forming part of Letters Patent No. 124,971, dated March 26, 1872.

*To all whom it may concern:*

Be it known that I, JOHN S. PALMER, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Machines for Rolling Stock for Finger-Rings, &c.; and I do hereby declare that the following specification, taken in connection with the drawing, making a part of the same, is a true, clear, and exact description thereof.

Figure 1 is a front elevation. Fig. 2 is a transverse section on a plane through the line *xx* of Fig. 1. Fig. 3 is a top view with upper cross-bar removed. Figs. 4 5 6 represent different forms of die-blocks used with the machine. Figs. 7 and 8 represent the stock after it has come from the machine and partly trimmed. Fig. 9 is a complete ring of one form.

My invention specially relates to machinery for rolling the stock to manufacture the improved finger-ring which is the subject of the Letters Patent heretofore granted to me December 27, 1870. Such machinery is also applicable to the manufacture of stock for other articles of jewelry which are made of precious metal, overlaid upon both sides of a base metal plate in which the seam formed by bringing together the precious-metal surfaces is required to be specially located. The invention resides in the employment of a pair of pressure-rollers, one of which is grooved, to form a portion of the exterior surface of the blank, in combination with a die-block or bed, grooved or channeled correspondingly with the roller; such grooved die-block and grooved roller together fashioning the blank and disposing the overlying surface-metal as hereinafter described.

A A are a pair of standards, constituting, with the base-piece B and cross-bar C, a frame. D D' are pressure-rollers, whose journals are mounted in boxes set in the standards. Coiled springs *a a* are set between the boxes, which act to spread the rollers apart, the standards being slotted above the upper pair of boxes to allow of an upward movement, and pressure-screws *b b* working through nuts formed in the cross-bar C serve to adjust the position of the upper roller relatively to the lower roller. The surface of one (preferably the upper) roll-

er is grooved, *c*, and the office which this groove performs in connection with the channeled die-block presently to be described will appear. E, Figs. 4 5 6, represent die-blocks. The upper face of each is channeled longitudinally, and the shape of the channel corresponds with the shape which is to be given to the outer face of the ring blank. Thus the block, Fig. 4, is appropriate for making a blank for a ring with a rounded face, like that shown in Fig. 9. The block shown at Fig. 5 will produce a blank with a rectangular cross-section, while the block shown at Fig. 6 will be used, if a ring-blank, with a wave-line face if desired. In employing the machine a die-block is selected and adjusted with reference to the grooved roller D by means of the adjustable guides *d d*, so that the channel upon its face will correspond, as seen at Fig. 1, in position with the groove in the roller. Now it will be observed that the relative depths of the channel in the die-block and the groove in the roller may be such that one-half of the cross-section of the ring-blank will be formed by each, or a greater portion be formed by one than by the other; and thus the line of the junction of the two overlying plated surfaces of the metal of which the blank is composed can be arranged so as to produce a blank for the improved article which is the subject of the Letters Patent granted to me December 27, 1870, before referred to.

The metal to be shaped is placed upon the bed-block, and both block and metal are made to pass between the rollers under pressure sufficient to enable the groove in the roller and the channel in the bed-block to completely shape the blank. The "fin" of metal, which is formed by the operation of rolling, is to be trimmed off, after which the blank is ready to be finished into a ring in the usual way.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the grooved pressure-roller D, channeled bed-block E, guides *d d*, and roller D, substantially as described, for the purposes specified.

JOHN S. PALMER.

Witnesses:

EDWIN C. PEIRCE,  
PETER F. HUGHES.