

(No Model.)

A. R. BAKER.

NUMBERING ATTACHMENT FOR PRINTING PRESSES.

No. 305,781.

Patented Sept. 30, 1884.

Fig. 1.

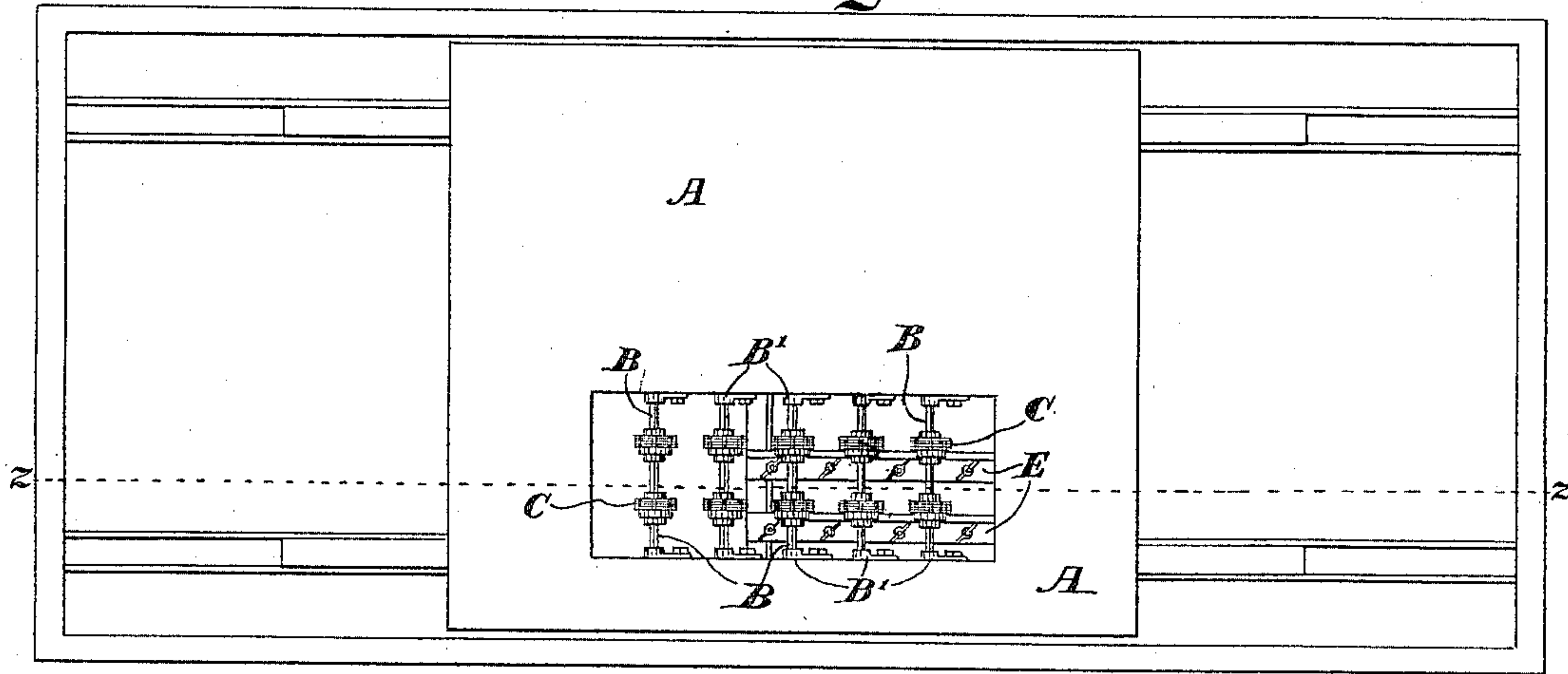


Fig. 2.

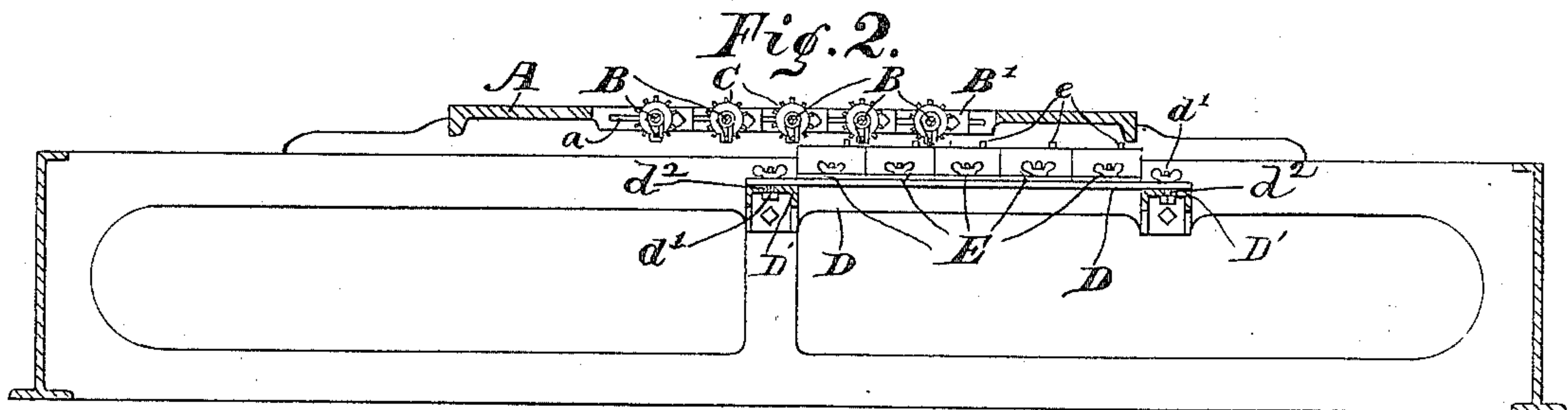


Fig. 3.

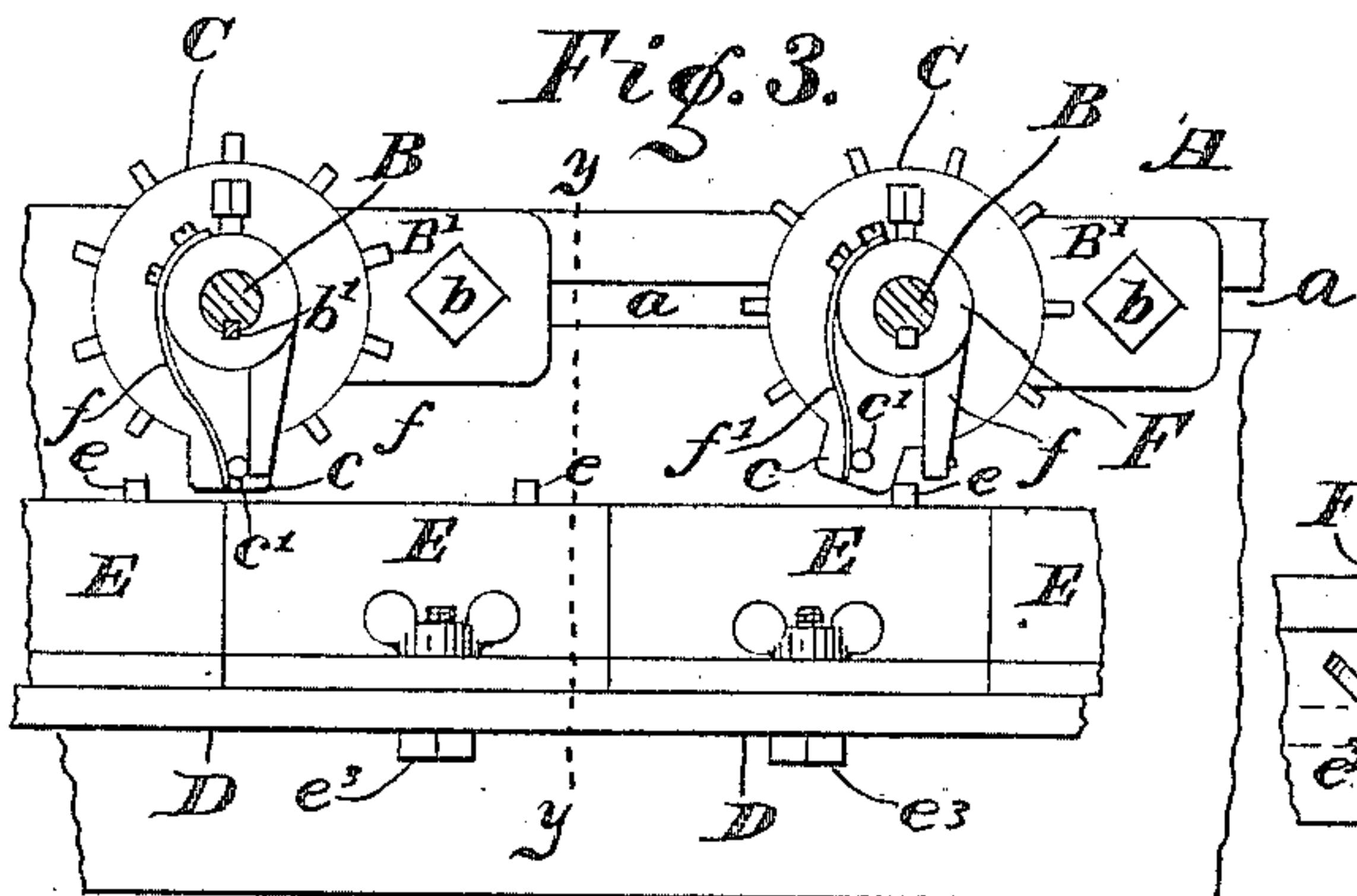


Fig. 4.

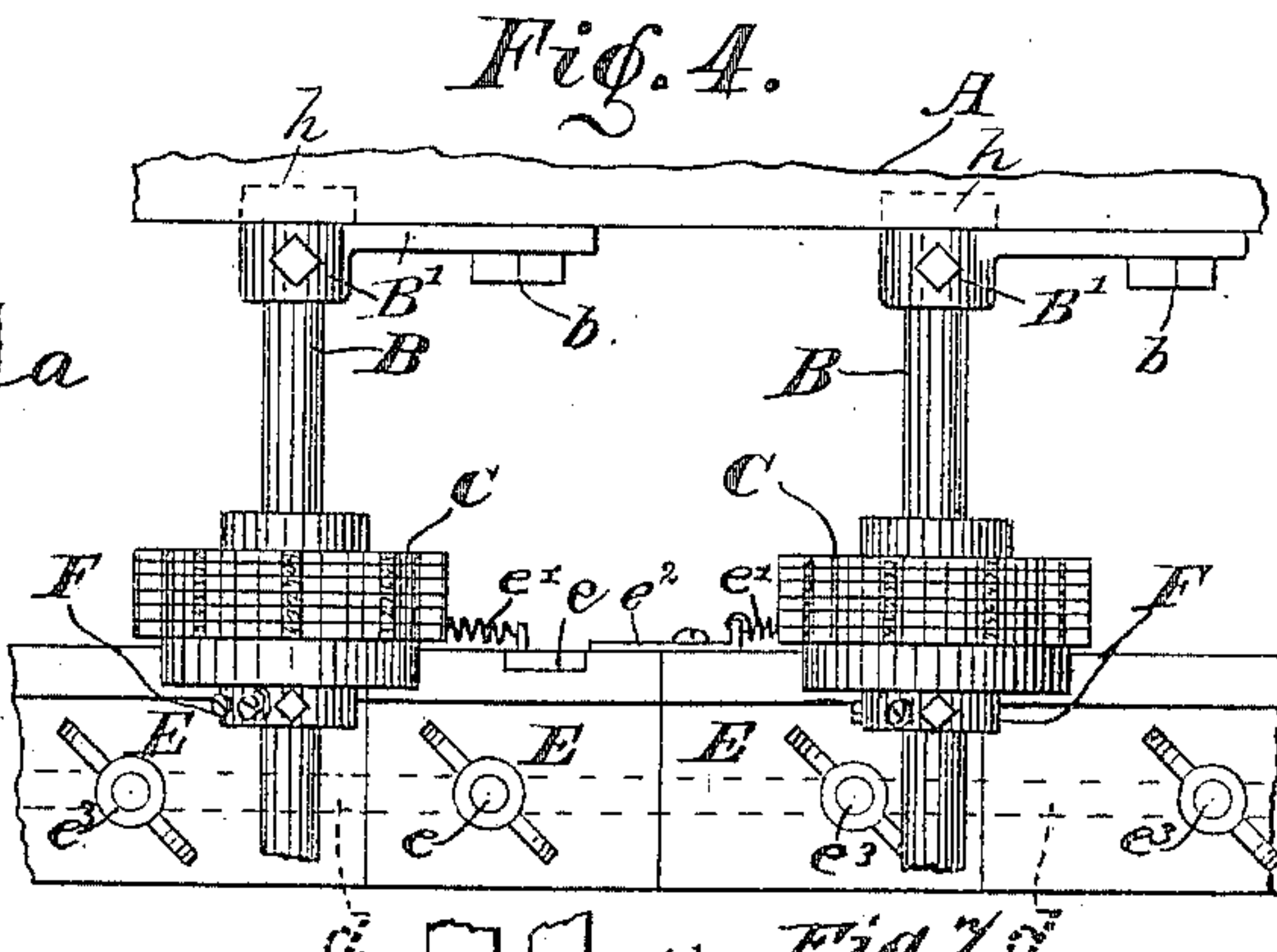
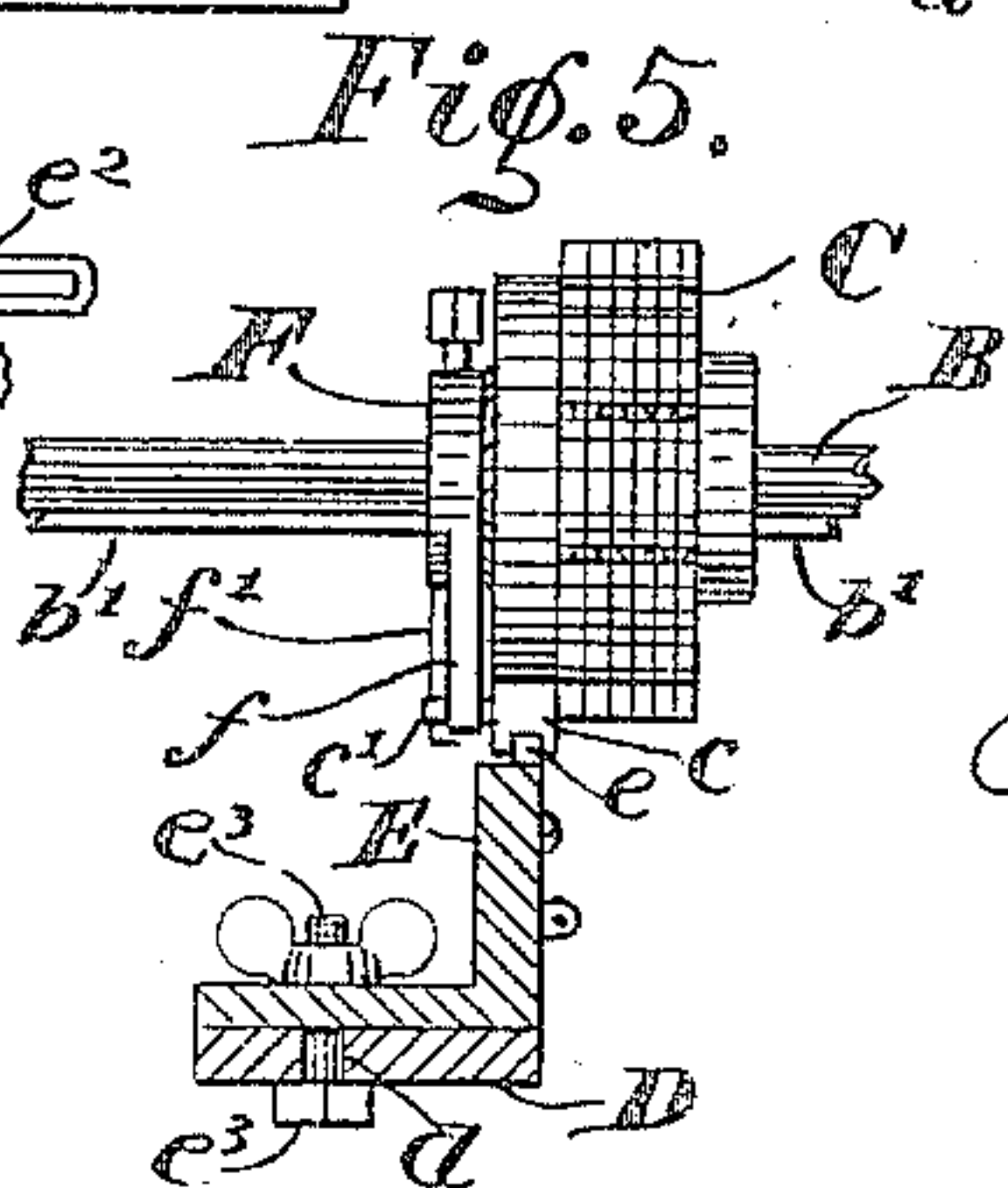


Fig. 6.

WITNESSES.

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Fig. 5.



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# UNITED STATES PATENT OFFICE.

ALBERT R. BAKER, OF INDIANAPOLIS, INDIANA.

## NUMBERING ATTACHMENT FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 305,781, dated September 30, 1884.

Application filed October 6, 1883. Renewed May 27, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT R. BAKER, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Numbering Attachments for Printing-Presses, of which the following is a specification.

This invention relates to improvements in numbering attachments for printing-presses, wherein numbering devices are provided with mechanism for operating the same to bring the number-printing surfaces into proper position for printing the numbers; and the object of my invention is to provide for a greater variety of adjustments of the numbering devices than has heretofore been secured, whereby any desired number of blanks contained in a single sheet may be numbered consecutively from sheet to sheet, or may be numbered otherwise than consecutively, when desired.

The invention consists of the novel construction hereinafter described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a top or plan view of the bed of a printing-press and the numbering-heads therein embodying my said invention; Fig. 2, a vertical section thereof on the dotted line *z z*; Fig. 3, a detail view similar to a portion of Fig. 2, but on an enlarged scale; Fig. 4, a top or plan view of the parts shown in Fig. 3; Fig. 5, a view looking to the left from the dotted line *y y* in Fig. 3; and Fig. 6, a view of the opposite side of the catch *E*, showing the retractile spring, &c.; and Fig. 7 is a detail view showing the adjustable connection between bar *D* and the frame-work.

In said drawings, the portions marked *A* represent the bed of the printing-press, adapted to act as carrier for the numbering-heads; *B*, shafts therein on which to mount the numbering-heads; *C*, said numbering-heads; *D*, bars on which catch-blocks carrying spring-catches are mounted; *E*, said catch-blocks, and *F* hubs on the shafts alongside the numbering-heads.

The bed or carrier *A* is an ordinary bed, except that it is cut away to admit the shafts and numbering-heads, as shown. It has slots or ways in the sides of the orifice formed by

cutting it away, in which the bearings for the shafts *B* are secured.

The shafts *B* are mounted in bearings *B'*, located at the edges of the orifice in the bed, and are not revoluble. The bearings, however, are movable, so that the heads can be adjusted to a greater or less distance apart, and thus adapt the machine to use with different-sized forms. Said bearings are secured to the sides of the orifice in the bed by means of bolts *b*, which enter slots *a* in said sides. These bearings are to have projections *h*, (see dotted lines in Fig. 4,) which also enter said slots *a* and serve to steady the bearings. By loosening these bolts the bearings can be moved along in said slots, and the position of the shafts thus adjusted.

The numbering-heads *C* are similar to those used in ordinary numbering-machines, and operate in the same manner. Each has a projection, *c*, which is adapted to come in contact with the catches *E* as the bed moves back and forth, and be thus partially revolved in the usual manner. These heads are adapted to be moved along their shafts, and thus adjusted to larger or smaller work in this direction; but will not rotate thereon, being secured from so doing by splines *b'*.

The bars *D* are secured to the frame-work *D'* of the press underneath the bed by bolts *d'*, and support the catches *E* in such relation to the numbering-heads as to operate the same as they pass back and forth over said catches. The bolts *d'* are arranged in slots *d''* (see Fig. 7) in the frame-work *D'*, which slots run at right angles to the bars *D*, in order to adapt the latter to be moved farther from or nearer to each other to correspond with the movement of the numbering-heads on their shafts.

The catch-blocks *E* are mounted on the bars *D*—one for each numbering-head. Each is provided with a spring-catch, *e*, secured in upright position in one direction, as shown, but is adapted to be pushed over in the other, and thus permit the heads to travel reversely over them without being affected. A spring, *e'*, draws said catch back into upright position after the numbering-head has passed over it. This spring is secured to the block by an adjustable device, *e''*, by which its tension can be regulated. By moving the device *e''* to-



ward the catch *c*, and thus crowding the spring *c'* against the said catch, the latter will be deflected and held out of position for acting on the numbering-heads. One or more of the  
 5 catches may thus be thrown and held out of acting position to vary the order of the numbering where a consecutive order is not required. The blocks *E* are secured to the bars *D* by bolts *e'*, which pass down through slots  
 10 *d* in said bars.

The hubs *F* are rigidly mounted on the shafts *B* alongside the heads *C*, and have rigid arms *f* and spring-arms *f'*, which project downwardly and engage with the stud *c'* on the projection *c*.  
 15

The arms *f* prevent the ratchet-wheels of the numbering-heads from being turned too far back, and the spring-arms *f'* throw them back into position after being operated by the catches *E*.  
 20

The operation of my invention is as follows: The ordinary bed of the printing-press being replaced by the bed shown, containing the numbering-heads, the shafts of the heads are  
 25 then adjusted to a distance apart corresponding to the width of the blank to be printed. If only one set of numbers is to be used, a single row of numbering-heads is arranged in proper position on the shafts. If two or more  
 30 are to be used, as in case of checks having stubs, or duplicate or triplicate blanks of any kind, two or more rows of numbering-heads are employed. In the drawings two rows are shown in substantially the position they would  
 35 occupy in the printing of ordinary checks or receipts, that being, perhaps, the most common use to which my invention is likely to be applied. The number in each row is in each  
 40 case equal to the number of blanks on a sheet, and the sheets are run through the press for numbering purposes in exactly the same way that they are originally to be printed.

The number of catches for revolving the disks of the numbering-heads is equal to that  
 45 of said heads for printing consecutively from sheet to sheet, and thus each one is advanced as many numbers at each revolution of the press as there are heads in use, thus keeping the numbers always running in consecutive  
 50 order.

By adjusting one or more of the catches out of acting position, as above described, so that the number of remaining catches shall be unequal to the number of numbering-heads, the  
 55 order of the numbering will be varied accordingly, and this variation or departure from the consecutive order may obviously be controlled to give any desired result according to the requirements of the art.

From the foregoing it will be readily understood that the characteristic feature of my invention is the provision of a series of trips arranged in one or more rows extended in the direction of the movement of the numbering-head carrier and corresponding to the  
 65 position of the numbering-heads, so that the

catches in one row shall severally act upon the numbering-head or all the numbering-heads corresponding to that row. Where there are more than one numbering-head corresponding to a row of catches, these numbering-heads, as shown, are to be arranged in a row extended in the direction of the movement of the carrier in the same manner as the catches; but if there is only one numbering-head corresponding to a row of catches and there are several rows of catches, it is obvious that to number consecutively with such an arrangement the single numbering-heads must form a row extended at right angles to the  
 70 movement of the carrier, and each row of catches corresponding to a numbering-head must contain as many catches as there are numbering-heads in all. For instance, if there are five numbering-heads in a row extended  
 75 at right angles to the movement of the carrier, there must be five rows of catches, each row corresponding to one numbering-head throughout the series, and there must be five catches in each row, the rows of catches being  
 80 extended in all cases in the direction of the movement of the carrier.

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

1. The combination of a movable carrier, a series of numbering devices arranged therein in one or more rows, and a series of devices, substantially as described, for operating the numbering devices, which operating devices are arranged in one or more rows extended in the direction of the movement of the carrier, and each of which rows corresponds in position to one or more of the numbering devices whereby the operating devices  
 95 of one row shall severally act upon the numbering device or all the numbering devices corresponding in position to that row, to the end that the numbering devices shall be automatically set, after numbering one sheet of  
 100 blanks, for numbering the blanks of the next succeeding sheet in consecutive order following those of the preceding sheet, substantially as specified.

2. The combination of a movable carrier, a series of numbering devices arranged therein in one or more rows extended in the direction of the movement of the carrier, and a series of devices, substantially as described, for operating the numbering devices, which operating devices are arranged in one or more rows corresponding to the row or rows of the numbering devices, and are made adjustable, whereby they may severally be moved out of acting position, substantially as shown and  
 115 described.

3. In a printing-press, the combination of the bed provided with an orifice to receive numbering-heads, said numbering-heads mounted on shafts, said shafts being mounted in adjustable bearings on the sides of said orifice, whereby the relative position of the num-  
 120 125 130



bering-heads may be changed, substantially as described, and for the purposes specified.

4. In a printing-press, the combination, with the bed provided with an orifice, wherein are  
5 mounted numbering-heads, of the catch-blocks E, mounted on the bars D and provided with spring-catches *e* as a means for operating the numbering-heads, substantially as set forth.

10 5. In a printing-press, the combination, with the bed fitted to receive numbering-heads, said numbering-heads and the bar D secured to the frame-work underneath the bed, of the catch-block E, mounted on said bar and pro-  
15 vided with spring-catches which are adapted to be pushed over in one direction, whereby the heads are permitted to travel reversely over them, substantially as described, and for the purposes specified.

20 6. The combination, in a printing-press, of the bed A, fitted to receive numbering-heads, the shafts B, on which said numbering-heads are mounted, said numbering-heads C having studs *e'*, and the hub F, said hub being rigidly  
25 mounted on the shafts B alongside the numbering-heads and provided with a rigid arm, *f*, and a spring-arm, *f'*, substantially as described, and for the purposes specified.

7. In a printing-press, the combination, with the bed A, provided with an orifice, of the  
30 shafts B, mounted in said orifice, the numbering-heads C, mounted on said shafts, the bars D, secured to the frame-work under the bed, and the catch-blocks E, mounted on said bars, substantially as set forth.

35 8. The combination, in a printing-press, with the bed A, provided with an orifice, of the bearings B' for the shafts B, adjustably mounted in slots in the sides of said orifice, substantially as set forth.

40 9. The combination, in a printing-press, of the bed A, provided with an orifice, the shafts B, mounted therein, the numbering-heads C, mounted on said shafts, the bars D, secured to the frame-work under the bed, and the catch-  
45 blocks E, provided with spring-catches *e*, one end of the spring of which is secured to the block by an adjustable device, *e''*, substantially as described, and for the purposes specified.

In witness whereof I have hereunto set my  
50 hand and seal, at Indianapolis, Indiana, this 3d day of October, A. D. 1883.

ALBERT R. BAKER. [l.s.]

In presence of—

E. W. BRADFORD,  
CHAS. L. THURBER.