

(No Model.)

E. DIETZ.
BOX TRIMMING MACHINE.

No. 440.697.

Patented Nov. 18, 1890.

Fig. 1.

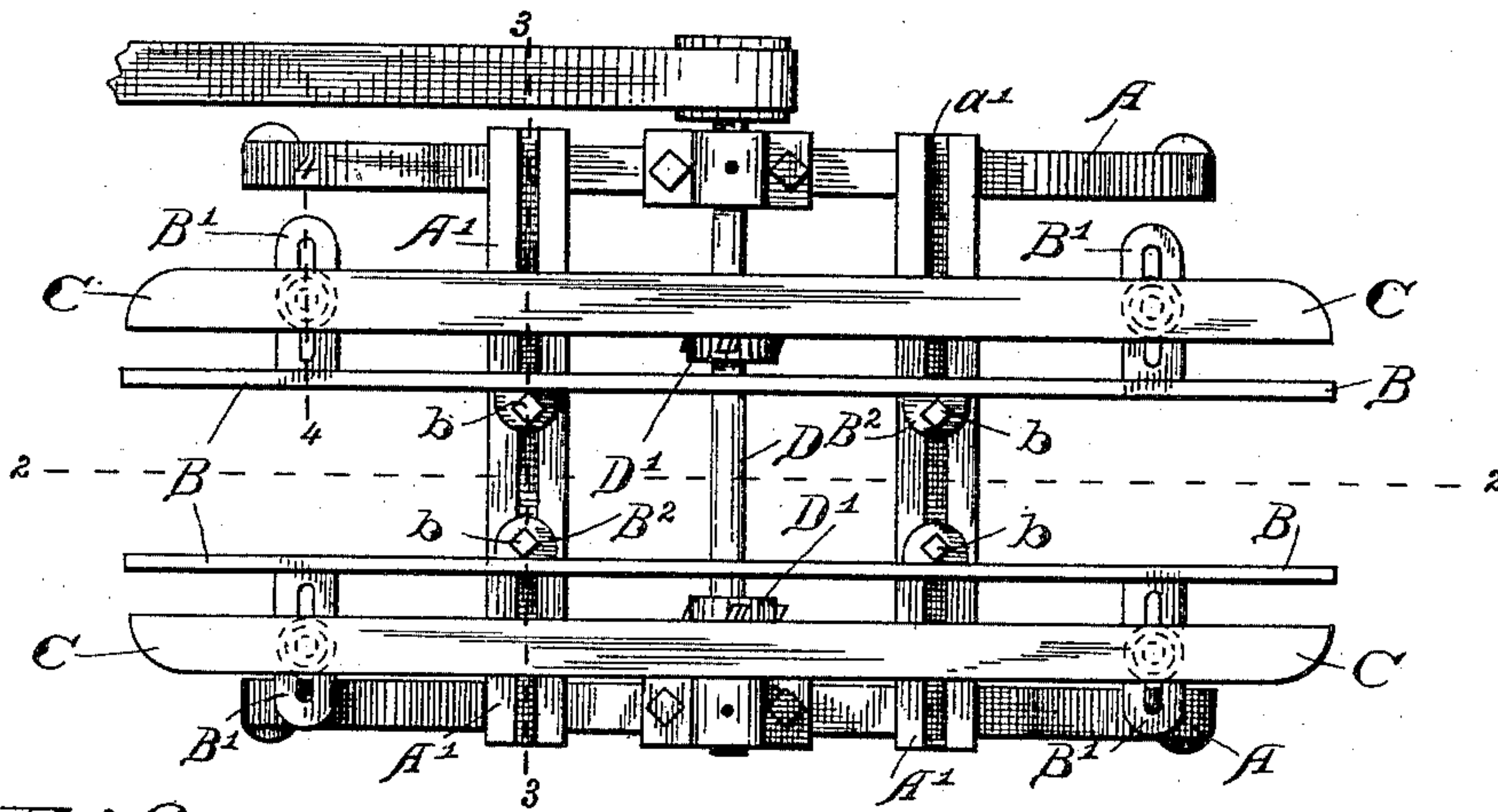


Fig. 2.

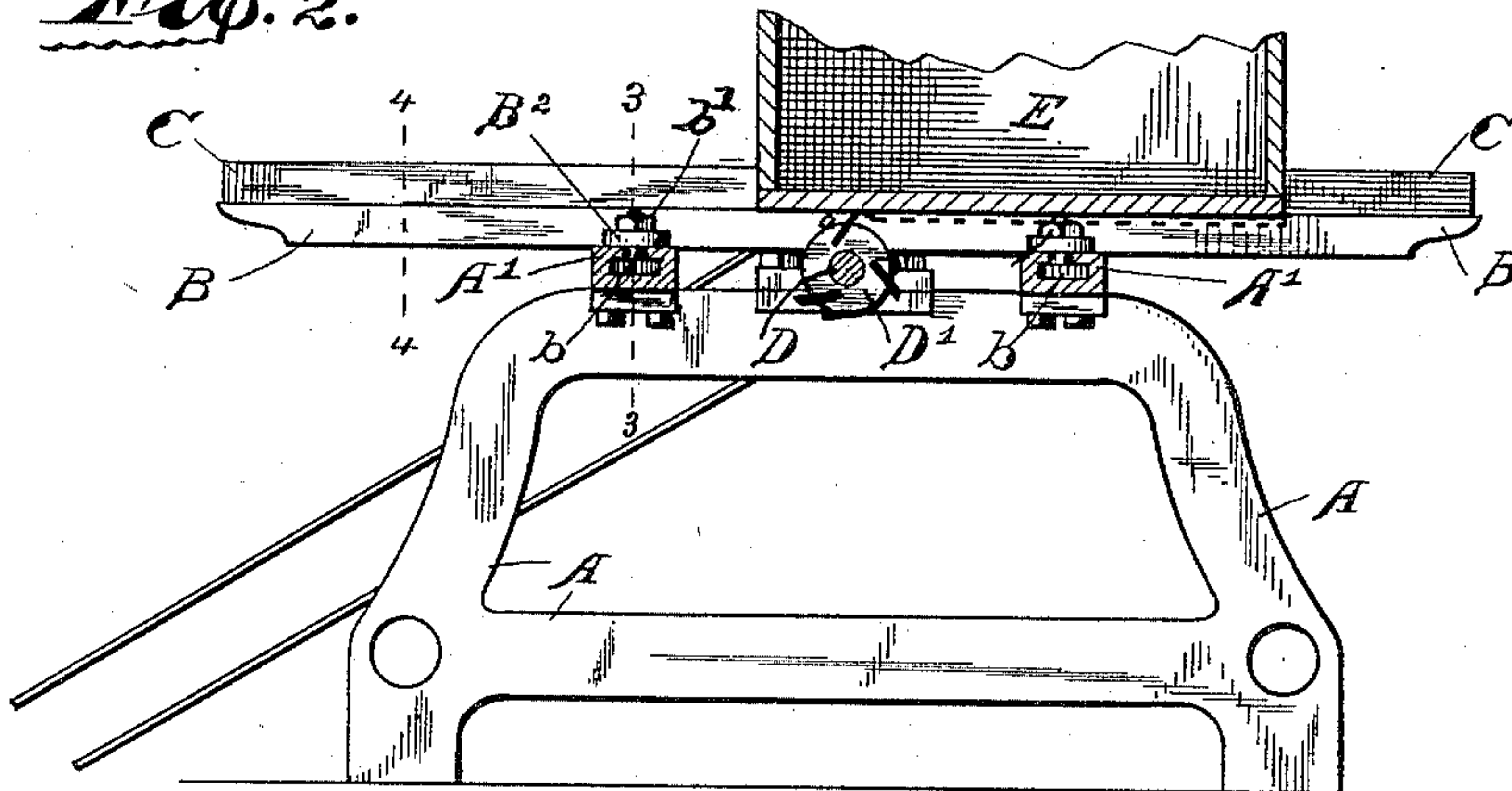


Fig. 3.

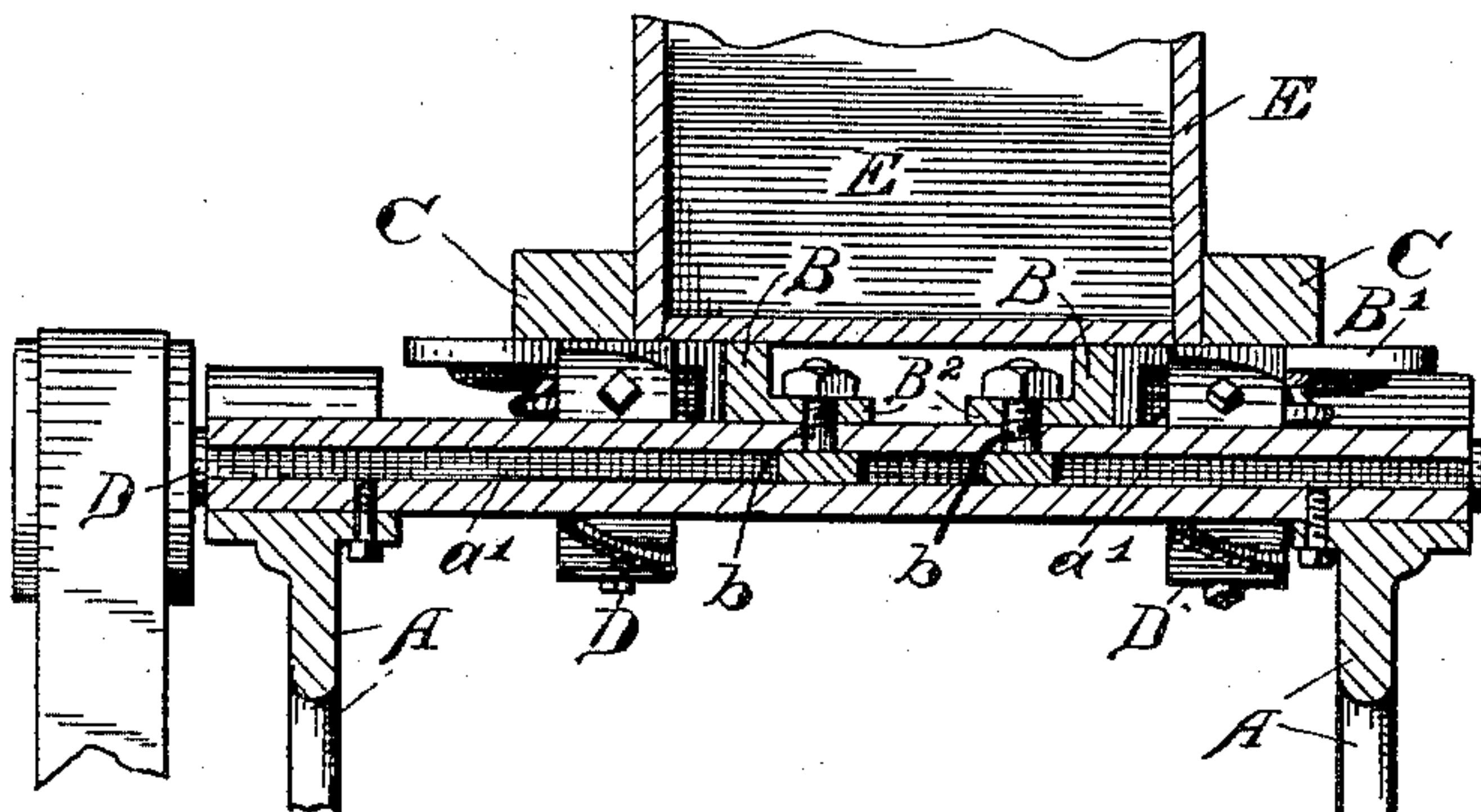
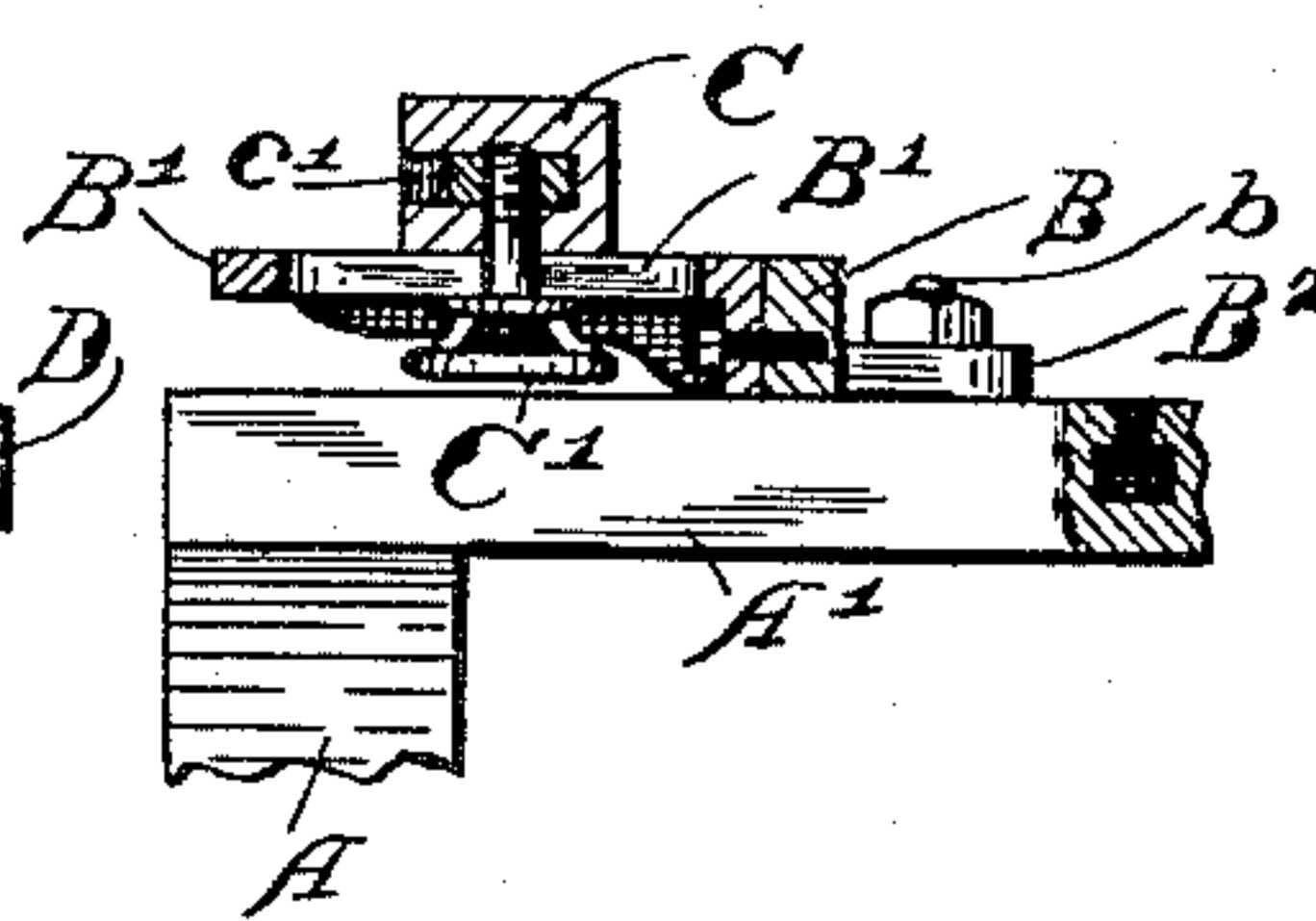


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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BOX-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 440,697, dated November 18, 1890.

Application filed April 18, 1890. Serial No. 348,533. (No model.)

To all whom it may concern:

Be it known that I, EMIL DIETZ, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Box-Trimming Machines, of which the following is a specification.

My said invention relates to that class of machines by which the projecting edges of the sides of boxes are trimmed off after said boxes are nailed together.

The particular object of my present invention is to provide such a machine with means of adjustment, whereby the cutter-heads are kept from projecting too far over the sides of the box, and thus kept out of the way of nails, with which they might otherwise come in contact, and thus be broken or dulled. Said invention will be first fully described, and then pointed out in the claims.

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 a machine embodying my said invention; Fig. 2, a central longitudinal vertical sectional view looking upwardly from the dotted line 2 2 in Fig. 1; Fig. 3, a transverse vertical sectional view looking toward the right from the dotted line 3 3, and Fig. 4 a detail sectional view looking toward the right from the dotted line 4 4.

In said drawings, the portions marked A represent the frame-work of the machine; B, adjustable bars forming ways upon which the boxes rest while being trimmed, and mounted upon said frame-work; C, adjustable guides mounted upon said bars B; D, the shaft upon which the cutter-heads are mounted, and E a fragment of a box, showing its relation to the machine while being operated upon thereby.

The frame-work A is in the main an ordinary frame-work, such as is used in many similar machines. Its two upper transverse bars A' are, however, specially adapted to have the bars or ways B secured thereto, being provided with **I**-shaped slots a', which receive the heads of the bolts, by which said bars or ways are secured thereto. As these slots extend entirely across the machine, it

will be readily seen that said bars or ways B may be adjusted to any extent desired.

The bars or ways B are mounted on the cross-bars A' of the frame, and are secured thereto by bolts b, the heads of which engage in the slots a', and the points of which engage with nuts b', which are located above wings B² on said bars B, as shown most plainly in Fig. 3. As will be readily understood, these nuts can be readily loosened and tightened by the use of an ordinary form of wrench and said bars be thus permitted to be adjusted back and forth and secured in the desired positions. These bars or ways B are provided with slotted wings B', to which the guides are secured.

The guides C are secured to the wings B' on the bars or ways B by bolts C', which pass through the slots in said wings and up into nuts c', which are seated in appropriate recesses in said guides C, as shown most plainly in Fig. 4. Said bolts C' are preferably provided with large heads, so that they can conveniently be operated by hand, as it is necessary, in the ordinary use of these machines, to adjust these guides quite frequently.

The shaft D carries the cutter-heads D', and is operated in an ordinary and well-known manner. It is arranged so that the knives of the cutter-heads will cut to just the level of the bars or ways B. The cutter-heads are of course adjustable on their shaft to accommodate various-sized boxes.

The box E is an ordinary box, and is shown simply to illustrate the use of my machine. The operation is illustrated in Fig. 2, where the projecting edge is shown by means of a dotted line along the greater part of the length of the box on one side of the cutter-head, while the said edge has been cut away on the other side and the edge of the box left smooth. As shown in Fig. 3, the machine is so adjusted that the cutter-heads will cut only a trifle more than the thickness of the sides of the boxes which are being trimmed, and thus said cutter-heads are kept from coming into contact with any nails which might be driven into the ends of the box near said sides, the remaining portions of said cutter-heads being covered by the guides, and thus

protected from contact with the work, except as above stated. This arrangement is best shown in Fig. 3, where the guides C are shown as covering about three-fourths of the cutter-heads, while as shown in Fig. 1 they are capable of being adjusted back, so as to expose substantially all of said cutter-heads, if desired. This result—the keeping of the cutters away from the nails—is the principal object of my present invention, which consists, mainly, in the double adjustment, whereby the bars or ways B may be appropriately located to support any-sized box and still be out of the path of the nails, and whereby the guides C may be adjusted independently of the bars or ways B, so that the cutters D' shall be exposed just sufficiently to cut away the projecting edges.

While it is my intention that both the bars or ways upon which the boxes rest while being trimmed and both the guides shall be adjustable, it is more convenient in practice (except when a change is made to boxes formed of stuff of a different thickness, in which case the guides and bars must be relatively adjusted) to adjust but one of each.

In the drawings (particularly Fig. 1) I have shown one of the guides at nearly the extreme outer edge of the machine and the corresponding way or bar in the appropriate relation thereto, and these two should most conveniently in practice remain in the positions shown, while those on the opposite side of the machine alone need be adjusted. By follow-

ing this plan only half the time and labor of making the various changes in adjustment are necessary that would otherwise be required.

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

1. The combination, in a box-trimming machine, of the cutter-heads, independently-adjustable bars or ways to support the box, and adjustable guides mounted on said bars or ways, said cutter-heads being arranged below said adjustable guides and projecting through into the space between said guides and said supporting bars or ways, substantially as set forth.

2. The combination, in a box-trimming machine, of the cutter-heads, a frame-work, transverse bars A' on said frame-work which are provided with slots extending longitudinally thereof, bars or ways B to support the box, bolts whereby said bars or ways are secured to said transverse bars, which bolts are adjustable in the slots in said transverse bars, and guides adjustably secured to wings on said bars or ways, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 12th day of April, A. D. 1890.

EMIL DIETZ. [L. S.]

Witnesses:

CHESTER BRADFORD,
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