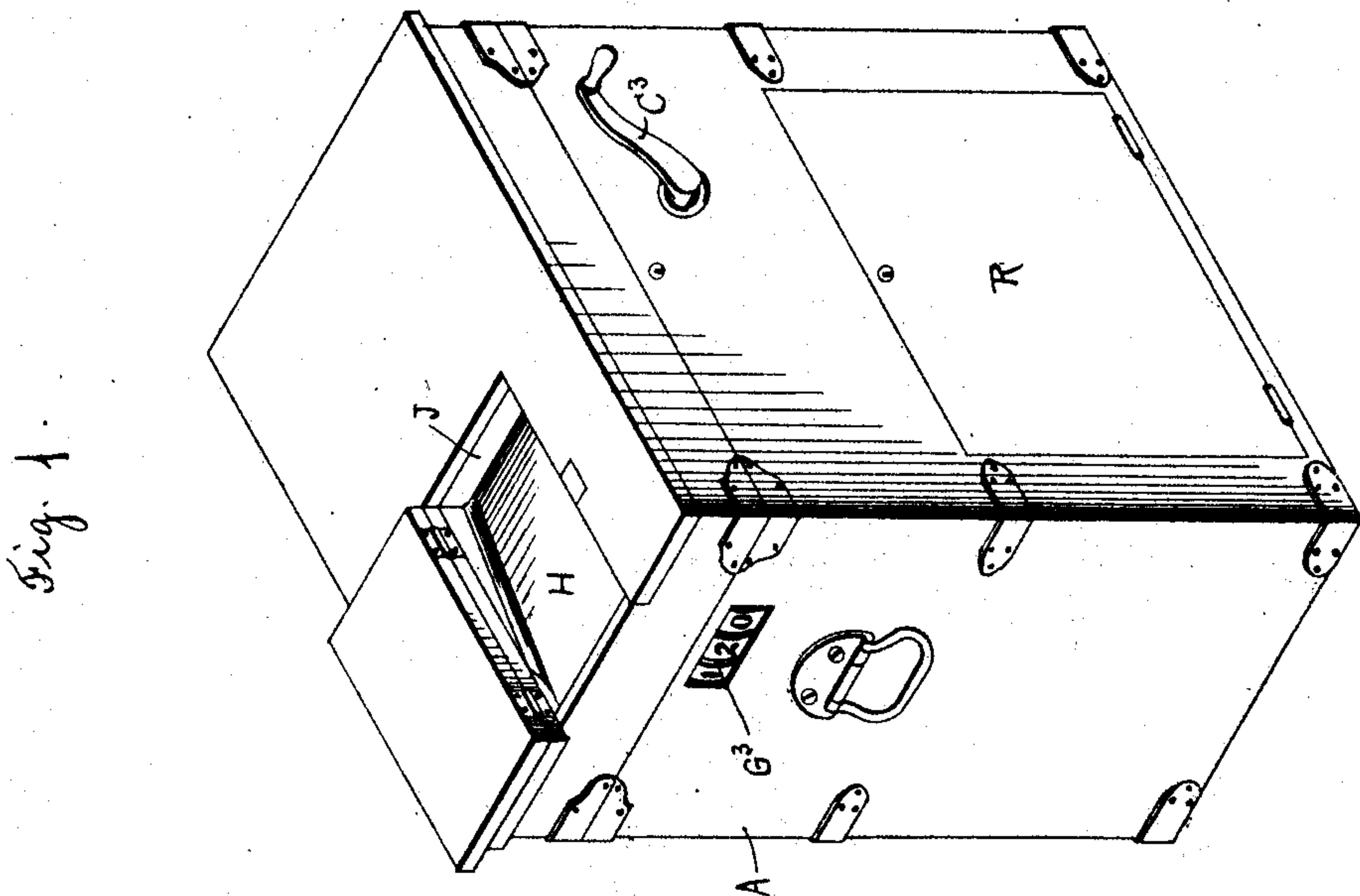
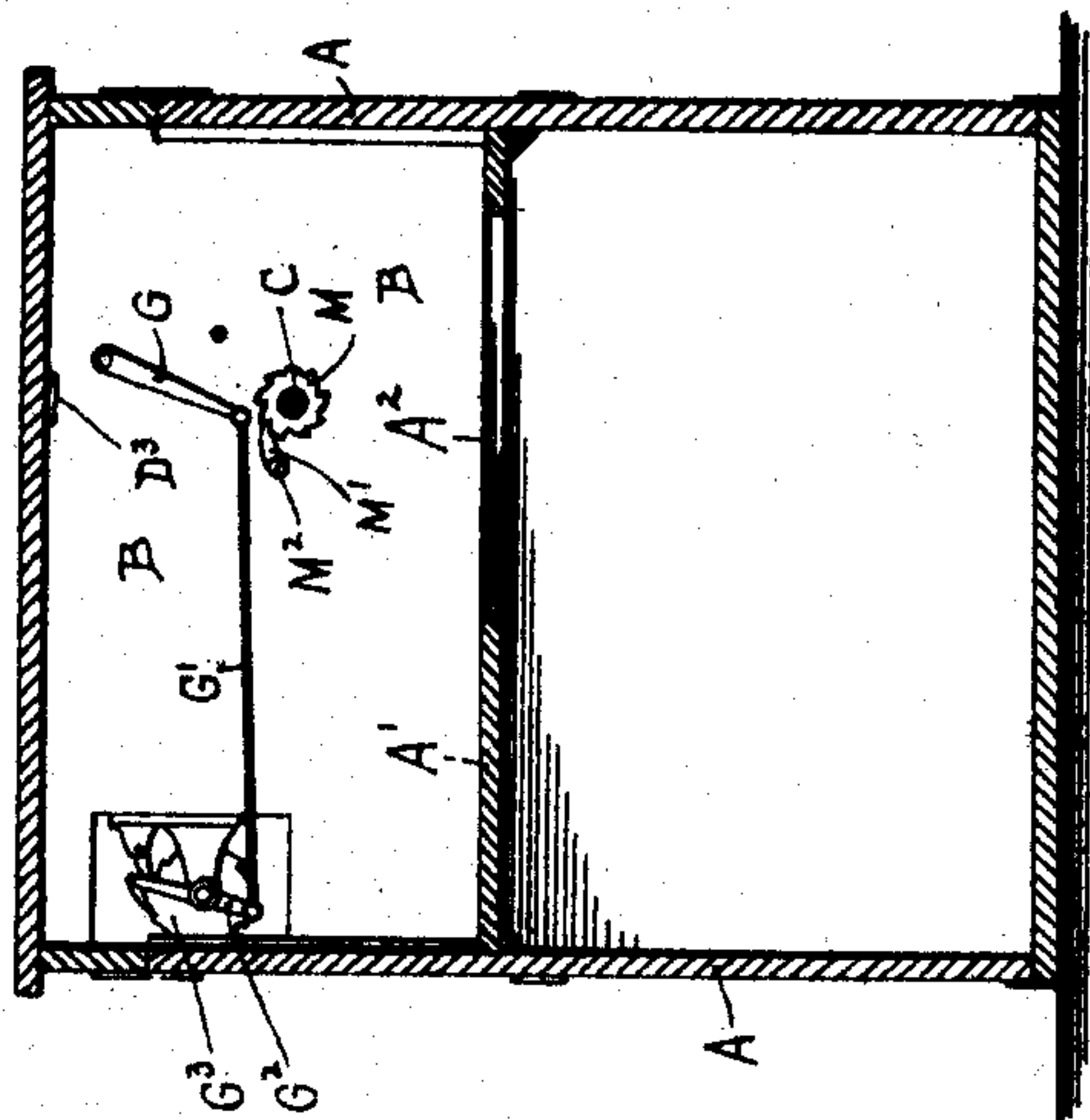
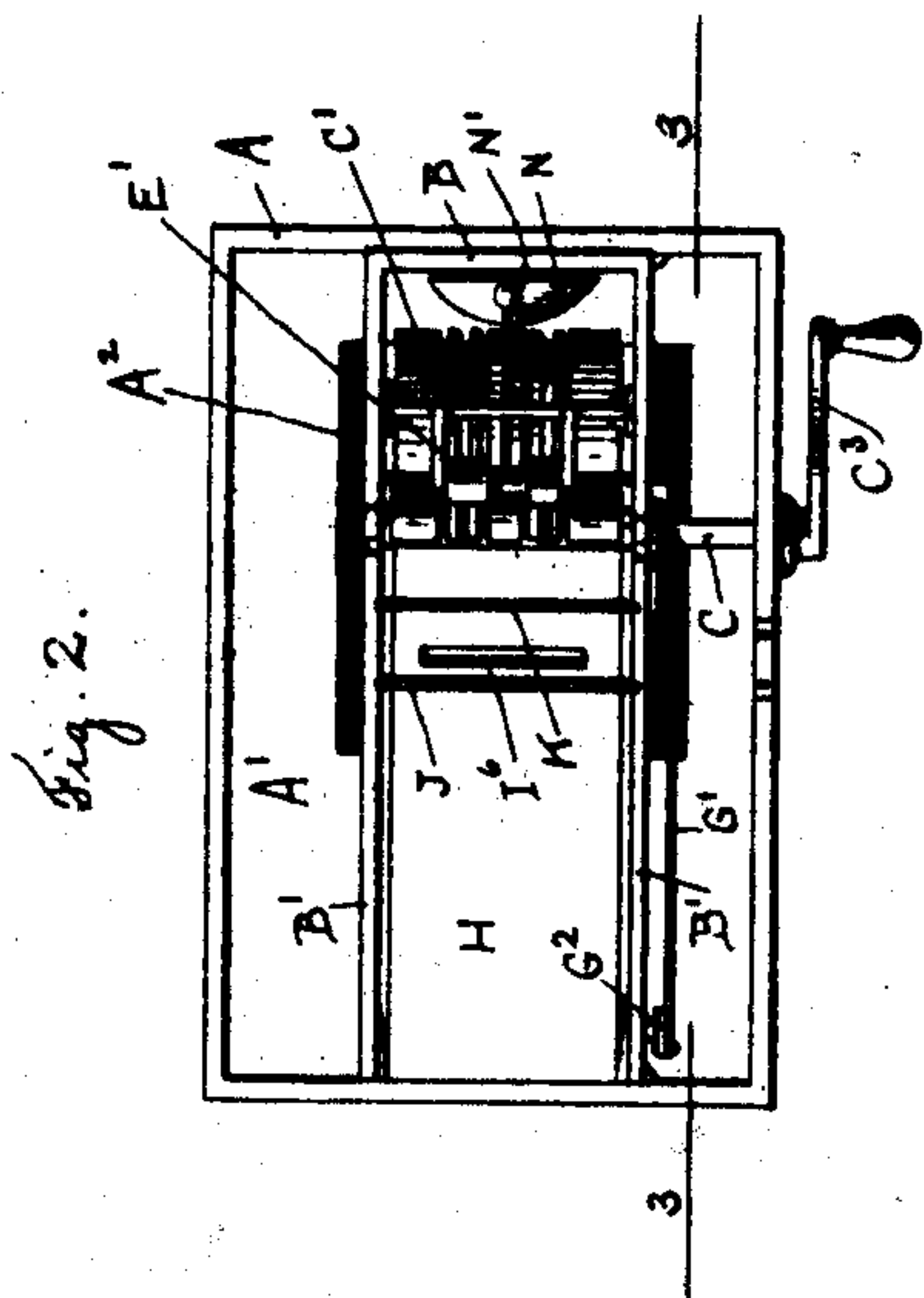


E. K. TOLMAN.
REGISTERING AND CANCELING BALLOT BOX.

No. 503,626.

Patented Aug. 22, 1893.



Witnesses
Chas. F. Schuchert
S. J. Burbank.

Inventor
Edward K. Tolman.

UNITED STATES PATENT OFFICE.

EDWARD K. TOLMAN, OF WORCESTER, MASSACHUSETTS.

REGISTERING AND CANCELING BALLOT-BOX.

SPECIFICATION forming part of Letters Patent No. 503,626, dated August 22, 1893.

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To all whom it may concern:

Be it known that I, EDWARD K. TOLMAN, a citizen of the United States, and a resident of Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Ballot-Boxes, of which the following, in connection with the accompanying drawings, is a specification.

My invention relates to boxes adapted to register, cancel and receive ballots; and it consists in the improved construction of the operating mechanism, and its component elements, as will be fully described, and as is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved box. Fig. 2 represents a top view of the same, the cover having been removed. Fig. 3 is a section on line 3—3, Fig. 2. Fig. 4 shows a top view of the box containing the mechanism for registering and canceling the ballots. Fig. 5 is a section on line 5—5, Fig. 4. Fig. 6 represents a similar section, the parts being shown in another position.

Similar letters refer to similar parts.

In the drawings: A represents the casing of the box containing two compartments, which are separated by the shelf A', and the upper one of which serves to receive the box containing the operating mechanism, while the lower compartment is adapted to receive the ballots, after they have been registered and canceled and discharged through the opening A² in the shelf A'.

The box containing the operating mechanism is illustrated in Figs. 4, 5 and 6, and contains,—first, means for taking the ballot after it has been placed on the feed-board into the machine; secondly, apparatus for canceling the same by printing one or more lines of type on the plain surface of the ballot; thirdly, a counting mechanism by which each ballot, as it enters the box, is registered; and fourthly, mechanism by which the insertion of the ballot into the machine before the preceding one has been canceled and registered, is prevented.

Journaled in the sides B' of the box B, is a shaft C, upon which is mounted the drum C', the outside of which is covered with a layer of rubber C².

Placed on top of the drum C' is a friction roller D, the outside of which is covered with rubber D', and which is forced down upon the drum C' by means of springs, D², interposed between the bearing blocks of the roller D and the plates D³, secured in the upper edges of the sides B'. The roller D is also provided with the printing wheels E, to which ink is applied by the weighted roller E', the ends of which are held by the arms E² secured to the spindle E³, having its bearings in the blocks E⁴ secured to the sides B'. The drum C' is provided with grooves E⁵ to permit drum C' and roller D to run tightly together without the printing wheels E leaving "off-set" on the drum C'. The spindle F is journaled in the sides B' of the box B, and attached to it is a series of fingers F', the ends of which will, in their normal positions, enter the grooves F² of the drum C'.

Secured upon the spindle F and at the outside of the box, is a lever G, (see Figs. 3 and 4,) the free end of which is connected by the link G' with the operating lever G² of the counting or registering mechanism G³, which may be of any well-known type or construction, and which is so arranged that when the spindle F is rocked sufficiently to bring the ends of the fingers F' out of the grooves F², an angular movement is imparted to the lever G² sufficient to advance the first wheel on the counting mechanism one tooth.

H represents the feed board, upon which the ballots are placed, and fed between the drum C' and the friction roller D. If, now, rotary motion is imparted to the drum C' by the crank C³, it will be seen that, as the ballot travels with the drum C' the ends of the fingers F' are gradually expelled from the grooves F², and that, consequently, the spindle F is rocked sufficiently to impart the necessary movement to the lever G² of the registering mechanism G³.

Pivoted at I to the sides B' are the levers I', which are connected by the tie I² in order to make them move uniformly, while the other ends are provided with slots I³ adapted to receive the pins I⁴ secured to or made integral with arms I⁵, which are firmly secured to the spindle F.

At the inner side of the tie I² is attached the bar I⁶, and in the feed board H is provided

an opening I⁷ to permit said bar I⁶ to protrude beyond the upper surface of the feed board H, and thus serve as a stop for a ballot being fed into the machine, before the preceding
5 ballot has been discharged from the drum C'.

Arranged above the feed board H and secured in the sides B' is a guard J, the lower edge of which is beveled so as to bring the ballot in close contact with the upper edge of
10 said feed board, and another guard plate K is placed a short distance from the guard plate J to prevent the ballots from being lapped onto each other, and fed into the machine, in which case the ballots would form a
15 continuous sheet, thus keeping the fingers F' in their outward position, till the last one of the series of ballots would have been fed into the box and canceled, while only one ballot would have been registered by the counting
20 mechanism.

The particular object of the guard plate K is clearly illustrated in Fig. 6, in which the bar I⁶ is shown as projecting above the surface of the feed-board H, thus making a bend in
25 the ballot O between the guide plates J and K, and thereby guiding the succeeding ballot against the guard plate K, as indicated by the broken line P, Fig. 6. A counterweight I⁸ serves to return the levers I' and the bar
30 I⁶ to their normal positions, as soon as the rear end of the ballot has passed beyond the ends of the fingers F'.

On the under side of the drum C' I provide the discharge fingers L, which enter into
35 the grooves F² so as to positively separate the ballot from the drum C'. A gong N may be placed in the box B and so arranged that when the fingers F' return to their normal positions in the grooves F², the hammer N',
40 which is attached to the spindle F may strike a blow, thus indicating that the ballot has been discharged from the drum C'. As it is essential to prevent the drum C' from being rotated backward, I provide on the shaft C,
45 a ratchet wheel M to be engaged by a pawl M', which is pivoted at M² to the side wall B'.

The operation is as follows:—The ballot is placed upon the feed board H and passed beneath the guards J and K, and between the
50 drum C' and the friction roller D; as the drum C' is rotated, the ballot is carried with it, and upon its periphery, and the fingers F' are thus gradually ejected from the grooves F², whereby the spindle F is slightly rocked, and
55 this imparts proper movements to the stop levers I' and the bar I⁶, and at the same time rocking the operating lever G² of the counter, so as to advance the first wheel one notch. Upon the continued movement of the drum

C', the ballot is possibly discharged from the
60 drum by means of the clearer fingers L, and is then allowed to drop through the opening A² in the shelf A' into the lower compartment of the case, where the ballots accumulate and whence they can be removed through the
65 door R.

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

1. The combination with the grooved drum
70 for receiving the ballot on its periphery, and fingers secured to a rock-shaft and adapted to enter into said grooves, and to be ejected therefrom by the ballot on said drum, of a registering apparatus operated by the rock-
75 ing movement of said rock-shaft, substantially as described.

2. The combination with a roller provided with bands of printing type, and an ink-roller
80 for supplying ink to said type, of a receiving drum imparting rotary motion to said roller, and having in its periphery grooves which are in alignment with said bands of type, and of a depth sufficient to "clear" the type, sub-
85 stantially, and for the purpose set forth.

3. The combination with the grooved receiving drum and a pivoted stop lever arranged above and in front of said drum, of a
90 rock-shaft having fingers adapted to enter into and be ejected from the grooves of the drum by the passing of the ballot, and an arm whereby a rocking motion is imparted to the said stop lever from the rock-shaft, substantially as described.

4. The combination with the feed board, a
95 receiving drum, a stop lever, and means for imparting movement to the same, of the guard plates arranged in close proximity to the upper surface of the feed board and one on each side of the stop lever, substantially as
100 described.

5. The combination with the receiving drum, provided with grooves, fingers entering said
105 grooves and adapted to hold the ballot against the surface of said drum, of means, substantially as described, for positively discharging the ballot from the drum, substantially as and for the purpose set forth.

6. The combination with the receiving drum, the counter, and means for imparting move-
110 ment to the operating lever of said counter, of means whereby a backward movement on the part of said drum is prevented, substantially as described.

EDWARD K. TOLMAN.

Witnesses:

E. E. JOHNSON,

CHARLES F. SCHMELZ.