

No. 658,153.

Patented Sept. 18, 1900.

F. MACEY.
CARD INDEX.

(Application filed June 2, 1898.)

(No Model.)

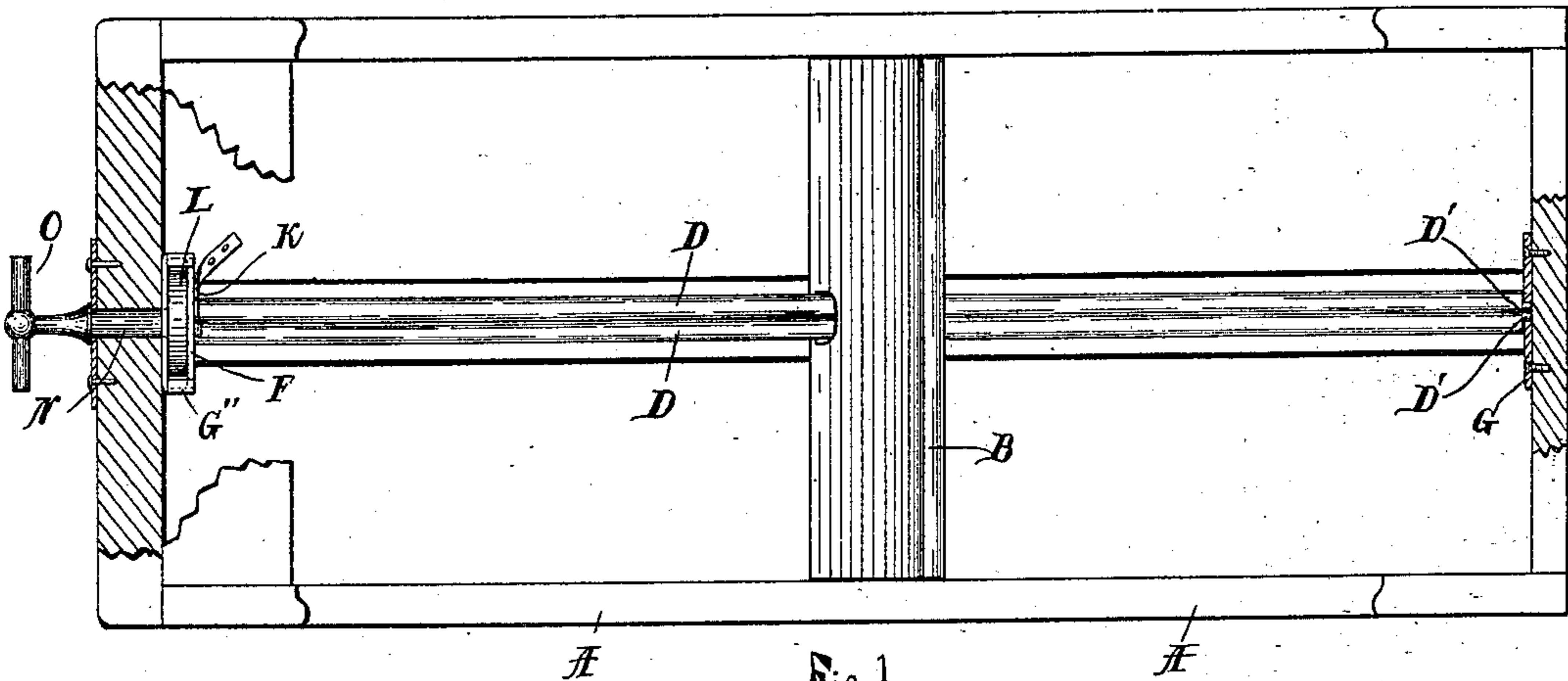


Fig. 1.

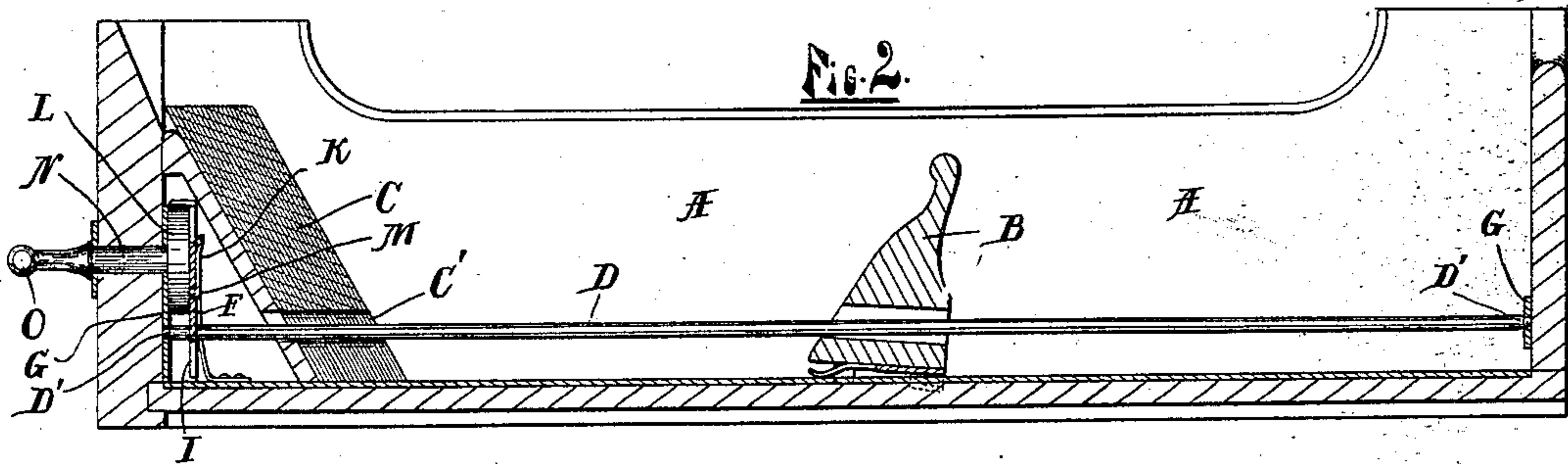


Fig. 2.

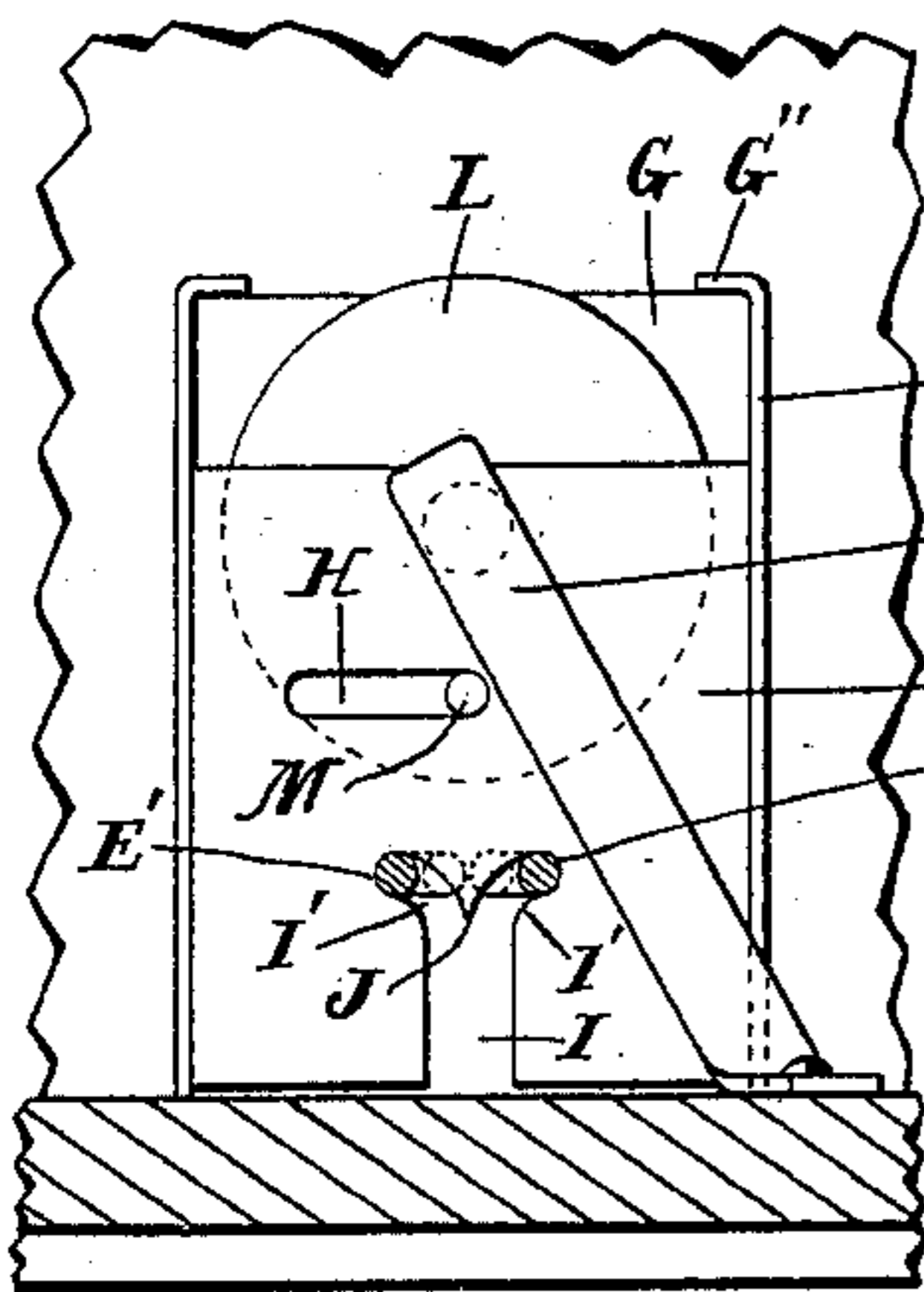


Fig. 3.

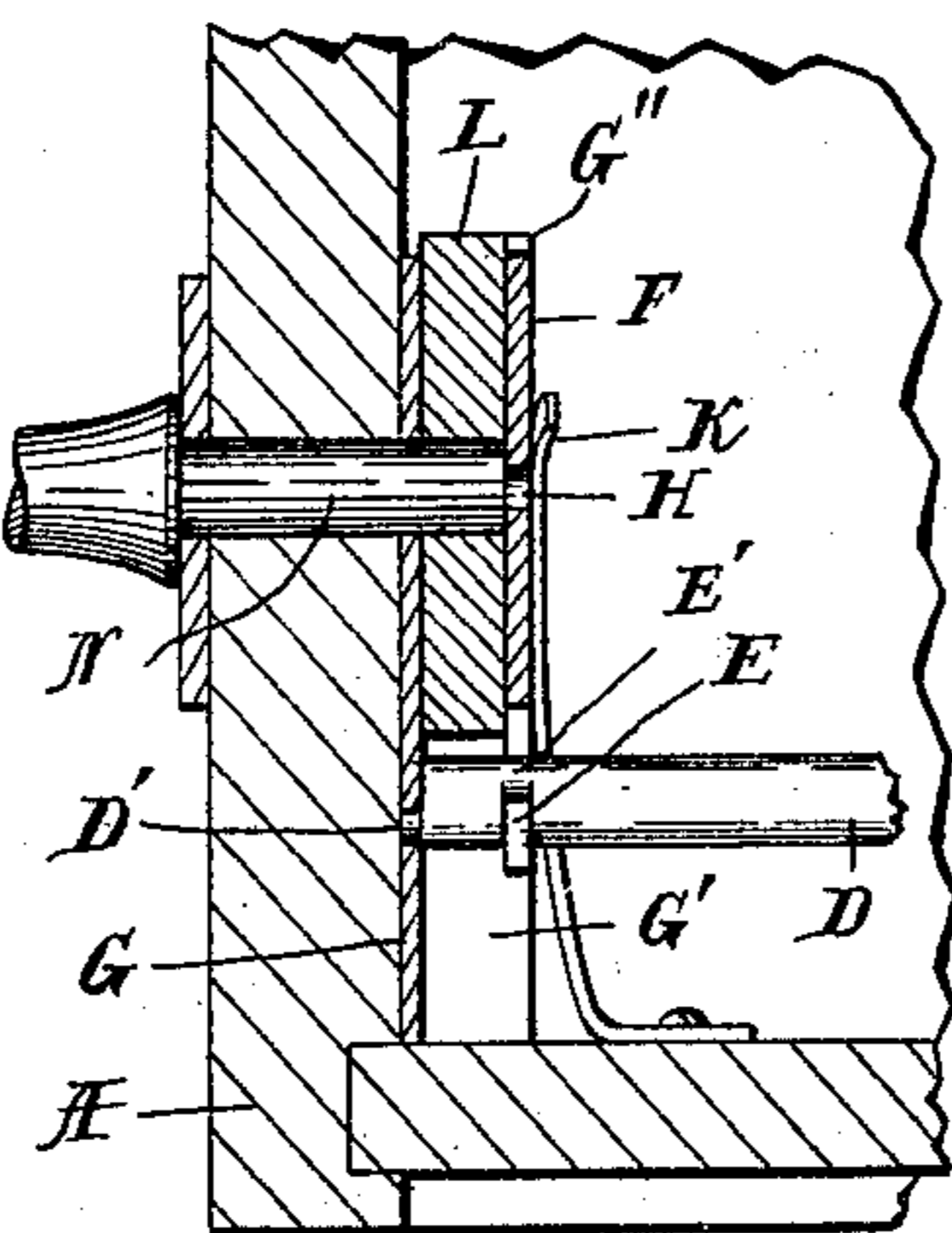


Fig. 5.

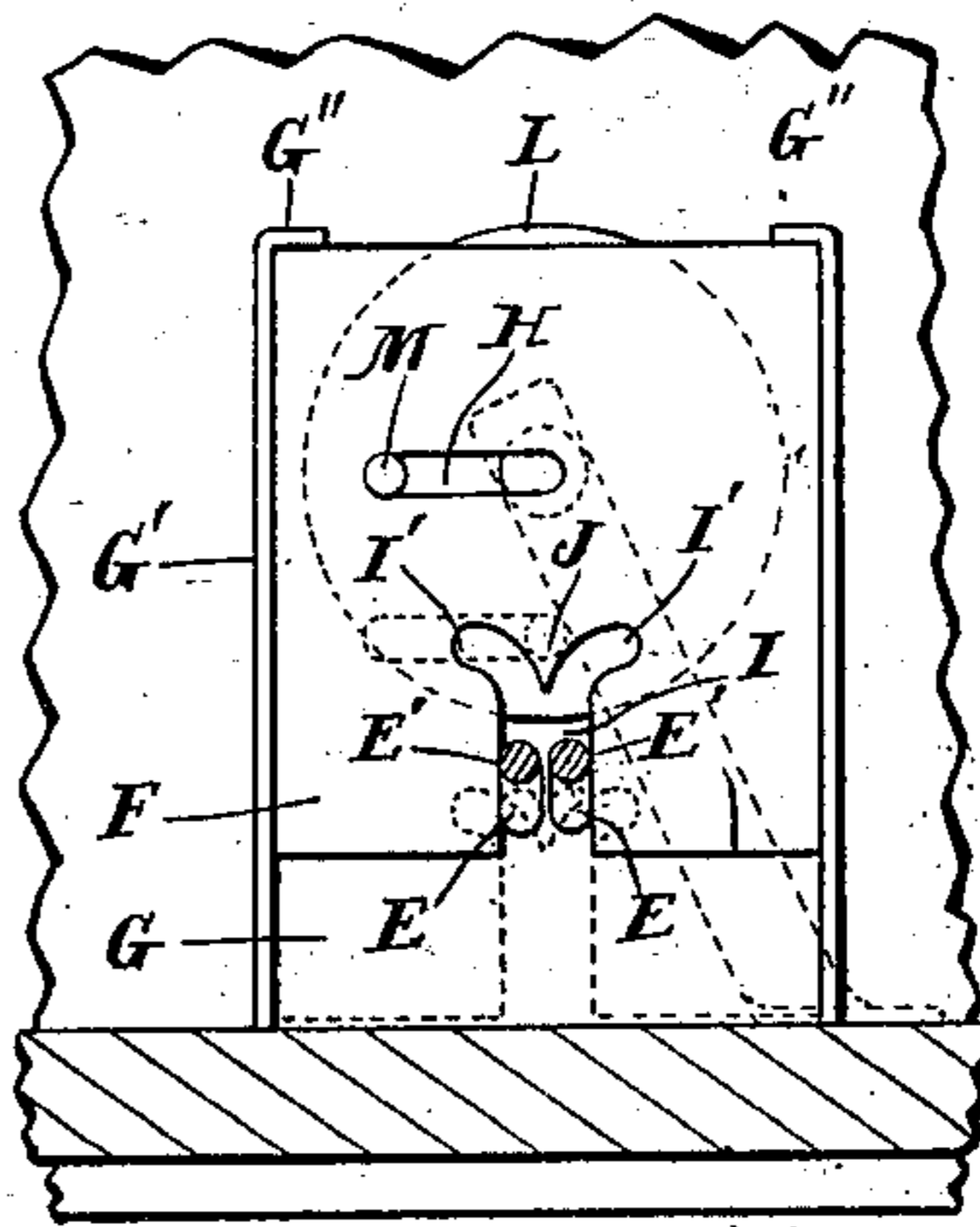


Fig. 7.

WITNESSES:

Joseph K. ...
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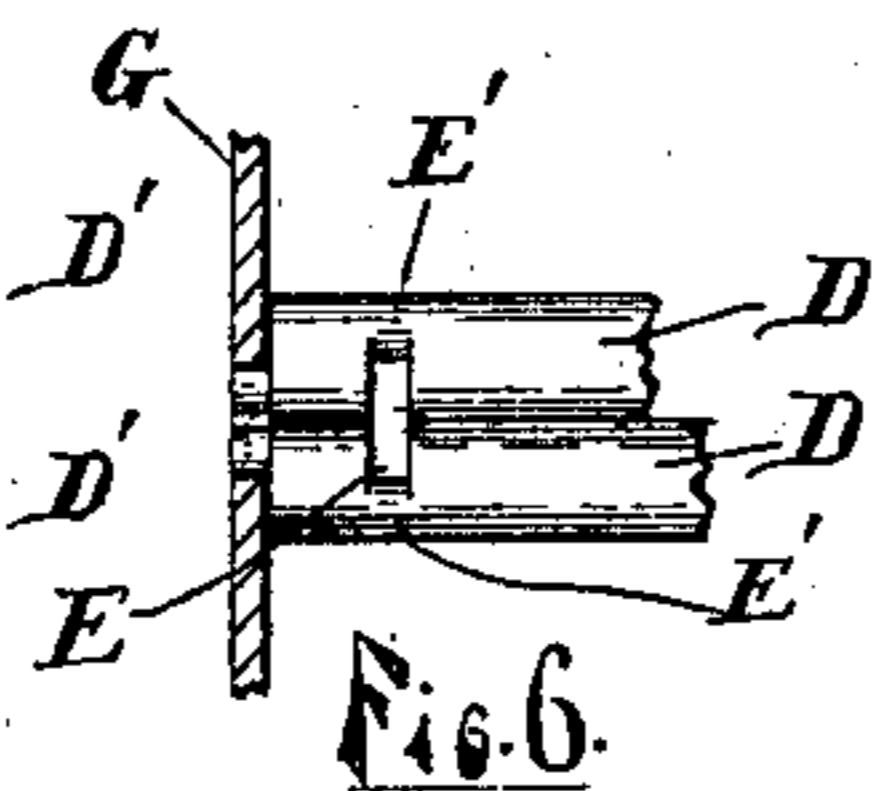


Fig. 6.

INVENTOR:

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By

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UNITED STATES PATENT OFFICE.

FRANK MACEY, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF TWO-THIRDS
TO FRED MACEY AND CHARLES W. MATHESON, OF SAME PLACE.

CARD-INDEX.

SPECIFICATION forming part of Letters Patent No. 658,153, dated September 18, 1900.

Application filed June 2, 1898. Serial No. 682,345. (No model.)

To all whom it may concern:

Be it known that I, FRANK MACEY, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Card-Indexes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in card-indexes, and more particularly to that class in which the cards are detachably held within a tray or drawer by means of rods or bars engaging suitable openings in the cards; and its object is to provide the same with novel means for operating said rods and with certain other new and useful features, all of which are hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a device embodying my invention with parts broken away to show the construction; Fig. 2, a longitudinal vertical section of the same; Fig. 3, an enlarged detail showing the inner side of the rod-operating mechanism in position to secure the cards in the tray; Fig. 4, the same in position to release the cards; Fig. 5, a longitudinal vertical section of the same, and Fig. 6 a detail of a portion of the bars.

Like letters refer to like parts in all of the figures.

A represents the tray, provided with the adjustable inclined back-rest B.

C represents the cards, having suitable T-slots C' in their lower sides to engage the retaining-bars D, which bars are flat and have rounded edges and are of suitable width to enter the transverse part of the T-slots in the cards when turned with their flat sides horizontal and of such thickness that they will pass freely through the vertical part of the slots then turned with their flat sides vertical and close together. To effect these movements and to retain the bars in these positions, journals D' are formed on the ends of the bars close to the adjacent edges of the same, which journals are inserted in openings in suitable plates G, secured to the ends

of the tray. Near the front ends of the bars opposite transverse slots E are formed in their adjacent edges, leaving connecting portions E', forming cranked portions at the edges of the bars opposite to the edges of the same on which the journals D' are formed. The plate G at the forward end of the tray is extended upward and folded at its edges, forming ways or guides G', which are turned inward at the top, forming stops G''. A vertically-movable plate F traverses the ways G' and engages the stops G'' as it rises. This plate is provided with a slot I, having divided outwardly and oppositely curved upper parts I' I', between which is a downwardly-projecting wedge J. This plate is in the plane of the slots E in the bars and is provided with a horizontal slot H, traversed by a crank-pin M on a crank-wheel L, mounted on a shaft N, which shaft extends through the front of the tray and is provided with a suitable handle O, which handle serves to manipulate the tray and also to rotate the shaft and crank-wheel. A spring-plate K presses against the plate F and retains it in place in the ways and also prevents too-free vertical movement thereof.

The operation of my device is as follows: By grasping the handle O the tray may be withdrawn or returned to its proper place or receptacle and at the same time a quarter-revolution of the handle O will shift the bars to either secure or release the cards. By turning the parts to the position shown in Fig. 3 the plate F is lowered and the pin M engages the end of the slot H and stops further movement of the parts. Said pin is also below the axis of the wheel, and the plate cannot be again raised except by turning the handle O. As the plate is lowered the wedge J passes into the slots E and, engaging the connecting portions E' of the bars, forces the same apart, turning the bars to a horizontal position and in the same plane, where they are firmly held with their connecting portions E' in the ends of the slots I' I'. The cards are thus secured in the tray and cannot be removed until released by turning the handle O back, whereby the parts are shifted to the position shown in Fig. 4, the pin M traversing the slot H and raising the plate F

until it strikes the stop G". The bars by this movement are carried upward at their outer sides and, turning on their pivots, are folded against each other, with their flat sides vertical, and the connecting portions E' of the same pass into the vertical lower part I of the slot in the plate in position the cards are released and may be removed from the tray.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with a card having a T-shaped notch, of longitudinal end-hinged bars and a reciprocable plate provided with a T-shaped slot having a downwardly-projecting wedge.

2. In a card-index, the combination with flat bars each hinged at one edge in end supports and adapted to stand side by side in parallel planes or to be moved into the same plane, of a slidable plate with a slot in its lower edge to receive said bars, and provided with means whereby said bars may be moved from one to the other of said positions.

3. The combination with revoluble bars, end-hinged and edge-hinged, and adapted to stand in parallel planes and to turn therefrom into the same plane, of a frictionally-adjustable back-rest, pierced by said bars, substantially as specified.

4. In combination with a tray two flat bars pivoted at their adjacent sides, and provided with crank portions at the sides opposite their pivots, and means for turning and holding said bars engaging the said crank portions substantially as described.

5. The combination of a tray, flat bars pivoted at their adjacent edges in said tray, and having transverse slots in their adjacent edges, a vertically-movable plate having a slot with a divided and diverging upper end, a wedge between the diverging portions of said slot, and means for operating said plate, substantially as described.

6. In combination with a tray, flat bars having pivots on their ends at their adjacent edges and transverse slots in their adjacent edges, a vertically-slidable plate having a vertical slot with divided and oppositely-diverging upper ends and a wedge between said ends, and also having a horizontal slot, and a crank-wheel having a crank-pin engaging said slot and mounted on a shaft passing through the end of the tray and provided with a handle, substantially as described.

7. The combination of a tray, plates secured to the ends of the same, flat bars pivoted at

their adjacent edges to said plates and having transverse slots in said edges, one of said plates being folded to form ways and a stop, a sliding plate traversing said ways and engaging the stop and having a vertical slot with divided and oppositely-curved upper ends, said plate also having a horizontal slot, a crank-wheel having a pin engaging said horizontal slot, a shaft passing through the end of said tray and a handle on said shaft, substantially as described.

8. In a card-index, in combination with a series of cards having T-slots, flat bars pivoted to turn with their flat sides vertical to pass through the vertical part of said slots and to turn with their flat sides in the same horizontal plane to enter the horizontal part of said slots and means for turning and holding said bars, substantially as described.

9. In a card-index, in combination with a series of cards having T-slots and a tray having an adjustable inclined back-rest for said cards, flat bars pivoted at their adjacent edges and having opposing transverse slots in said edges, a vertically-slidable plate having a vertical slot with a divided and diverging upper end and downwardly-projecting wedge and a horizontal slot, plates secured to the ends of said tray in which the bars are pivoted, one of said plates having folded edges forming ways for the vertically-movable plate, a crank-wheel having a pin engaging the horizontal slot in the plate, a shaft supporting the crank-wheel and passing through the end of the tray, and a handle on the outer end of the shaft, substantially as described.

10. In combination with a tray, two flat bars pivoted at their adjacent sides and means for turning and holding said bars, said means being adapted to engage the non-adjacent sides or edges of the bars eccentric to their pivots.

11. A card-index-locking device, comprising the combination with cards having integral shoulders to afford locking provisions, of locking devices therefor comprising two bars pivoted at their adjacent longitudinal edges and adapted when turned in one position to engage by their non-adjacent longitudinal edges the shoulders of said cards, and means for rocking said bars upon their pivots.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK MACEY.

Witnesses:

LEWIS E. FLANDERS,
LUTHER V. MOULTON.