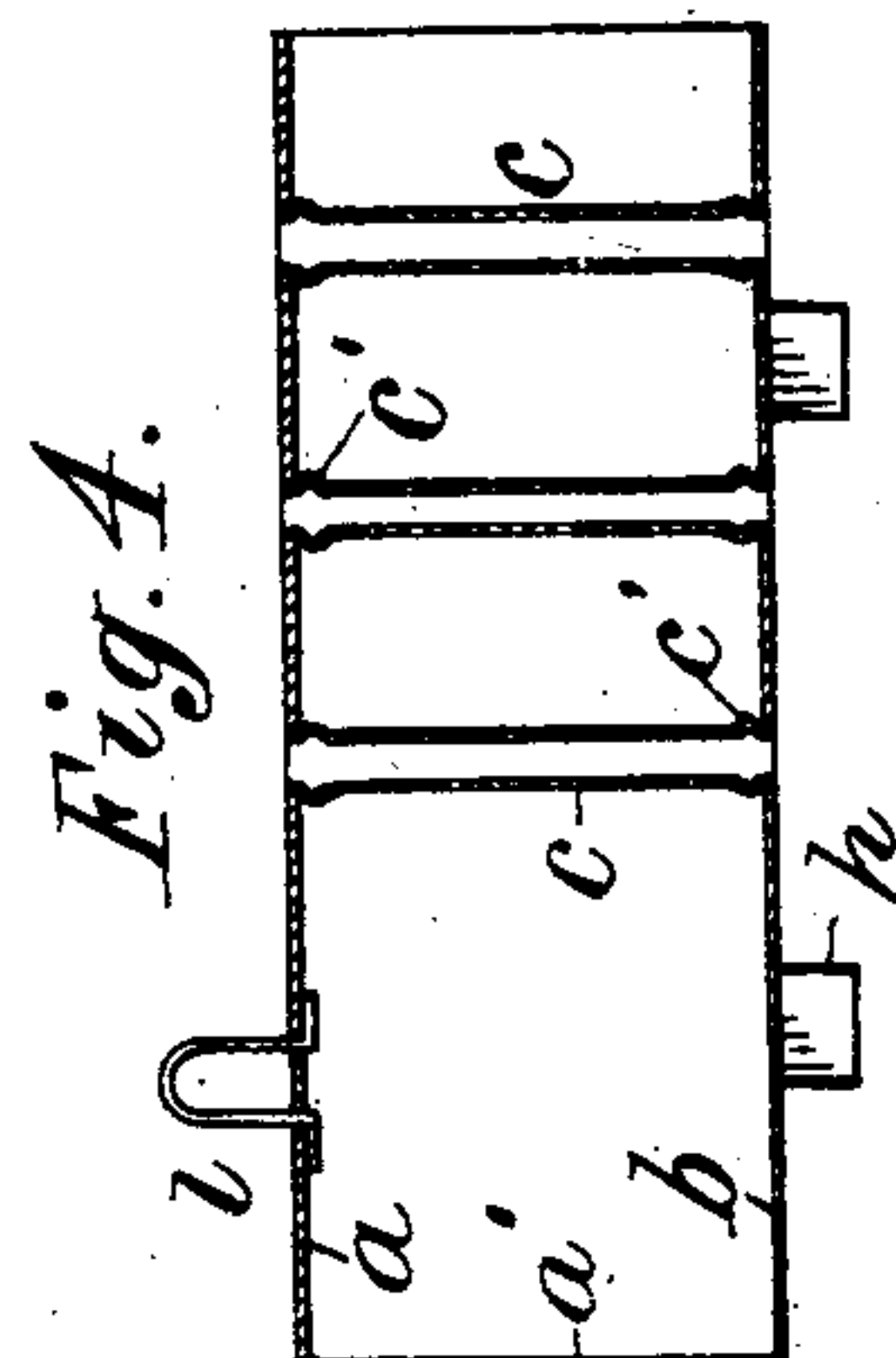
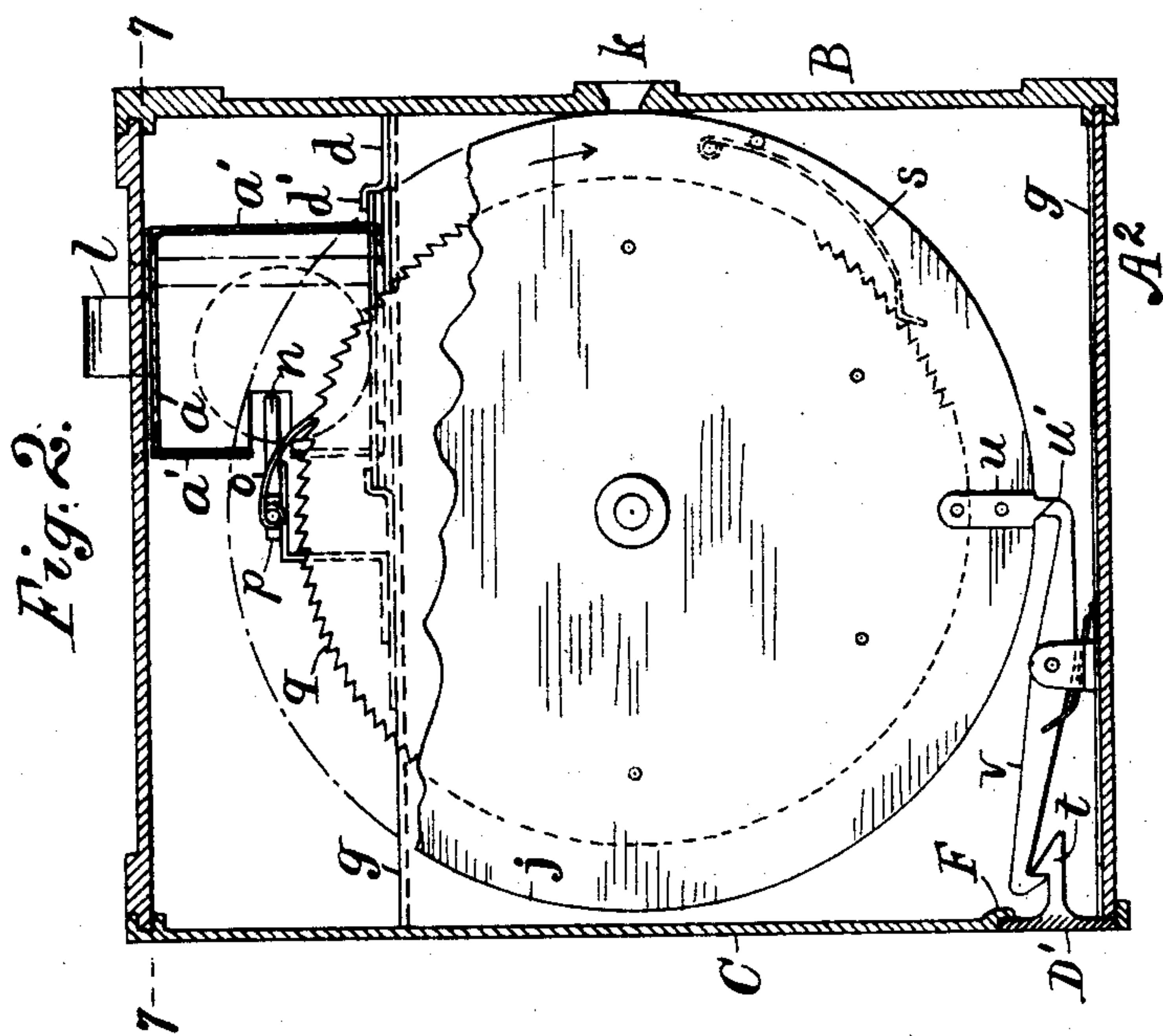
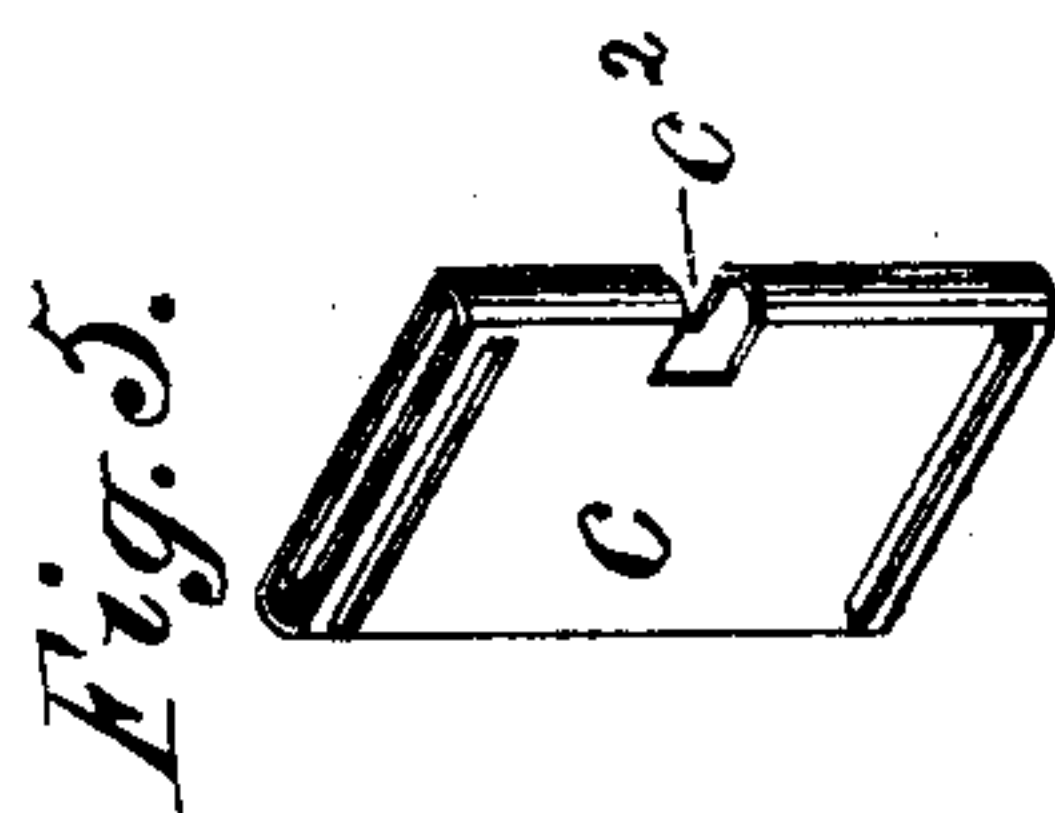
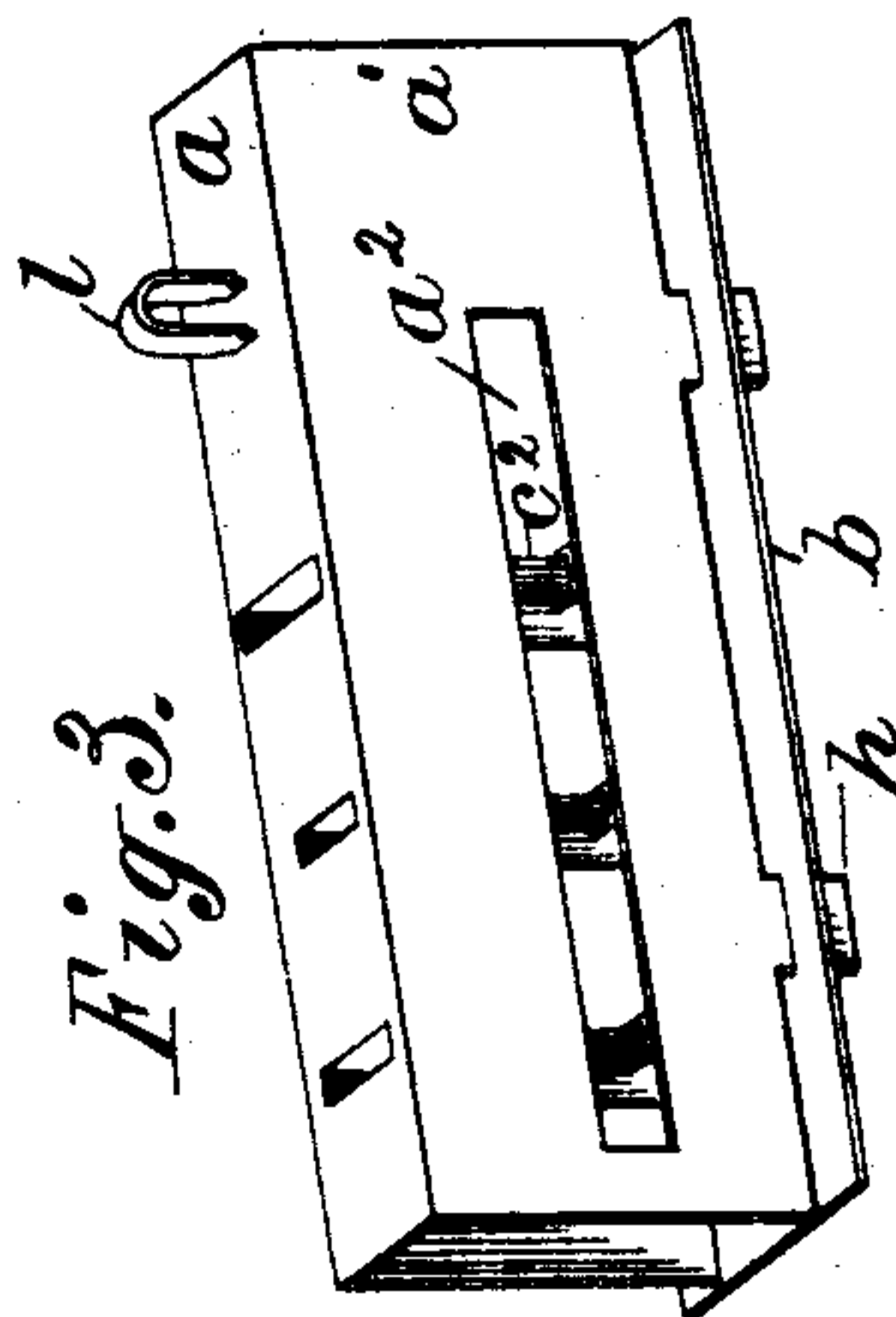
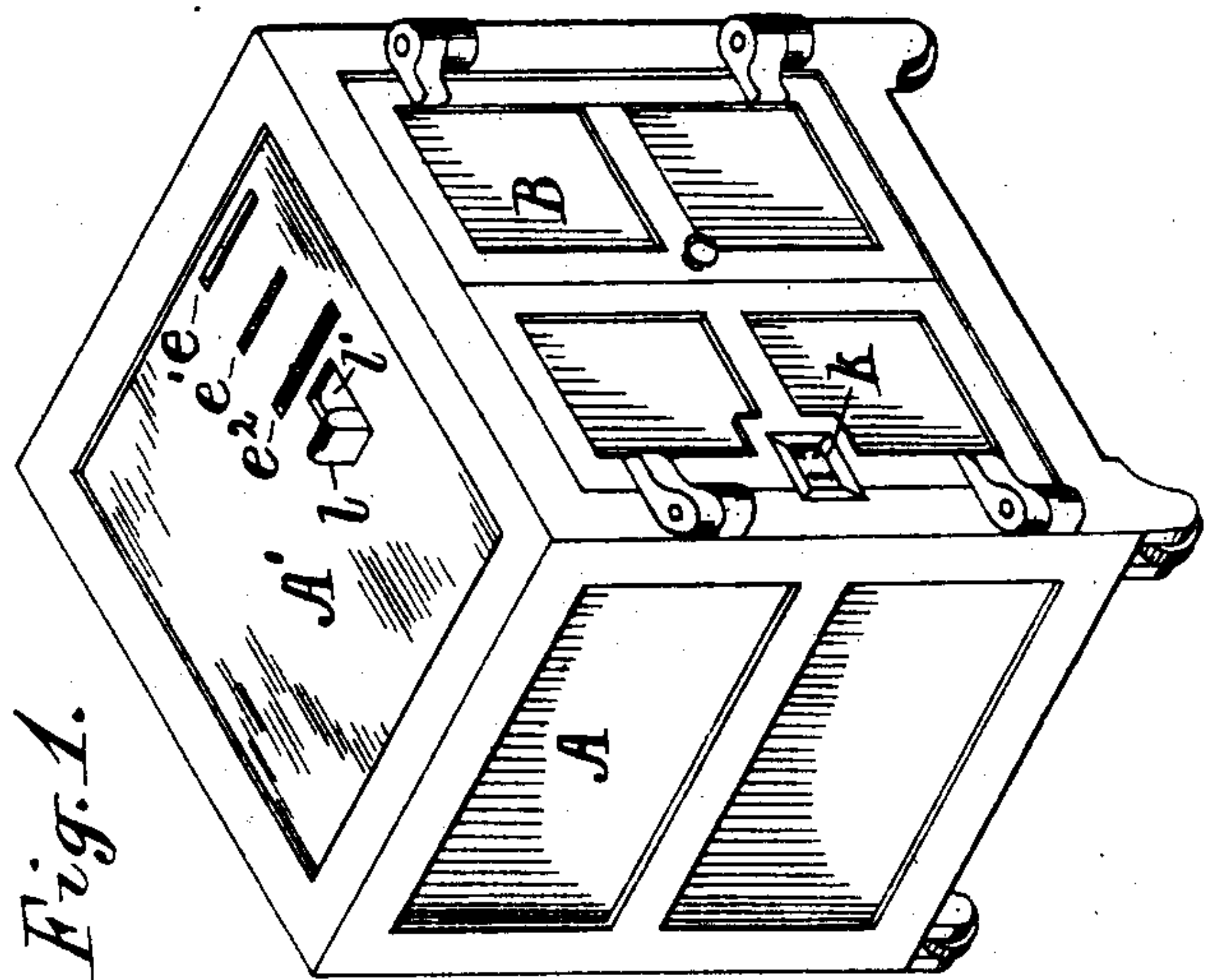


G. HAVELL.
COIN SAVINGS BANK.

(Application filed Nov. 30, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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Theodore Dalton

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George Havell, per
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COIN SAVINGS BANK.

(Application filed Nov. 30, 1900.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 6.

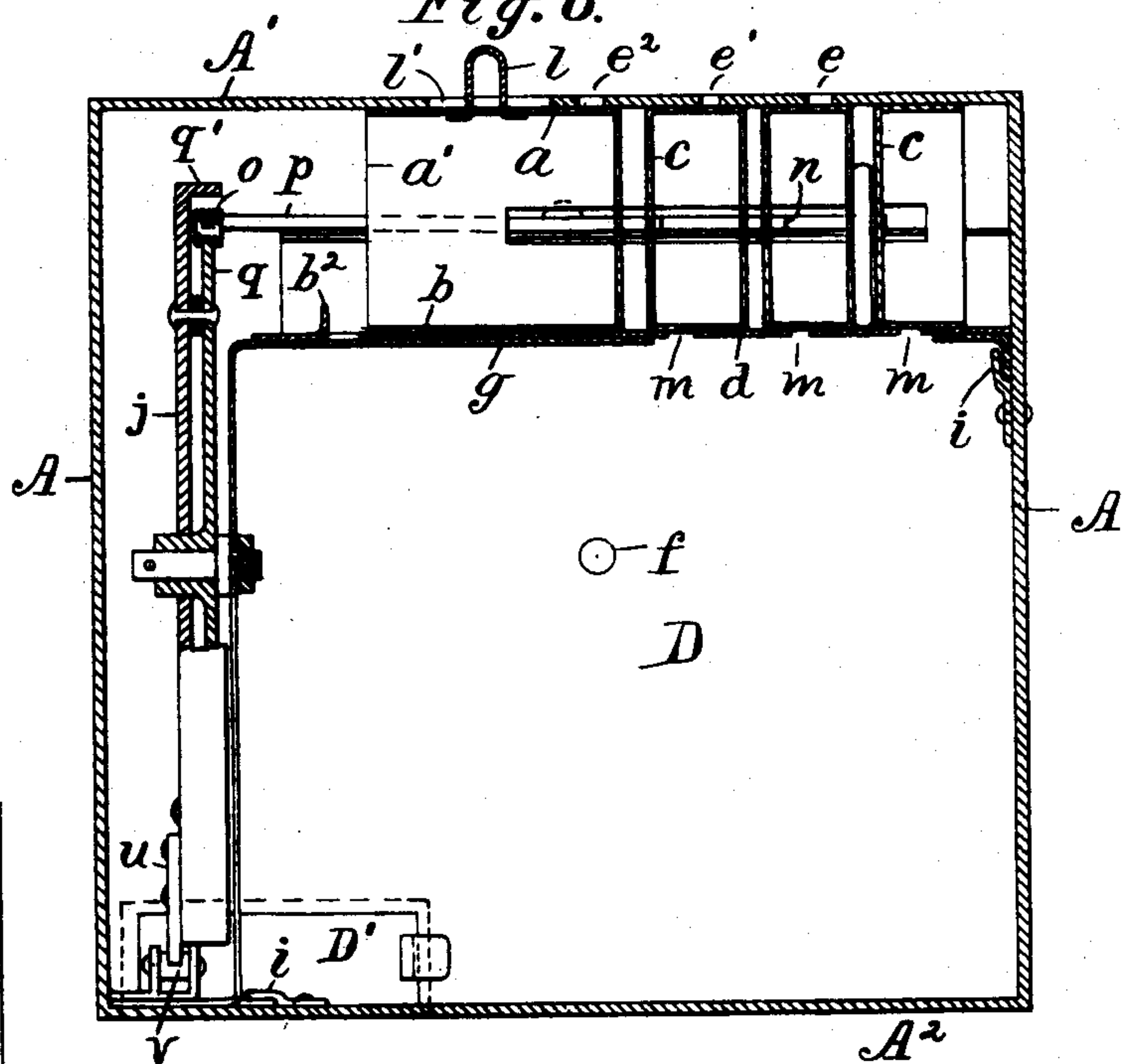


Fig. 8.

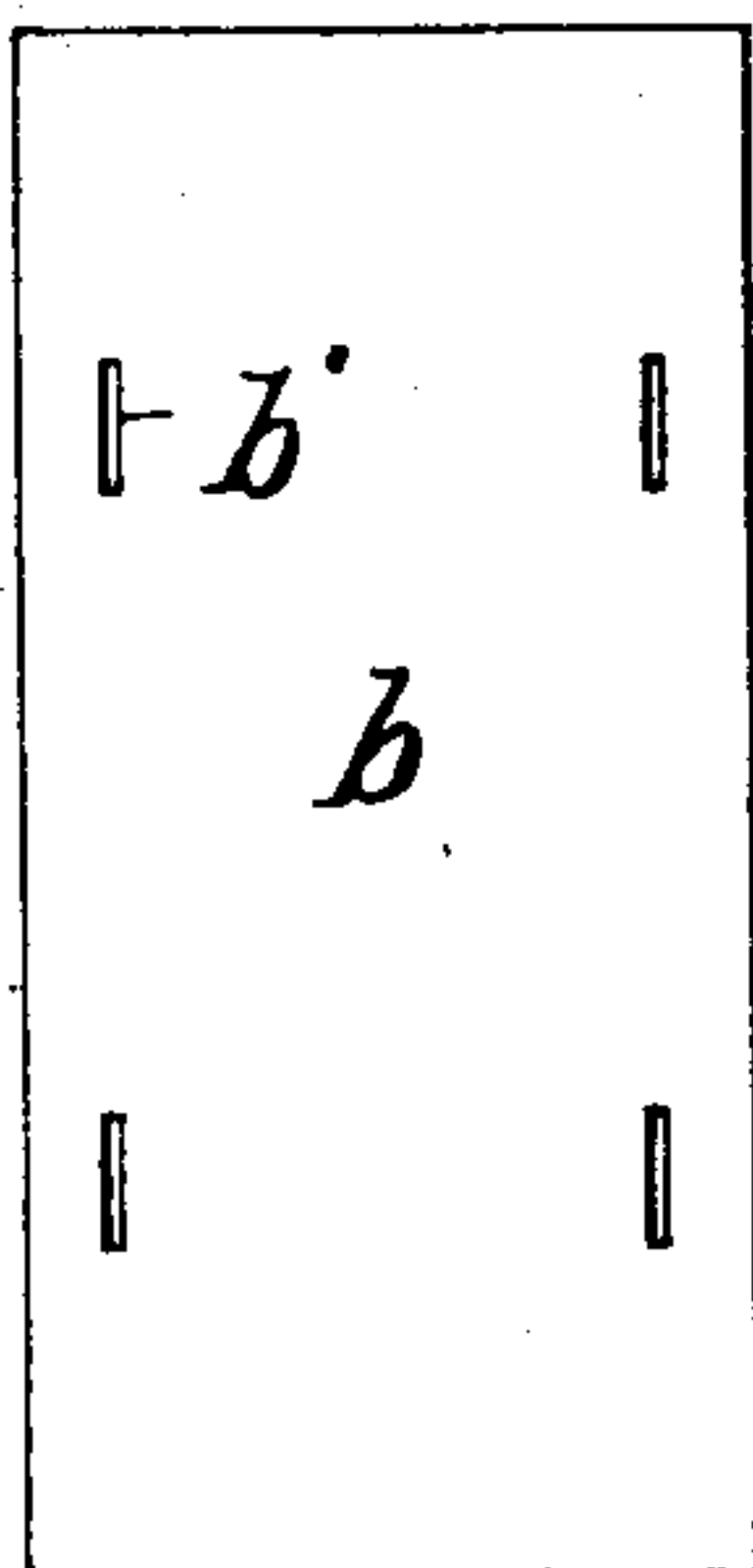
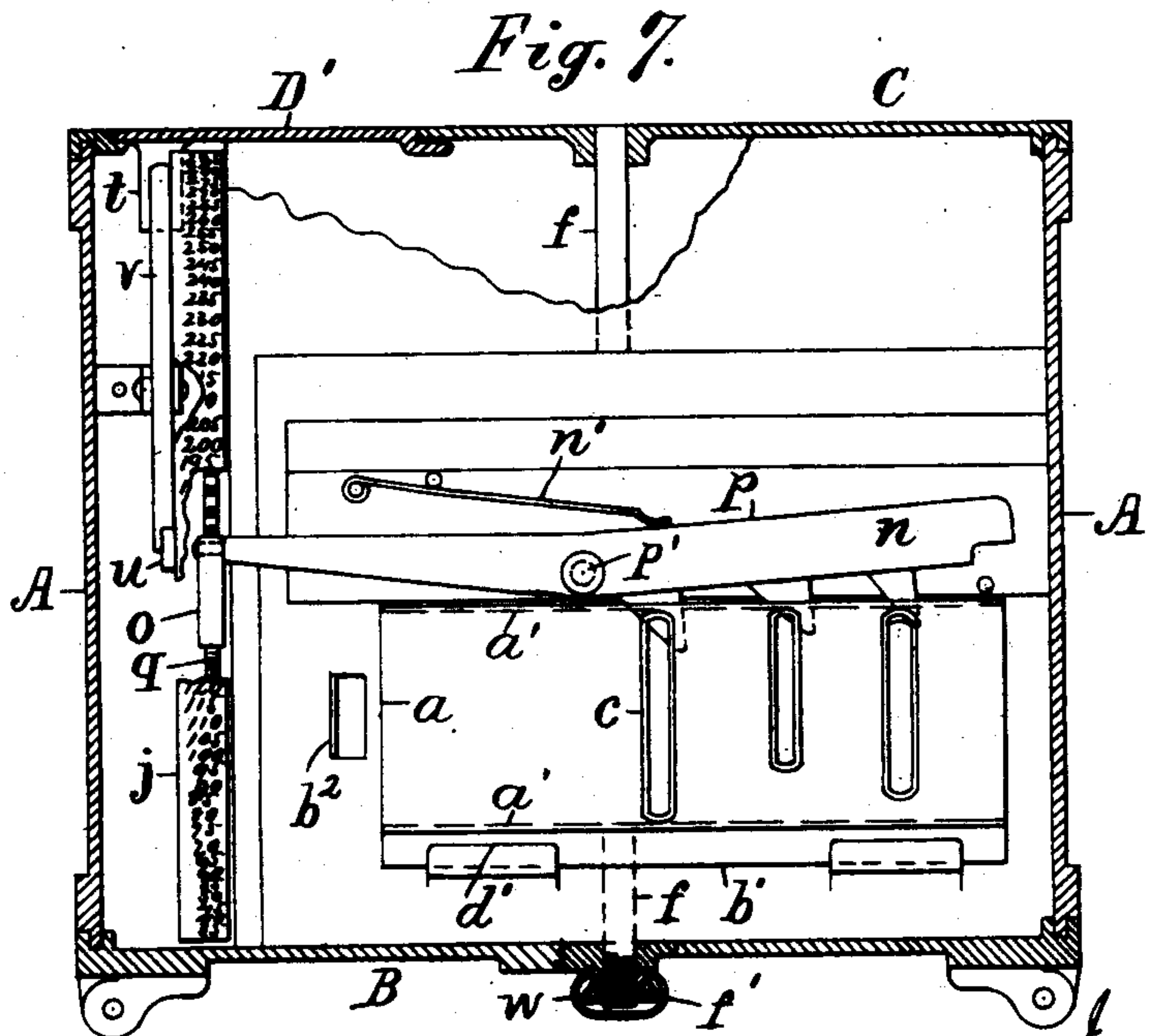


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE HAVELL, OF NEWARK, NEW JERSEY, ASSIGNOR TO HAVELL MANUFACTURING COMPANY, OF NEW JERSEY.

COIN SAVINGS-BANK.

SPECIFICATION forming part of Letters Patent No. 683,396, dated September 24, 1901.

Application filed November 30, 1900. Serial No. 38,143. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HAVELL, a citizen of the United States, residing at No. 30 Mount Prospect Place, Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Coin Savings-Banks, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to furnish a cheap construction for a coin savings-bank adapted to receive coins of several sizes and to register the amount received; and the invention consists chiefly in the details of construction herein described and claimed.

In coin savings-banks of this class it has been common heretofore to employ a reciprocating slider formed of a casting with several chambers to receive a quarter, a dime, and a nickel five-cent piece and to place the chambers in the slider at different distances from a given point or stop, corresponding with the value of the coin received by such chamber. Thus if the nickel were one-eighth of an inch from the said stop the dime would be two-eighths of an inch from such stop and the quarter would be five-eighths of an inch and the movement of the slider would vary according to the value of the coin. In the present invention I form the slider of sheet metal, as I find it can be thus made more accurately and cheaply than by casting, and I preferably give it a uniform movement whatever the value of the coin. Such movement may be secured by forming an aperture in the side of the slider intersecting each of the coin-chambers and arranging a registering-lever at the side of the slider, with teeth projected one into the path of each of the coins, and such teeth proportioned in their length and their distance from the fulcrum of the lever to give it a movement corresponding to the value of the coin. The registering mechanism is actuated by such lever and is moved in a degree proportionate to the value of the coin received.

The invention includes various other features of construction, which will be understood by reference to the annexed drawings, in which—

Figure 1 is a perspective view of the savings-bank. Fig. 2 is an elevation of the interior with the side A of the bank removed.

Fig. 3 is a perspective view of the slider in process of construction with the tongues *h* upon the sides *a'* inserted partially in the mortises of the bottom plate *b'*. Fig. 4 is a longitudinal section of the slider with the tongues inserted wholly in the mortise and the bottom plate in contact with the sides *a'*, but the tongues not yet bent inwardly to secure the bottom plate upon the slider. Fig. 5 is a perspective view of one of the coin-tubes for the slider. Fig. 6 is a front elevation with the front B of the bank removed, and Fig. 7 is a plan with the casing in section on line 7 7 in Fig. 2. Fig. 8 is a plan of the bottom for the slider.

The rectangular shell of the casing is formed with sides A, top A', and bottom A² in one piece and a front B and back C, fitted thereto by joint at the margin and held thereon by bolt *f*. The coin receiving and registering mechanism is for convenience of construction built upon a tin angle-plate *g*, which with all of said mechanism may be inserted in and removed from the casing when the front and back are detached. The angle-plate extends from the front to the back, and the space within it forms the coin-receptacle D, from which the coins can be removed when a maximum amount has been accumulated through a door D', as hereinafter described.

The angle-plate *g* may be fitted removably to guides *i* (shown in Fig. 6) or otherwise held within the casing when in operation. A space is provided between the top of the plate *g* and the top of the casing to receive a bed and the slider and between the plate *g* and the side of the casing for the index-wheel *j*, the edge of which rotates adjacent to a window *k* upon the front of the bank. (See Figs. 1 and 2.) The slider is formed with a top *a* and sides *a'* in one piece and with bottom plate *b*, having mortises *b'* to receive tongues *h* upon the sides *a'*. The bottom is secured by clenching the tongues upon the under side of the plate *b*, as shown in Fig. 2, thus forming a rectangular sheet-metal shell with flanges *b* at its lower edges. The coin-chambers are formed of flat metal tubes *c*, (see Figs. 4 and 5,) made of various widths, as indicated in Figs. 3 and 7, to receive the various coins, and the opposite sides of the slider are formed with opposed transverse slots, corresponding in length with the widths

of the different coin-tubes. The tubes are held transversely in the slider by engagement with the slots and form a series of transverse coin-chambers therein. The coin-tubes may be secured by solder in the slots of the slider or by means of shoulders c' , formed near their ends. With such shoulders the coin-tubes are inserted in the slider before the bottom b is applied, and the fastening of the bottom b in place by the tongues h secures the coin-tubes permanently.

A tin bed d is formed with lugs d' , bent upward from slots therein and turned over to form a guideway for engaging the flanges b^2 upon the bottom of the slider. The bed d is secured upon the angle-plate g , and the slider is movable by the finger between one side of the casing and a stop b^2 upon the bed. A thumb-piece l is projected from the slider through a slot l' in the top of the casing to receive it when inserting a coin. The bed d of the guideway is formed with slots m , agreeing with the coin-chambers in the slider when the slider is at one end of its movement, and the top A' of the casing is provided with slots which similarly correspond with the three coin-chambers when the slider is at the opposite extreme of its movement.

The slot for the nickel is designated e in the top of the casing, that for the dime is lettered e' , and that for the quarter is marked e^2 . A coin dropped in any of the slots can be discharged into the receptacle D by moving the slider to its opposite position, in which all of the coin-chambers register with the sides m .

An aperture is formed in the side of the slider and a notch c^2 in the edge of each coin-tube to admit the teeth n upon the movable lever p , which actuates a pawl o to turn the index-wheel j . The index-wheel is preferably made of pressed pasteboard, with a flange q' upon its margin to receive the index-figures, and it is secured to ratchet-wheel q , which is turned by the pawl o . The teeth n intersect the path of the coin in the adjacent coin-tube and are inclined upon the side next the fulcrum p' , so that when the slider is moved with the coin therein the corresponding tooth is pressed outwardly and the lever and pawl actuated to turn the ratchet-wheel. The teeth are at different distances from the fulcrum p' of the lever, and the coin-tubes are arranged so that the coin of greatest value operates upon the tooth nearest the fulcrum, and thus moves the lever through a greater angular distance than a coin operating upon a tooth at a greater distance from the fulcrum. The lengths of the teeth and their distance from the fulcrum are so proportioned that the nickel inserted in the slot e farthest from the fulcrum moves the ratchet-wheel one tooth, the dime introduced by the slot e' moves at two teeth, and the quarter introduced by the slot e^2 moves at five teeth. The ratchet-wheel is made with a hundred teeth to register five dollars, and the index-wheel j is thus turned in exact correspondence with the value

of the coin inserted. A spring n' presses the lever p to hold the teeth n normally in the aperture of the slide, the lever being thus returned to its outward position after a tooth is pushed outwardly by the coin. A spring-detent s is applied to the teeth upon the ratchet-wheel, as indicated in Fig. 2, for the purpose of completing the movement of the ratchet-wheel in case the pawl should not move it exactly the required distance, and thus effects the centering of the index-numbers at the window k , as indicated in Fig. 1, where the number "15" is shown upon the edge of the index-wheel. Experience has shown that where a coin is used to move the registering mechanism it does not always move the mechanism uniformly, and I have found that the spring-detent s is essential to secure a uniform movement of the wheel.

Provision is made to release a door D' upon the back of the safe when the index-wheel has been turned a complete revolution by the introduction into the bank of coins having a value of five dollars. To effect this result, the door is formed to rest upon flanges F around the aperture to which it is applied and is provided with a hooked tongue t , which engages a hook upon a latch-lever u when the door is fitted to its aperture. The latch-lever is pressed normally toward the hook upon the tongue t and is pressed in the opposite direction at the proper time by a dog u , rotated with the index-wheel and fitted to press upon an inclined tail u' at the rear end of the latch-lever. The index-wheel is shown in the position it assumes before its last movement to release the door, as when a single five-cent coin is required to produce the necessary movement. The introduction of such coin and the movement of the slider rotates the ratchet-wheel one tooth, and this movement depresses the tail of the latch-lever to release the door so that the contents of the bank may be removed. The door, as shown in Fig. 6, extends across one end of the angle-plate g , which it touches when closed. The hooked tongue t projects into the space outside of the angle-plate where the index-wheel revolves, while the remainder of the door covers an aperture leading from the receptacle D' which receives the coins.

A passage, which embraces all of the slots m in the bed-plate d , is formed in the angle-plate g to permit the coins to enter the receptacle through whichever slot they pass.

A great economy in construction is secured by the mounting of the slider and the registering mechanism upon the angle-plate or equivalent support, which fits within the casing and can be removed therefrom with all of such mechanism. In some cases the mechanism does not operate perfectly when inserted in the casing, and if it be soldered or riveted therein great trouble and difficulty are experienced in correcting such defect. To facilitate the opening of the casing and the adjustment of the mechanism during the

manufacture of the bank or when it may subsequently require repairs, I secure the bolt *f* by a tapering nut *f'*, which is covered when the bank is wholly completed by a rotatable shell *w*. During the construction and adjustment of the parts the front B and back C may be secured by the bolt *f* and nut *f'* and may be repeatedly removed by unscrewing the nut. When the bank is completed, the shell *w*, made of sheet metal, is first formed of cup shape and then applied over the nut and the margin of the cup bent or flanged inwardly by a suitable tool, so as to fit loosely upon the nut. Such shell appears like a knob upon an artificial door depicted upon the front of the tank; but although it can be rotated it has no effect in turning the nut or permitting the separation of the front and the back. When the bank requires repairs, the grasping of the shell by a pair of strong pliers operates to press it against the corners of the nut *f'*, so as to turn the latter, and thus release it from the bolt, which permits the separation of the parts.

Having thus set forth the nature of the invention, what is claimed herein is—

1. A slider for coin receiving and registering banks, consisting of the rectangular sheet-metal shell with opposite transverse slots of diverse lengths in its opposite sides, and a series of flat coin-tubes of different widths in correspondence with such slots inserted transversely within the shell to form chambers for receiving coins of different sizes, substantially as herein set forth.

2. In a registering-bank having a case with a series of slots of diverse sizes to insert various coins, and registering mechanism to record the same, the combination, with the case having the series of slots, of a guideway underneath such slot, a slider fitted to such guideway and having transverse chambers corresponding with the said slots, and the bed of the guideway having slots suitably located to discharge the coins from the chambers when the slider is reciprocated, substantially as herein set forth.

3. In a registering-bank having a slot for the insertion of a coin, and a registering device to record the same, the combination, with the case having the coin-slot, of a rectangular guideway underneath such slot, a square sheet-metal slider fitted to such guideway and provided with transverse chamber to receive the coin, an aperture in the side of the slider intersecting such chamber, and a movable member of the registering mechanism projected into said aperture into the path of the coin to be moved by the same, as and for the purpose set forth.

4. In a registering-bank having a series of slots for the insertion of a coin, and a registering device to record the same, the combination, with the case having the coin-slider, of a rectangular guideway underneath such slot, a square sheet-metal slider fitted to such

guideway and provided with transverse chamber to receive the coin, an aperture in the side of the slider intersecting such chamber, a lever with teeth projected into said aperture to intersect the paths of the several coins, and a registering mechanism actuated by such lever, substantially as herein set forth.

5. In a coin receiving and registering bank, the combination, with a case having a slot to insert the coin, and a slider to receive and discharge the same into the receptacle, of a ratchet-wheel with pawl actuated by the movement of the coin with the slider, a disk attached to such ratchet-wheel with flat rim upon its periphery with index-numbers upon such rim, and a window in the case to expose such numbers successively, substantially as herein set forth.

6. In a coin receiving and registering bank, the combination, with a rectangular body open at one side, of a cover fitted to such side, a bolt extended through such cover to secure it upon the body, a circular flaring nut applied to such bolt outside of the cover, and a malleable shell engaged loosely with such nut to turn freely upon the same, but collapsible when compressed by a suitable tool to grasp the nut, substantially as herein set forth.

7. A slider for coin receiving and registering banks, comprising a rectangular sheet-metal shell with opposite transverse slots of diverse lengths in the opposite sides, and a series of flat coin-tubes of different widths inserted transversely in the tube with their ends in such slots, and having shoulders near their ends to prevent their displacement, substantially as herein set forth.

8. A slider for coin receiving and registering banks, comprising the trough-shaped piece with tongues upon its edges, a bottom plate of greater width than the trough with slots to receive such tongues, a series of flat coin-tubes with shoulders near their opposite ends, and slots in the bottom plate and in the top of the trough-piece to hold such tubes transversely in the slider, substantially as herein set forth.

9. In a registering-bank having a slot for the insertion of a coin and a registering device to record the same, the combination, with the case having the coin-slot, of a guideway comprising a sheet-metal bed underneath such slot, gibs raised from such bed to form guides thereon, and a rectangular slider containing a transverse chamber to receive the coin, and a bottom plate with projecting edges fitted to the said gibs to slide beneath the same, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE HAVELL.

Witnesses:

THOMAS S. CRANE,
J. D. CLARK.