

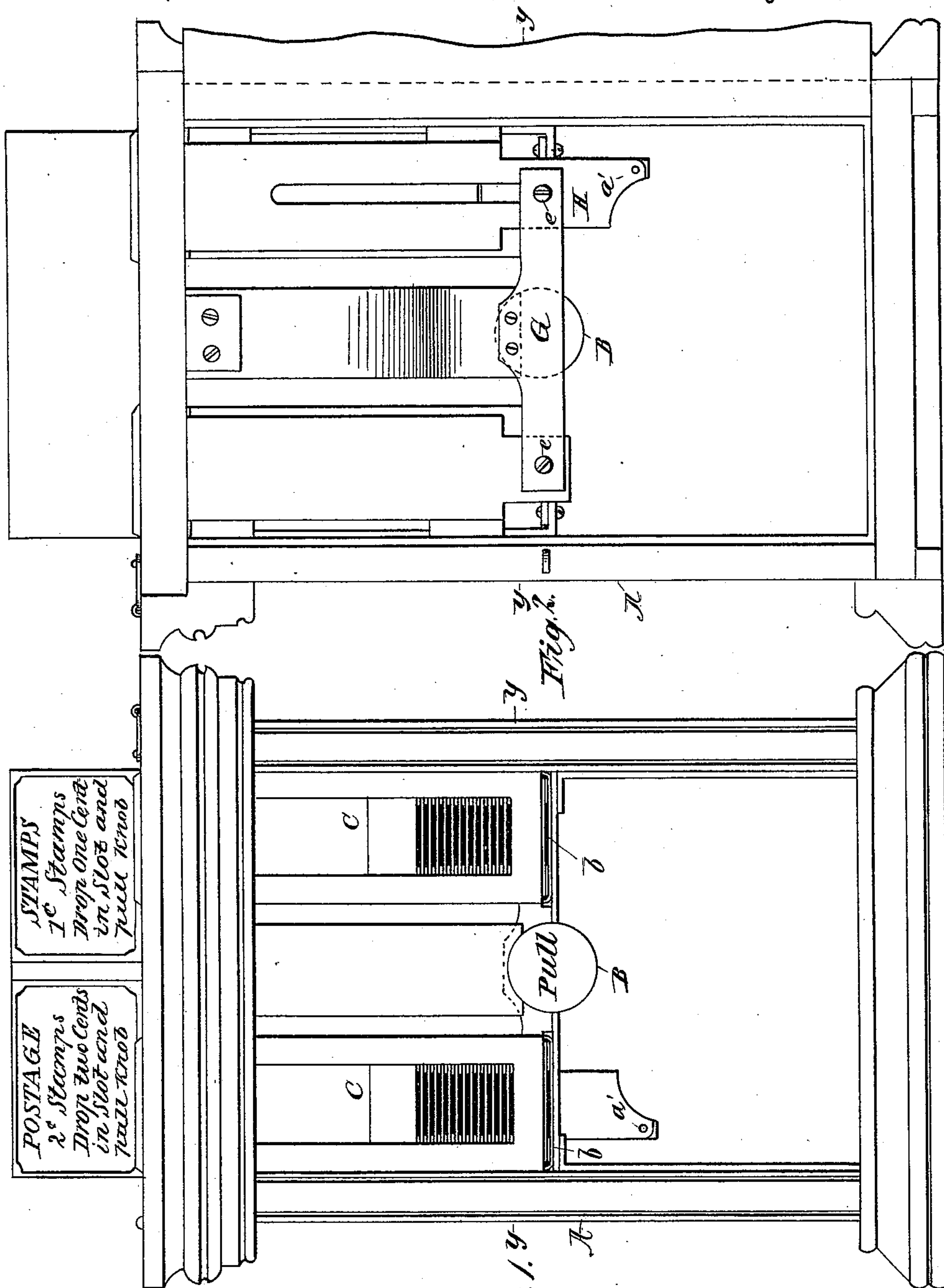
(No Model.)

3 Sheets—Sheet 1.

A. H. FANCHER.
VENDING DEVICE.

No. 428,388.

Patented May 20, 1890.



WITNESSES:

W. Benjamin.
Charles Herbert

INVENTOR

Alton H Fancher
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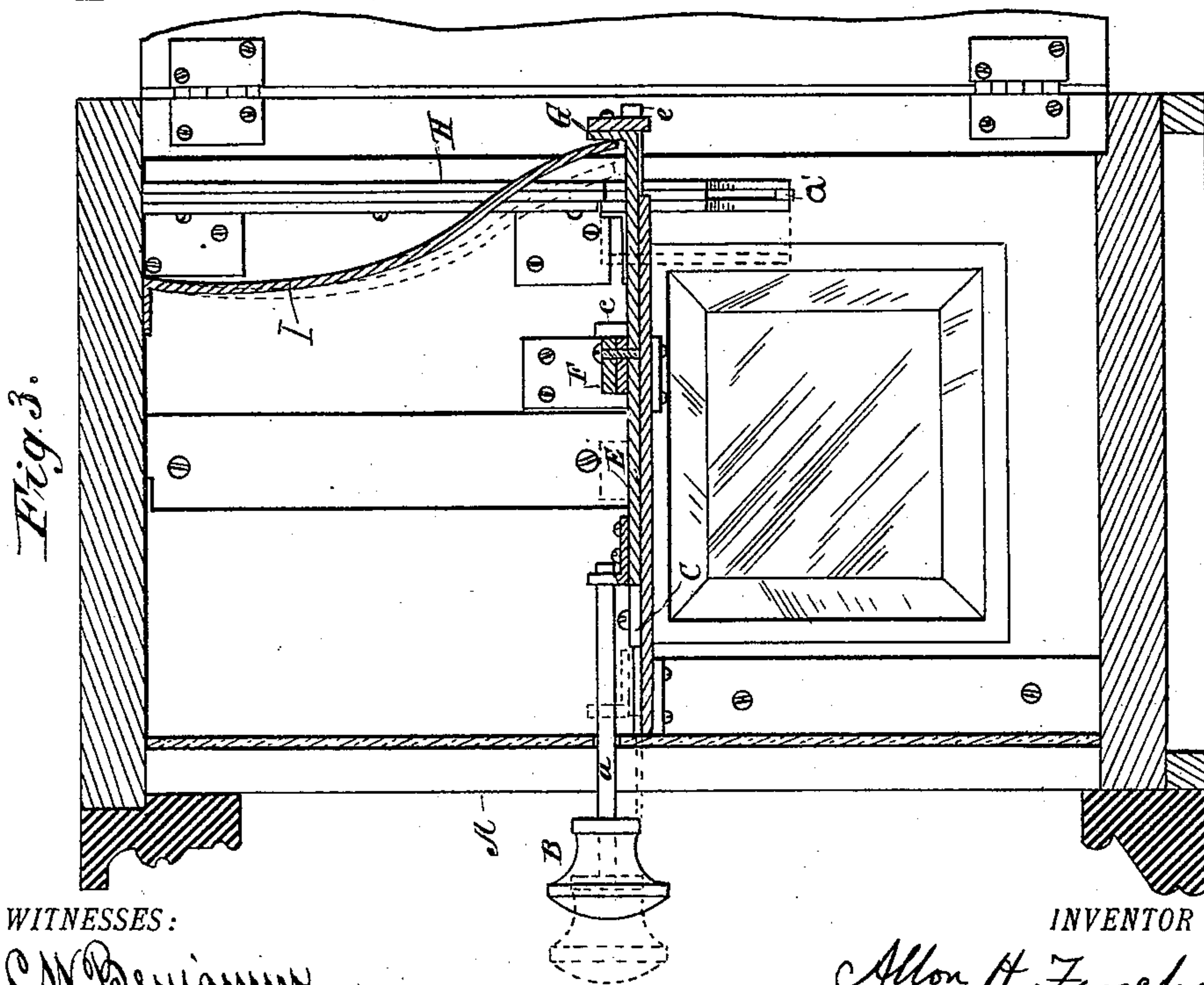
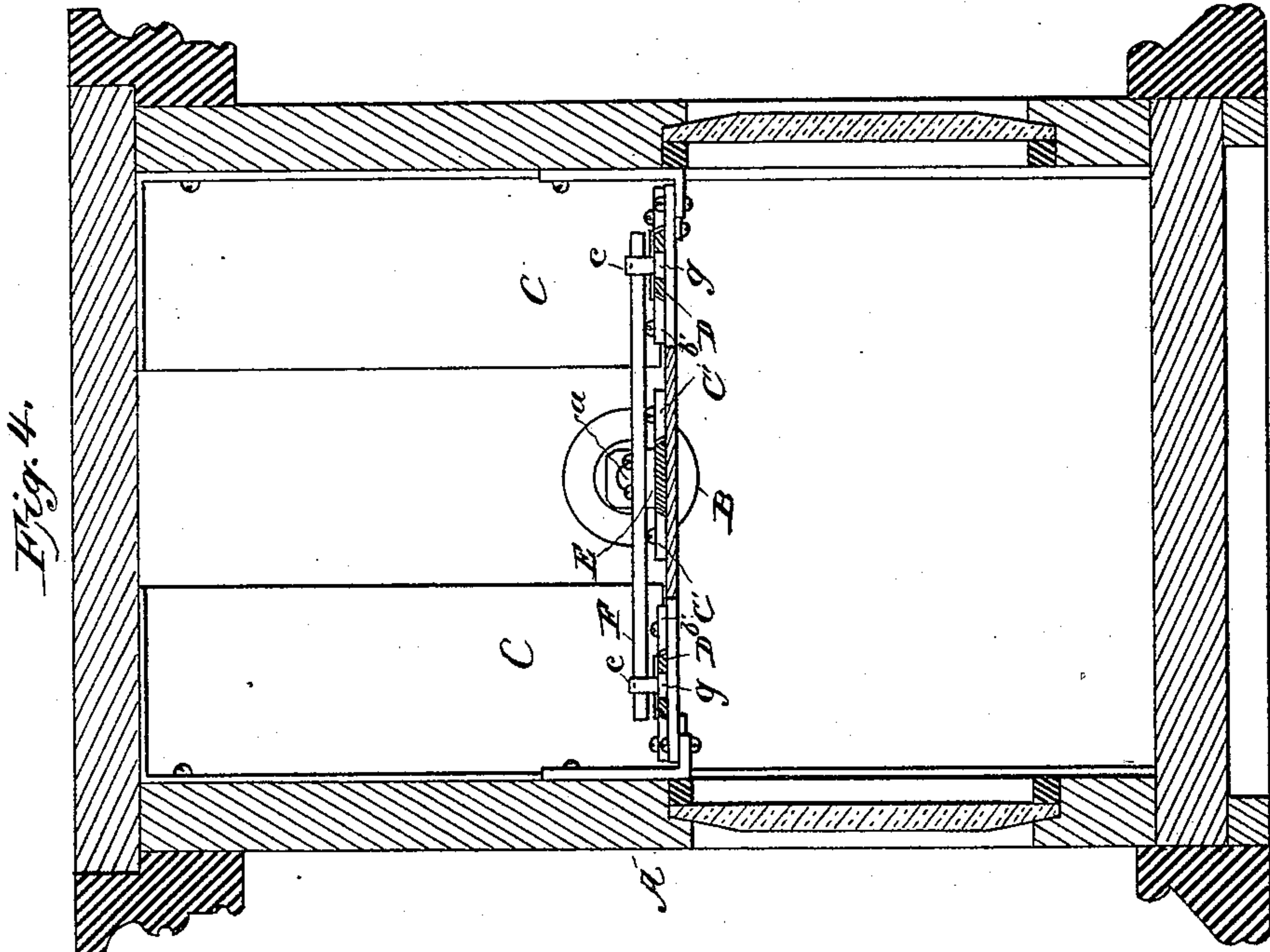
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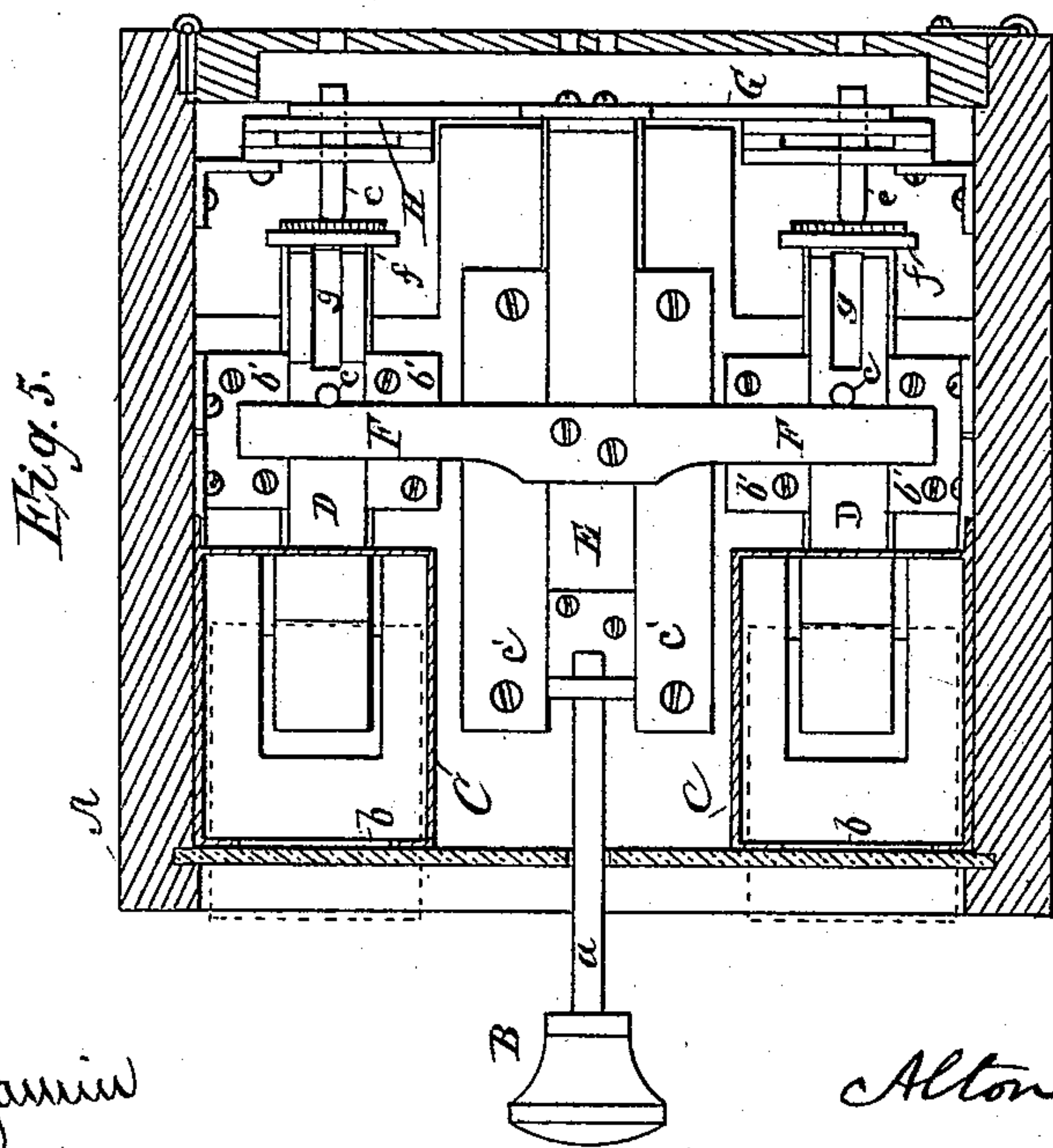
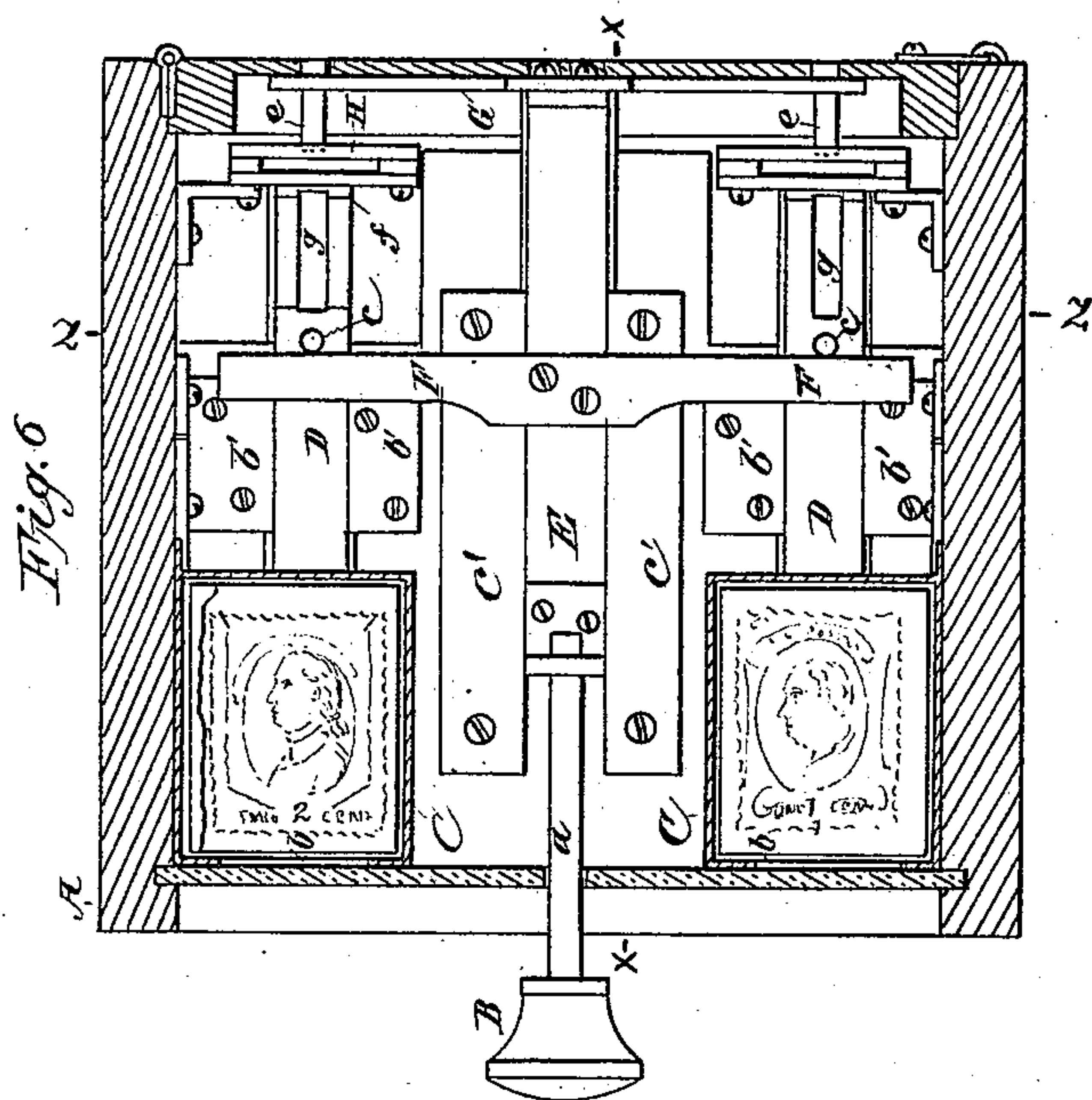
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UNITED STATES PATENT OFFICE.

ALTON H. FANCHER, OF CANTON, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO WILLIAM H. GOODWIN, OF NEW YORK, N. Y.

VENDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 428,388, dated May 20, 1890.

Application filed February 3, 1887. Serial No. 226,352. (No model.)

To all whom it may concern:

Be it known that I, ALTON H. FANCHER, of Canton, in the county of Hartford and State of Connecticut, have invented certain Improvements in Vending Devices, of which the following is a specification.

This invention relates to that class of apparatus in which articles of known or determinate dimensions—such, for example, as envelopes, postal-cards, &c.—are made capable of delivery by the insertion of a coin in such relation with the mechanism as to cause or permit the ejection or withdrawal of such articles as the consequence of the insertion of such coin. Its object is to provide an apparatus of the class mentioned which will be positive in its operation, simple and durable in construction, and adapted to a wide range of uses of the character indicated.

To this end my said invention comprises certain novel combinations of parts whereby the results above indicated are effectually secured.

Figure 1 is a front view, and Fig. 2 a back view, of an apparatus constructed according to my said invention. Fig. 3 is a vertical sectional view taken in the line *xx* of Fig. 6. Fig. 4 is a like view taken in the line *zz* of Fig. 6. Fig. 5 is a horizontal sectional view taken in the line *yy* of Figs. 1 and 2; and Fig. 6 is a horizontal sectional view corresponding to Fig. 5, but showing certain of the parts in a different position.

A is a box or shell, which incloses the working parts of the apparatus, with the exception of the external knob B and its stem *a*, which projects through a suitable opening in the side of the box or case A in order to permit the apparatus to be worked, as hereinafter explained, from the outside.

The box or case A may be made of any suitable material, but is preferably made in part of glass, in order that the internal portions of the apparatus may be readily viewed. Placed within the said box or case are any desired number (one or more) of the receptacles, in which are placed the articles to be sold or delivered from the apparatus. As represented in the drawings, the apparatus is provided with two such receptacles, indicated by the reference-letters C C, respectively. Prefer-

ably at the bottom of each receptacle C C, at the front thereof, is a slot *b*, through which the articles in said receptacle are passed therefrom to the exterior of the apparatus, the said articles being guided or directed toward said slot when pushed forward, as hereinafter explained, by the adjacent bottom of the receptacle, or, if the slot be at the top, by the similar guiding-surface presented by the top of the said receptacle. At the rear of each receptacle, and in substantially the same plane with the slot *b* thereof, is a pusher D, capable of being thrust forward into the receptacle through a suitable opening provided for that purpose, so that the forward movement of the pusher, acting upon the rear of the article, will project the said article forward and cause it to pass outward through the slot *b* to an extent proportioned to the forward thrust upon it of the pusher. It is desired that this thrust should be sufficient to partially eject the article through the slot *b*, so that the end thereof may be readily grasped and withdrawn by the fingers. When desired, the pusher D, instead of acting upon the rear of the article, may be arranged to act through a suitable opening against the lower side of said article to project the same by frictional contact with the latter. At the rear of the stem *a* is a slide E, which may be of any suitable character, and which, in fact, is part of the stem *a*, and upon which is a cross-bar F, the opposite arms of which extend across the pushers D in front of the studs *c c*, so that when the stem *a* is pushed inward the said cross-bar F, acting upon the studs *c c*, will force backward the pushers D to retract the same from the articles contained in the receptacles. At the rearmost end of the slide E is a transverse bar G, provided with pins or studs *e*, which should be placed substantially parallel with the slide E. The pushers D are extended rearward beyond the studs *c c*, and are formed, preferably, with shoulders *f*, the purpose of which will herein presently appear, the said rearwardly-projecting parts of the pushers D being also so constructed—as, for example, by slots *g*—as to permit the pins *e* to move forward beyond the rearmost ends or shoulders *f* of the pushers D without giv-

ing motion to or actuating the said pushers, except when a coin is interposed between the pins *e* and the adjacent ends or shoulders *f* of the pushers.

5 The coin is supplied behind each pusher D and in front of the adjacent pin *e* by means of chutes H, which are more or less vertical and of such size, shape, and position that the proper coin, placed edgewise therein, will be
10 permitted to drop in its edgewise position between the forward extremity of the pin *e* and the rearward extremity or shoulder *f* of the adjacent pusher D, the coin being prevented from falling beyond the said pin *e*
15 and the end or shoulder of the pusher by means of a small stud or pin or like device *a'*, duly provided to said end or shoulder of the pusher. The coin being thus interposed between the pin *e* and the adjacent end or
20 shoulder of the pusher D, temporarily connects the two said parts in such manner that the forward movement of the pin *e* communicates a corresponding forward movement to the pusher D, and thereby causes the lat-
25 ter to act upon the adjacent one of the articles in the adjacent receptacle to partially eject the same through its slot *b*, so that the said article may be grasped and withdrawn from the outside.

30 The chutes H extend up through the top of the box or case A and open externally, so that the coins may be readily dropped into the said chutes from the outside. Inasmuch as motion is given to the slide E, and conse-
35 quently to the cross-bar F and transverse bar G, by the movement of the stem *a*, it follows that in order to operate the apparatus it is simply necessary to cause the stem *a* to move backward until the pin *e* and the ends or
40 shoulders *f* of the pushers D are brought in due relation with the lower ends of the chutes H, the pushers D being of course moved backward by the action of the cross-bar F upon the studs *c*, as hereinbefore explained.

45 A coin being dropped into one or the other of the chutes H, or, if desired, the requisite coins into both of said chutes, according as it may be desired to operate one or the other or both of the pushers D, the stem *a* is pulled
50 forward, thereby moving forward the one or the other or both of the pushers, according as one or the other or both of the coins are interposed between them and the pins *e*, the forward motion of each pusher causing the
55 partial ejection, as hereinbefore explained, of one of the articles from one or the other or both, as the case may be, of the receptacles.

In order to lessen the care and attention necessary in the manipulation of the appa-
60 ratus, and to render the same to a certain extent automatic, a spring I is arranged to retract or move backward the slide E and the parts connected therewith, when the stem *a* is relieved from its forward pull or movement.

65 The pushers D work in suitable guides—as, for example, such as are indicated at *b'*—and in like manner the slide E works in suit-

able guides—as, for example, those indicated at *c'*; but the guiding devices and also the contour of the pushers D and of the slide E 70 may be modified within wide limits, so long as their construction is such as to permit or insure the requisite movement of the parts with reference to the contents of the receptacles.

75 In order that one and the same apparatus may be employed for the vending of envelopes or other articles of differing values or denominations, the shape and proportions of the rearmost end or of the shoulders *f* of one 80 of the pushers D, its stud or stop *a'*, and of the adjacent pins *e*, are so modified that the insertion of two or more coins, according to the value of the article, one above the other, is necessary to insure the requisite interposi- 85 tion of a connecting material between the pin *e* and the adjacent end or shoulder *f* of the pusher. In such case the lowermost of the coins would act as the support of the uppermost coin to hold the same in due relation 90 with the pin *e* to insure the action of the latter in projecting forward the adjacent pusher. This arrangement is illustrated more fully in Figs. 1 and 2, the greater depth or capacity required for multiple coins being illus- 95 trated at the left-hand portion of Fig. 1 and at the right-hand portion of Fig. 2. In order that the use and purpose of this construction may be apparent to the purchaser, suitable notices, printed or otherwise marked or de- 100 signed, should be placed in close relation with the mouths or open upper ends of the respective chutes, as illustrated in Fig. 1, in which the right-hand portion of the apparatus is indicated as adapted to the sale of articles 105 the price of which is the value of one coin of a given denomination, while that at the left hand is adapted to the sale of articles the price of which is the value of two such coins.

When desired, the parts may be so propor- 110 tioned as to require the insertion of three or even of a greater number of coins to insure the operation of the pusher upon the contents of the contiguous receptacle. When no coin is placed behind the pusher of one receptacle, 115 or when less than the desired number of coins is placed behind the pusher of the other receptacle, the pin *e* instead of actuating the pusher will pass through the slot or opening *g* without affecting the pusher in any manner, 120 so that the article cannot be ejected or withdrawn unless prepayment be made therefor by passing the requisite coin or coins through the proper chute into the apparatus.

It is to be observed that in an apparatus 125 constructed according to my invention any desired number of the receptacles C C', &c., and their respective adjuncts may be employed as within the scope of my said invention.

What I claim as my invention is— 130

1. The combination, with a receptacle having an outlet-slot *b* and a guiding-surface coincident with said slot, of a pusher D, a pin *e*, arranged to have a sliding movement, and

a chute H, arranged to conduct the coin to a position between the pusher and the pin to permit the latter to act upon the former to eject an article along the guiding-surface to or through the slot, substantially as and for the purpose herein set forth.

2. The combination, with a receptacle having an outlet-opening *b* and a guiding-surface coincident with said opening, of a pusher D, constructed with a stud *c*, a pin *e*, capable of a sliding movement and arranged to actuate the pusher through an interposed coin, and a chute arranged to conduct a coin to the stud *a'* in a position between the pusher and the pin, substantially as and for the purpose herein set forth.

3. The combination, with a receptacle having an outlet-slot *b* and a guiding-surface coincident with said slot, of a pusher D, provided with a stud *c*, a pin *e*, arranged to actuate the pusher through an interposed coin, a chute arranged to conduct the coin to a position between the pusher and the pin, and a cross-bar arranged to retract the pusher from the receptacle, substantially as and for the purpose herein set forth.

4. The combination, with a receptacle having an outlet-slot *b*, of a pusher D, arranged to move toward and from the said slot and provided with a stud *c*, a pin *e*, arranged to actuate the pusher through an interposed coin, a chute arranged to conduct the coin to a position between the pusher and the pin, a cross-bar arranged to act upon the stud *c* to retract the pusher from the receptacle, and a stud *a'*, substantially as and for the purpose herein set forth.

5. The combination, with a receptacle having an outlet-slot *b*, of a pusher D, arranged to move toward and from the said slot and provided with a stud *c*, a pin *e*, arranged to actuate the pusher through an interposed coin, a spring arranged to retract said pin, a chute arranged to conduct the coin to a position between the pusher and the pin, a cross-bar arranged to act upon the stud *c* to retract

the pusher from the receptacle, and a stud *a'*, substantially as and for the purpose herein set forth.

6. A sliding pusher for ejecting articles to be sold from a vending apparatus, in combination with a pin capable of a sliding movement, said pin in its normal movement having no co-operation with said pusher, and a coin-chute for directing coins between said pin and pusher, said coin-chute having means—such as a stud—for stopping the movement of a coin inserted therein, said stud being located below the path of said pin, whereby the insertion of a plurality of coins is essential to bring one coin into position between said pin and said pusher, substantially as set forth.

7. A vending apparatus comprising a plurality of pushers for ejecting articles to be sold, a plurality of pins each capable of a sliding movement, there being one pin for each pusher, each pin in its normal movement having no co-operation with its pusher, a plurality of coin-chutes, one for each of said pins and pushers, respectively, each coin-chute being adapted to direct a coin between its pin and pusher, and operating means connected with all of said pins for simultaneously moving the same, substantially as set forth.

8. A vending apparatus comprising a plurality of pushers for ejecting articles to be sold, a plurality of pins each capable of a sliding movement, there being one pin for each pusher, each pin in its normal movement having no co-operation with its pusher, a plurality of coin-chutes, one for each of said pins and pushers, respectively, each coin-chute being adapted to direct a coin between its pin and pusher, operating means connected with all of said pins for simultaneously moving the same, and means for retracting said pushers, substantially as set forth.

ALTON H. FANCHER.

Witnesses:

CHARLES A. HERBERT,
FRED. SCHALLER.