

(No Model.)

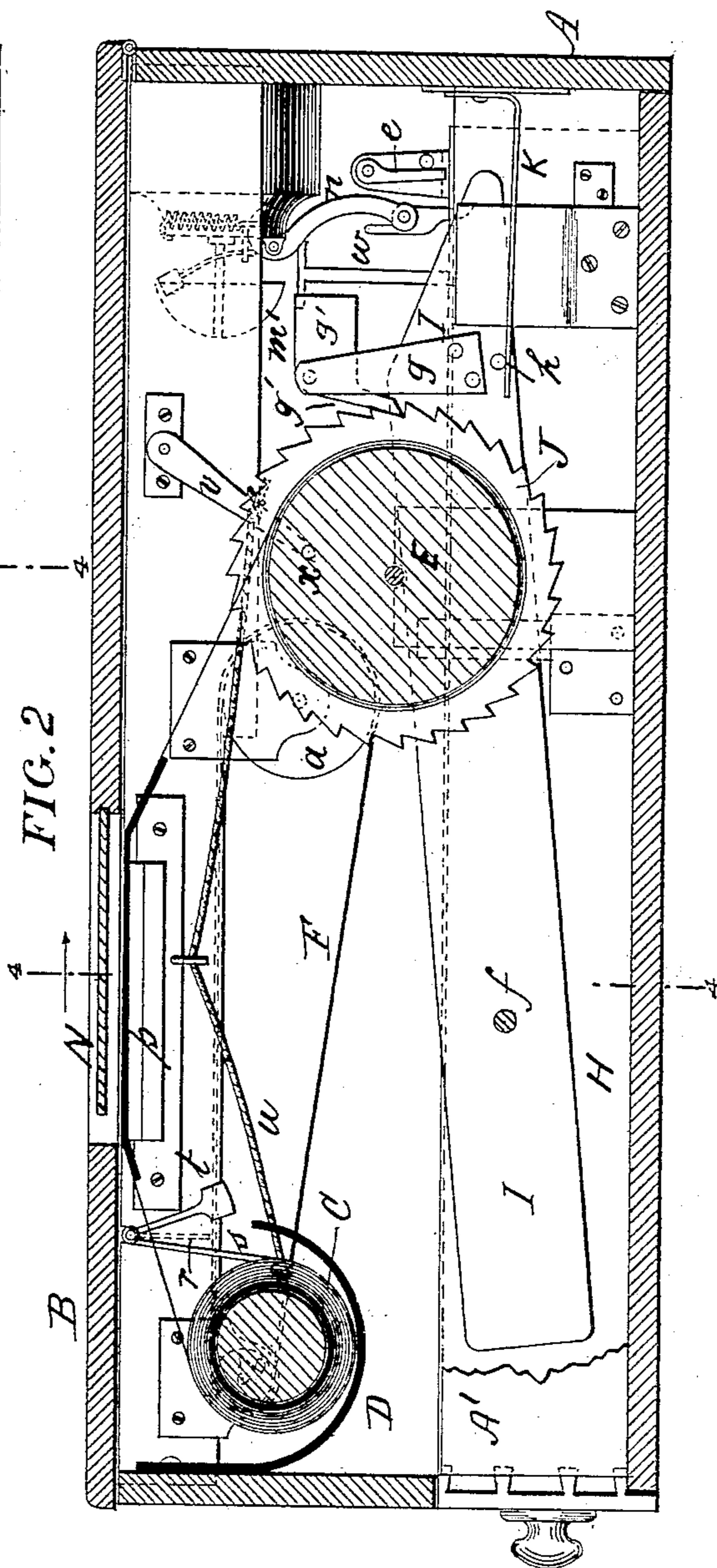
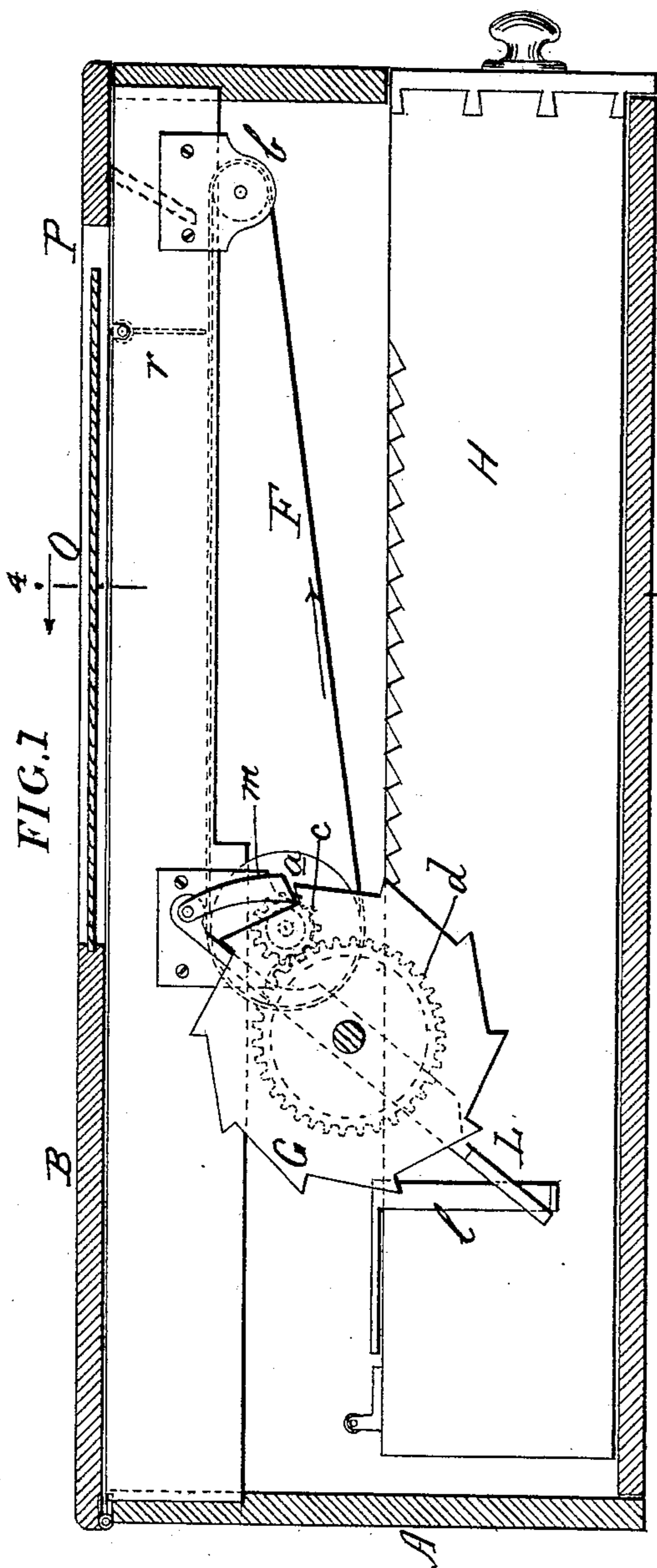
3 Sheets—Sheet 1.

G. H. GLEDHILL.

APPARATUS FOR CHECKING THE RECEIPT OF MONEYS.

No. 391,958.

Patented Oct. 30, 1888.



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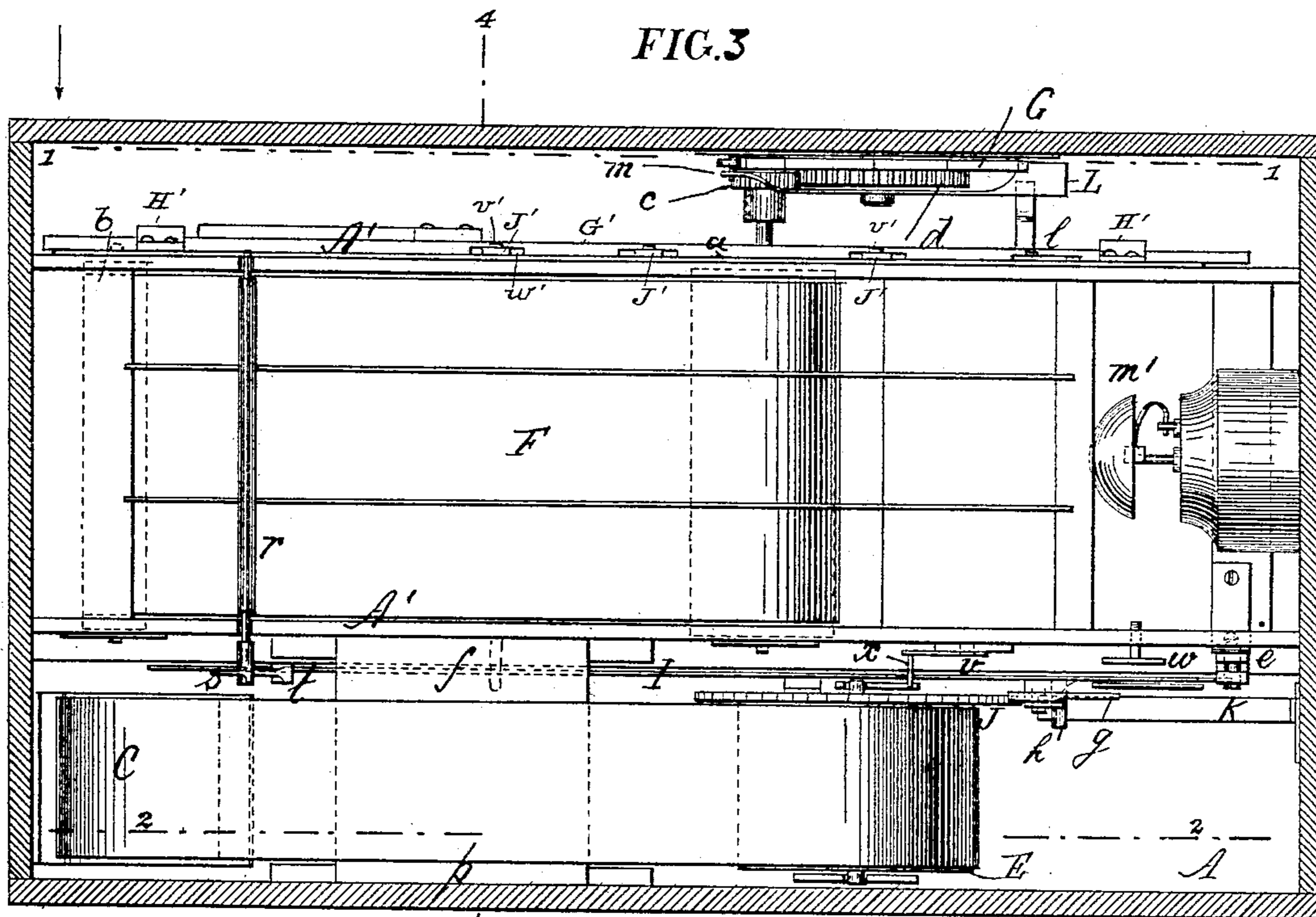


FIG. 7.

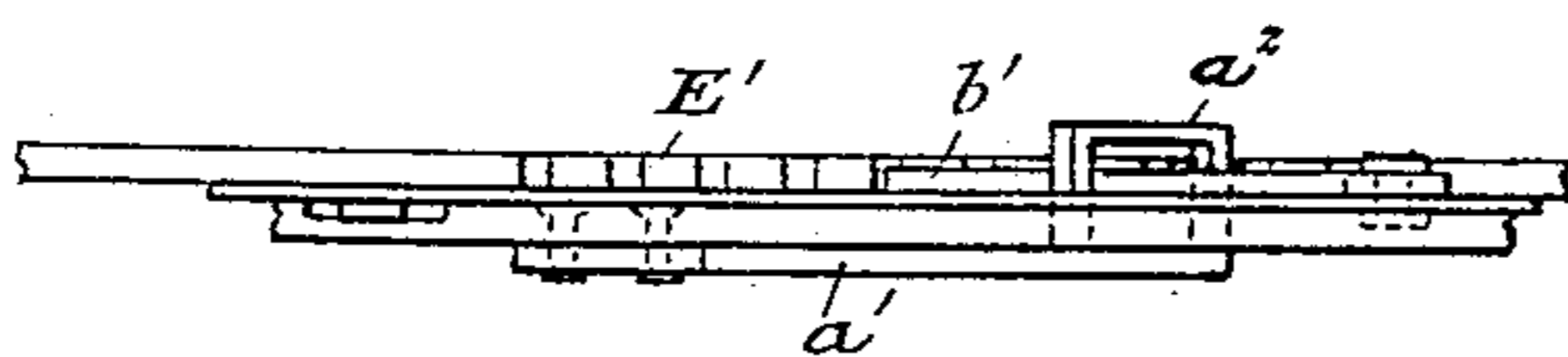
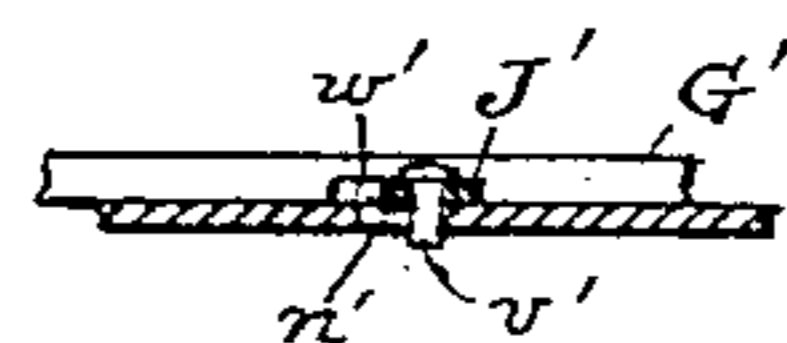


FIG. 8.



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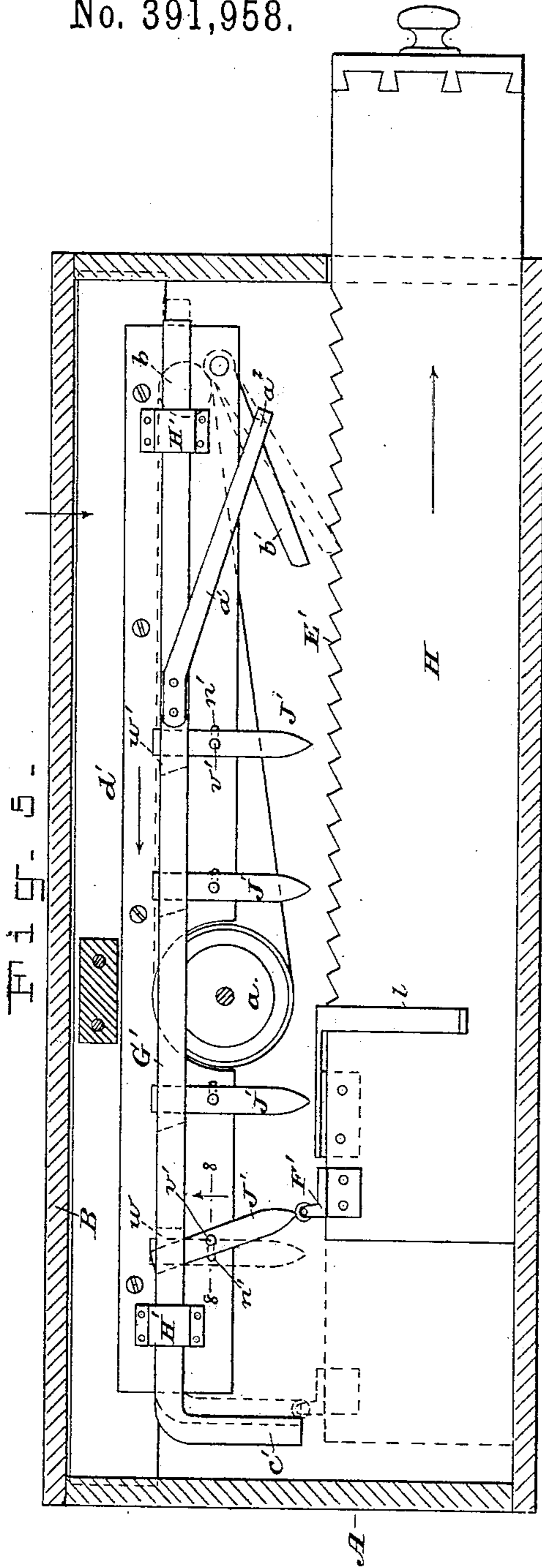


Fig. 5.

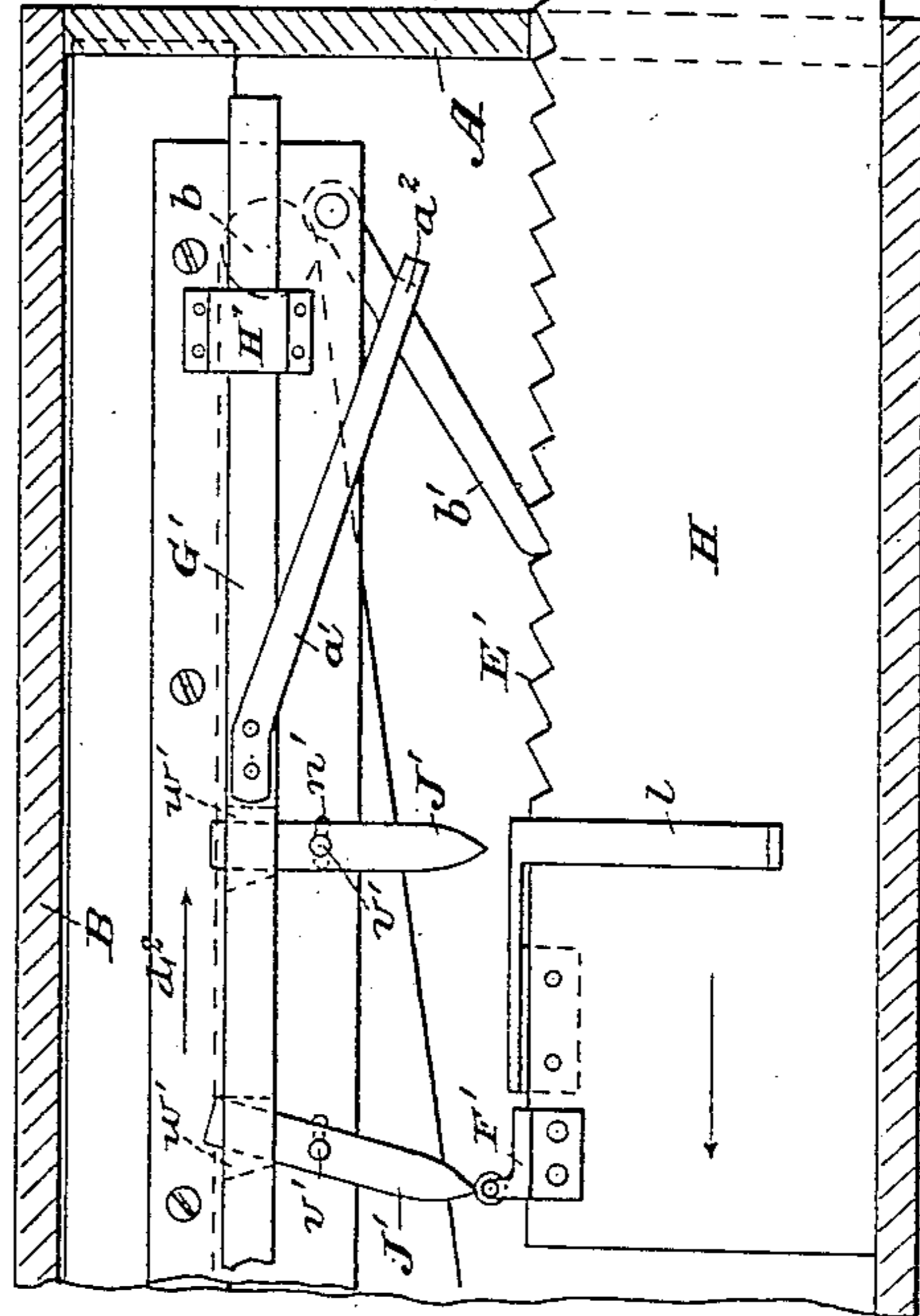
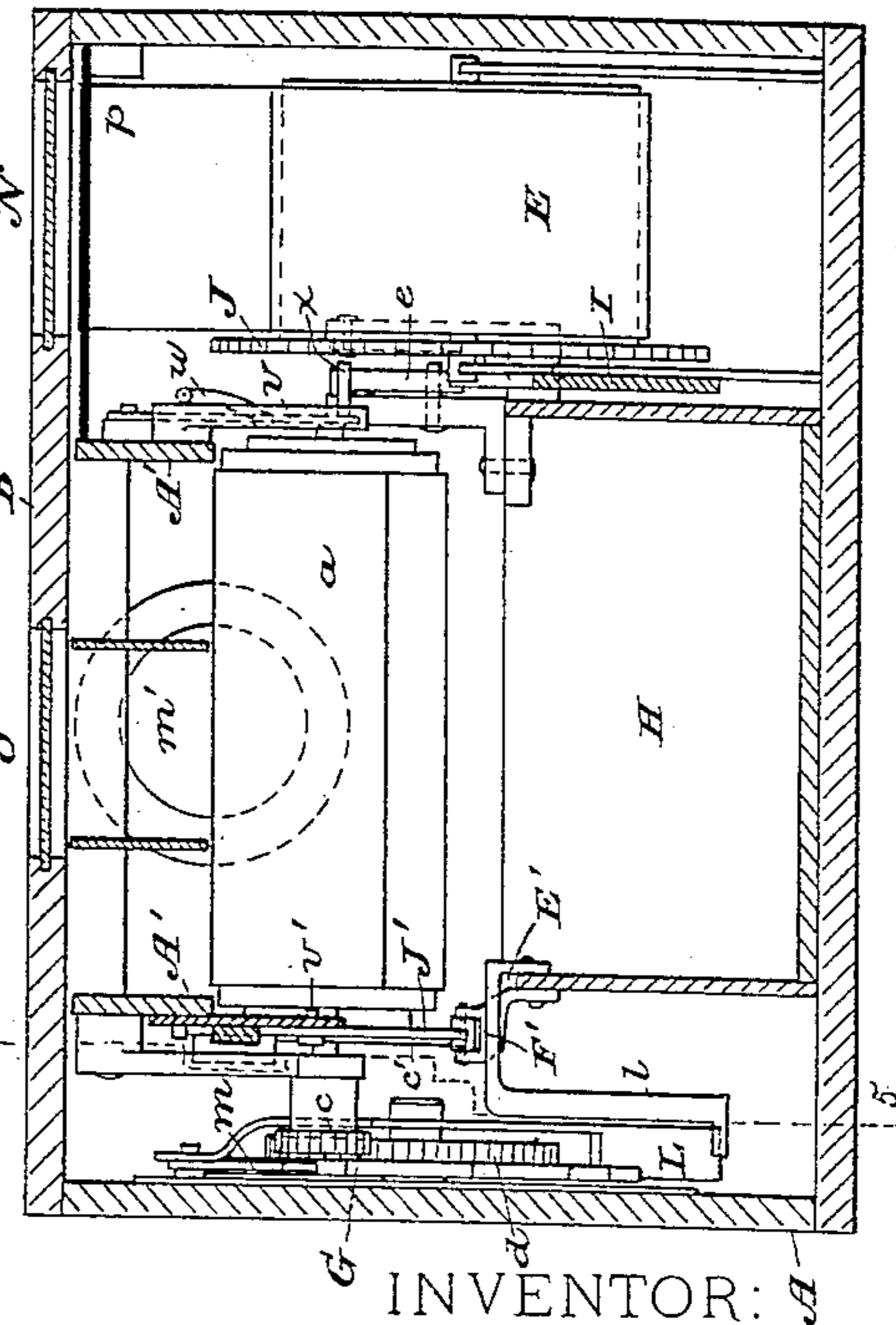


Fig. 4.



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# UNITED STATES PATENT OFFICE.

GEORGE HENRY GLEDHILL, OF HALIFAX, COUNTY OF YORK, ENGLAND.

## APPARATUS FOR CHECKING THE RECEIPT OF MONEYS.

SPECIFICATION forming part of Letters Patent No. 391,958, dated October 30, 1888.

Application filed February 21, 1888. Serial No. 264,834. (No model.) Patented in England August 11, 1886, No. 10,247; in France June 7, 1887, No. 184,082, and in Belgium June 8, 1887, No. 77,758.

*To all whom it may concern:*

Be it known that I, GEORGE HENRY GLEDHILL, a subject of the Queen of Great Britain, residing in Halifax, Yorkshire, England, have  
5 invented certain new and useful Improvements in Cash-Drawers or Apparatuses for Checking the Receipt of Moneys, (for which I have been granted Letters Patent in Great Britain, No. 10,247, dated August 11, 1886; in France, No.  
10 184,082, dated June 7, 1887, and in Belgium, No. 77,758, dated June 8, 1887,) of which the following is a specification.

My invention relates to that class of cash drawers or tills employed in stores which have  
15 a strip of paper, actuated by the movements of the drawer, for receiving an entry of the amount received by the salesman, said amount being written on the strip through an aperture in the cover of the casing.

It also relates to that class of such tills as have a traveling apron to receive a coin dropped through a coin-slit in the cover, said apron eventually depositing the money in the drawer. I provide such a till with devices for accom-  
25 plishing both of the above objects, and also with a device for preventing the drawer from being pulled out until it has been pushed "home," or fully back into its casing. The purpose of this feature is to compel the user  
30 to push the drawer fully in at each operation thereof, so that the other portions of the mechanism will be properly actuated thereby.

My invention will be fully described hereinafter, and its novel features carefully defined  
35 in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal section or sectional elevation of a cash till or receiver embodying my invention, the plane of the section being indicated by line 1 1 in Fig. 3. Fig. 2 is a similar  
40 sectional elevation to Fig. 1, the plane of the section being indicated by line 2 2 in Fig. 3. Fig. 3 is a plan view of the interior of the till, the top or cover of the box being omitted. Fig. 4 is a transverse vertical section taken in  
45 the plane indicated by line 4 4 in Fig. 3. Fig. 5 is a longitudinal sectional elevation taken in the plane indicated by line 5 5 in Fig. 4. This view represents the drawer as being drawn  
50 out, and serves to illustrate the device for preventing the drawer from being drawn out un-

til it has been previously pushed home. Fig. 6 is a fragmentary view taken on the same plane as Fig. 5, and representing the drawer as being pushed home. Figs. 7 and 8 illustrate details of the device seen in Figs. 5 and 6, which will be hereinafter described.

A is a box-like casing, the cover B of which is hinged and may be provided with a lock of any kind.

C is a rolled strip of paper which rests in a concave support, D, mounted on the side of the casing. The end of the strip of paper is carried over a plate or tablet, *p*, mounted in the casing near the cover B under a partly-glazed  
65 aperture, N, as seen best in Fig. 2. The end of the paper is then attached to a winding-drum E. This drum is mounted in bearings in the casing, and is rotated intermittingly through the medium of a ratchet mechanism  
70 by the pulling out and pushing in of the money-drawer H in the bottom of the casing—that is to say, on the drawer H is a pendent pawl-like finger, *e*, which, on the drawer being pulled out, wipes over an incline or bevel on the end  
75 of an inclined lever, I, pivoted at *f* to an inner frame-work, A', in the casing, and depresses that end of said lever. On an upright, *g*, on the lever I is mounted a weighted gravity-pawl, *g'*, which meshes with a ratchet-wheel, 80  
J, fixed on the arbor of drum E. The depression of lever I thus serves to rotate drum E and wind the strip of paper from roll C onto said drum. When the drawer is pushed in, the  
85 finger *e* rides over lever I, and when the latter is free a spring, K, which takes under a pin, *h*, on lever I, raises the lever and retracts pawl *g'*. Thus a portion of the paper is fed from roll C each time the drawer is pulled out.

When the salesman effects a sale and receives the money, he writes the amount across  
90 the strip where it rests on tablet *p*, under aperture N, then pulls out the drawer, places the money therein, and pushes it back. The effect of this is to feed the strip of paper along  
95 far enough to receive the next entry. The glass at aperture N allows the last entry to be inspected, or, in other words, one entry remains in view until another is made.

It is desirable to provide the apparatus with  
100 a sound-signal to give warning when the drawer is pulled out. I provide a gong or bell, *m'*,

mounted on the inner wall of the casing, and provide this gong with the usual striking-hammer and tumbling-lever, *n*, the lower end of which lever is in contact with the upper edge of the drawer, whereby when the drawer is pulled out the gong will sound.

The above description covers only that part of the apparatus employed when the money received is deposited directly in the drawer H; but as there is often a dispute as to the coin or amount paid by the purchaser to the salesman I have provided means whereby the coin may be deposited indirectly in the drawer by dropping it through a slit upon a traveling apron, where it remains visible through a glazed opening, D, in the cover of the casing. This device I will now describe.

F is an endless apron mounted in the casing on rollers *a* and *b*, supported in brackets on the frame-work. The roller *a* has a pinion, *c*, fixed on its arbor, which meshes with a spur-wheel, *d*, rotatively mounted on a stud inside the casing. Connected rigidly to this spur-wheel is a ratchet-wheel, G. Movement is imparted to this ratchet-wheel and by it to apron F by the following-described mechanism:

On the drawer H (see Fig. 1) is a finger, *l*, which, when the drawer is pulled out, acts on the pendent end of a gravity-lever, L, fulcrumed on the axis of ratchet-wheel G. This lever carries on its upper end a pawl, *m*, that engages said ratchet-wheel. When the drawer H is pulled out, the lever L is left free to swing, and it draws the pawl *m* back over the teeth of the ratchet-wheel and takes a purchase on same, and when the drawer is pushed in the finger engages lever L and pushes it back and the pawl is made to rotate said wheel, and through it the roller *a*, and thus to move apron F in the direction of the arrow thereon in Fig. 1. This movement of apron F takes place, of course, every time the drawer is opened and closed. In the cover of the casing, over the apron, is set a glass or other transparent plate, O, and adjacent to this plate is the slit P for the insertion of the money. The money, when inserted, falls upon the apron and is carried by it toward the left in Fig. 1 at each movement of the apron, finally falling into the drawer H below. The money will be visible through the glass O while it lies on the apron.

In order to prevent any one from abstracting the money through slit P after it has fallen upon the apron, I provide the following-described device:

A vibrating wing, *r*, is suspended in rocking bearings over the apron at a point just in advance of slit P, the lower and free edge of said wing nearly touching the apron. To the axis of this wing is attached a suspended arm, *s*, and also a weighted arm, *t*, the latter to bring the wing back into position. The free end of arm *s* is connected by a cord or chain, *u*, to a lever, *v*, pivoted to the frame, as seen in Fig. 2. On the drawer H is an upright

finger, *w*, which wipes under the forwardly-inclined lever *v* when the drawer is pulled and raises it a little without producing any other effect; but when the drawer is pushed in said finger strikes the lever *v* and swings it back, and with it wing *r*, through the medium of cord *u*. This lifting movement of the wing takes place simultaneously with the forward movement of apron F, and thus the coin on the apron is carried on past said wing. Then the finger *w* passes lever *v* and weight *t* returns wing *r* to its first position. The wing *r* will now be interposed between the coin and the coin-slit P.

In order to prevent any one from pulling out the drawer a little way and then pushing it in a little way without disturbing the paper, C, or apron F, I provide the device best illustrated in Figs. 5 and 6. I have omitted from these figures most of the mechanism illustrated in Figs. 1 and 2 in order to avoid obscuring the device I am now about to describe.

In the upper edge of the drawer H, at one side, I form ratchet-teeth E', and at its back or inner end I provide the drawer with an upright, F', which may bear a roller, as shown.

G' is a longitudinally-arranged slide-bar, mounted in brackets or keepers H'. On the inner frame-work of casing A is pivotally hung a suitable number of pendent weighted levers, J' J', which have rounded or cam-like lower ends, and which are pivotally mounted in horizontally-slotted bearings in said inner frame-work, on which the bar G' is mounted. This feature is further illustrated in Fig. 8, which is a section on line 88 in Fig. 5. There is a pivot-pin, *v'*, in the lever J', which finds a bearing in the short slot *n'* in the frame-work. The upper ends of these levers engage gains or slots *w'*, Fig. 8, in the back or rear face of the slide-bar G'. The inner faces of these gains are sloped or cut away, so as to allow the lever J' to swing over, as seen in Fig. 5, without moving the bar, and the outer faces are vertical. This form of the gains is clearly represented by the dotted lines in Figs. 5 and 6. A pawl, *b'*, is pivotally mounted on the frame-work, and its free end is adapted to engage the ratchet-teeth E' on the edge of the drawer and prevent the latter from being drawn out. On the slide-bar G' is fixed an arm, *a'*, on the free end of which is a loop or eye, *a<sup>2</sup>*. (Seen in plan in the detached view, Fig. 7.) The pawl *b'* passes through this loop *a<sup>2</sup>* on the arm *a'*.

When the drawer H is pushed home or into the casing as far as it will go, the upright F' on the drawer strikes against a pendent portion, *c'*, on the sliding bar G' and pushes the said bar inward longitudinally in the direction indicated by the arrow *d'* in Fig. 5. This position of the drawer is represented in dotted lines in Fig. 5. As the arm *a'* is carried by the bar G', the effect of this movement is to cause the lower part or tie of the eye *a<sup>2</sup>* on said arm to take under and lift the pawl *b'* out of

the ratchet E'. The drawer may now be drawn out. The full lines in Fig. 5 represent the drawer as being drawn out and the upright F' as passing freely under one of the levers J'. This it may do without disturbing the bar G', as the gain or recess in the bar is cut away or beveled, so as to allow the upper end of the lever to swing over, as seen in the figure; but after the upright F' has passed one or more of the pendent levers in pulling out the drawer, if the latter be pushed in again the upright F' will strike a lever J' and push its lower end inward, as seen in Fig. 6, thus causing its upper end to act on the vertical shoulder formed by the gain in the bar G' and push this bar forward. The bar carries arm a' forward, and thus lets the pawl b' fall and engage the ratchet E' on the drawer, thereby preventing the latter from being drawn out again until it has been again pushed home.

The object in having a shoulder on the bar G' on each side of the lever J', and the object in mounting the lever pivotally in slot v', is this: When the bar moves longitudinally, it carries the lever J' with it, the shoulders move the lever along, and the slot v' permits it to move and still to stand vertically. Nevertheless, the shoulder on the bar behind or inside of the lever must not interfere with the free swing of the lever when the drawer is pulled out.

It will be understood that my apparatus may employ only the means for enabling the entries to be recorded on the strip of paper; or it may include, also, the endless apron, coin-slit, &c. The latter device is not absolutely essential, however, to the proper working of the first-named part of the apparatus.

Of course the lever I may be a gravity-lever and be weighted at its end (at the left in Fig. 2) back of the pivot f. In this case the spring K would not be required.

Having thus described my invention, I claim—

1. The combination, with the casing having slotted bearings and the drawer H, sliding therein and provided with a ratchet, E', and an upright, F', of the sliding bar G', provided with shoulders on its back and with an arm, c', on its inner end in the path of the upright F' on the drawer, the pawl b', arranged to engage the ratchet on the drawer, the arm a' on the bar G', coupling said bar to the pawl b', whereby the endwise movement of said bar actuates said pawl, and the weighted pendent levers J', mounted in bearings in the casing, and their ends standing between the shoulders on the bar G', substantially as set forth.

2. A cash-box having a partially-glazed aperture, N, in its top, a support for a strip of paper under said aperture, a drawer having a ratchet, E', and an upright, F', and mechanism for feeding said strip of paper by the movement of said drawer, comprising the drum E, its ratchet-wheel J, the lever I, and its pawl g', and the pawl e on the drawer, in combination with a pawl, b', adapted to engage the ratchet on the drawer and prevent the latter from being drawn out, the slide-bar G', having gains in its back, and an arm, c', the arm a', carried by said bar G' and controlling the pawl b', and the pivoted weighted levers J', the upper ends of which engage the gains in the bar G', all arranged to operate substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEORGE HENRY GLEDHILL.

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