

April 12, 1927.

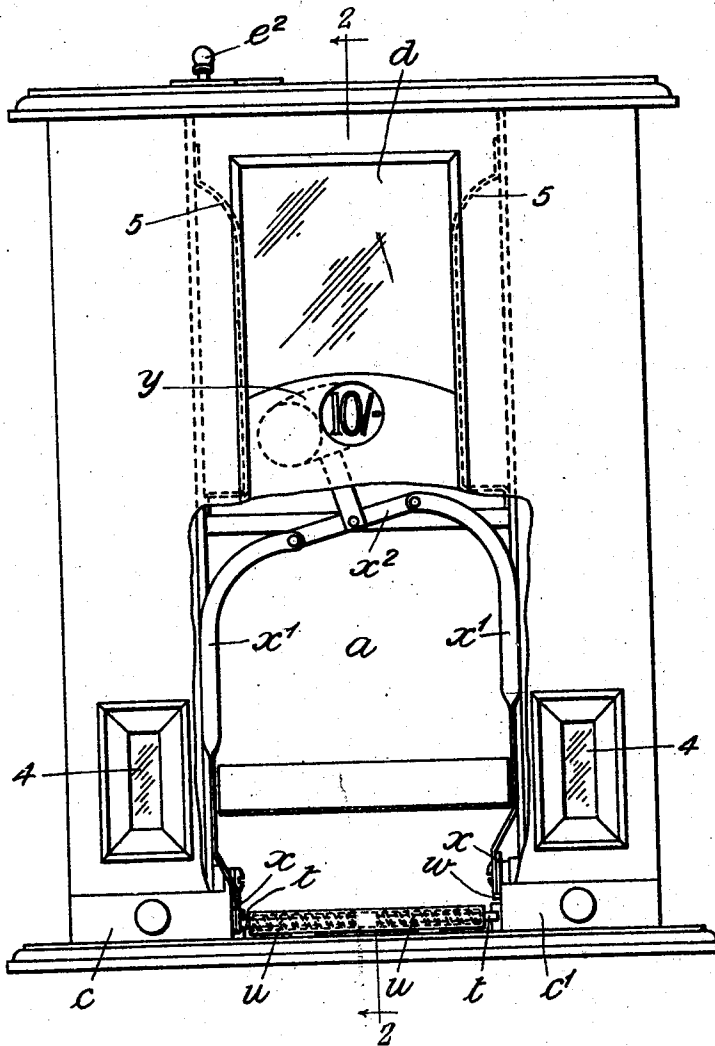
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TREASURY NOTE CABINET

Filed Nov. 24, 1924

3 Sheets-Sheet 1

Fig. 1.



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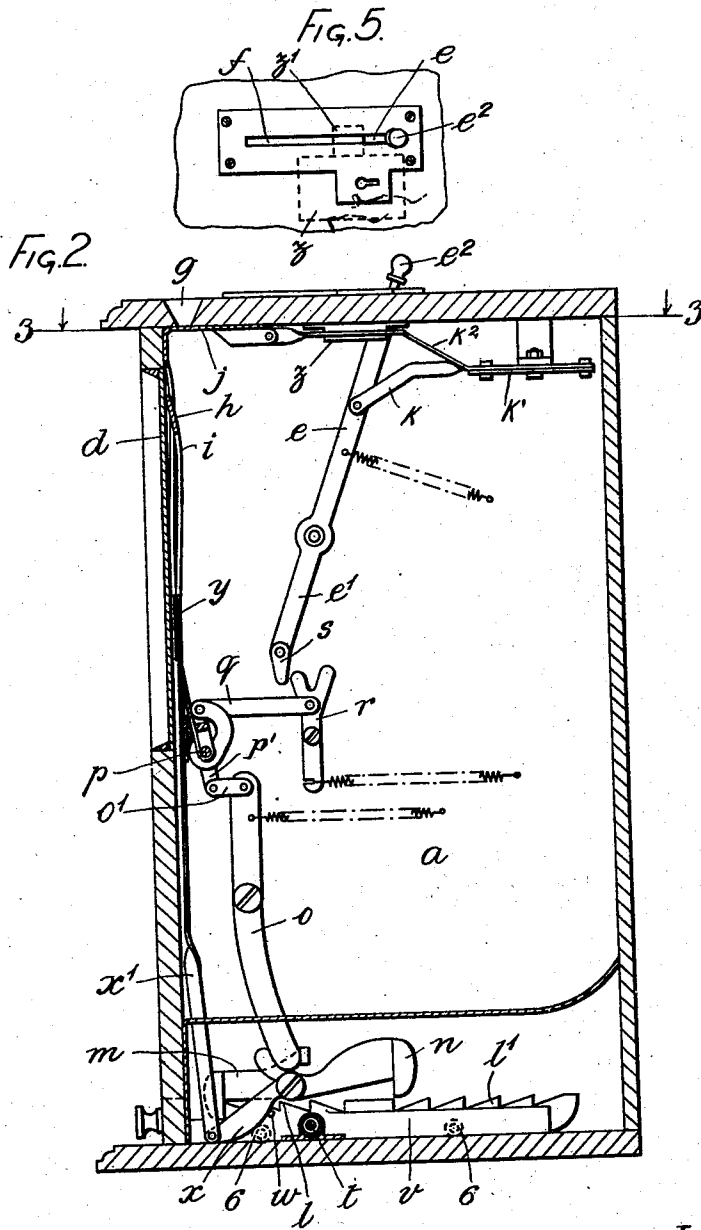
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3 Sheets-Sheet 3

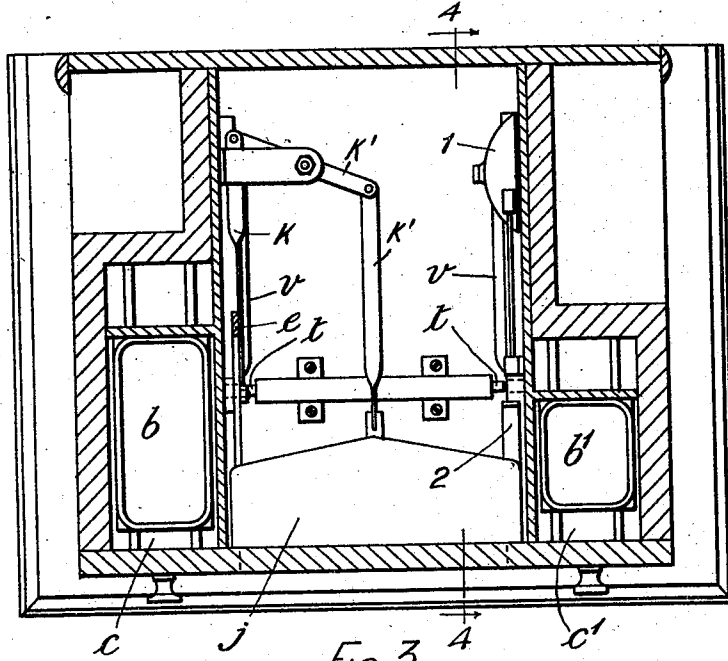


FIG. 3.

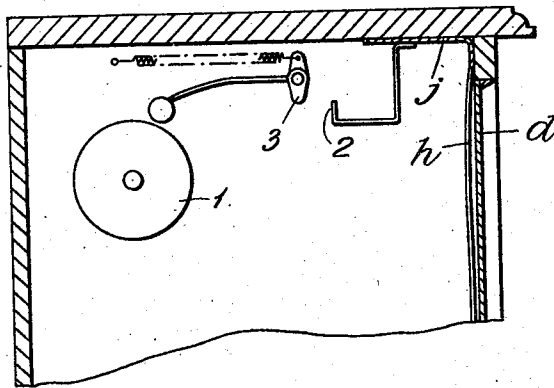


FIG. 4.

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# UNITED STATES PATENT OFFICE.

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## TREASURY-NOTE CABINET.

Application filed November 24, 1924, Serial No. 751,945, and in Great Britain December 29, 1923.

This invention relates to treasury note cabinets, such as are described in U. S. A. Patent No. 1,490,873, granted to Arthur Warren.

5 In the said patent a treasury note cabinet is described wherein the note receiving and displaying mechanism is combined with change giving apparatus consisting of a drawer or drawers released by the operation  
10 of the note receiving and displaying mechanism, and adapted to deliver packets or trays containing change corresponding to the note values.

The present invention has mainly the following objects in view:—

1. To obviate the change drawers being used more than once for one movement of the operating handle of the note receiving and displaying mechanism.

20 2. To obviate more than one change drawer being used for one movement of the operating lever of the note receiving and displaying mechanism.

25 3. To indicate to an observer which drawer has been last used.

4. To enable the apparatus to be locked against operation when not required for use.

30 With the above objects in view and according to the present invention the operating handle of the note receiving and displaying mechanism is provided with or adapted to operate a locking pawl or member or a pair thereof operating in opposite directions and so arranged as to engage with the change  
35 giving drawer or drawers or a rack therein and prevent the return of the drawer until the operating handle is released, the said pawl and racks being also arranged to prevent the return of the drawer until a full  
40 outward movement thereof has been completed.

Means are also provided whereby the operation of any one drawer actuates a suitable interlocking device or devices such as levers,  
45 bolts, or pawls whereby all the other drawers are locked against movement until the operated drawer is returned to closed position.

To show which change drawer has been last operated each drawer is connected to  
50 and adapted to actuate an indicating disc or the like adapted to be exposed through a suitable window in the front or other suitable part of the apparatus.

The casing of the apparatus is fitted with  
55 a suitable lock located adjacent to the path

of the operating lever so that the said lever may be locked to prevent the apparatus being used when the premises are closed or at other times when required.

We will now describe with reference to  
60 the accompanying drawings one construction of combined treasury note cabinet and change giving mechanism as set forth in the said U. S. A. Patent No. 1,490,873, and having the present improvements embodied  
65 therein.

In the accompanying drawings—

Fig. 1 is a front elevation with the front of the machine partly broken away,

Fig. 2 is a central sectional side elevation  
70 of Fig. 1 looking from the right,

Fig. 3 is a plan in section on a line just below the top.

Fig. 4 is a sectional side elevation of the upper part of the apparatus looking from  
75 the left of Fig. 1.

Fig. 5 is a detail showing the means for locking the operating handle.

The cabinet as a whole consists of a central note receiving and displaying mechanism with a till *a* beneath and flanked on  
80 each side by vertical hoppers *b b'* adapted to contain piles of packets or trays of change for the notes. In the illustration the hopper *b* is assumed to contain packets of change  
85 for £1— notes and the hopper *b'* packets of change for 10/— notes. The hoppers are fitted with delivery drawers *c* and *c'* respectively, and the note displaying mechanism occupies the upper portion of the central  
90 space whilst the lower part is occupied by the till *a* which is adapted to receive the notes discharged from the note receiving and displaying mechanism, the last note retained therein being exhibited through a suitable  
95 window *d*.

The note receiving and displaying mechanism is operated by the lower end *e'* of a vertically mounted pivoted lever *e* the upper end *e<sup>2</sup>* of which projects from the case  
100 and is guided in a suitable slot *f*.

The notes which are inserted through a slot *g* are received and held, so as to be exhibited between a pair of frames or loops *h* and *i*, the loop *i* being adapted at the next  
105 operation to pass through the other loop *h* and transfer the note to the till *a* below and then return to initial position to receive the next note.

The pivoted operating lever *e* is connected 110

to a slide *j* which uncovers the note receiving slot *g* and moves back the loop *h* so as to permit the insertion of a fresh note, all as in the said U. S. A. Patent No. 1,490,873.

5 According to the present improvements each drawer *c c'* is provided with a ratchet rack having the teeth *l* at the front and the teeth *l'* at the rear end respectively, cut in reverse directions and two correspond-  
10 ingly reversed pawls *m n* are provided. The said pawls *m* and *n* are pivotally mounted above the racks *l l'* and the tails of the said pawls are adapted to engage with the opposite sides of the lower end of a depending  
15 lever *o* suitably actuated from the note receiving and displaying mechanism which is in turn actuated by the operating handle, and adapted when operated by the said handle to first raise one of the said pawls *m*  
20 out of engagement with the corresponding racks *l* which then permits outward movement of the drawers, and at the same time the other pawls *n* fall into engagement with the rear racks *l'* which in conjunction with  
25 the pawls *n* prevent the drawers being returned until fully drawn out.

The depending lever *o* is connected by a link *o'* to a lever *p'* turning on the spindle  
30 *p* which carries the loop *i* of the note receiving device and the said lever *p'* is connected to the loop *h* and plate *j* of the note receiving device, which plate *j* is operated through the links *h<sup>2</sup> h' h* from the lever *e*. The spindle *p* is operated through a link *q* from  
35 a rocking arm *r* bifurcated at its upper end and adapted to be engaged by the pawls *s* at the lower end *e'* of the operating lever *e*. By employing a bifurcated end to the rocking arm *r* the pawl is prevented from  
40 passing out of engagement with the arm *r* until a full stroke has been obtained.

A locking bolt *t* extends across the base of the cabinet between the drawers and is normally held in central inoperative position  
45 by means of opposing springs *u*. The said bolt *t* is adapted when operated to engage a hole in the side of the inoperative drawer, and for the purpose of operating the said locking bolt *t* the rack *l* of each  
50 drawer is provided on its side towards the rear end with an inclined projection or cam *v* so that when one change drawer is pulled out the cam *v* thereon engages one end of the bolt *t* and pushes the bolt endwise so  
55 that the other end passes into the hole in the opposite rack and locks the corresponding drawer against movement until the operated drawer is returned to closed position, when the locking bolt *t* is withdrawn by the  
60 springs *u*.

The drawers or the racks thereon are fitted with pins *w* on their sides adapted to engage with the edges of curved cam faces formed on the ends of a pair of pivoted levers *x*  
65 which are both connected by upwardly ex-

tending bars *x'* to a rocking arm *x<sup>2</sup>* mounted centrally of the cabinet and carrying an indicator plate *y* of T or other suitable shape having depicted thereon on the left and  
70 right respectively the value of the notes which correspond with the change delivered by the respective drawers, £1— and 10/— in the example shown, so that the said indicator will be actuated and will show through the window *d* which change drawer was last  
75 operated.

In the top of the cabinet alongside the guiding slot *f* for the operating handle *e* is fitted a lock *z* adapted to be operated by a key from the outside so that the lock bolt  
80 *z'* may be shot across the path of the handle *e* to prevent the apparatus from being used until the handle is unlocked.

In order to keep the notes centralized with the window *d*, guide plates 5, Fig. 1, are provided. The drawers *c c'* are fitted with rollers 6 to insure easy running.  
85

In order to give an audible indication when the apparatus is operated the slide *j* is adapted to operate a bell 1 through the medium of a rearwardly extending arm 2 and a trigger device 3.  
90

In general use it will be seen that when a note is received the operating handle *e* is pulled forward, the first portion of its movement causing any note previously exhibited to be discharged into the till *a* by the pawl  
95 *s* engaging with the bifurcated end of the rocking arm *r* and causing the loop *i* to pass through the loop *h*. The drawer is then pulled out. On further movement of the handle *e* the pawl *s* passes out of engagement with the rocking arm *r* and the latter and the loop *i* fly back to normal position under the action of a suitable spring. The  
100 plate *j* has now moved sufficiently far to uncover the note insertion slot *g*. When the parts are in this position the loop *h* is tilted backwards to receive a newly inserted note between the said loop *h* and the loop *i*. A new note is inserted and, should change be required therefor, the drawer corresponding to the note value is pulled out, the pulling  
105 out of the drawer being now possible as the beforementioned forward movement of the operating lever *e* through the intermediate mechanism consisting of links *h<sup>2</sup> h' h<sup>2</sup>*, plate *j*, loop *h*, lever *p'* turning on spindle *p''*, link *o'* and lever *o* has caused the pawls *m*  
110 to be moved out of engagement with the corresponding racks *l*, thus releasing both the drawers *c* and *c'* the pawls *n* having descended into engagement with the racks *l'*.  
115

The act of pulling out the drawer causes the pins *w* on the side of the operated drawer to engage the cam like lower ends of the corresponding lever *x* and rock the indicator  
120 *y* to show which change drawer has been operated and whether it corresponds to the last note inserted. During the last men-  
125  
130

tioned movement the cam *v* engages with one end of the locking bolt *t* and pushes the latter endwise to lock the opposite drawer against movement.

5 The operating handle *e* is now released with the result that the slot *g* is closed and the newly inserted note remains exhibited through the window *d*, being held between the loops *h* and *i* until the next operation.  
10 The tray containing the change is removed from the drawer and the latter pushed in to closed position.

The drawer cannot be returned after a partial movement owing to the engagement  
15 of the pawl *n* with the corresponding rear racks *v'*.

The movement of the slide *j* actuates the bell 1 and gives an audible signal that the machine has been operated.

20 At the side of the cabinet towards the rear, hoppers are provided for storing the empty change trays which have been withdrawn.

Suitable windows 4 will be provided just above the drawers to show when the change  
25 hoppers require replenishing.

Only two sets of hoppers and drawers are referred to but it is obvious that the number may be increased to correspond with the different note values to be received in the cabinet, the mechanism being suitably modified.  
30

What we claim as our invention and desire to secure by Letters Patent is:—

1. A note receiving and displaying apparatus of the kind referred to having combined therewith, a change giving mechanism, consisting of locking devices in the form of  
35 pawls and racks normally holding the change giving mechanism against operation, locking devices in the form of pawls and racks whereby the change giving mechanism when released is held against return movement  
40 until a full outward movement has been completed, and means for operating said pawls from the mechanism of the note receiving and displaying apparatus.  
45

2. A note receiving and displaying apparatus of the kind referred to having combined therewith, a change giving mechanism, a locking and releasing device for the change giving mechanism consisting of a slidable  
50 ratchet rack having the teeth at one end cut in opposite direction to the other, a pawl coacting with that portion of the rack which prevents outward movement, a pawl coacting with that portion of the rack which prevents  
55 return movement, a depending rocking lever, tails on said pawls engaging the opposite sides of said depending rocking lever, means for operating said rocking lever from the mechanism of the note receiving and display-  
60 ing apparatus.

3. A note receiving and displaying apparatus of the type referred to for containing a supply of notes combined with a change giving mechanism consisting of at least one  
65 change delivery drawer corresponding to the value of the notes, a locking device for each drawer consisting of a single rack bar the teeth of which are cut in reversed directions and two correspondingly reversed pawls co-  
70 acting with said rack teeth, a lever engaging the tails of both said pawls, and means for operating said lever from the mechanism of the note receiving and displaying apparatus.

4. A note receiving and displaying apparatus of the type referred to adapted to contain a supply of notes having combined therewith, a change giving mechanism consisting of change delivery drawers cor-  
80 responding to the value of the notes, an oscillating indicator plate marked with note values corresponding to the change giving drawers, a pin on the side of each drawer, levers connected to said oscillating indicator plate and having their lower ends located  
85 in the path of the pins on the corresponding drawers whereby the indicator is operated when any one drawer is pulled out.

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