

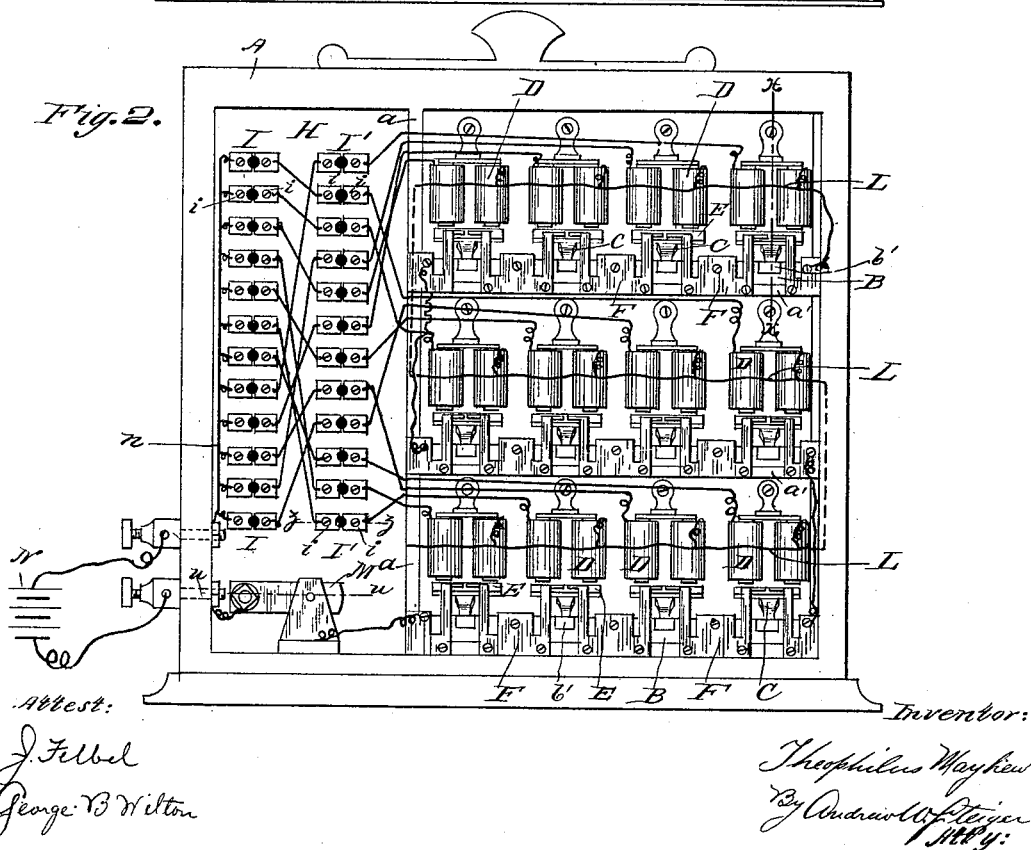
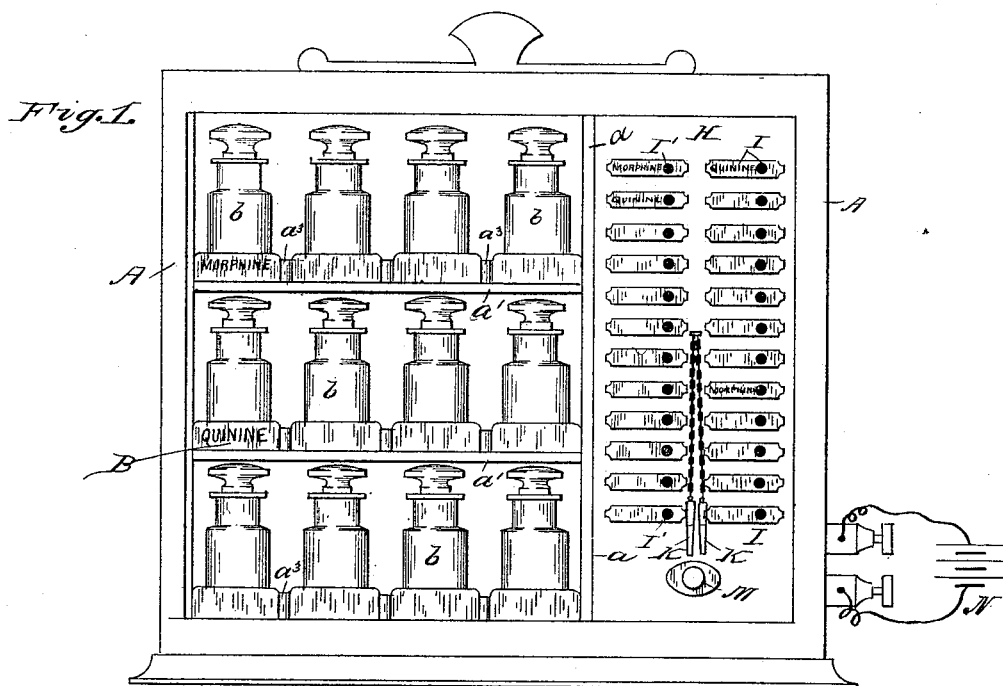
(No Model.)

2 Sheets—Sheet 1.

T. MAYHEW.
RECEPTACLE FOR POISONS.

No. 348,227.

Patented Aug. 31, 1886.



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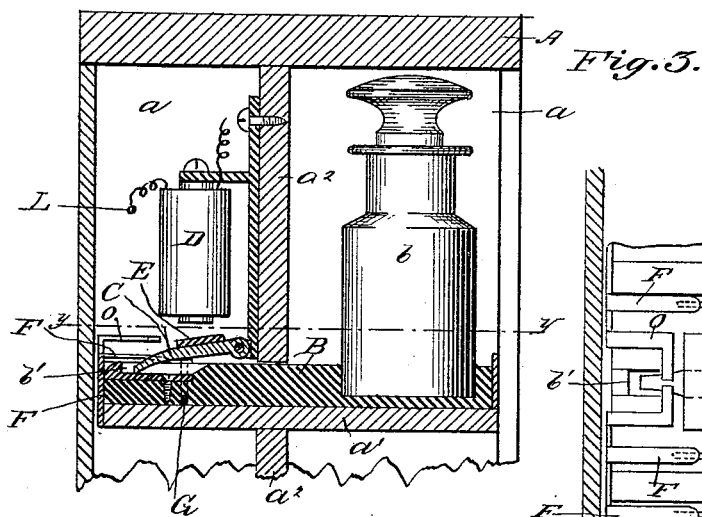


Fig. 3.

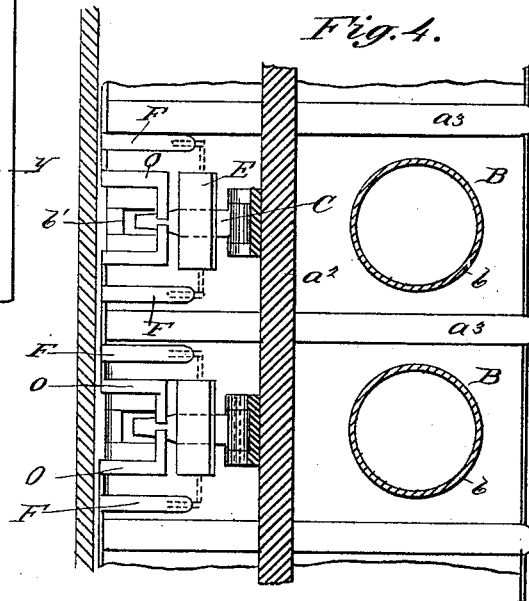


Fig. 4.

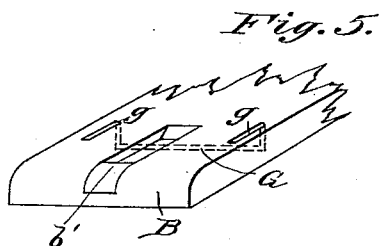


Fig. 5.

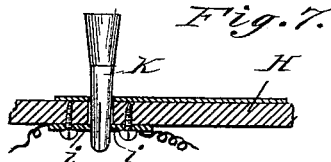


Fig. 7.

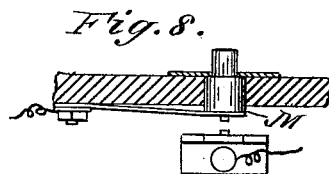


Fig. 8.

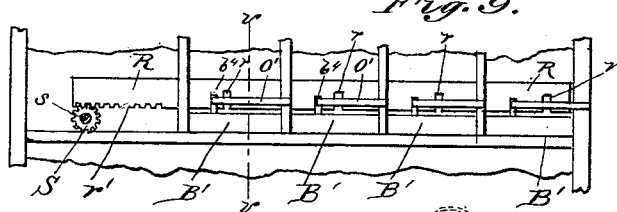


Fig. 9.

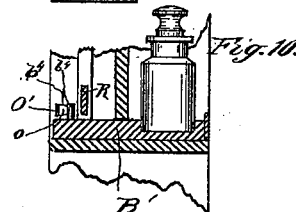


Fig. 10.

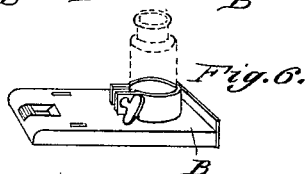


Fig. 6.

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UNITED STATES PATENT OFFICE.

THEOPHILUS MAYHEW, OF NEW YORK, N. Y.

RECEPTACLE FOR POISONS.

SPECIFICATION forming part of Letters Patent No. 348,227, dated August 31, 1886.

Application filed March 26, 1886. Serial No. 196,652. (No model.)

To all whom it may concern:

Be it known that I, THEOPHILUS MAYHEW, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Receptacles for Poisons, of which the following is a specification.

My invention relates to a case or receptacle for poisons, and is for the purpose of preventing such mistakes in compounding prescriptions or dispensing poisonous drugs as might happen through the inadvertence of the druggist or the misplacing of bottles.

It consists, as hereinafter more fully set forth, of a series of drawers or slides for receiving and retaining the drugs, said drawers or slides being mounted in a frame or case, and provided each with a catch or latch, arranged so that in their normal condition the drawers will be secured in the frame, but may be unlatched and removed one, but only one, at a time. The locking mechanism of the several drawers or slides is formed and connected so that the movement of unlocking or removing one drawer will disconnect or block the mechanism for opening or removing those remaining. To prevent the removal of the wrong receptacle through inadvertence, the unlocking mechanism is constructed so that before it can be operated an index or other device must be moved or placed in an appropriate position for the drug or poison needed, and to so prepare for the removal of the drug from the case it will be necessary for the person wishing the same to apply his mind directly to the operation. To still further guard against error, I prefer to use two separate indicating devices, both of which must be placed before the receptacle can be withdrawn from the case. There are several forms in which the locking and unlocking mechanism can be operated to retain or release the drawers, and I have shown, as a modification of my device, a locking device which is entirely mechanical and positive in its operation. I prefer, however, to construct the device so that the unlocking will be accomplished through the agency of electro-magnets, as electric currents are more easily controlled, require no exact adjustment, and are less liable to become deranged through rough handling.

In the accompanying drawings, Figure 1 is a front view of the case complete. Fig. 2 is a rear view of the same with the back of the case removed to show its interior construction. Fig. 3 is a vertical section through one of the slides and its locking mechanism on line *xx* of Fig. 2. Fig. 4 is a horizontal section on line *yy* of Fig. 3. Fig. 5 is a perspective view of the rear portion of the removable slide. Fig. 6 shows a modification in the slide. Figs. 7 and 8 are respectively sections on lines *zz* and *uu* of Fig. 2. Fig. 9 is a rear view of a detached portion of a case in which the locking and unlocking is done by purely mechanical means, without the use of electro-magnets, and Fig. 10 is a vertical section on line *vv* of Fig. 9.

A is a rectangular case open in front and divided by partitions, as follows: first, by a vertical partition, *a*, extending from front to rear, then on one side of this vertical partition by horizontal shelves *a'*, extending from front to rear of the case. The spaces between these horizontal shelves are divided by vertical partitions *a''*, extending from the bottom of one shelf to a point above the next lower shelf, and at a distance therefrom equal to the thickness of the drawer or slide which is to be used. The spaces between the lower edge of the partitions *a''* are divided by guide-strips *a'''*, running from front to rear of the case, to form channels or ways, into which are fitted drawers or slides B. These slides B are preferably made as shown—that is, of a flat piece of a length to reach from front to rear of the case. That part of the slide B which is in front of the partition *a'* is made to receive and retain a bottle, *b*, secured thereto by any suitable means. I have shown this slide as having an opening cut therein to receive the lower end of the bottle, which may be secured either by cement or by means of a clamp-ring, as shown in Fig. 6. This front portion of the slide may also be made in the form of a box or drawer. At the rear end of each of the slides B is formed a detent-notch, *b'*, and levers C are pivoted to the rear side of the partitions *a''*—one over each slide—so that when the slide is pushed in the free end of the lever will drop into the detent-notch *b'* and prevent the removal of the slide.

Immediately over each of the pivoted levers

or latches C, and secured to the rear side of the partition a^3 , is an electro-magnet, D, preferably made double, as shown, and an iron armature, E, is secured to each of the levers C.

5 Attached to the rear edge of the shelves a' are contact-plates F, so placed and of such a size and form that each will extend up and project for a short distance over the rear end of the adjacent sides of two of the slides B and
10 bear thereon. These plates F, and more especially the portion of them which projects over the slides, are made of spring metal. Extending horizontally across from side to side of the slides B, near their rear ends, are metallic conductors G, terminating in contact
15 plates or knobs g —one at either side of the slide—in position to contact with the plates F when the drawers are in place, and complete with the plates F a continuous electric conductor from end to end of each shelf a^2 , and
20 these conductors thus formed on the several shelves are connected in series throughout the case.

In the compartment of the case A which is not occupied by the slides B is placed a switch-board, H, carrying one or two sets of electric switches, I I', there being a switch in each set for each slide B. These switches may be made of any well-known form; but I prefer to make
25 them as shown in Figs. 1, 2, and 7, wherein metal plates i i are made to project from opposite sides of an opening in the switch-board, through which a metallic plug, K, may be passed to form an electric connection between
30 the plates i i . It will of course be understood that the conducting-wire is led to one of the plates i and from the other. Upon the face of the switch-board, and adjacent to the openings through which the switch-plug is to be
35 inserted, are placed tags or labels, each to indicate which circuit is controlled by that particular switch.

An electric conductor, L, is made to traverse the spaces to the rear of the electro-magnets
40 D, and is connected at one end to one end of the series of conductors formed by the plates F and conductors G, of the slides. The second end of the conductor, formed by the plates F and conductors G, is connected through an open-circuit switch M, preferably in the form
50 of a push-button, as shown in Fig. 8, with one pole of an electric battery, N. The second pole of the battery N is connected through a conductor, n , with one plate of each of the switches I, and the second plate of each of
55 these switches is connected with the first plate of one of the switches I'. The second plate of each of the switches I' is connected with one end of one of the electro-magnet coils, and the
60 second end of each of these coils is connected, with the conductor L, to the plates F and to the battery.

It will be seen from the above that the circuit through each magnet-coil includes one of
65 the switches I, one of the switches I', all of the plates F, and all of the conductors G, also the open switch M and the electric battery N.

To close the circuit through any one of the magnet-coils, it is necessary to insert the
70 plugs in the two switches I I' included in that circuit, and then close the switch M. On this being done the magnet D will raise the armature E and the lever C, to which it is attached, thus setting free the slide B. In connecting
75 the circuits through the switches I I', the two switches in any single circuit should not be near together on the switch-board, and are preferably so arranged that the switches of the
80 several circuits shall be interspersed upon the switch-board, to compel a search when it is desired to work the switches. As soon, however, as one of the slides B is removed, and
85 with it the conductor G, the circuit will be broken, and a second circuit cannot be closed till the slide B is returned to its place.

In order to insure the locking of the slide B when it is returned to its place, and to prevent a second slide being removed before the first is properly locked, the latch-lever C is made of such a length that it will drop into
90 the detent-notch before the slide is fully back to its place. The contacts g of the slide are so placed that the latch-lever E must have dropped into the detent-notch in the slide before contact will be made within the plates F.
95 To prevent the breaking of the circuit by the contacts g on the slide being withdrawn from the plates F before the latch-lever is freed from the slide-detent, projecting arms O are formed upon the adjacent edges of the plates F,
100 and these arms are made to terminate immediately over the latch-lever C, so that when said lever is raised by the electro-magnet D it will contact with the two arms O and hold the circuit complete, even after the slide is withdrawn,
105 till the push-contact M is released.

In Figs. 9 and 10 I have shown a modification of the locking device. B' are the slides.
110 b^4 are pins projecting upward, one from the rear end of each slide. R is a plate or rod extending along over the slides and in front of the pins b^4 , working through guides, and having notches r at intervals along its lower edge,
115 through which the pins b^4 may pass to allow the slides to be withdrawn when the notches are brought into register therewith. These notches r r are so placed along the rod R that no two notches will be in register with
120 their respective pins at the same time. A spring-actuated lever, O', is pivoted behind the slide B and made to carry a pin or lug, o . This lever is normally held back by the slide B; but when the slide is removed the lever will advance and insert the pin o into the notch in the rod R, through which the pin b^4 on the
125 slide has passed, and will prevent the movement of the rod to free another slide till the one already removed is replaced. The bar R is moved by means of a toothed rack, r' , formed at one end, into which is made to gear a
130 toothed pinion, S, mounted upon a shaft, s , extending through the case and operated by a handle upon the outside. Two or more of these bars R may be used and their notches r

differently spaced, so that it will be necessary for the operator to work out a combination before releasing the receptacle wherein is stored the particular drug which he wishes to use. Other mechanism may be used to perform this locking without departing from the spirit of my invention.

What I claim is—

1. In a case or receptacle for poisons, the combination of a series of detachable slides adapted to support receptacles, and locking mechanism, substantially such as described, to control the removal of said slides, as and for the purpose set forth.

2. In a case or receptacle for poisons, a series of detachable slides carrying receptacles, and locking mechanism for retaining the same in their closed positions, adapted to permit one only of said slides to be removed from the case at a time, and preventing the removal of a second slide till such time as the first shall have been returned, as set forth.

3. In a case or cabinet for poisons, the combination, with two or more sliding receptacles, of a locking device for each of said receptacles, and a lock-operating mechanism common to all of said receptacle-locking devices, the combination being such, as described, that it is impossible to have removed from the case or cabinet more than one receptacle at a time, all as set forth.

4. In a case or receptacle for poisons, a receptacle consisting of a base-piece adapted to slide in guideways formed in the case, and having attached to it a bottle or receptacle, in combination with an electro-magnetic locking device for retaining or releasing said slide, as and for the purpose set forth.

5. In a case or receptacle for poisons, the combination of two or more sliding receptacles, a pivoted latch-lever for each slide, an armature attached to each latch-lever, electro-magnets located in position each to operate one of the pivoted latch-levers, contact-plates bridging over the spaces between the sliding receptacles, electric conductors arranged on each sliding receptacle, and provided with contact-points to bear upon the bridging contact-plates on opposite sides of the receptacles when the latter are closed, an electric generator, a number of circuits extending from one pole of the generator, each passing through one or more controlling-switches, one of the

electro-magnets, all of the bridging contact-plates, and the conductors on the receptacles through a circuit-closer common to all, and back to the other pole of the electric generator, as and for the purpose set forth.

6. In a case or receptacle for poisons, the combination of a slide carrying a receptacle and working within guideways in a supporting frame or shelf, a lock or latch for said slide operated by an electro-magnet, and adapted to engage a stop on said slide, two insulated contact-plates bearing upon the slide when closed, and connected across the slide by an electric conductor arranged thereon, and adapted to make said connection after the slide has been latched or locked, and to break the said connection during the withdrawal of the receptacle from the case, an electric circuit passing from an electric generator through a governing-switch, the electro-magnet coils to and through the contact-plates across the conductor on the receptacle and back to the electric generator, and two auxiliary contact-plates connected one to each of the main contact-plates, and arranged over the pivoted latch-lever in position to make contact with the latter when it is raised by the electro-magnet, all as and for the purpose set forth.

7. In a case or receptacle for poisons, the combination, with two or more receptacles, locking mechanism for said receptacles, and electro-magnets adapted to operate said locking mechanism, of an electric circuit for each of said electro-magnets passing through one or more controlling-switches, all as and for the purpose set forth.

8. In a case or receptacle for poisons, the combination, with a series of receptacles, an electro-magnetic locking device for retaining each of said receptacles in the supporting-case, and an electric circuit for each of said locking devices, of two or more switches connected in each of the electric circuits, the switches of the several circuits being interspersed or intermixed on the switch-board, substantially as and for the purpose set forth.

Signed at New York, in the county of New York and State of New York.

THEOPHILUS MAYHEW.

Witnesses:

ANDREW W. STEIGER,
JACOB FELBEL.