

C. SAYERS.

ALARM BANK.

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1,056,590.

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Fig. 1.

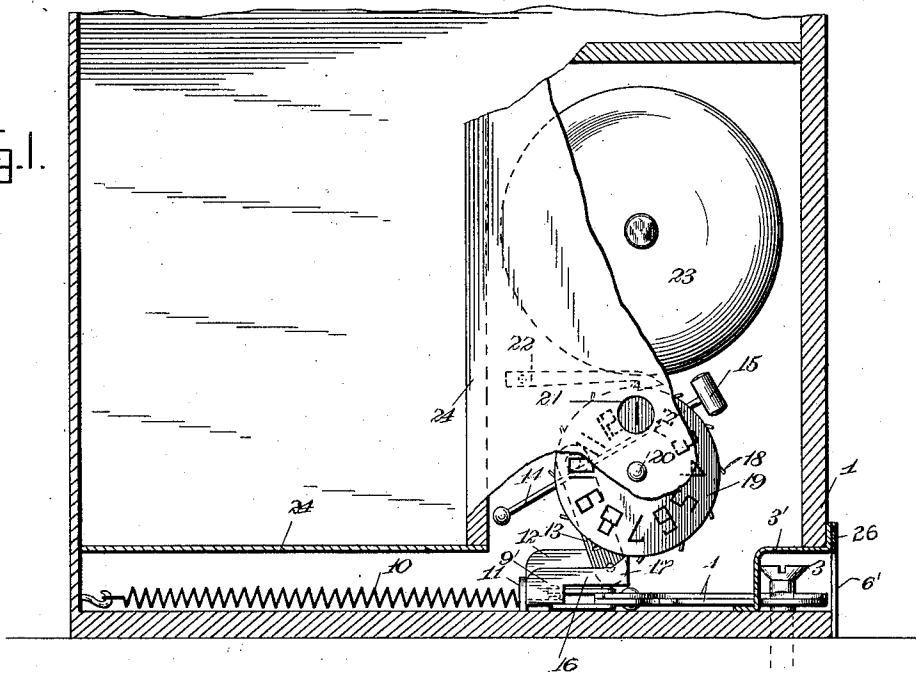


Fig. 2.

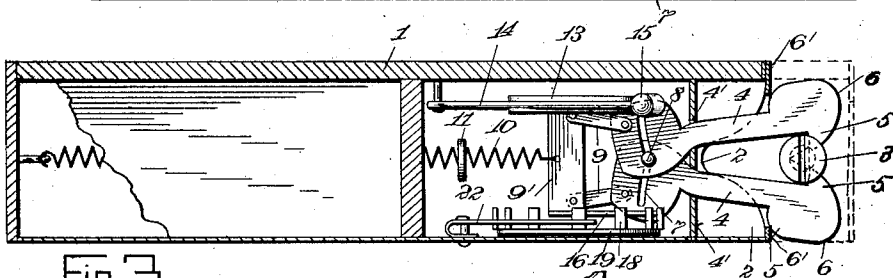
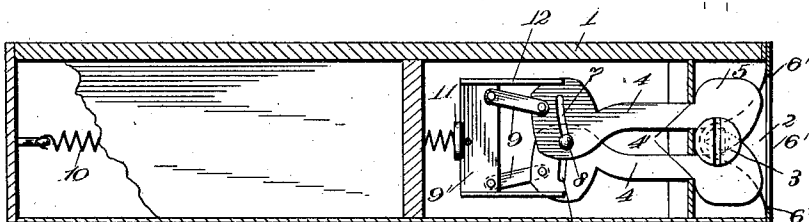
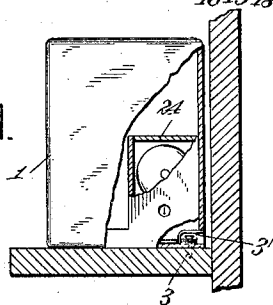


Fig. 3.

Fig. 4.



WITNESSES:

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ALARM-BANK.

1,056,590.

Specification of Letters Patent.

Patented Mar. 18, 1913.

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To all whom it may concern:

Be it known that I, CYRIL SAYERS, a subject of the King of Great Britain, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Alarm-Bank, of which the following is a full, clear, and exact description.

My invention is an alarm bank adapted to be secured upon a shelf or other support by a suitable fastening device, such as a bolt or screw. The fastening device is connected to mechanism on the inside of the bank casing, by means of which an alarm will be sounded when the bank is removed from its proper place, the fastening device exerting a tension upon the alarm mechanism and actuating the same to produce this effect. The alarm mechanism also includes an indicator dial, on one face of which numbers or other characters are placed, these characters being visible through an opening in the side of the bank. This indicator dial is actuated in advance of the alarm, as soon as an attempt is made to pull the bank away from the fastening means, thus affording a visible indication that the bank has been tampered with, even should the alarm device be prevented from working as intended.

Reference is to be had to the accompanying drawings forming a part of this specification, in which the same characters of reference indicate the same parts in all the views.

Figure 1 is a side elevation, partly in section, showing the alarm and indicator mechanism on the interior of the casing of my improved bank; Fig. 2 is a horizontal section through the casing of the bank, the plane of section passing adjacent the bottom of the bank casing; Fig. 3 is a horizontal section of the bank casing on a plane passing through the casing between the alarm bell and the indicator dial; and Fig. 4 is a side elevation on a reduced scale, of the bank and the alarm mechanism, part of the construction being broken away to show the bank secured in position by the fastening means.

My improved bank comprises a casing 1, in the bottom of which is formed a flaring notch 2, to receive the shank of a suitable fastening device, such as a bolt or screw, shown at 3. A suitable partition 3' in the

end of the bank forms with the notched portion of the bottom a closed compartment, in which the head of the screw 3 is received, 26 being a member partly closing up the rear of the compartment receiving the screw and housing the screw 3. This member has an opening slightly arched on top, the sides 6' extending upward as high as the roof of the compartment formed by the partition 3', the outer end of this partition 3' being bent upward against the exterior of the rear side of the casing 1, in the manner shown on Fig. 1, to form a support for the door 26.

The screw 3 is triangular in cross-section for a portion of its length below the head thereof, as shown in dotted lines on Figs. 2 and 3, and is engaged by the outer end of a pair of catch levers 4. These catch levers 4 have enlarged ends provided with in-turned teeth 5, the backs or opposite edges of these ends being rounded off to form smooth curves 6. The teeth 5 engage one of the surfaces of the triangular section of the screw 3, the back of this triangular surface being parallel with the rear of the casing 1, so that the teeth 5 of the catch levers 4 will hold onto the screw 3, until the outer ends of these catch levers have been moved a certain distance apart. The catch levers 4 are curved toward each other adjacent their inner ends and pass through openings 4' in the vertical part of the partition 3', these openings being large enough to allow the levers 4 to have a certain amount of lateral play therein. Transverse slots 7 are formed in the inner end of these levers, and a rivet 8 connects the inner ends of these levers together by passing through both of the slots 7. These levers 4 are also connected by separate pivotal links 9, to a carriage or frame 9', this carriage being longitudinally movable in the casing, and being held in position therein by a coil spring 10, against a stop or eyelet 11. This frame or carriage 9 carries at one side an arm 12, in the end of which is pivoted an arm 13. This arm has pivoted engagement at its upper end with a spring arm 14, pivoted to the side of the casing 1 and carrying on its outer end a knob or hammer 15. On the opposite side of the frame or carriage 9' is an arm 16, which carries on its upper edge, adjacent the outer end thereof, a lug 17. This lug engages the teeth 18 of a ratchet-wheel 19, pivotally mounted on a stud 20, carried

in the side of the bank. The face of this ratchet-wheel has numbers from 1 to 12 marked thereon, and these numbers are exposed to view by means of an aperture 21.

5 A pawl 22 is also pivoted on the side of the bank above the ratchet wheel 19, the end of this pawl engaging the teeth 18 and preventing the ratchet-wheel from moving backward. As shown in Fig. 1, the pawl offers
10 no resistance to the movement of the ratchet-wheel to the left, but will engage the teeth to prevent the dial from moving in the same direction as the hands of a clock. Hence, the ratchet dial can only be moved
15 to exhibit successively higher figures through an aperture 21. The pawl is held down by a suitable spring.

23 is a bell arranged above the arm 14, in position to be struck by the hammer 15,
20 and give the alarm. The alarm mechanism and the ratchet-wheel and actuating devices are inclosed, as shown, by suitable partitions 24, which completely inclose and protect them.

25 At the lower right hand corner of the bank casing, in which is formed the compartment to receive the screw 3, are the sides of the member 26, which extend from the top to the bottom of the compartment
30 formed by the partition 3. By means of the sides 6', the ends of the catch levers 4 are prevented from spreading and releasing their hold upon the screw 3, until they have been drawn out to the extent indicated on
35 Fig. 3.

The operation of the bank will now be set forth.

The only way to take the bank out of its proper place is to pull upon the same, and this will cause the screw 3 to draw the catch
40 levers 4 from the position shown on Fig. 2, to that shown on Fig. 3. The catch levers will be prevented from spreading until the enlarged ends having the curved outer edges
45 clear the strips 6'. Before this takes place, however, the end 17 of the arm 16 will engage one of the teeth 18 and begin to move the ratchet dial 19. This will cause the dial to move the number 1 out of register with the aperture, and move the number 2 into
50 register with this aperture; and the ratchet 21 will hold the ratchet dial in this position and prevent backward movement. Hence, the fact that an attempt has been made to
55 tamper with the bank will become apparent upon subsequent examination, even should the person attempting to remove and open the bank desist at this point, for in such a case the spring 10 will tend to withdraw the
60 carriage 9', and the cam action of the edges 6' on the curved end 6 of the catch levers 4 will force them together, and return them to their original position. If, however, the attempt to open the bank is carried further,
65 that is, if the unauthorized person should

continue pulling upon the casing 1, the levers 4 will now be spread apart by the action of that part of the partition 3' which lies between the opening 4' upon the incurved ends of the catch-levers 4. The
70 outer ends of these levers having cleared the projections 6', the catch levers 4 will now be moved laterally to such an extent that the teeth 5 will no longer engage the triangular section of the screw 3. Before this happens,
75 the arm 13, carried by the arm 12 of the carriage 9', has drawn down the spring hammer 15, and when the teeth 5 of the levers 4 are spread apart to a sufficient extent to clear the screw 3, the tension of the spring 10 will at once pull back the carriage
80 9' and the catch levers into the casing 1. The return movement of the carriage 9' has no effect upon the dial, but the arm 13, being pivotally connected to the hammer 15, now helps to throw the hammer 15, which has been drawn down, and the return movement of the carriage thus causes this hammer 15 to fly up and strike a blow against the bell 23, thus giving the alarm.
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The bank can be replaced by simply pushing it toward the back of the shelf, causing the screw 3 to pass through the part 26 and moving the incurved ends of the catch levers
95 4 against the screw 3. The wedge-shaped sides of the screw 3 will spread apart the ends of the catch levers 4, until the teeth 5 pass behind the screw. Spreading apart the ends of the levers 4 in this way, the slotted inner ends of the catch levers will be
100 caused to move toward each other. This will draw the carriage toward the partition 3' to a slight extent and tension the spring 10. As soon, however, as the teeth 5 of the locking levers have passed behind the screw
105 3, the parts will re-adjust themselves, and neither the dial nor the alarm mechanism will be disturbed. It will be observed that by means of my lock and alarm attachment therefor, the bank casing can be put in place
110 upon a shelf or support, as shown on Fig. 4, in such a way as to conceal every indication that it is provided with an alarm mechanism on the interior. The screw 3 and gate 26 are completely hidden from sight, and any
115 intermeddler attempting to tamper with the bank will, in every case, displace the casing far enough to operate the ratchet dial and ring the alarm bell before discovering the fact that the bank is secured to its support.
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While I have shown and described the alarm and indicator mechanism in connection with a bank, it is obvious that I may use it on any receptacle in which things can
125 be placed for storage.

I wish to emphasize the fact that when the casing is located in operative position with respect to the fastening means it completely hoods or covers the fastening means; and when the casing is put on a shelf, with
130

its back resting against the wall, as shown in Fig. 4, it is practically impossible to detach the casing, even by the use of tools, without sounding the alarm bell 23, and actuating the indicator 19.

The alarm bell 23 and the indicator together constitute a signaling means which will give evidence that the bank has been tampered with, either by calling a person within reach of the sound of the bell, or showing later that the casing has been inter-meddled with, by means of the indicator, even should no one be near to hear the alarm when the bell is rung.

I wish to reserve to myself the right to make certain small changes in the size, shape and arrangement of the parts as fall within the scope and spirit of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination of a casing, a pair of pivoted levers carried by said casing and projecting to the exterior thereof, said levers having projections at their outer ends, means for engaging the projections, whereby when the casing is moved the levers will be drawn out, a frame carried by said casing and pivotally connected to the inner ends of the levers, an arm projecting from the frame, an alarm device in operative relation to said arm, a spring for holding said frame and said levers within the casing, and means for moving the outer ends of said levers out of engagement with the means for engaging the projections thereon when the casing is moved, whereby the levers will be first drawn out against the tension of the spring and then released, said spring then moving the frame and the arm carried thereby to actuate the alarm device.

2. The combination of a casing, a pair of pivotally-mounted levers carried by said casing and projecting to the exterior thereof, said levers having projections at their outer ends, means for engaging said projections to draw the levers out when the casing is moved, a frame carried by said casing and pivotally connected to the inner ends of the levers, an arm projecting from said frame, an indicator dial in operative relation to said arm, a spring for holding said frame and said levers within the casing, and means for moving the projections on the outer ends of the levers out of operative relation with respect to the engaging means when the casing is moved, whereby the levers will be first drawn out against the tension of the spring and then released, said spring then moving

the frame and the arm to actuate the indicator dial.

3. The combination of a casing, a movable frame therein, a pair of levers connected together at their inner ends and pivotally connected to the frame, a spring for holding said frame and levers within the casing, means for engaging the levers to draw the same out when the casing is moved, said levers having projections at their outer ends which abut against the engaging means, a ratchet dial and an alarm device carried by said casing, operating arms carried by the frame to operate the dial and the alarm device, the dial being provided with a pawl to prevent reverse movement, means for temporarily preventing lateral movement of the levers to released position when the casing is moved with respect to the engaging means, and means for spreading said levers when the casing has been displaced to move the projections away from the engaging means, whereby the levers and the carriage attached thereto will be first moved longitudinally with respect to the casing when the casing is displaced, and then returned into the casing after being released by the engaging means, the movement of said carriage serving to operate the dial on the alarm device.

4. The combination of a casing, a pair of movably-mounted levers, means for engaging the outer ends of said levers to draw the same out of the casing upon the movement thereof, means for moving said levers out of engagement with the engaging means when the casing has been moved, a signal device, means connected to the levers to actuate the signal device, and means for imparting bodily movement to the actuating means after the disengagement of the levers with the engaging means, to actuate the signal device.

5. The combination of a casing having an opening, signal means carried by the casing, means adapted to be received in said opening in the casing, and means movably connected to said casing and also connected to said second-named means and to the signal means to cause the signal means to be actuated when the casing is displaced with respect to the second-named means.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CYRIL SAYERS.

Witnesses:

WINIFRED M. SAYERS,
EVELINE M. JOHNSON.