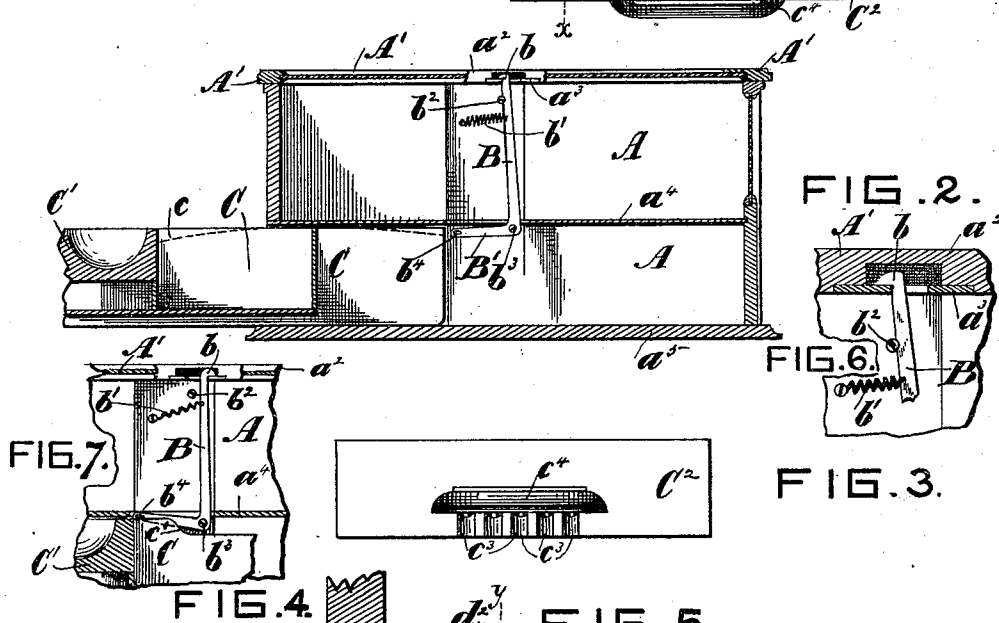
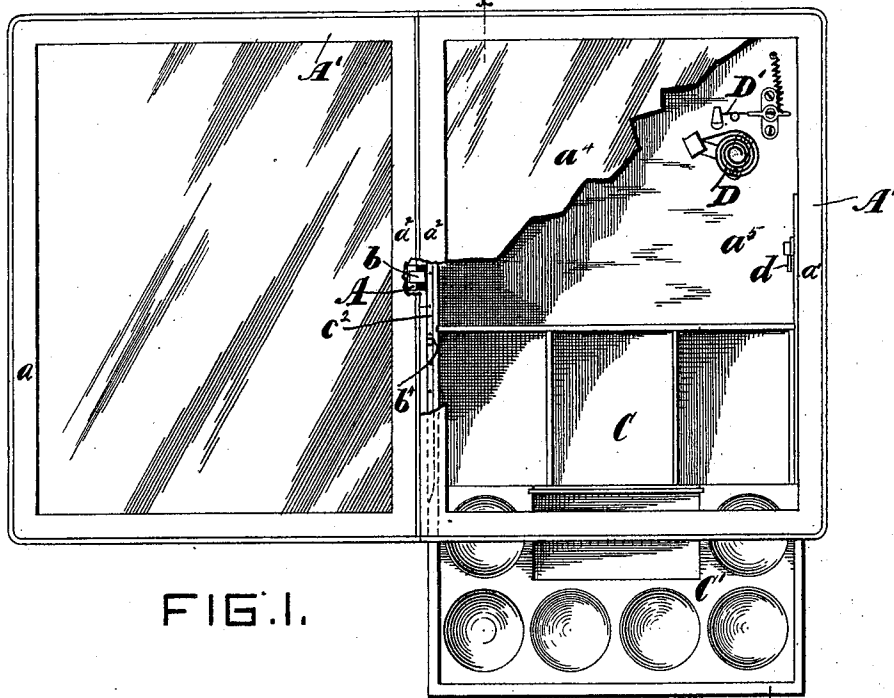


J. M. WADDEL.
LOCKING DEVICE FOR SHOW CASES.

No. 529,886.

Patented Nov. 27, 1894.



WITNESSES:
Hank S. Davis
Emma Lyford

Inventor
John M. Waddel
By Geo. M. Munn
Atty

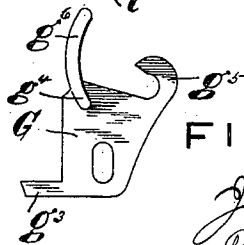
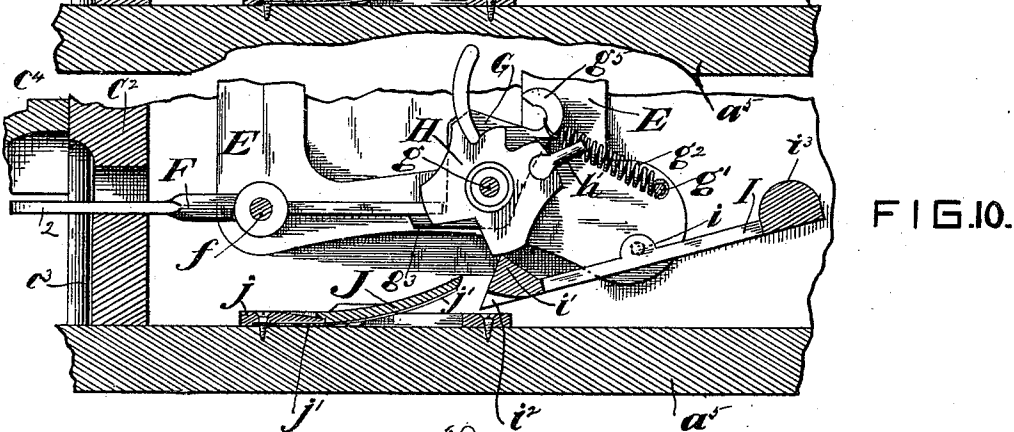
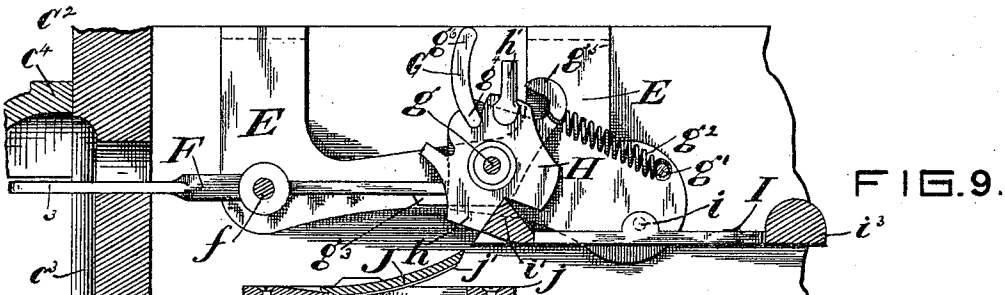
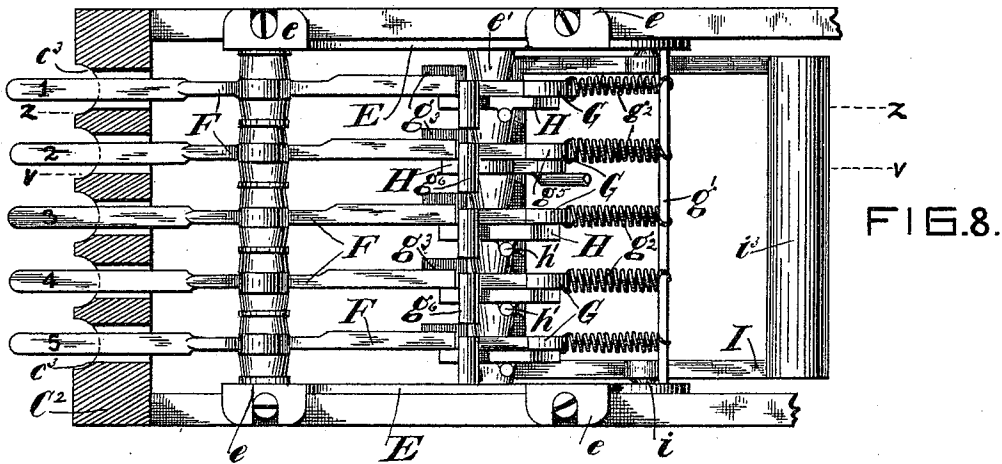
(No Model.)

2 Sheets—Sheet 2.

J. M. WADDEL.
LOCKING DEVICE FOR SHOW CASES.

No. 529,886.

Patented Nov. 27, 1894.



Witnesses
Frank & Son
Emma Lyford

Inventor
John M. Waddel
By Geo. J. Murray
Att'y

UNITED STATES PATENT OFFICE.

JOHN M. WADDEL, OF GREENFIELD, OHIO.

LOCKING DEVICE FOR SHOW-CASES.

SPECIFICATION forming part of Letters Patent No. 529,886, dated November 27, 1894.

Application filed August 25, 1894. Serial No. 521,283. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. WADDEL, a citizen of the United States, and a resident of Greenfield, in the county of Highland and State of Ohio, have invented certain new and useful Locking Devices for Show-Cases, of which the following is a specification.

The object of my invention is to provide a sales case for cigars or other articles, and combined therewith, a cash drawer, by the opening of which the case is automatically unlocked, and locked by the closing. Its object is also to provide said drawer with a combination lock, which can be readily set, without removing the drawer, to any combination desired, and the combination changed readily when desired. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the case with the drawer shown partially open, and a portion of the partition covering the drawer, and part of the meeting styles of the top frames broken away to expose the parts below. Fig. 2 is a transverse section of the same taken through line *xx* of Fig. 1, but with the drawer drawn farther out. Fig. 3 is an elevation of the drawer front. Fig. 4 is a detail view, in transverse section, of the knocker actuating the gong, taken through line *yy* of Fig. 5, which figure is a side elevation of the knocker. Fig. 6 is a detailed view of the locking plate and end of the locking lever, upon an enlarged scale. Fig. 7 is a detailed view similar to Fig. 2, but showing a modification of the locking end of the lever and the locking plates upon the top frames of the case. Fig. 8 is a detailed view, upon a greatly enlarged scale, taken in horizontal section through the drawer front, showing the locking mechanism in plan view. Fig. 9 is a detailed vertical sectional view, taken through line *zz* of Fig. 6, illustrating the parts in the unlocked position. Fig. 10 is a similar view, through line *vv* of Fig. 6, showing the drawer in the locked position. Fig. 11 is a detailed view in side elevation, of one of the lock tumblers.

To illustrate my invention, I have selected a well known form of cigar case, which is divided centrally by transverse partition, A.

A', are two frames fitted with glass, hinged upon the ends, *a* and *a'*, of the case body,

their meeting edges coming together over the transverse partition A. Each meeting rail, *a*², is recessed underneath near the center, to receive the toothed upper end of the angle lever, B, and to the under side of each meeting rail, *a*², under the recesses, are secured notched metal plates, *a*³, the notches being to permit the toothed end, *b*, of the angle lever, B, to pass through the notches and catch over the plates when turned forward by the coil spring, *b'*, one end of which is secured on a screw in the partition, A, and the opposite end of which is secured to the vertical arm of the lever, B. A stop pin or screw, *b*², limits the movement of the lever, B.

The lever, B, passes through a movable partition, *a*⁴, which is fitted to slide in grooves between the drawer compartments and the upper or sales compartment of the case and is pivoted upon a pin or screw, *b*³, passing through the angle of the lever and into the transverse partition, A.

The short or horizontal arm, B', of the lever is armed at its end with the pin, *b*⁴, which projects over the top edge of one side of the drawer, C. This side is downwardly curved at *c*, the depressed part of the groove coming under the pin, *b*⁴, when the drawer is closed, thus permitting the tension of the spring, *b'*, to pull the lever to the locked position shown in Fig. 2, when the drawer is closed. When the drawer is pulled open, the pin, *b*⁴, rides up the incline upon the edge of the drawer and when it comes to its highest position, throws the locking catch, *b*, out of engagement with the plates upon the under side of the top frames, A', and unlocks them, so that the case may be opened for access to its contents. The rear edge of the drawer side is also beveled so that when the drawer is pulled out as shown in Fig. 2, the case tops, A', will be again locked if closed down, and the inclined end permits the drawer to pass under the pin, *b*⁴, until the drawer is pushed into its closed position, when the tops will be again automatically locked.

The modification shown in Fig. 7 differs from that shown in Figs. 1 and 2 only in the fact that the locking detent, *b*, is on the opposite side of the upright arm of the lever, B, and the drawer edge, instead of being depressed at *c*, is depressed back of that, at *c'*,

so that the tension of the spring automatically unlocks the frames, A', and when the drawer is pushed in, the raised part, c', forces the lever back against the tension of the spring to the locked position and holds it locked until the drawer is drawn out far enough to permit the pin, b⁴, to slide down the incline over the depressed side of the drawer.

- 10 The top of the drawer side, over which the pin, b⁴, rides, is preferably capped with a sheet metal strip, c². Upon the bottom, a⁵, is secured a gong, D, and in proximity to it, a spring actuated hammer, D'. The short arm of the hammer extends toward the side of the case and in the path of a pivoted knocker, d, which is pivoted upon the inside of the drawer extension, upon a screw, d', which screw passes through a flanged cap, d², through the pivoted knocker, d, and into the side of the drawer. One of the side flanges and part of the rim of the cap is cut away, as seen in Fig. 5, to permit the latch to rise and fall as it passes over the end of the knocker lever when the drawer is closed. The play of the latch is limited by the rim of the cap. This arrangement for sounding an alarm when the drawer is opened, is not broadly new and any other well known arrangement may be substituted in place of it.

- 30 The case, so far as described, may have any ordinary lock applied to the drawer front in the usual manner, in which case the central front space, below the sliding tray, C', may be utilized for money or bills, the same as the other compartments in the drawer, but in the construction shown, this space is left open from the bottom to accommodate the combination lock shown on Sheet 2 of the drawings. The application of this particular lock to the drawer, I will now describe.

- 40 E are metal bearings secured upon each side of the center space of the drawer and having slotted lugs, e, which overlap the top edge of the compartment, the slots being to receive the screws which secure the bearing plates in position. The plates, E, have bearings to receive the transverse shaft, f, upon which the actuating levers, F, are journaled, also bearings for the shaft, g, upon which the lock tumblers, G and H, are journaled. They also support a transverse rod, g', upon which are hung the spiral springs, g², the opposite ends of said springs being hooked over the projection on the tumblers, G.

55 I, is a vibratory frame pivoted upon stud pins, i, which project outwardly from the lugs on top of the frame sides and into perforations in the bearing plates, E.

J, is a swinging tongue journaled in the frame, j, which is secured upon the bottom, a⁵, of the case. The spring, j', which is secured with the frame to the bottom of the case, holds the tongue, J, normally in the upper position, as shown in Figs. 9 and 10, so as to top the retraction of the drawer when the forward end of the frame, I, is thrown down

to the position shown in Fig. 10, and to allow the drawer to be closed by pressing down the tongue, J, when the frame is in the same position.

The tumbler, G, Fig. 11, is a flat disk having a forwardly projecting tooth, g³, at its lower end, and a laterally projecting tooth, g⁴, at its upper end, the tooth, g³, to be engaged by the inner end of the lever, F, to turn the tumbler, and the tooth, g⁴, to engage with one of the notches in the tumbler, H. It also has a hooked end, g⁵, to receive one end of the spiral spring, g², to hold the tooth, g³, in engagement with the inner end of its lever, F. The tumbler, H, seen in side elevation in Figs. 9 and 10, has notches upon its upper edge to receive the tooth, g⁴, for the purpose of locking the two tumblers to revolve together, and is notched on its lower edge to allow the detent, i', of the vibrating frame to pass up into the notch, so as to escape the upwardly projecting swinging tongue, J, when the tumbler is in the position shown in Fig. 9.

The combination of the lock may be set so as to be released by actuating one or more of the levers, F, and the ends of the levers may be marked with suitable numbers or letters, as in Fig. 8 they are marked 1, 2, 3, 4, and 5, and when so set, by actuating the properly numbered lever or levers, the lock is released, and by touching any of the other levers, whose tumblers are not set, the vibrating stop, I, is turned to the lower position. In Figs. 8, 9 and 10 the lock is set so as to be released when the lever, 2, is pressed upwardly by which action the notch in the tumbler, H, is brought over the detent, i, but it will be seen that if any of the other levers, as lever 3, Fig. 9, were pressed up, the forward cam end, h, of the tumbler would be thrown over its detent, i', and still hold the stop from passing up into the notch in the tumbler turned by lever 2.

The tumbler, G, has an elongated slot through which the shaft, g, passes, and the tooth, g⁴, has an upward finger piece, g⁶, by which the tumbler is lifted up to disengage it from one notch in the tumbler, H, and engage it with another, and the tumbler, H, has an upwardly extended thumb piece, h', by which it is turned to change the combination when the tumbler, G, is lifted up, the tension of the spring, g², being to hold the tumbler, G, in its lower position upon the shaft. The tumblers, H, have hubs projecting from them to bear against the sides of the opposite tumbler, G, and one of the plates, E, has an inwardly extending boss, e', to hold the tumblers in proper position.

The combination of the lock can be readily changed without removing the lock from the drawer or the drawer from the case, by simply changing the tooth, g⁴, of the tumbler, G, into the forward or rear notch of the tumbler, H. When the tooth is in the forward notch, as seen in Fig. 10, the movement of the lever will spring the notch over the detent, i' and allow the detent to pass into the notch and

out of the path of the stop, J, so that when any of the detents, g^4 , are placed in the forward notch or notches of the tumblers, H, as the tumblers are set to open when their forward ends are pressed up and when the detents are in the rear notch, as seen in Fig. 9, any movement of the levers actuating said tumblers will throw the vibrating frame down at its forward end, and lock instead of unlocking the combination. It will thus be seen that in order to open the drawer, only the levers which actuate the tumblers locked together, as shown in Fig. 10, will open the drawer, while the movement of one or more of these set tumblers with any one of the tumblers set as in Fig. 9, will block the opening of the drawer.

The drawer front, C^2 , is transversely perforated to permit levers, F, to pass through and play up and down through said perforations, and below the perforations the drawer is vertically grooved, as seen clearly at c^3 , Fig. 8, the circular depressions extending up to near the handle, c^4 , which covers them, to the protruding ends of the levers, F.

The forward bar of the vibrating stop of frame, I, is provided with inclined detents, i' , under each of the tumblers, H, and with a downwardly extending stop, i^2 , to engage the tongue J. The rear bar of the frame, i^3 , is made heavy, so that it throws the rear end down by gravity when the said tumblers are moved to allow the detents, i' , to enter the notches in the tumblers, H, as seen in Fig. 9.

The peculiar form of combination lock shown in Figs. 8 to 11 inclusive is especially adapted for use with my case, but is not separately claimed herein, because it is the invention of myself and another, while its adaptation to this particular case is of my own invention, and I have shown my top locking device adapted to the double case so as to lock both of the top glass frames simultaneously by the closing of the drawer in one of the cases, and unlocking them by the opening of the same, but it is obvious that the same device may be employed in a single case.

I have shown what I believe to be the best form of carrying out my invention, but it is obvious that many mere mechanical changes may be made in the parts without varying its principle or mode of operation, and hence, without limiting myself to the specific details of construction shown,

What I claim as new, and desire to secure by Letters Patent, is—

1. In a sales case, the glass frames hinged to the top edge thereof and having locking plates on the swinging edge of said frames,

the lever pivoted to the end of the case underneath the locking plates, and having its upper end hooked to engage with said locking plate and having a pin or projection on its lower end, and the sliding drawer having its top edge formed to actuate said lever to lock or unlock the top frames when the drawer is moved in or out, substantially as shown and described.

2. The combination of the sales case, having central partition, A, and glass frames, A' , hinged to the opposite ends thereof, the free ends meeting upon said central partition, the locking plates, a^3 , secured to the under side of the meeting edges of said frames, the bell crank lever, B, pivoted to said partition, A, and having hooked end, b , to engage over the locking plates of the frames and a pin, B' , to ride over the top edge of the drawer, to throw said lever to the unlocked position, a spring, b' , to hold the lever in the locked position, the drawer, C, having its upper forward edge inclined at, c , to allow the spring to lock the case tops when the drawer is closed, and its inner portion elevated to throw the detent, b , of the lever out of engagement with the plates when the drawer is opened or partially opened, substantially as shown and described.

3. The combination, substantially as herein before set forth, of the case, the glass frames hinged to the top edge thereof and having the locking plates underneath the swinging edge, a central partition, A, dividing said case into two compartments, the angle lever, B, pivoted upon said partition and having a locking detent to engage the plates on the top frames and hold the same in the locked position, and a pin or stud on its lower end to project over one side of the cash drawer, the horizontal partition, a^4 , dividing one side of said case into upper and lower compartments, the cash drawer fitted to slide in the lower compartment and having one of its sides cam shaped to actuate the locking lever to lock or unlock the top frames as it is moved in or out, and a central open compartment at its forward end to receive the combination lock, the front of said drawer being perforated to pass the lock actuating lever, the combination lock fitted within said compartment and having its actuating levers protruding through the drawer front, and the drawer handle, c^4 , to cover the ends of said levers, substantially as shown and described.

JOHN M. WADDEL.

Witnesses:

FRANK S. DAVIS,
GEO. J. MURRAY.