FRANK MUENNICH, OF CLEVELAND, OHIO.

LOCKING DEVICE FOR A SERIES OF DRAWERS.

1,247,137.


To all whom it may concern:

Be it known that I, FRANK MUENNICH, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Locking Devices for a Series of Drawers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a device for locking a series of drawers.

An object of the invention resides in the provision of a device by means of which the plurality of drawers may be locked and which device will be operative to release the drawers independently or simultaneously.

A further object of the invention resides in so constructing the device that either of the above operations may be accomplished by a single pressure on the operating means.

A still further object of the invention resides in so constructing the device that the operating means may be locked in its inactive position.

A still further object of the invention resides in so constructing the device that the operating member must be turned to various points in order to release the drawers and so that these points may be only known to an authorized person.

With these and other objects in view, such as will appear as my description progresses, my invention comprises the combination and arrangement of parts as set forth in and falling within the scope of the appended claims.

In the drawing:

Fig. 1 is a perspective view of a conventional form of desk showing a portion of the top and one side broken away to disclose the locking mechanism for the drawers.

Fig. 2 is a plan view of the operating mechanism.

Fig. 3 is a side elevation of the desk with the outer wall removed and the inner wall partly broken away.

Fig. 4 is a fragmental sectional view showing the manner in which the hook on the end of the lever extends through the inner wall of the desk and engages the hook on one of the drawers.

Fig. 5 is a vertical sectional view showing the operating mechanism for the levers.

Fig. 6 is a perspective view of the mechanism showing a portion of the dial and disclosing the manner in which the detent for the mechanism is mounted.

Fig. 7 is a fragmental sectional view showing the operating fingers in the positions they will occupy when all of the drawers are to be released, and

Fig. 8 is a similar view showing the positions of the fingers when but one of the drawers is to be released.

Referring to the drawing by reference characters wherein like parts are indicated by like characters throughout the several views:

I have illustrated a desk which includes outer side walls 1 and inner side walls 2 which are in spaced relation to the outer walls 1. This desk also includes a top 3 and a series of drawers 4. These drawers are slidably mounted in the usual manner between the walls of the desk as will be readily seen from the drawing. Secured to the rear end of each of these drawers is a spring 5 which is also secured, at 6, to the desk proper. A second spring 7 is secured to each drawer and is adapted to abut against the rear wall of the desk. These springs 5 and 7 are under tension when the drawer is in its closed position and therefore normally tend to move the drawer outwardly. The drawers are provided with rollers 8 which operate in tracks 9 so as to reduce the friction during the opening of the drawers. This friction is further reduced by means of horizontally disposed rollers 10 which bear against strips 11 secured to the sides of the drawers. Rubber bumpers 10' are mounted on the drawers to arrest their outward movement gradually.

In order that the drawers may be locked in their closed positions, I have provided the following mechanism:

Pivoted to the sub-top 12 of the desk is a lever 13, the pivotal point being at 14, which lever extends downwardly between the outer wall 1 and the inner wall 2, being held in place by guide members 15, which members however permit its movement. On the lower end of this downwardly extending arm of the lever a hook 16 is formed, which hook extends through an opening 17 in the inner wall 2 and is adapted to engage a hook 18 which is secured to the drawer. When these hooks are thus engaged the drawer will be prevented from moving outwardly but when
they are disengaged the springs 5 and 7 will open the drawer. Each of the side drawers is provided with a mechanism similar to that described while the middle drawer in the embodiment shown is locked by means of a similar lever which however projects downwardly through an opening 19 in the sub-top 12. The ends of all of these levers 13 terminate adjacent a common point, the ends lying in the circumference of a circle subscribed with that point as the center. These ends are normally pushed upwardly from the sub-top 12 by means of springs 20 which are disposed between the ends and the top and the hooks 16 are thus normally held in the path of movement of the hooks 18. It will thus be seen that when any or all of the ends of the levers are depressed, that the hook or hooks 18 will be disengaged from the hook or hooks 18.

In order that these levers may be depressed independently or simultaneously, I have provided an operating member which includes a vertically extending shank 21, which shank is rotatably and slidably mounted in the top 3 of the desk and is provided with a disk 22 on its lower end, which disk is located between the top 3 and the sub-top 12 above the ends of the levers. This disk 22 is provided with a series of outwardly extending fingers 23 equal in number to the levers and so arranged that when the disk is in one position each will lie over the end of one of the levers. The upper end of the shank 21 is provided with an operating knob 24. Thus when the fingers 23 lie over the ends of the levers and the disk 22 is depressed all of the levers will be actuated to release the drawers. The disk 23 is further provided with a finger 25 which is of greater length than the fingers 23 and which is disposed between two of the same. This finger is adapted to successively engage the levers and it is so arranged that when it is engaged with one of the levers the fingers 23 are out of registration with the levers so that when the disk is depressed only the lever with which the finger 25 is engaged will be actuated. The upper end of the shank 21 is further provided with an indicator 26, the indicator 26 and knob 25 being located above the top 3. A coil spring 27 surrounds the shank 21 and normally tends to move the disk 22 upwardly so that after it has been depressed it will automatically move into its normal position. The shank 21 passes upwardly through a plate 28 which acts as a dial for the indicator 26. This plate is secured to the top of the desk by means of a plurality of fasteners 29 and disposed between each of these fasteners is a symbol 30, the symbols and indicator being so arranged, with relation to the fingers 23 and 25, that when the indicator points to one of the symbols the fingers 23 will all lie in registration with the ends of the levers 13 and when it points successively to the remainder of the symbols it will indicate that the finger 25 lies over the successive levers so that an authorized person, being acquainted with the relation of the symbols to the levers, may readily actuate the operating member to release any or all of the drawers.

In order that the disk 22 may be maintained in its raised position so that it will be prevented from actuating the levers, I have formed an annular groove 31 in the shank 21, which groove is located below the plate 28. A detent 32 is provided, the end of which is normally pressed into the groove 31 by means of a spring 33. This detent is provided with an operating handle 34 which is of the same shape as the fasteners 29 so that it will resemble one of the same. This handle extends upwardly through an angular slot 35 in the plate which is so arranged that the detent 32 may be withdrawn from the groove 31 and moved sidewise until the handle 34 lies in the portion of the slot 35 which lies tangentially to the plate 28 at which time the detent will be locked in such position. It will be obvious that when the detent engages the shank 21, the operating mechanism will be locked, but when it is disengaged therefrom it may be actuated to release the drawers.

It will thus be seen that I have provided a device by means of which a series of drawers may be locked and which is so constructed that one or all of the drawers may be released by a single pressure on the operating means. Furthermore I have so constructed the device that an unauthorized person will be unable to operate the same.

While I have illustrated and described a particular embodiment of my invention, it has merely been for the sake of convenience and I do not wish to be limited to that particular embodiment as it is obvious that numerous changes may be made in the details of construction without departing from the spirit of the invention or exceeding the scope of the appended claims.

What I claim is:

1. The combination with a desk having a series of drawers therein, of levers for maintaining the drawers in their closed positions and having their ends terminating in the periphery of a circle, a disk mounted above the ends of said levers and having a plurality of fingers extending therefrom, said fingers being so arranged that they will simultaneously lie in alinement with the ends of the levers, said disk having an additional finger adapted to successively lie in alinement with the ends of the levers when the first mentioned fingers are out of alinement therewith and means for depressing the disk when either the first mentioned or the last
mentioned fingers lie in alinement with the ends of the levers.

2. A device of the character described comprising in combination with a plurality of drawers, a locking lever for each of said drawers, said locking levers having their ends terminating in the periphery of a circle, a disk mounted above the ends of said levers, and having a plurality of fingers extending therefrom, and means for operating said disk to cause the fingers to operate the levers and release the drawers.

In testimony whereof, I affix my signature, in the presence of two witnesses.

FRANK MUENNICH.

Witnesses:

Patrick Dovan,

E. A. Woodburn.