

Jan. 29, 1929.

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1,700,299

AUTOMATIC DRAWER LOCK FOR FILING CABINETS

Filed Oct. 29, 1925

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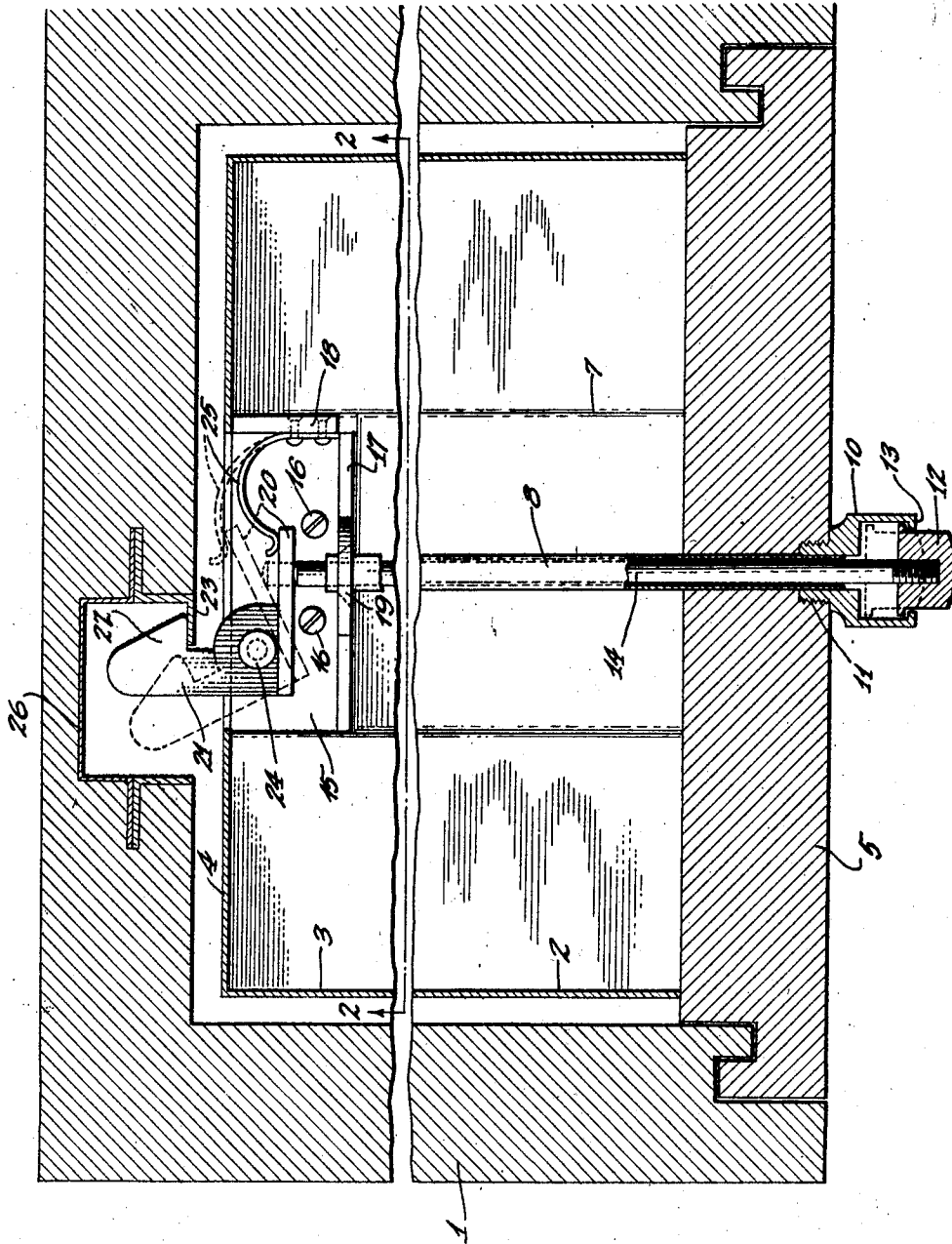


Fig. 3

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AUTOMATIC DRAWER LOCK FOR FILING CABINETS.

Application filed October 29, 1925. Serial No. 65,518.

This invention relates to filing cabinets and especially to that type of cabinets known as vertical files. These cabinets are provided with a suitable cabinet body in which are normally housed a plurality of drawers adapted to contain card indexes, folders, etc.

It is the practice in the manufacture of vertical filing cabinets to provide for the locking of one or more of the drawers thereof by means of a key operated lock and when this lock is operated, the drawers are secured against opening. In practice, however, it is not the custom to lock the drawers and in the event of fire the falling of the cabinet, due to the giving away of a floor generally results in the opening of the drawers and the exposing of their contents to conflagration.

With the foregoing considerations in mind, the object of the present invention is to provide automatic locking means for the drawers of vertical files which will function to automatically lock each drawer in closed position, preferably without manual intervention, when the drawer is closed; that is to say, the mere act of closing the drawer is utilized to effect the automatic locking of the drawer against inadvertent opening. By this means, the contents of the cabinet are at all times protected against the damage referred to and such protection is absolutely assured.

The drawers of vertical files are generally provided with one or more spacers which are mounted for movement longitudinally of the drawer on a retaining rod which passes through the front of the drawer and longitudinally of the drawer to the back thereof and is anchored in the back wall of the drawer. The present invention can be efficiently incorporated in a cabinet of this character by making the retaining rod in the form of a hollow tube and positioning within the tube a lock operating rod. The solid knob generally found on the forward end of retaining rods is made hollow and supports a push button mounted on the forward end of the lock operating rod. The rear end of the lock operating rod cooperates with a latch or detent, preferably spring actuated, to normally automatically engage with a suitable keeper formed in or mounted on the casing of the cabinet. By this arrangement, the closing of the drawer automatically brings the latch into cooperative relation with its keeper to effect the locking of the drawer

against opening until such time as the push button is operated to release the latch and permit the drawer to be manually opened. The construction is simple, economical to manufacture, and is absolutely dependable in its operations.

Features of the invention, other than those adverted to, will be apparent from the herein-after detailed description and claims, when read in conjunction with the accompanying drawings.

The accompanying drawings illustrate one practical embodiment of the invention, but the construction therein shown is to be understood as illustrative only, and not as defining the limits of the invention.

Figure 1 is a perspective view of a vertical filing drawer embodying the present invention.

Figure 2 is a transverse section through the drawer looking to the rear. This section is taken in the plane of the line 2—2 of Figure 3.

Figure 3 is a plan section through a cabinet embodying the invention.

Referring to the drawings, 1 designates a casing of the cabinet and 2 one of the drawers associated therewith. It is the practice to mount these drawers on suitable guides for sliding movement, but inasmuch as this constitutes no part of the present invention, the slides or guides are not shown. The drawer is illustrated as comprising the usual drawer body 3 having a back wall 4, and provided with a suitable front 5. On the front of the drawer is a handle 6 by means of which the drawer may be readily manipulated.

The bottom of the drawer is provided with a medial longitudinal depression 7 which extends the full length of the drawer, and longitudinally of this depression extends a tubular retainer 8, with which any suitable number of spacers 9 are adapted to cooperate in the usual manner. The forward end of the tubular retainer 8 extends through the drawer front 5 and is secured in any suitable manner to a hollow knob 10. The knob has a threaded shank 11 which is screwed into a tapped hole in the drawer front, and by this arrangement, the knob may be unscrewed for the purpose of withdrawing the retaining rod in a manner common to this art.

Operable within the hollow knob 10 is a push button 12, the inner end of which is pro-

vided with a circumferential flange cooperating with an intumed flange 13 at the front of the knob and through the cooperation of these flanges, inadvertent disengagement of the push button from the knob is precluded. To the push button is secured a rod 14 which extends rearwardly through the tubular retainer 8 and cooperates with locking mechanism situated in the rear portion of the drawer.

This locking mechanism embodies a suitable lock carrier 15, shown as comprising a flat metal plate secured in the base of the depression 7 by means of screws or rivets 16, and having upturned flanges 17 and 18. The flange 17 extends transversely of the drawer and is perforated at 19 to provide a centralizing bearing for the rear end of the tubular retainer 8. The rod 14 extends beyond the rear end of the retainer and cooperates with the operating arm 20 of the latch. The operating arm 20 of the latch is formed integral with the body of the latch 21, which has a nose 22 adapted for locking engagement with a suitable keeper 23 mounted on the body or casing of the cabinet. The latch is pivoted to the plate 15 by a stud or rivet 24 and is adapted to be normally impelled into locking position by means of a leaf spring 25 which is secured to the flange 18 of the carrier plate and bears against the operating arm 20 of the latch.

The keeper 23 will manifestly partake of different forms depending upon the type of cabinet with which the lock is associated, but in the monolithic form of cabinet illustrated in Figure 3 of the drawings, it is convenient to make the keeper a part of a locking channel 26, which is embedded in the monolithic cabinet body during the process of manufacture. The locking channel 26 affords ample room in its interior for proper operation of the latch and at the same time provides a durable and efficient stop with which the latch may cooperate.

When locking mechanism of the character described is associated with a drawer of a vertical file, it will be apparent that the mere act of closing the drawer will automatically bring the latch into locking relation with the keeper 23. In this connection, it will be noted that the nose of the latch is tapered, so that when the drawer is closed, the latch will be automatically retracted into the dotted line position of Figure 3, to permit the nose to pass the keeper, after which the spring 25 will impel the nose of the latch into engagement with said keeper. No manual intervention is required in effecting the locking of the drawer, so that the leaving of the drawer unlocked is fully safeguarded against.

When it is desired to open the drawer, slight pressure on the push button 12 will cause the latch to be retracted into its dotted line position for the purpose of releasing it

from its keeper, whereupon the drawer may be opened in the usual manner. The spring 25 serves at all times to impel the latch into locking position and it therefore follows that the drawer cannot possibly be left inadvertently unlocked. It will of course be understood that key operated locking means may be associated with the drawers of a cabinet embodying this invention to safeguard the contents of the drawers as against unauthorized persons, but this constitutes no part of the present invention.

The foregoing detailed description sets forth the invention in its preferred practical form, but inasmuch as the invention is adapted for use in filing cabinets generally, it will be apparent that slight changes or modifications may be made in structural details in adapting the invention to cabinets of different construction without departing from this invention, the scope of which is fully commensurate with the appended claims.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. In an automatic drawer lock for filing cabinets, the combination of a tubular retainer extending longitudinally of the drawer and provided at its forward end with a knob detachably locked to the drawer to permit the withdrawal of the retainer when desired, a locking element at the back of the drawer, a keeper supported by the cabinet body in proximity to the locking element, a spring for normally impelling the locking element into a position to automatically engage the keeper when the drawer is closed, a push button carried by the knob of the retainer, and a releasing rod extending between the push button and the locking element to release the locking element from the keeper when the push button is operated to permit opening of the drawer.

2. In an automatic drawer lock for filing cabinets, the combination of a tubular retainer extending longitudinally of the drawer and provided at its forward end with a knob having threaded engagement with the drawer front to permit of removal of the retainer when desired, a push button carried by said knob, a latch pivotally mounted at the back of the drawer, a keeper mounted in the cabinet body in proximity to the latch, a spring for impelling the latch into a position to automatically engage the keeper when the drawer is closed, and a push rod secured at its forward end to the push button and extending rearwardly through the tubular retainer into cooperative relation with the latch, to permit unlocking of the drawer by pressure on the push button when it is desired to open the lock.

3. In a filing cabinet having a drawer and a spacer movable longitudinally thereof, a

retaining member detachably mounted in the drawer and engaging said spacer for preventing detachment thereof from the drawer, a drawer latch normally operable to lock
5 and retain said drawer in closed position, and manually operable means carried by said retaining member for operating said latch to permit outward movement of the drawer from the cabinet.

10 4. In a filing cabinet having a drawer and a spacer movable longitudinally thereof, a retaining member detachably mounted in the drawer and engaging through an opening in
15 said spacer for preventing detachment thereof from the drawer, a drawer latch operable to normally lock the drawer in housed position in the cabinet, and manually operable means forming part of and housed by said

retaining member for releasing said latch to permit outward sliding of said drawer. 20

5. In a filing cabinet having a drawer and a spacer movable longitudinally thereof, a tubular retaining member detachably mounted in the drawer and engaging through an
25 opening in said spacer for preventing detachment thereof from the drawer, a drawer latch at the rear end of the drawer operable to normally lock the drawer in housed position in the cabinet, and an operating rod in
30 said tubular retaining member, manually operable to operate said latch to release said drawer for outward sliding movement.

Signed by me at Marietta, O., this 22nd day of October, 1925.

CARL F. WOLTERS.