

Nov. 13, 1945.

A. H. LIESKEN

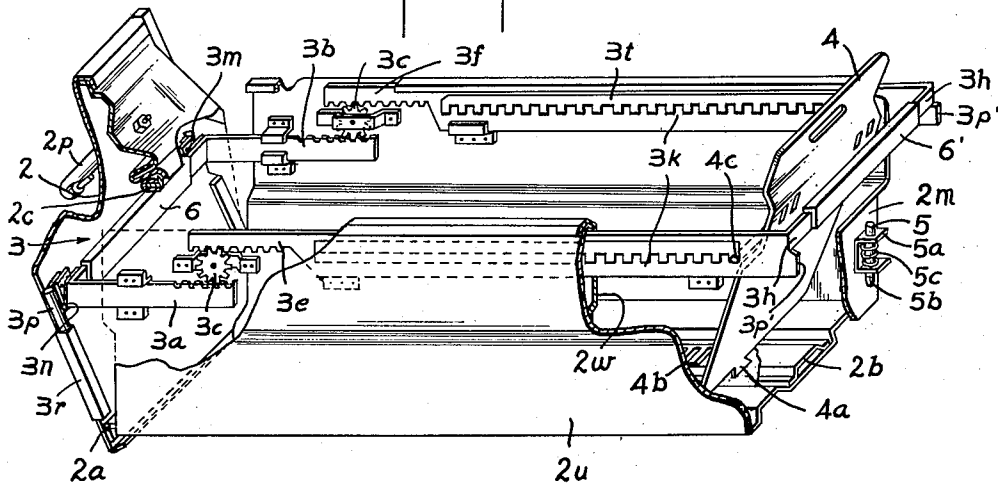
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SWING FRONT FACE DRAWER FOR VERTICAL FILING CABINETS

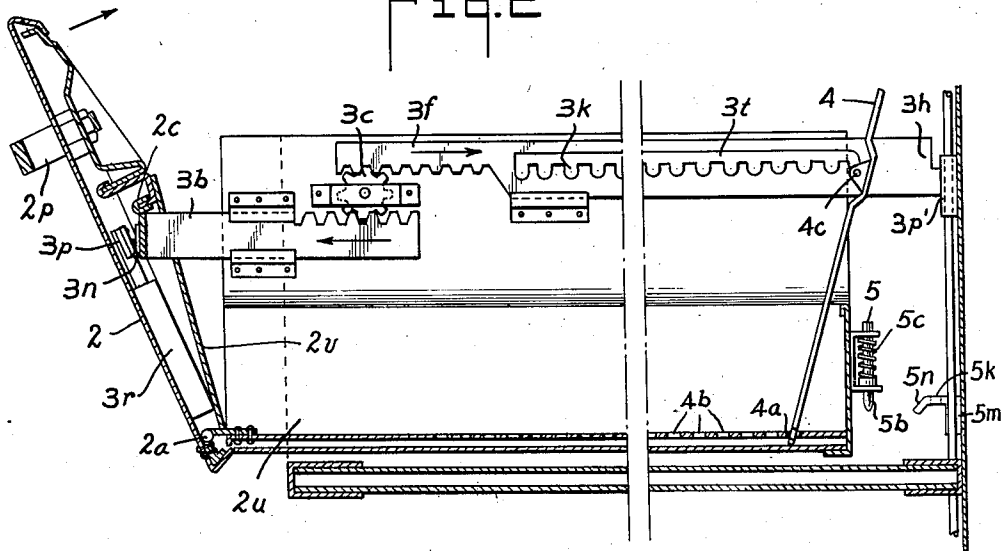
Filed June 26, 1941

2 Sheets-Sheet 1

Fig. 1



F19.2



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Fig. 3

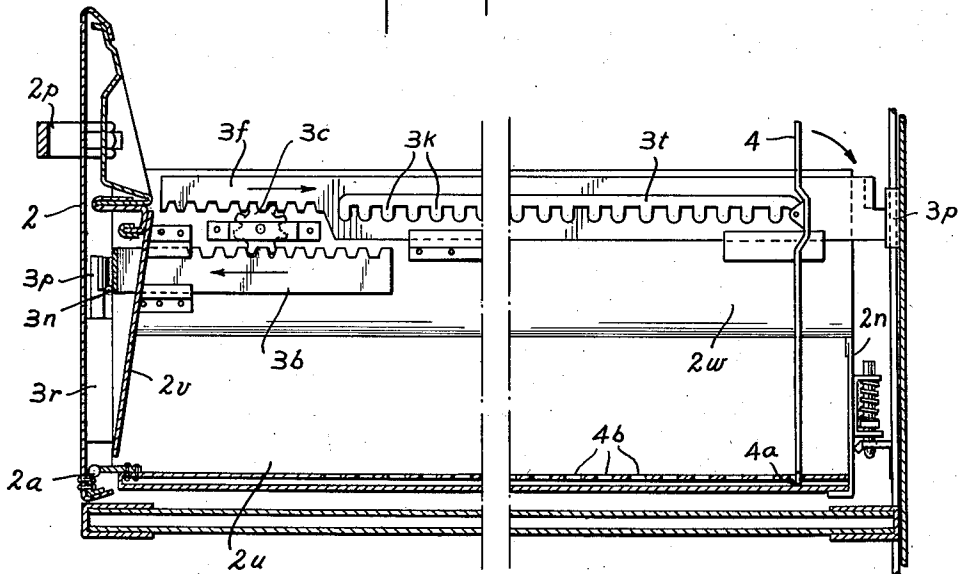
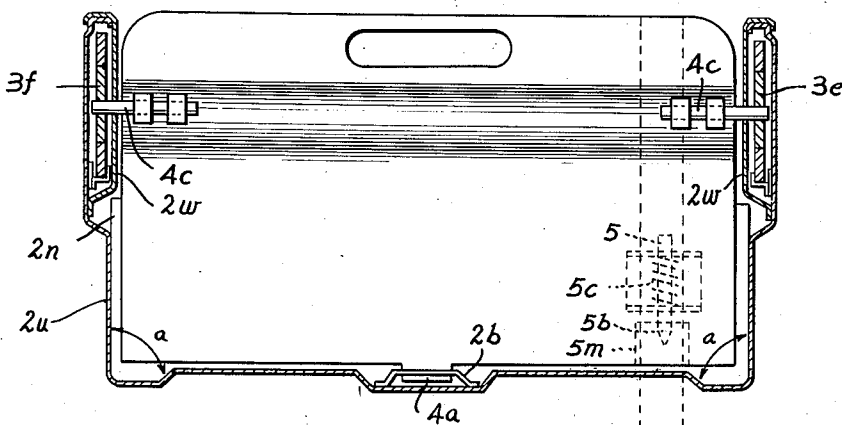


Fig. 4



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UNITED STATES PATENT OFFICE

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SWING FRONT FACE DRAWER FOR
VERTICAL FILING CABINETSAuguste Hubert Liesken, Brussels, Belgium;
vested in the Alien Property CustodianApplication June 26, 1941, Serial No. 399,921
In Belgium December 31, 1940

10 Claims. (Cl. 45—2)

The invention relates to improvements in filing cabinet drawers of the tiltable front type, wherein the front can tilt forwardly as the drawer is opened in order to release folders and papers in the drawer for easy insertion or removal from between the drawer front and the usual follower.

The followers in such drawers have usually a fixed rearward inclination and, the drawer front being perpendicular when closed, the result is that the folders or papers are not uniformly compressed between the follower and the drawer front, and there is some loss of useful space in the drawer due to the slanting position of the folders, and to the greater amount of drawer space which a slanting follower occupies in comparison to a perpendicular follower.

In the improved filing cabinet drawer according to the present invention, the front swings open as the drawer is pulled out of the cabinet by the operation of novel mechanism herein described, and the swinging of the drawer front causes the normally perpendicular follower to swing to a similar degree but in a direction opposite to that of the drawer front.

When and as the drawer is closed, the front and the follower return to their normal perpendicular positions. This is accomplished by merely closing the drawer.

In order to make the full filing space of the drawer available, the mechanism returns the front and the follower to perpendicular position before the drawer has reached a position wherein the follower can contact the back panel of the filing cabinet.

The said mechanism involves also means which latches the drawer as it reaches the fully closed position.

In the appended drawings showing an exemplary embodiment of the invention,

Figure 1 is a perspective view of a filing cabinet drawer according to the present invention, with certain parts thereof broken away.

Figure 2 is a longitudinal sectional view showing the drawer in open position with the front and the follower in their extreme inclined positions.

Figure 3 is a view similar to Figure 2 but showing the drawer in closed position, with the front and the follower in their normal perpendicular positions.

Figure 4 is a transverse sectional view taken across the drawer in front of the follower.

Referring in detail to the drawings, the drawer shown has a handle 2*p* fixed on the normally perpendicular drawer front 2, which is mounted

on the hinges 2*a* at the bottom of the drawer. The forward and rearward swinging movement of the drawer front on the hinges 2*a* is converted into rectilinear motion by means of a U-shaped piece 3, formed of a sleeve 6 into which are inserted and secured one arm of L-shaped pieces whose other arms 3*a* and 3*b* are in the form of racks which are in mesh with pinions 3*c*. The pinions 3*c* are in turn in mesh with corresponding racks 3*e* and 3*f* of another U-shaped piece 3*h* which is connected to a normally perpendicular, but tiltable follower 4. The U-shaped piece 3*h* is constructed similarly to the U-shaped piece 3, and comprises a flat tubular piece 6' into the ends of which are inserted and secured one arm of the L-shaped piece whose other arms provide the racks 3*e* and 3*f*. As a result of this arrangement the angular movement of the follower toward and away from its normal perpendicular position corresponds to the angular displacement of the drawer front when the latter is swung on its hinges in the opening and closing of the drawer.

For mounting the follower swingably in the drawer and spaced from the drawer front in accordance with the amount of folders or papers in the drawer, the follower is provided with a depending tongue 4*a* which can be selectively engaged in any one of the slots 4*b* which are provided along the central part 2*b* of the bottom of the drawer 2*a*. Angular movement is imparted to the follower through pins 4*c* on its opposite sides which turnably engage in notches 3*k* provided in each of the racks 3*e* and 3*f*.

The notches 3*k* are deep enough to retain the pins 4*c* whether the follower is in perpendicular or inclined position. For each notch 3*k* there is a slot 4*b* in the central portion of the bottom of the drawer. To provide for easy adjustment of the position of the follower to correspond with the contents of the drawer, the notches 3*k* communicate at their upper ends with horizontal slots 3*t* which serve as guideways for the pins 4*c* as the follower is being shifted forwardly or rearwardly in the drawer to a new position.

In the closed position of the drawer, both the front and the follower being in perpendicular position, the folders or papers are uniformly compressed and in a perpendicular position between the front and the follower, if the follower has been properly spaced from the front.

The angular movement of the drawer front 2 relative to the rack arms 3*a* and 3*b* is permitted by two hinge connections 3*m* and 3*n* between the member 3 and the sliding blocks 3*p*,

working in vertical guides 3r provided on the drawer front. The forward tilting of the drawer front is limited by a rubber stop 2c fixed on the inside of the front and arranged to be engaged by the bight portion of the U-shaped piece 3 in the fully open position of the drawer front.

In order to prevent the drawer from being shut or closed while the front and the follower are in tilted position, the rear ends of the racks 3e and 3f are provided with extensions 3p' which come into contact with the back panel of the cabinet, as the drawer is pushed into the cabinet, before the drawer can reach fully closed position. Obviously, when the extensions 3p' strike the back panel of the cabinet as the drawer is pushed toward closed position, they cause the racks 3e and 3f to move so that the follower 4 and the front 2 are brought back toward their perpendicular position before the full return of the drawer into the cabinet can take place. It is obvious that if, the drawer being shut, a pull is exerted on the handle 2p of the front 2, this pull causes tilting of the front whereby the various racks are moved, and the extensions 3h press against the back panel of the cabinet and push the drawer forwardly.

In order to prevent rebound of the drawer when pushed closed suddenly, the rear face 2n of the drawer 2u is provided with a bolt 5 sliding in a stirrup 5a fixed to the face 2n. This bolt is provided with a conical end 5b, permanently urged downwardly under the action of a spring 5c.

When the back of the drawer approaches the back panel of the cabinet, the conical end 5b of the bolt 5 slides against a slope 5n of a catch 5m fixed to a plate 5p, until the moment when the bolt 5 is above an opening 5k. At this moment, as the spring 5c continues to act downwardly on the bolt 5, the latter penetrates said opening 5k and locks the drawer closed. A pull exerted on the handle 2p causes the conical end of the bolt 5 to rise out of the opening 5k and permit the drawer to move to open position.

The mechanism connected to the front may be protected by means of a counter-face 2u provided with openings passing the racks. A similar provision may be made for the racks acting on the follower, which may be protected by a metal sheet 2w provided on the lateral walls of the drawer.

The invention is not limited to the precise details of the embodiment herein described by way of example but changes may be made within the scope of the appended claims without departure from the invention.

What I claim is:

1. A drawer for a vertical filing cabinet, comprising a tilting front, a tilting follower in the drawer shiftable toward and away from the front, operating means for reversing the tilting movements of the front and the follower comprising a pair of racks, pivotal and sliding means connecting one of the racks to the front, pin and slot means connecting the other rack to the follower, and a pinion mounted on the side of the drawer with opposite sides of which said racks are meshed.

2. A drawer for a vertical filing cabinet, comprising a tilting front, a tilting follower in the drawer, operating means for reversing the tilting movements between the front and the follower including a pair of racks, one of which is hingedly mounted on the front, the other mounted on the drawer and flexibly connected with the follower, a pinion mounted on the drawer with opposite sides of which the racks are meshed, and a stop

on the front for engagement by a portion of the front rack for limiting the tilting movement of the front.

3. A drawer for a vertical filing cabinet, said cabinet having a rear panel, said drawer comprising opposite sides, a tiltable normally vertical front, a tiltable normally vertical follower spaced behind said front, operating means operatively connecting said front and said follower for tilting movement in opposite directions, said operating means comprising a first pair of racks connected to and projecting rearwardly from side portions on said front and a second pair of racks vertically spaced with respect to the first pair and projecting forwardly from side portions on said follower, pinions mounted on the sides of the drawer between and in mesh with the front and follower racks on the corresponding sides of the drawer, whereby tilting movement of the front and the follower are reversed with respect to each other, and extension means projecting rearwardly from said second pair of racks in a manner to engage said rear panel of the cabinet as the drawer is closed so as to move said operating means to restore the front and the follower to their normal vertical positions before the drawer reaches fully closed position.

4. A drawer for a vertical filing cabinet according to claim 3 wherein the follower has lateral pins for selectively and loosely engaging in notches spaced along the follower racks.

5. A drawer for a vertical filing cabinet according to claim 3 wherein the follower has lateral pins for selectively and loosely engaging in notches spaced along the follower racks, the follower having a depending tongue for selectively and loosely engaging in one of a plurality of slots formed along the bottom of the drawer beneath the said notches, whereby in the vertical position of the follower the notches engaged by the follower pins are each vertically aligned with the corresponding slot on the bottom of the drawer.

6. A drawer for a vertical filing cabinet according to claim 3, wherein the follower has lateral pins for selectively and loosely engaging in notches spaced along the follower racks, the follower racks being formed with longitudinal elements spaced from the openings of the notches, said elements serving to guide the follower pins while being shifted to engage in different notches in the follower racks.

7. A drawer for a vertical filing cabinet having a rear panel, said drawer comprising at least one side, a tiltable normally vertical front, a tiltable normally vertical follower, and operating means connected to and between the front and the follower and acting to tilt the front and the follower in opposite directions whenever either of them is tilted from its normal vertical position or is tilted towards its normal vertical position, said operating means comprising a pinion mounted on the side of the drawer, racks projecting from the front and the follower into mesh with opposite sides of said pinion, and means on the upper part of said side of the drawer slidably supporting the racks, a downwardly spring pressed bolt on the back of the drawer, said bolt having its lower end tapered, and a catch on the rear panel formed with a ramp along which the tapered end of the said bolt rises to drop into a hole formed in the catch as the drawer arrives at fully closed position.

8. In a drawer for a vertical filing cabinet; a drawer bottom and sides, a normally vertical forwardly tiltable drawer front pivoted on the for-

ward end of the bottom, a normally vertical rearwardly tiltable follower between the drawer sides and spaced behind the drawer front, and having a depending tongue loosely inserted in a selected one of a plurality of slots formed along the drawer bottom whereby the spacing of the follower behind the front is determined, and the follower is tiltable supported on the drawer bottom, said follower having lateral pins, and operating means for producing substantially similar tilting of the front and follower in unison and in opposite directions whenever the drawer front is pulled forwardly into a tilted position or is pushed rearwardly toward the normal vertical position, said operating means including longitudinally movable components at opposite sides of the drawer, said components being formed with longitudinally spaced notches arranged to selectively receive the pins on the follower in any determined position of the follower.

9. A filing drawer for a vertical filing cabinet according to claim 8 wherein said components of

the operating means have extensions arranged to engage a rearward portion of the filing cabinet as the drawer is pushed inwardly in a manner to impart motion to the components effective to move the front and the follower from tilted positions to their normal vertical positions before the drawer can reach its fully closed position.

10. A drawer for a vertical filing cabinet, comprising a tiltable front, a tiltable follower in the drawer shiftable toward and away from the front, operating means for reversing the tilting movements of the front and follower including a pair of rack members, one being U-shaped and mounted on the front with its toothed extensions extending rearwardly therefrom, a guideway on the front mounting the U-shaped rack member thereon, a slide block in the guideway, a hinged connection between the block and said U-shaped rack member, and rack mechanism cooperating with said rack members and producing tilting of the follower in synchronism with the front.

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