July 6, 1943. C. W. STRAUBEL 2,323,632

DRAWER WITH TILTING BACK WALL

Original Filed June 6, 1941

Fig. 1.

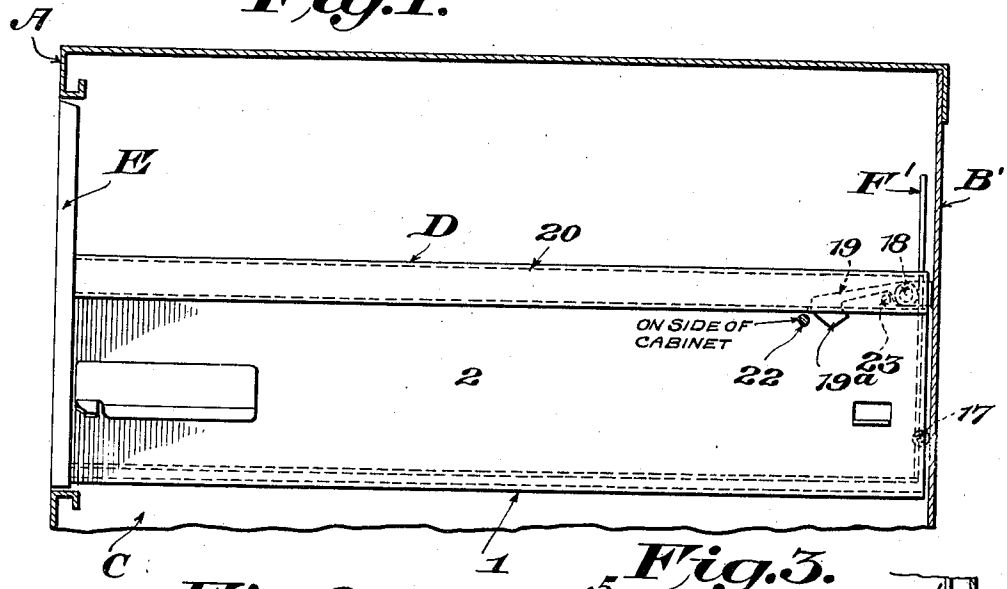


Fig. 2.

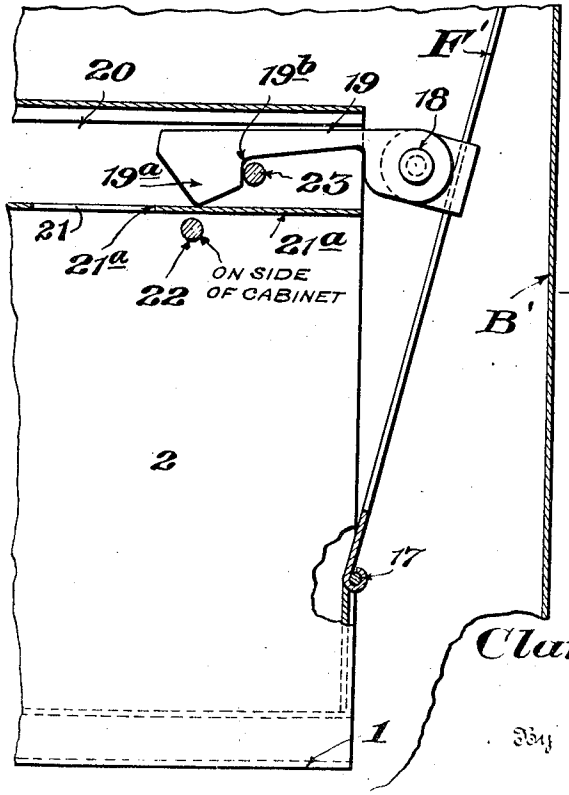


Fig. 3.

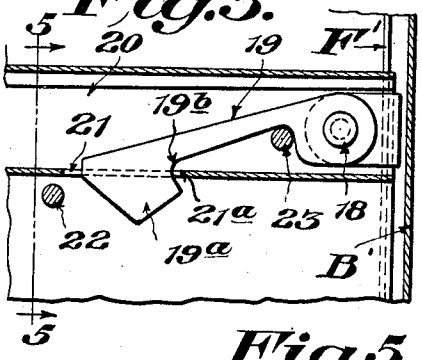


Fig. 4.

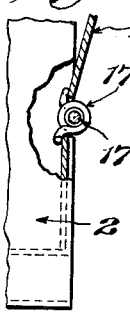
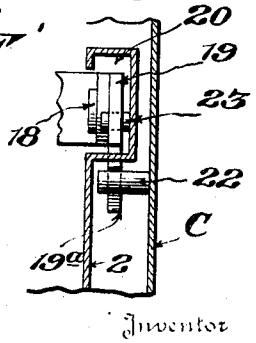


Fig. 5.



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DRAWER WITH TILTING BACK WALL

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Original application June 6, 1941, Serial No. 396,956. Divided and this application November 12, 1942, Serial No. 465,393

6 Claims. (Cl. 45—2)

This invention relates to an improvement in drawers for filing cabinets, and has particular reference to a construction which assists in permitting the opening up or spreading apart of the drawer contents when the drawer is opened.

While it has been heretofore proposed to free the compressed contents of a filing drawer for easier access and better view of indicia by providing the drawer with an outwardly tiltable or swinging head, nevertheless, even with a construction of this type it is often desirable to obtain additional freeing of the drawer contents, and, moreover, where a rigid drawer head is used, this objective is particularly desirable.

Accordingly, a primary object of the invention is to provide the drawer with a movable back wall which will tilt rearwardly when the drawer is opened to relieve the pressure on the drawer contents whether the drawer is loaded throughout to capacity, or whether the rear section of the drawer is filled behind a divider plate, follower plate, or other subdividing means. This arrangement also permits a follower plate or the like, when at the extreme rear of the drawer and the drawer is open, to tilt rearwardly for maximum capacity with increased accessibility.

A further and more specific object is to provide a pivotally supported back wall for the drawer which may be thrown back or tilted by gravity due to weight of drawer contents, or automatically by a spring, when the drawer is pulled open, and which is maintained in upright position when the drawer is closed by suitable cooperating means on the drawer and the filing cabinet or drawer casing. Thus, when the drawer is closed the actuated back wall will not yieldingly bear against the rear wall of the cabinet and tend to force the front of the drawer out of the cabinet.

With the above and other objects in view which will be more readily apparent as the nature of the invention is understood, the same consists in the novel combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawing, in which:

Fig. 1 is a vertical sectional view of a filing cabinet having a drawer therein including the present improvements, the drawer being shown in its closed position.

Fig. 2 is a detail side elevation, partly in section, showing the relative position of the tilting back wall to the drawer and the cabinet when the drawer is pulled out of the cabinet.

Fig. 3 is an enlarged detail view illustrating the latch arm in its locked position relative to the drawer to hold the tilting back wall vertical when the drawer is closed as in Fig. 1.

Fig. 4 is a detail elevation, partly in section, illustrating how the axis of the tilting back wall may be provided with a conventional coil spring for normally urging the back wall of the drawer rearwardly thereof.

Fig. 5 is a vertical sectional view taken on line 5—5 of Fig. 3.

Similar reference characters designate corresponding parts throughout the several figures of the drawing.

This application is a division of my co-pending application, Serial No. 396,956 filed June 6, 1941, patented February 9, 1943, No. 2,310,879.

The filing cabinet A in the accompanying drawing is of the conventional type, including a rear wall B' and suitable suspension means (not shown) on the side wall C of the cabinet for slidably supporting the filing drawer D. The drawer D includes a drawer body having a front drawer head E, which may be of the rigid, tilting or extensible type, and also including the usual bottom wall 1 and side walls 2.

The present invention is particularly concerned with the novel back wall F' which is movable relative to the rear ends of the side walls 2 when the drawer is opened, that is, withdrawn from the cabinet, and which is held vertical when the drawer is clased, that is, fully pushed into the cabinet. More specifically, the invention is directed to a tilting back wall for the drawer which is movable to a rearwardly inclined position when the drawer is opened to assist in freeing the drawer contents, and which is moved to a vertical position and preferably locked or held in that position when the drawer is closed. To accomplish these ends the lower portion of the back wall F' is hinged or pivoted, as indicated at 17 to the short upstanding relatively fixed portion of the rear of the drawer.

The intermediate portion of the back wall F' is also pivotally connected at 18 with a locking latch arm 19 which operates in the inwardly opening channel 20 at the top of the side wall of the drawer. The bottom of the channel 20 is provided with a slot 21 for receiving the head 19a of the latch arm when the back wall F' is in its closed vertical position. The head 19a of the latch arm is provided with a rear shoulder 19b for connnecting or locking the latch arm

to one end 21a of the slot 21 and thus hold the back wall F' vertical when the drawer is closed.

An abutment or stop 22 is provided on the inner side wall of the cabinet so that when the drawer is pulled out of the cabinet the stop 22 will engage the rounded front edge of the head 19a of the latch and lift the locking shoulder 19b away from the said end 21a of the slot 21 with which it has been engaged, thereby to free the latch so that the back wall F' can tilt rearwardly by gravity, or under the weight of drawer contents, or with the aid of a spring. To limit the travel of the latch 19 in a rearward direction, a suitable stop pin 23 or its equivalent is provided on the inside face of the bottom of the channel 20 on the drawer.

Upon closing the drawer carrying the back wall F', and assuming that the wall is in its rearwardly tilted position, the upper edge of said back wall F' will engage the inner face of the back wall B' of the cabinet, and, as the closing movement of the drawer in the cabinet continues, the wall F' will be moved to a vertical position and the shoulder 19b of the latch-head will engage with the rear end 21a of the slot 21, thereby to lock the back wall F' in a vertical position so that it will not lean against the inner face of the back wall B' of the cabinet and tend to push the drawer out of the cabinet.

Fig. 4 of the drawing illustrates the manner in which the back wall F' may be spring urged to rearwardly tilted position. That is to say, the pintle of the hinge 17 may be provided with one or more coil springs 17a, as shown, for example, in my co-pending application referred to, for the purpose of urging the back wall F' rearwardly when the head 19a of the latch arm is disconnected from the rear end 21a of the slot 21.

From the foregoing it will be apparent that the present invention contemplates the provision of a hinged back wall which may or may not be spring tensioned, but which moves to a rearwardly tilted position when the drawer is pulled open, thereby to additionally free the contents of the drawer for inspection purposes. It will, of course, be understood that the back wall of the drawer may be hinged to a short permanent back wall of the drawer, as shown, or, on the other hand, the horizontal pivot axis for the back wall may be positioned as low as the drawer bottom itself. In all cases the essential feature is to provide a hinged back wall for the drawer. Moreover, when the drawer is fully closed and the back wall is erect, means is provided for preventing the back wall from engaging the rear wall of the cabinet or casing, thereby avoiding any tendency of the back wall to cause the drawer to creep out of the cabinet.

Without further description, it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art and it will, of course, be understood that changes in the form, proportion and arrangement of parts may be resorted to within the scope of the appended claims.

I claim:

1. In a filing cabinet having side and rear walls, the combination including, a drawer mounted for sliding movement in the cabinet and including side and bottom walls, a back wall hinged on a transverse axis to the rear of the drawer body and movable from a vertical position when the drawer is closed to a rearwardly inclined position when the drawer is open, cooperating latch and keeper means respectively associated with the back wall and drawer and interengageable for holding the back wall in vertical position when the drawer is closed, and fixed means on the cabinet cooperating with the latch to control the unlatching of said latch and keeper means when the drawer is opened.

2. In a filing cabinet, the combination including a rear wall and a side wall of the cabinet, a drawer body slidably mounted in the cabinet, a drawer back wall pivotally mounted at the rear of the drawer body whereby its upper end may swing beyond the rear limit of the drawer when the drawer is pulled open, cooperating latch means respectively on the back wall of the drawer and the drawer body for holding the back wall in vertical position, fixed means on the side wall of the cabinet for cooperating with the latch means to control the unlatching of said latch means when the drawer is pulled out of the cabinet to permit the back wall of the drawer to tilt rearwardly, and whereby when the drawer is moved to closed position the upper edge of the drawer back wall will engage the inner face of the rear wall of the cabinet to move the back wall of the drawer to vertical position and permit the said latch means to be reengaged to maintain the back wall in locked vertical position when the drawer is closed.

3. In a filing cabinet, the combination including a rear wall and a side wall of the cabinet, a drawer body slidably mounted in the cabinet including a side wall and a bottom wall, a back wall pivoted to the rear of the drawer whereby its upper end may be swung beyond the rear limit of the drawer, a latch arm pivotally connected at one end to the back wall of the drawer, retaining means on the side wall of the drawer body, an offset head on the latch arm adapted to engage with said retaining means on the drawer to hold the back wall in a vertical position, abutment means on the side wall of the cabinet and disposed in the path of travel of the head of said latch whereby when the drawer is moved out of the cabinet said abutment means will cause the lifting of the latch and its consequent disengagement from the retaining means on the drawer, thereby permitting the back wall to tilt rearwardly, and whereby when the drawer is moved to closed position, the back wall of the drawer will be returned to vertical position by the upper end thereof engaging the rear wall of the cabinet.

4. In a filing cabinet, the combination including a side wall and a rear wall of the cabinet, a drawer mounted for sliding movement in the cabinet, and a back wall hinged on a transverse axis to the rear of the drawer and movable from a vertical position when the drawer is closed to a rearwardly inclined position when the drawer is open, latch means connected with the back wall of the drawer and cooperating with means on the side wall of the drawer to hold said back wall locked in a vertical position when the drawer is closed, and fixed abutment means on a side wall of the cabinet cooperating with the latch means to control the unlatching thereof from the said means on the side wall of the drawer when the drawer moves out of the cabinet.

5. In a filing cabinet, the combination including, a side wall of the cabinet, abutment means on said side wall of the cabinet, a drawer mounted for sliding movement in the cabinet and having a side wall provided with a slot, a back wall hinged to the rear of the drawer and movable from a vertical position when the drawer is closed to a rearwardly inclined position when the drawer

is opened, and a latch arm connected at one end to the back wall of the drawer and having a head portion adapted to project through said slot and engage one end thereof to hold the back wall locked in vertical position when the drawer is closed, the said head of the latch arm being adapted to engage said abutment means when the drawer is pulled out of the cabinet, thereby to move said head out of the slot and release the back wall for rearward tilting movement.

6. In a filing cabinet, the combination including, a side wall of the cabinet, a fixed abutment on said side wall of the cabinet, a drawer mounted for sliding movement in the cabinet and having a side wall provided with a channel portion whose bottom is vertically disposed and whose opposite sides are horizontally disposed, one of said sides having a slot, a back wall hinged to the rear of the drawer and movable from a vertical position when the drawer is closed to a rearwardly inclined position when the drawer is opened, a latch arm pivotally connected at one end to the back wall and having a hook-like head at its other end, said latch arm operating within the channel whereby the head thereof may enter the slot and engage the rear end thereof when the drawer is fully closed, an abutment on the bottom of the channel for engaging the rear portion of the head of the latch arm when the latch arm is disengaged from the slot to limit the rear angular movement of the back wall when the drawer is opened, the head of said latch arm when engaged with one end of the slot while the drawer is closed being adapted to engage with the abutment on the side wall of the cabinet to lift the head of the latch out of the slot and permit the back wall to tilt rearwardly when the drawer is opened.

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