Feb. 9, 1943. C. W. STRAUBEL 2,310,264

ERECTION MEANS FOR FILING MATERIAL SUPPORT

Filed Oct. 20, 1941 3 Sheets-Sheet 1

Fig. 2.

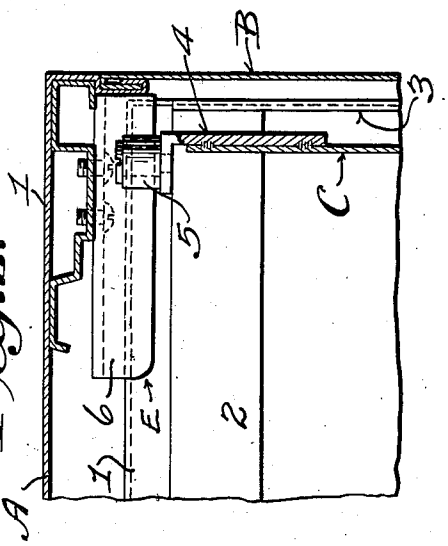


Fig. 3.

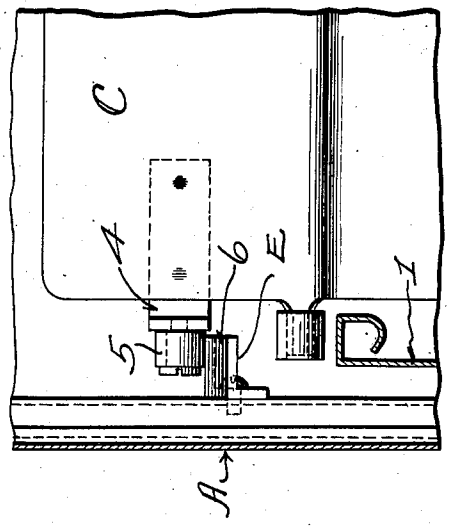
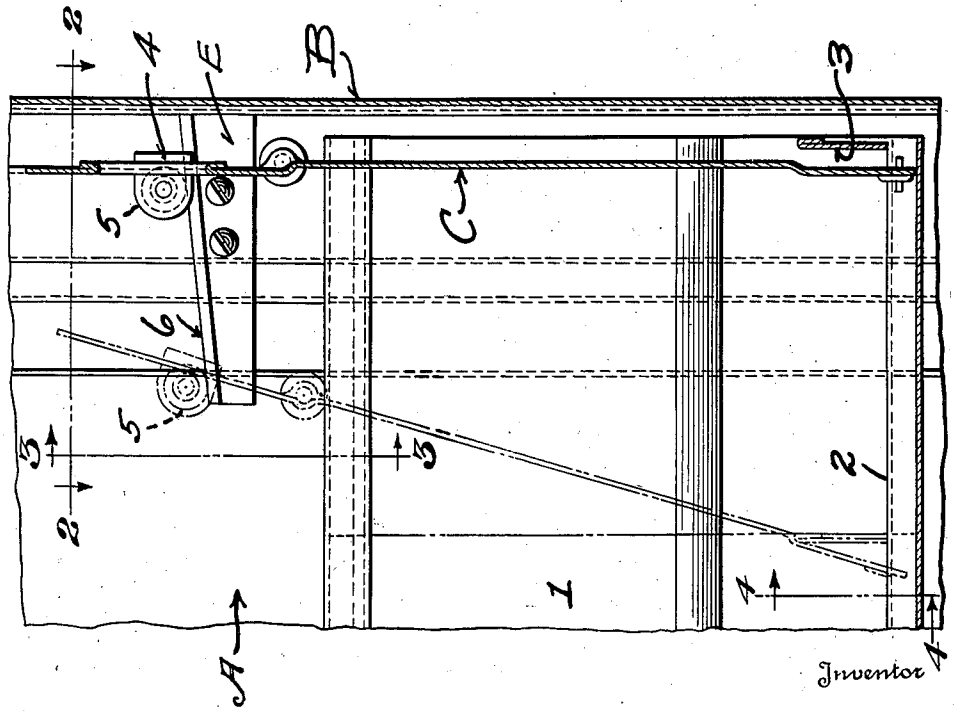


Fig. 1.



Inventor

Clarence W. Straubel,

By Wilhamter & Groff Attorneys

Feb. 9, 1943. C. W. STRAUBEL 2,310,264

ERECTION MEANS FOR FILING MATERIAL SUPPORT

Filed Oct. 20, 1941 3 Sheets-Sheet 2

Fig. 4.

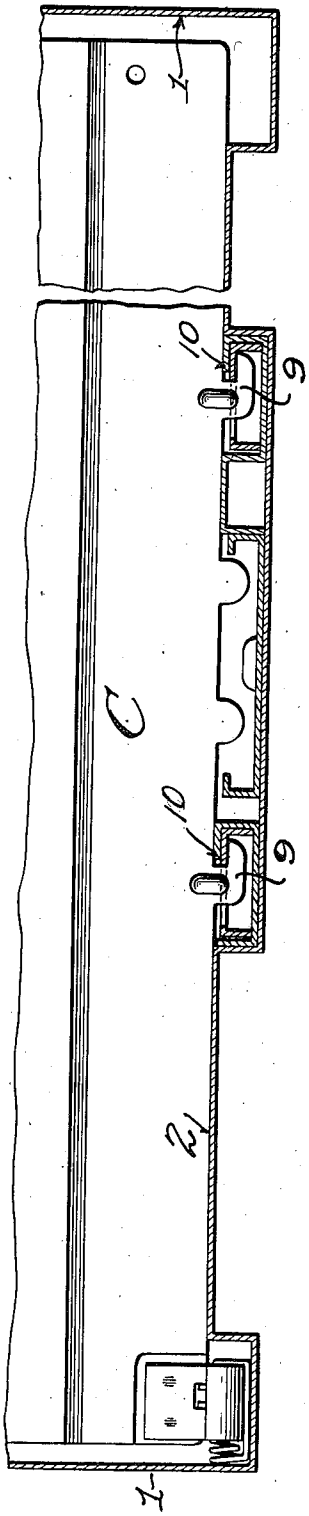
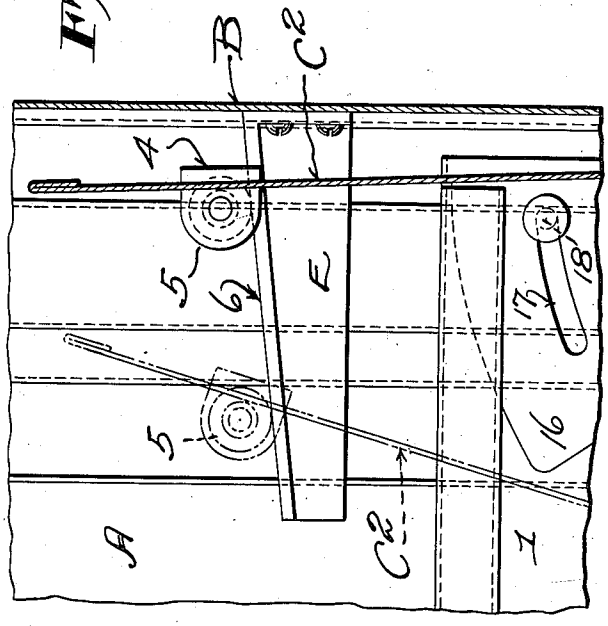


Fig. 7.



Inventor

Clarence W. Straubel,

By Wolhaupter & Groff

Attorneys

Feb. 9, 1943. C. W. STRAUBEL 2,310,264

ERECTION MEANS FOR FILING MATERIAL SUPPORT

Filed Oct. 20, 1941 3 Sheets-Sheet 3

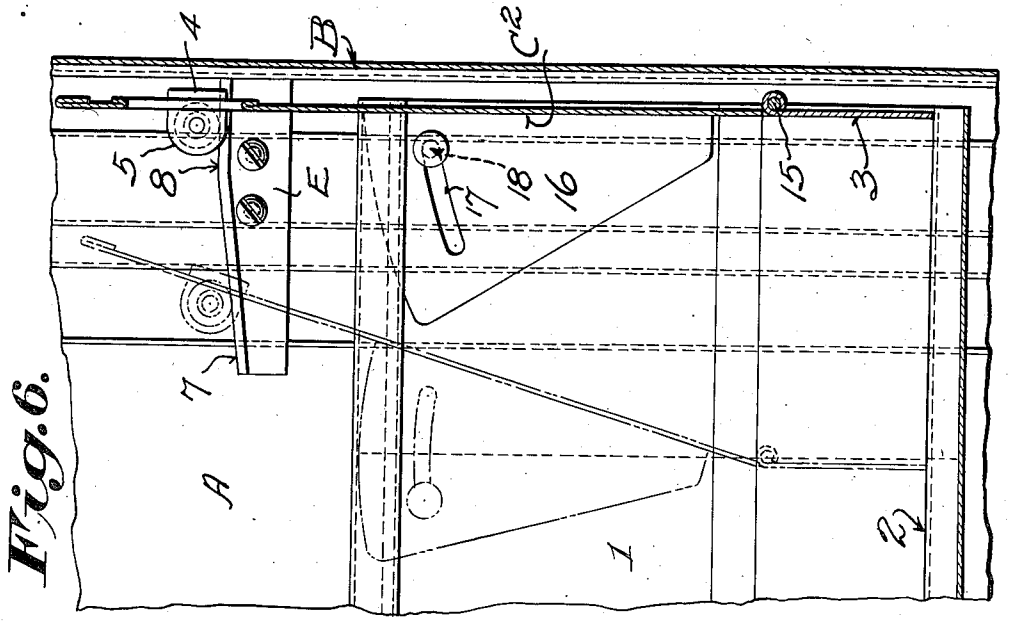


Fig. 6.

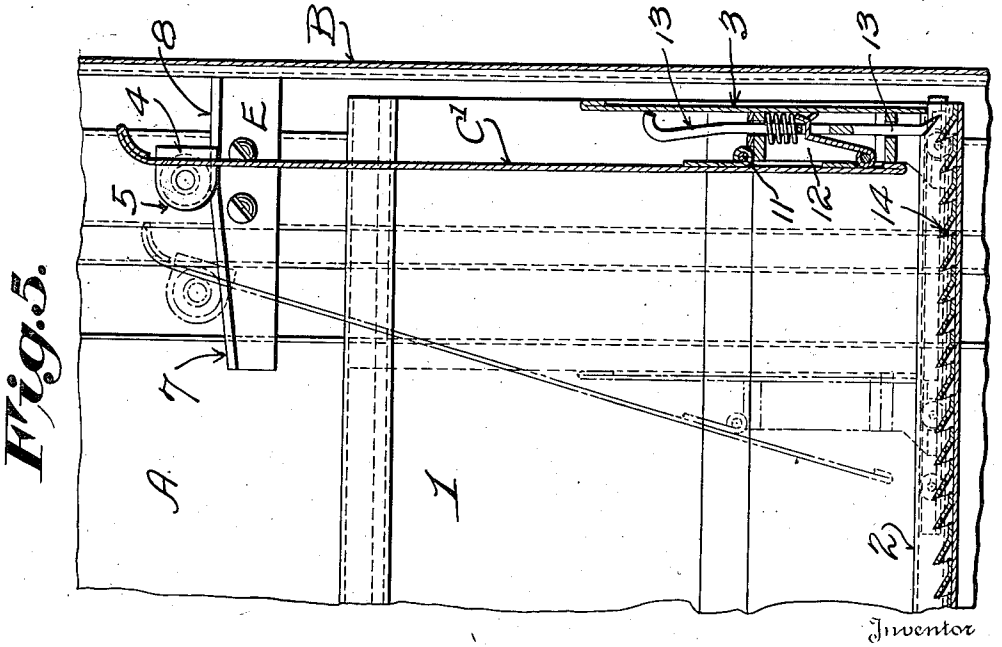


Fig. 5.

Inventor

Clarence W. Straubel,

By Wheatley & Groff.

Attorneys

Patented Feb. 9, 1943 2,310,264

UNITED STATES PATENT OFFICE

2,310,264

ERECTION MEANS FOR FILING MATERIAL SUPPORT

Clarence W. Straubel, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio

Application October 20, 1941, Serial No. 415,843

6 Claims. (Cl. 45—2)

This invention relates to filing cabinets, and more particularly to an improved means for causing the divider, follower, hinged rear wall, or other filing material supporting element, to be automatically moved to a substantially upright or erect position when located near the end of the drawer and the drawer is fully closed in the cabinet.

Dividers, followers or partitions or the like are usually in the form of a plate arranged in filing drawers so that they normally have a rearwardly inclined or tilted position, and since they are normally of greater height than the vertical dimension of the sides or back of the drawer, it frequently happens, especially when any of these elements are located near the back end of the drawer, that the upper edge thereof projects beyond the same and engages the inside face of the rear wall of the cabinet.

This is particularly true when the drawer length is substantially equal to the inner dimensional depth of the cabinet so as to provide maximum filing space in the drawer. When the drawer is loaded with filing material and this condition exists, the weight of the drawer contents against the plate is transmitted as pressure to the rear wall of the cabinet and has a tendency to push or feed the drawer out of the cabinet. The same situation occurs in closing a drawer wherein the rear or back wall is hinged to tilt rearwardly as the drawer is pulled out to enable the drawer contents to be spread apart at the proper viewing angle. In other words, a drawer provided with a rearwardly tilting back wall, and loaded with filing material, will have its upper edge projecting beyond the normal length of the drawer and engaging the wall of the cabinet.

Accordingly, in order to overcome the objectionable tendency of the filing materal support to directly engage the rear wall of the cabinet, or engage an element which has the effect of transmitting a pushing force parallel with the line of drawer movement, the present invention has primarily in view the provision of cooperating means respectively on the support or plate and a wall of the cabinet for lifting the support to a substantially upright or erect position, as the drawer proceeds to fully closed position, while at the same time causing the load that would otherwise manifest itself in a pressure parallel to said plane of the drawer movement to be lifted upwardly, that is, at substantially right angles to the line of drawer movement. Thus, a construction according to the present invention has not only the effect of causing the material support or plate to assume a substantially upright or vertical position so that it will not engage the rear wall of the cabinet, but also tends to wedge or hold the entire drawer more firmly within the cabinet.

A further object of the invention is to provide a simple, practical and reliable means for effecting movement of the material support or plate which is easy to install and reliable in operation.

With the above and other objects in view which will be more readily apparent as the nature of the invention is better understood, the invention consists in the novel features of construction, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and defined in the appended claims.

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

Fig. 1 is a vertical sectional view of a portion of a filing cabinet and a filing drawer, with the latter in its closed position, and illustrating the present improvements as applied to a support or plate known as a divider.

Fig. 2 is a detail horizontal sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a detail vertical sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a detail vertical sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a vertical sectional view of a portion of a filing cabinet and the rear end of a drawer illustrating the application of the invention to a plate or support ordinarily known as a follower.

Fig. 6 is a view similar to Figs. 1 and 5 illustrating the application of the invention to a support or plate in the form of a pivotally mounted back wall of the drawer.

Fig. 7 is a detail vertical sectional view illustrating the erecting cam applied to the rear wall of the cabinet instead of the side wall.

Similar reference characters designate similar parts throughout the several figures of the drawings.

The present application is a continuation in part of my Patent 2,281,463 dated April 28, 1942, Figs. 1, 2 and 3 of the present case being taken from said patent, while Fig. 5 is taken from Patent 2,281,464, and Figs. 6 and 7 are taken from application Ser. No. 396,956, filed June 6, 1941.

The improvements herein described are applicable generally to filing cabinets of the type including the side walls A and rear wall B, the

former being provided with suitable drawer suspensions for slidably supporting a drawer D. The drawer includes the side walls 1, bottom wall 2, and rear wall 3, the latter varying in height, as will be apparent from Figs. 1 and 5, and, as will also be seen from Fig. 6, the same may include a pivoted or hinged upper portion or plate for supporting filing material in the same manner as a divider, partition, or follower.

In Figs. 1 to 4, inclusive, the plate or support is designated generally as C and is in the nature of a divider or partition, while in Fig. 5 the plate or support is in the form of a follower designated generally as C^1, and in Fig. 6 the pivoted rear wall serves as the support or plate designated generally as C^2.

The said plates or supports C, C^1 and C^2 are each provided at the marginal edges which project above the side walls 1 of the drawer with suitable angular brackets 4 carrying the rollers 5. These rollers are adapted to cooperate with erecting cams designated generally as E carried by a face or faces of the inner walls A of the cabinet. In Figs. 1 to 6, inclusive, the said cam E is secured to the inner face of one of the side walls of the cabinet by screws or equivalent fastenings, and in Fig. 7 the erecting cam is secured to the back wall B of the cabinet. In all cases, however, the cams E have a similar location, namely below but adjacent to the general plane of movement of the rollers 5, and above the upper edge of the side walls 1 of the drawer.

According to Figs. 1 and 7, cam E is provided with an upper inclined surface 6 whose pitch is continuous from front to back and whose zenith is near the rear wall B of the cabinet. A modification of the inclined face of the cam E is shown in Figs. 5 and 6, wherein the same consists of the forwardly disposed inclined surface 7 and the substantially flat portion or dwell 8 disposed adjacent the rear wall of the cabinet.

When a support or plate C, or its equivalent, is moved toward the rear of the drawer and assumes its normal rearwardly inclined position, it will be apparent that when the drawer is pushed fully into the cabinet the rollers 5 will engage the inclined surface 6 or the inclined surface 7 and gradually lift the plate or support so that as the drawer continues its movement inwardly to final position the plate is caused to assume a substantially upright position. In the modified arrangement shown in Figs. 5 and 6, where the cam surface consists of the inclined portion 7 and the dwell 8, it will, of course, be apparent that the rollers 5 will ultimately be seated on the dwell 8, which is substantially horizontal. In all cases, however, the rollers 5 are intended to engage the inclined surfaces of the erecting cams so as to exert a lifting and wedging force on the support or plate in the direction of its own plane, which is substantially at right angles to the general direction of drawer movement. Since the plate or support is connected at its lower edge to the drawer bottom, it will thus be apparent that as the drawer moves to final position the plate or support will not only wedge the drawer in closed position as the rollers 5 approach the end of the cam surfaces, but will also avoid any tendency of the support or plate to project beyond the vertical plane or limit of the rear end of the drawer, thereby preventing the upper edge of the plate from engaging the inner face of the rear wall B of the cabinet.

Referring more specifically to Fig. 1, the plate or support C is provided at its lower edge with a depending laterally extending hook or hooks 9 adapted to engage with locater means, preferably in the form of a rack 10, which extends longitudinally throughout the drawer, as set forth in my Patent 2,281,463.

In Fig. 5 the support or plate C^1 is pivotally supported at 11 on a follower carriage 12 provided with latch means 13 cooperating with locater means 14 in the drawer bottom, as set forth in my Patent 2,281,464.

In Figs. 6 and 7 the plate or follower C^2 is pivoted to the rear wall section 3, as indicated at 15, while the side edges thereof are provided with the wings 16 which are slotted as at 17 to cooperate with pins 18 on the side walls of the drawer, as shown in my copending application Ser. No. 396,956.

From the foregoing it will be apparent that all forms of the invention provide for automatically moving the plate or support to a substantially upright position as the drawer moves to its fully closed position with the advantages heretofore set forth.

I claim:

1. In a filing cabinet, in combination with a cabinet including side and rear walls, a drawer including a drawer head and side walls and slidably mounted in the cabinet between said side walls to move toward and from the rear wall, a filing material support pivotally mounted at its lower end in the drawer inwardly of the drawer head and having its upper end extending above the side walls of the drawer, and cooperating means respectively on the upper side edge portion of the support and a wall of the cabinet for lifting said support from a rearwardly inclined position to a substantially vertical position as the drawer is fully moved into the cabinet.

2. In a filing cabinet, in combination with a cabinet including side and rear walls, a drawer including a drawer head and side walls and slidably mounted in the cabinet between said side walls to move toward and from the rear wall, a filing material support pivotally mounted at its lower end in the drawer inwardly of the drawer head and having its upper end extending above the side walls of the drawer, an element offset from the upper side of the support, and cam means carried by an inner wall of the cabinet and including an inclined face disposed in the path of said element whereby as the drawer proceeds to final position the said element engages said inclined surface to lift the support from a rearwardly inclined to a substantially vertical position as the drawer approaches fully closed position.

3. In a filing cabinet, in combination with a cabinet including side and rear walls, a drawer including a drawer head and side walls and slidably mounted in the cabinet between said side walls to move toward and from the rear wall, a normally rearwardly inclined filing material support pivotally mounted at its lower end in the drawer inwardly of the drawer head and having its upper end extending above the side walls of the drawer, a roller offset from the upper side of said support and projecting laterally therefrom, cam means carried by a wall of the cabinet above the upper edge of the side walls of the drawer and including a rearwardly and upwardly inclined cam surface adapted to be engaged by said roller for moving said support from an inclined position to a substantially vertical position as the drawer approaches fully closed position.

4. In a filing cabinet, in combination with a

cabinet including side and rear walls, a drawer including a drawer head and side walls and slidably mounted in the cabinet between said side walls to move toward and from the rear wall, a rearwardly inclined filing material support pivotally mounted at its lower end in the drawer inwardly of the drawer head and having its upper end extending above the side walls of the drawer, a roller carried by the side of the upper portion of the support, a cam carried by a wall of the cabinet above the upper edge of the side walls of the drawer and including a rearwardly and upwardly inclined portion and a substantially horizontal portion, said roller being adapted to ride respectively on said inclined and horizontal portions as the drawer proceeds to final position to move the support from a rearwardly tilted position to a substantially vertical position.

5. In a filing cabinet, in combination with a cabinet including side and rear walls, a drawer including a drawer head and side walls and slidably mounted in the cabinet between said side walls to move toward and from the rear wall, a normally rearwardly tilted filing material support pivotally mounted at its lower end in the drawer inwardly of the drawer head and having its upper end extending above the side walls of the drawer, a roller offset from one side of the upper portion of the support, a cam carried by a side wall of the cabinet above the upper edge of the side walls of the drawer and having a rearwardly and upwardly inclined upper surface for engaging said roller as the drawer proceeds to closed position in the cabinet, the engagement of the roller with the cam erecting the support to a substantially vertical position.

6. In a filing cabinet, in combination with a cabinet including side and rear walls, a drawer including a drawer head and side walls and slidably mounted in the cabinet between said side walls to move toward and from the rear wall, a rearwardly tilted filing material support pivotally mounted at its lower end in the drawer inwardly of the drawer head and having its upper end extending above the side walls of the drawer, a roller carried by the side of the upper portion of the support, a cam carried by the rear wall of the cabinet above the upper edge of the side walls of the drawer and including a rearwardly and upwardly inclined surface adapted to be engaged by said roller, thereby to cause the support to be moved from an inclined to a substantially erect position.

CLARENCE W. STRAUBEL.