Feb. 16, 1954 C. W. STRAUBEL 2,669,236

DIVIDER MEANS FOR FILING DRAWERS

Filed Jan. 20, 1950 2 Sheets-Sheet 1

Fig. 1.

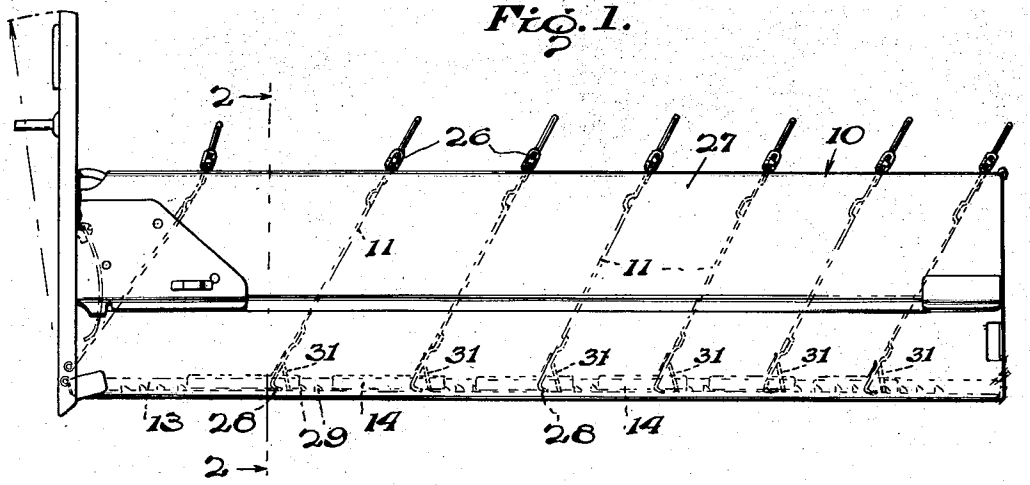



Fig. 2.

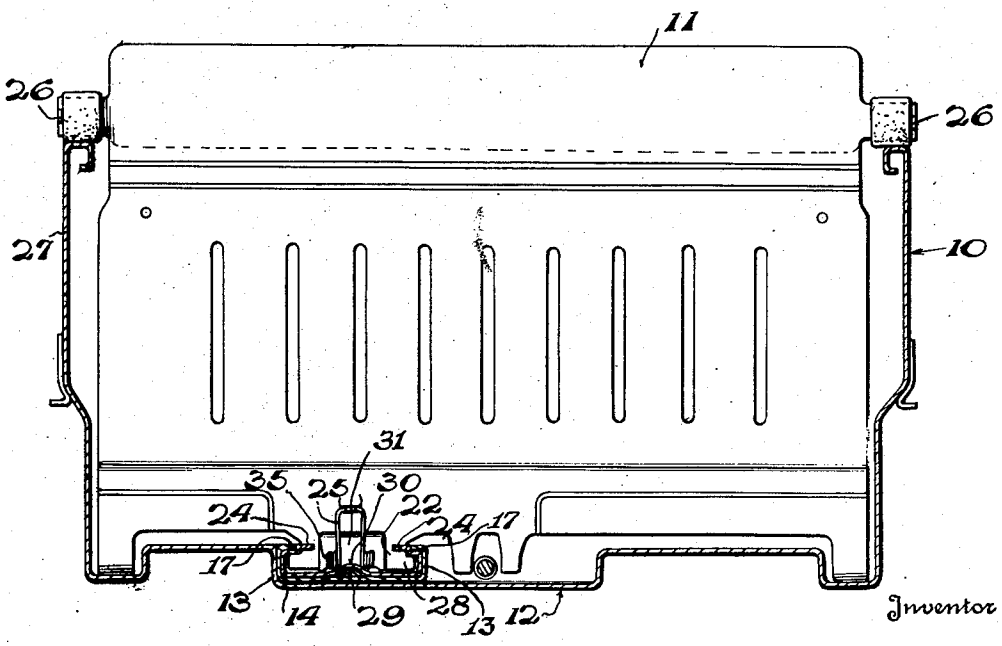
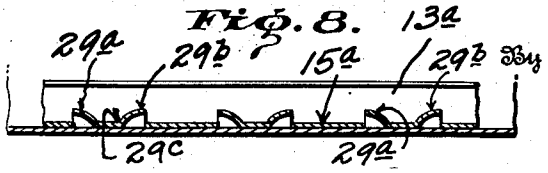



Fig. 8.




Inventor

Clarence W. Straubel.

ATTORNEY

Feb. 16, 1954 C. W. STRAUBEL 2,669,236

DIVIDER MEANS FOR FILING DRAWERS

Filed Jan. 20, 1950 2 Sheets-Sheet 2

Fig. 3.

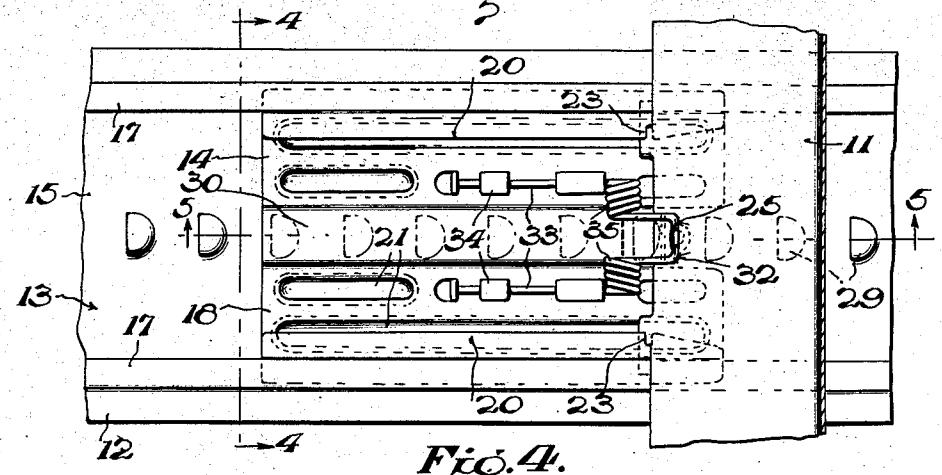



Fig. 4.

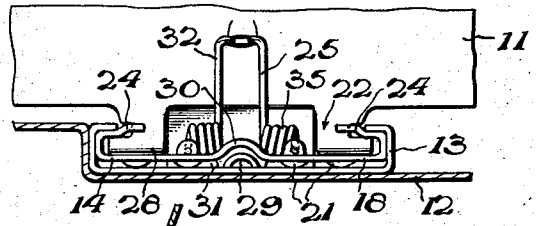



Fig. 5.

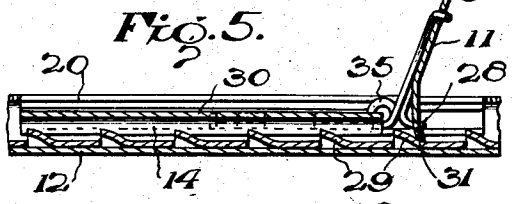



Fig. 6.

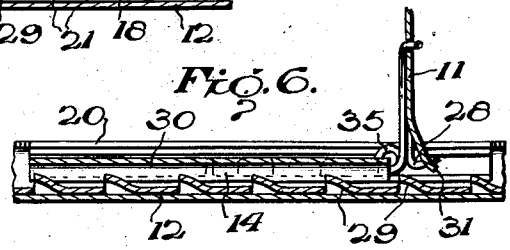
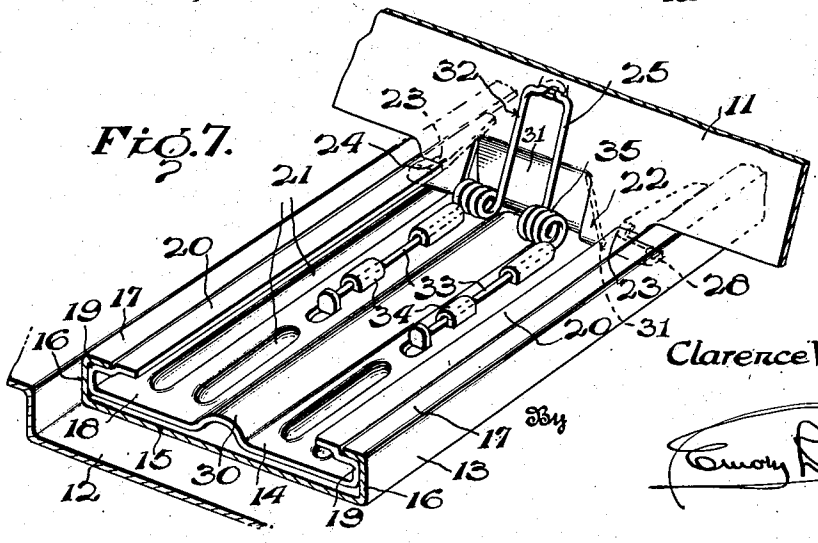



Fig. 7.




Inventor

Clarence W. Straubel.

By

ATTORNEY

Patented Feb. 16, 1954

2,669,236

# UNITED STATES PATENT OFFICE

2,669,236

## DIVIDER MEANS FOR FILING DRAWERS

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

Application January 20, 1950, Serial No. 139,589

3 Claims. (Cl. 129—28)

1

This invention relates to filing cabinets, and has particular reference to improvements in means for mounting divider plates in filing cabinet drawers for adjustments longitudinally of the drawers.

Generally speaking, the object of the invention is to provide, in association with a divider plate which is mounted in a drawer for forward and rearward sliding adjustments and for forward and rearward rocking movement, means to limit rearward rocking movement of said plate, yieldable means tending constantly to rock said plate rearwardly, and other means which is effective to hold said plate against any appreciable forward or rearward sliding adjustment as long as said plate is in a rearwardly rocked position, but which is released by forward rocking movement of said plate. Thus, said plate is adapted for manual forward or rearward adjustment at will simply by first rocking the same forwardly to effect its release to permit such adjustment and, at the same time, is adapted for advantageous, automatic, incremental, forward adjustment each time a sufficient amount of material accumulates behind the same to effect forward rocking movement thereof to a released position.

More particularly, the object of the invention is to provide simple, practical means for mounting a divider plate for forward and rearward sliding adjustments and for forward and rearward rocking movements, and other simple, practical means whereby said plate is adjustable either manually or automatically in the manner stated and is retained in any adjusted position thereof until moved from such position either manually or automatically by the accumulation of material behind the same.

With the foregoing and other objects in view, which will become more fully apparent as the nature of the invention is better understood, the same consists in a divider plate mounting means embodying the novel features of construction, combination and arrangement of parts as are illustrated by way of example in the accompanying drawings and as will be hereinafter more fully described and claimed.

In the accompanying drawings, wherein like characters of reference denote corresponding parts in the different views:

Figure 1 is a side elevation of a filing cabinet drawer equipped with a plurality of divider plates mounted in accordance with the invention;

Figure 2 is a transverse section on the line 2—2 of Figure 1;

Figure 3 is an enlarged top plan view showing the mounting of one of the divider plates;

2

Figure 4 is a section on the line 4—4 of Figure 3;

Figure 5 is a section on the line 5—5 of Figure 3;

Figure 6 is a view similar to Figure 5 showing the divider plate swung forwardly to a released position;

Figure 7 is a perspective view of one of the divider plate mountings; and

Figure 8 is a detail sectional view of a modified form of rack for the bottom wall of the guide element.

Referring to the drawings in detail, 10 designates, generally, a filing cabinet drawer and 11 designates, generally, a divider plate mounted in said drawer in accordance with the invention.

Secured in any suitable manner upon the bottom 12 of the drawer 10 is a guide element 13 which extends longitudinally of said drawer substantially from end to end thereof and which has suitably mounted thereon for sliding movement therealong a shoe 14 by which the divider plate 11 is carried.

As illustrated in the drawings, the guide element 13 may appropriately be of substantially U-shape in cross section and may comprise a bottom wall 15, side walls 16 and flanges 17 extending inwardly from the tops of its side walls. Likewise, and as illustrated in the drawings, the shoe 14 may appropriately be of substantially U-shape in cross section and may comprise a bottom wall 18, side walls 19 and flanges 20 extending inwardly from the tops of its side walls. Both said guide element and said shoe may appropriately be formed from sheet metal and said shoe may be slidably retained in said guide element by having its side portions confined between the bottom wall 15 and the flanges 17 of said guide element. In this connection, to provide for free and easy sliding movement of the shoe 14 along the guide element 13, said shoe may have depressed therefrom elongated ribs or other suitable formations 21 longitudinal thereof for substantially anti-frictional contact with the bottom wall of said guide element.

The divider plate 11 extends, of course, transversely of the drawer 10 and at its bottom has a downward projection 22 which is disposed between the flanges 20 of the shoe 14. The flanges 20 and the side edges of the projection 22 are notched as indicated at 23 and 24, respectively, and have their notched portions interfitted with each other whereby the divider plate 11 is retained in assembly with the shoe 14 and is mounted thereon for forward and rearward rocking movements relative thereto.

A suitable spring 25 is suitably mounted on the shoe 14 and is suitably engaged with the

divider plate 11 so as to tend constantly to rock the latter rearwardly to its limit of rearward rocking movement as determined by suitable stop means which may comprise either or both side projections 26 adjacent to the top of the divider plate for engagement with the tops of the side walls 27 of the drawer 10, or rearwardly directed foot formations 28 at the bottom of the projection 22 for engagement with the bottom wall 18 of the shoe 14.

The guide element 13 is suitably provided at points suitably spaced apart along its length with a series of suitable stop formations 29 which may consist, for example, of portions of the bottom wall 15 of said guide element extruded or deflected upwardly from said bottom wall as shown in my prior Patent 2,281,464, issued April 28, 1942, and assigned to the present assignee, The General Fireproofing Company of Youngstown, Ohio. These stops are receptor teeth for receiving an element integrally formed from the rear of the divider plate 11 providing positive abutments in one direction, while in the other direction the tongue, hereinafter referred to by numeral 31, may slide thereover. In order that the bottom wall 18 of the shoe 14 may clear these stop formations 29 so as to avoid interference by the latter with sliding movements of said shoe along the guide element 13, said shoe bottom wall 18 may be arched as indicated at 30.

At the bottom of the divider plate projection 22 is a tongue 31 which is rearwardly offset with reference to the plane of the divider plate and which is designed for cooperation with the stop formations 29. Due to the rearward offsetting of said tongue 31 with reference to the plane of the divider plate 11, said tongue 31 is eccentrically disposed with reference to the axis of rocking movement of said divider plate and therefore is moved downwardly between the stop formations 29 when said divider plate is rocked rearwardly (see Fig. 5) and rises above said stop formations when said divider plate is rocked forwardly (see Fig. 6). Consequently, when the divider plate 11 is in its rearwardly rocked position, rearward sliding movement of the shoe 14 and, hence, of said divider plate, is limited by the nearest stop formations 29 to the rear thereof. On the other hand, when the divider plate 11 is rocked forwardly sufficiently to raise the tongue 31 above the stop formations 29, the shoe 14 and the divider plate are free to slide forwardly and rearwardly. It thus will be apparent that the divider plate 11 may manually be adjusted forwardly or rearwardly of the drawer 10 whenever desired simply by first rocking said plate forwardly to lift the tongue 31 above the stop formations 29 and by then sliding said plate and the shoe 14 along the guide element to the desired location. By then releasing the divider plate, the spring 25 will rock said plate rearwardly with the result that the tongue 31 will be urged rearwardly into abutting relation with a rearward adjacent stop. This will limit any rearward movement of said plate.

As material accumulates in the drawer 10 behind the divider plate 11, the material will, of course, exert forward pressure against the divider plate with the result that the latter will eventually be rocked forward to a position in which the tongue 31 is raised above the stop formations 29. When this occurs, the spring 25 by reacting from the divider plate upon the shoe 14, will cause said shoe to slide forwardly until the forward pressure against the divider plate



is sufficiently relieved to permit the spring 25 to return said divider plate to its rearwardly rocked position. Thus, the divider plate 11 is automatically and incrementally adjustable forwardly to afford more drawer space behind the same to receive material as material accumulates behind the same.

While the spring 25 may be of any suitable type, it may appropriately be of generally U-shape and may include a medial portion 32 engaged against the front face of the divider plate 11 and a pair of arms 33 engaged in eye formations 34 struck upwardly from the bottom wall 18 of the shoe 14. As indicated at 35, the arms 33 may be coiled so that the medial portion 32 tends constantly to rock the divider plate 11 rearwardly.

As will be understood, any given drawer 10 may be provided with as many of the divider plates 11 as desired.

Figure 8 shows a modified form of guide 13a wherein the bottom wall 15a is provided with a series of stop formations 29a and 29b which form pairs of dual unit stops for the tongue 31. The stop formations of each unit have convex surfaces facing each other as shown. The convex surfaces contact the bottom edge of the tongue 31. Normally, the tongue 31 rests in a position 29c in the valley between the two convex surfaces of a unit. Under pressure of files in the cabinet tending to force a divider plate forwardly, the tongue 31 will ride over the stops. When the pressure is released, the plate will tend to tilt back to its normal position of rest. The tongue 31 may then be in any one of several positions. For example, it may be in the space between a pair of consecutive units; in the valley between the convex surfaces of a given unit; or on one of the convex surfaces. The force required to move the divider plate forwardly while the tongue member 31 is not in contact with a stop member is obviously less than that required to move it forwardly when the tongue member is in contact with a stop member. The divider plate will come to rest at a point where the file pressure is balanced by the resistance of a stop member against the tongue 31. In other words, if the pressure against the back of the divider plate diminishes to a point sufficient to permit the tongue 31 to fall in the space between consecutive units, the diminished pressure will usually be sufficient to continue moving the divider plate forwardly until the tongue 31 encounters sufficient resistance in contact with a rear stop member 29b of a unit immediately forward thereof. Should the tongue 31 fall in the valley between the convex surfaces of a given unit, it will usually proceed to engage the forward stop of the unit. Should it fall on the rearward convex surface 29b, as the pressure diminishes on the back of the divider plate, it will slide downward thereon until it comes to rest in the valley between it and the forward member 29a of the unit.

It may be seen, therefore, that under a file load pressure of sufficient magnitude the divider plate will be moved forwardly and as the pressure diminishes, movement of the divider plate will be arrested by a stop member. However, should it be desired to move the divider plate forwardly to any position desired, this may be done by grasping the top of the divider plate and pulling it forwardly under a constantly applied manual force sufficient to overcome the resistance of the tongue 31 against the stops.

From the foregoing description considered in connection with the accompanying drawings, it is believed that the novel features of the invention will be clearly understood and their advantages appreciated. It is desired to point out, however, that while only a single, specific structural embodiment of the invention has been illustrated and described, the same is readily capable of specifically different structural embodiments within its spirit and scope as defined in the appended claims.

I claim:

1. In a filing cabinet, a drawer, a guide element carried by and extending longitudinally of said drawer at the bottom thereof, said guide element being of substantially U-shape in cross section and including a bottom wall, side walls rising from said bottom wall, and inwardly directed flanges at the tops of said side walls, a shoe mounted in said guide element for sliding movement therealong, said shoe also being of substantially U-shape in cross section and including a bottom wall, side walls rising from its bottom wall, and inwardly directed flanges at the tops of its side walls, the side portions of said shoe being confined between the bottom wall and the flanges of said guide element, a divider plate having a bottom projection extending downwardly between the flanges of said shoe, said shoe flanges and said projection having interfitting notches whereby said divider plate is mounted upon said shoe for forward and rearward rocking movements relative thereto, stop formations on said guide element at points spaced apart longitudinally along the latter, a bottom portion of said divider plate projection being engageable between an adjacent pair of said stop formations when said divider plate is in a rearwardly rocked position, said bottom portion of said divider plate being disengageable from between said stop formations by a predetermined amount of forward rocking movement of said divider plate so as not to interfere with longitudinal adjustment of said shoe and said divider plate along said guide element, means to limit rearward rocking movement of said divider plate, and yieldable means tending constantly to rock said divider plate rearwardly.

2. In a filing cabinet, a drawer, a guide element carried by and extending longitudinally of said drawer, said guide element including a bottom wall, a shoe mounted on said guide element for sliding movement therealong, said shoe also including a bottom wall in contact with the bottom wall of the guide element, but having a longitudinal ridge to provide a longitudinal clearance channel between the bottom wall of the guide element, and the bottom wall of the shoe, a transverse divider plate hingedly mounted on said shoe at the rear thereof for forward and rearward rocking movement relative thereto, a longitudinal row of stop formations projecting upwardly from the bottom wall of said guide element at spaced intervals in the said channel, said stop formations being arranged in pairs, the stop formations of each pair being spaced



apart longitudinally and having convex surfaces facing each other and diverging upward from the bottom wall of the guide element to the top of the formations, said divider plate having a bottom portion projecting below its hinge axis beyond the rear end of the shoe in the space between a consecutive pair of said stop formations when said divider plate is in a rearwardly rocked position, said bottom portion of the divider plate being disengageable from between said stop formations by a predetermined amount of forward rocking movement of the divider plate, means for limiting rearward rocking movement of the divider plate, and resilient means urging the divider plate to rock rearwardly.

3. In a filing cabinet, a drawer, a guide element carried by and extending longitudinally of said drawer, said guide element including a bottom wall, a shoe mounted on said guide element for sliding movement therealong, said shoe also including a bottom wall in contact with the bottom wall of the guide element, but having a longitudinal ridge to provide a longitudinal clearance channel between the bottom wall of the guide element and bottom wall of the shoe, said shoe being also provided with inwardly extending horizontal flanges, a transverse divider plate hingedly mounted on said shoe at the rear thereof for forward and rearward rocking movement relatively thereto, said divider plate being provided with horizontal slots which register with said flanges, a longitudinal row of stop formations projecting upwardly from the bottom wall of said guide element at spaced intervals in the said channel, said divider plate having a bottom portion projecting below its hinge axis beyond the rear end of the shoe in the space between a consecutive pair of said stop formation when said divider plate is in a rearwardly rocked position, said bottom portion of the divider plate being disengageable from between said stop formations by a predetermined amount of forward rocking movement of the divider plate, means for limiting rearward rocking movement of the divider plate, and resilient means urging the divider plate to rock rearwardly, said resilient means comprising a coil spring having horizontally extending arms secured to the bottom wall of the shoe and an upwardly projecting medial portion secured to the divider plate.

CLARENCE W. STRAUBEL.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 482,497 | Cox | Sept. 3, 1892 |
| 1,381,491 | Ohnstrand | June 14, 1921 |
| 1,774,914 | Clark | Sept. 2, 1930 |
| 1,776,678 | Carlson | Sept. 23, 1930 |
| 1,926,503 | Straubel | Sept. 12, 1933 |
| 1,983,576 | Straubel | Dec. 11, 1934 |
| 2,040,595 | Brainard | May 12, 1936 |
| 2,236,807 | Swimmer | Apr. 1, 1941 |
| 2,249,548 | Swimmer | July 15, 1941 |
| 2,281,464 | Straubel | Apr. 28, 1942 |