Feb. 16, 1954 C. W. STRAUBEL 2,669,237

CONTROL MEANS FOR DIVIDER PLATES OF FILING DRAWERS

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Fig. 1.

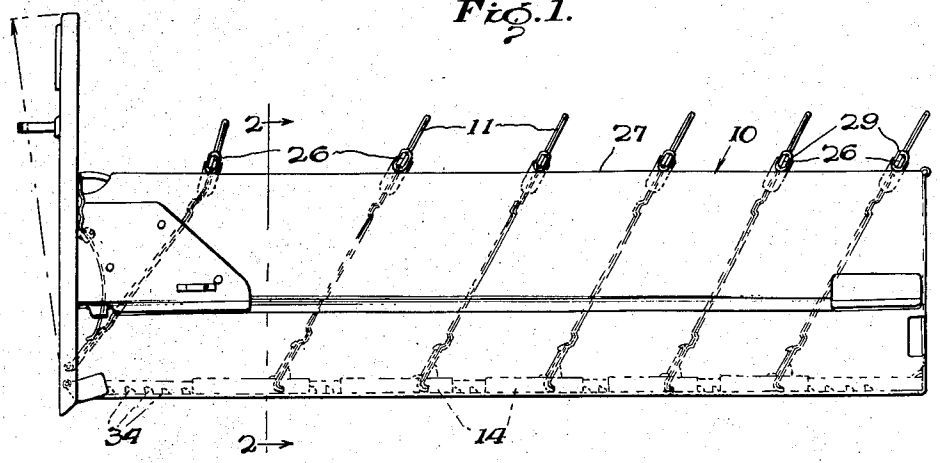



Fig. 2.

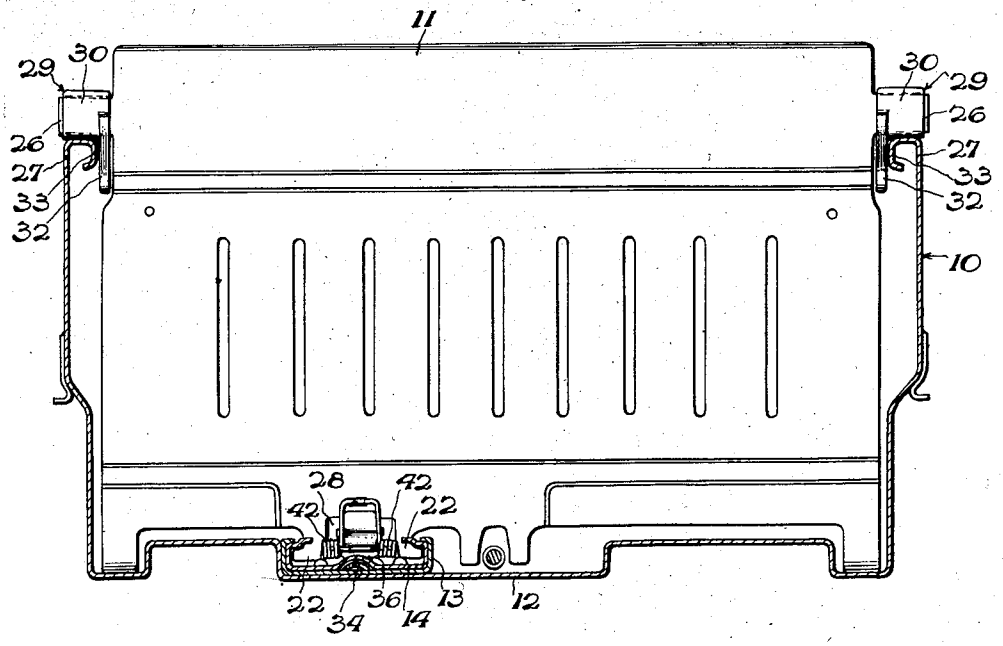
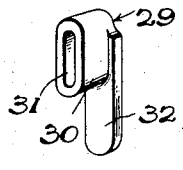



Fig. 8.




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Fig. 3.

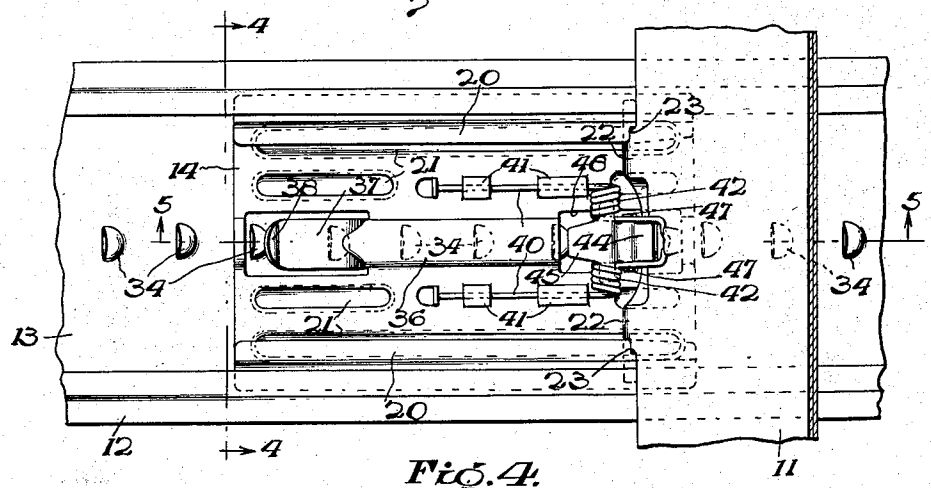



Fig. 4.

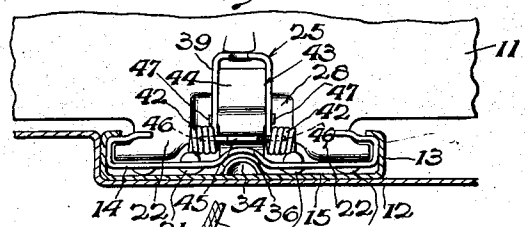



Fig. 5.

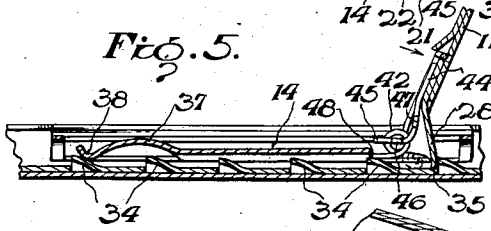



Fig. 6.

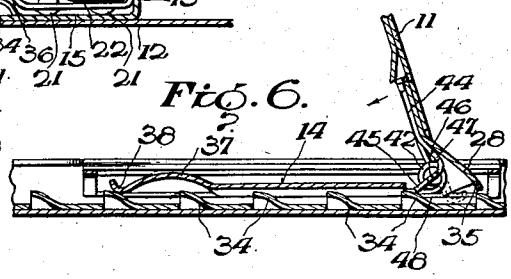
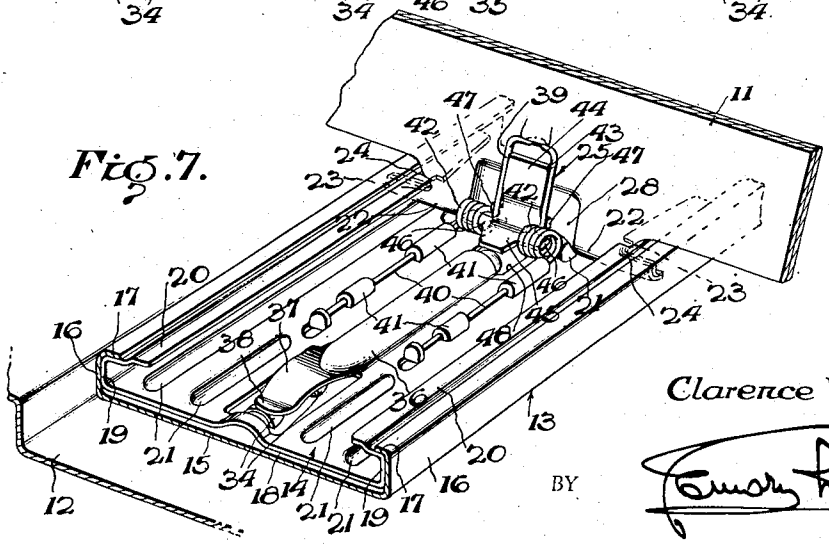



Fig. 7.




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2,669,237

## CONTROL MEANS FOR DIVIDER PLATES OF FILING DRAWERS

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Application September 3, 1952, Serial No. 307,683

7 Claims. (Cl. 129—28)

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This invention relates to filing cabinets, has particular reference to improvements in means for mounting divider plates in filing cabinet drawers for adjustment longitudinally of the drawers, and is a continuation-in-part of my co-pending application for Patent Serial No. 139,539, filed January 20, 1950.

In general, 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 are 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 general 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.

A specific object of the invention is the provision of such mounting means which also incorporates elements that function to moderate the longitudinal movement of the divider plate when rocked forwardly in released position so as to prevent excessive movement of overtravel under momentum, which may develop from the pressure of files or other material in the drawer, lying against the divider plate, or by manual pressure applied thereto or both.

Another specific object is the provision of means for releasably holding the divider plate against sliding movement when it is rocked to either of its extreme positions.

A further specific object is the provision of means which serve both to limit the rockable movement of the divider plate and to prevent canting or twisting thereof.

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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 comprises 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 drawing and as will be hereinafter more fully described and claimed.

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

Figure 1 is a side elevational view 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;

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 the divider plate being in its extreme rearwardly rocked position;

Figure 6 is a view similar to Figure 5 showing the divider plate in its extreme forwardly rocked position;

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

Figure 8 is a perspective view of one of the divider plate collar members.

Referring to the drawing in detail, the numeral 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 drawing, 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 drawing, 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 tips 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 reduced 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 side projections 26 adjacent to the top of the divider plate for engagement with the top edge of the side walls 27 of the drawer 10, hereinafter more fully explained, or a rearwardly directed foot formation or detent 28 at the bottom of the projection 22 for engagement with the bottom wall 18 of the shoe 14, or both.

The projections 26 are provided with collar members 29 which function both as anti-canting stabilizers and as spacers between the projections 26 and side walls 27. The members 29 are preferably of a solid plastic material or hard rubber, and comprise a main body portion 30 having a rectangular or other non-circular aperture 31 to slip over the projections 26 and be held in non-rotative position thereby. In this position, the body portion 30 rests on the top edge of the side walls 27. The inner end of the collar member has an integral dependent lip or flange 32 which projects downwardly between the inner face 33 of the walls and the corresponding edge of the divider plate, substantially as shown. By these means, the top of the divider plate is supported for relatively free movement on the top of the walls 27 and limit or assist in limiting its rocking movement to either of its two extreme positions. The lips 32 not only hold the collar members in place, but furnish resistance to twisting or canting of the divider plate from its normal transverse position, thereby preventing binding and insuring correct functioning of the device as a whole.

The guide element 13 is suitably provided at points suitably spaced apart along its length with a series of suitable stop formations 34 which may consist, for example, of portions of the bottom wall 15 of said guide element extruded or bent upwardly from the bottom wall as shown in my prior Patent No. 2,821,464, issued April 28, 1942, and assigned to The General Fireproofing Company of Youngstown, Ohio. These stop formations are receptor teeth for receiving the lower end 35 of the foot formations 28 providing positive abutments in one direction, while in the other direction the lower end 35 may slide thereover.

The midportion of the bottom wall 18 is arched, as indicated at 36, over the stop formations 34. A portion of the arch 36, however, is in the form of a resilient longitudinally extending tongue 37. The free end of the tongue 37 has a V-shaped depressed portion 38 for slidable engagement with the stop formations 34.



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 end 35 is raised above the stop formations 34. 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. However, the V-shaped portion 38 at the end of the resilient tongue 37 acts as a buffer to moderate or dampen free movement of the shoe under these conditions so as to prevent overtravel thereof. Consequently, the adjusting movement of the shoe is automatically restrained to the increment or minimum increments necessary to satisfy the prevailing load condition.

While the spring 25 may be of any suitable type, it may appropriately be of generally U-shape and may include a medial portion 39 engaged against the front face of the divider plate 11 and a pair of arms 40 engaged in eye formations 41 struck upwardly from the bottom wall 18 of the shoe 14. The arms 40 are provided with coils 42, so that the medial portion 39 tends constantly to rock the divider plate 11 rearwardly.

An L-shaped member 43 has its vertical leg 44 disposed between the sides of the U-shaped medial portion 39 and its horizontal leg 45 projecting forwardly a short distance, substantially as shown. Pins or shanks 46 project from either side of the L-shaped member and are pivotally disposed in the center of the coils 42, respectively, substantially as shown.

Projecting laterally on either side of the vertical leg 44 are tabs 47 which are disposed between the front face of the divider plate and the medial portion 39. In the normal position of the divider plate 11, that is, in the position in which it is rocked rearwardly, the horizontal leg is above the stop members 34. However, if the divider plate is suddenly rocked forward an excessive amount to its forward extreme position, the forward end of the horizontal leg will pass downwardly through an aperture 48 of the shoe 14 and enter between a consecutive pair of the underlying stop formations 34, thereby preventing forward movement of the divider plate. This is advantageous in cases where it is desired to remove or replace a file or other item behind the divider plate without changing its relative position in the drawer.

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

I claim:

1. In a filing cabinet having a drawer comprising a bottom wall and side walls and a transverse divider plate rockably mounted on a longitudinally slidable shoe, a device for limiting the rocking of said plate and stabilizing it against canting, said device comprising fingers projecting from either side of said divider plate above the top edges of the said side walls, a removable collar

on each finger adapted to abut the top edge of its corresponding side wall, said collar having a vertical flange projecting downwardly between the side wall and the adjacent edge of the divider plate.

2. In a filing drawer having a divider plate rockably mounted on a longitudinally slidable shoe, a guide element for the shoe, a longitudinal row of spaced upstanding stop members on the guide element below the shoe, a detent carried by the divider plate and projecting from one side thereof for normally engaging said stop members under the influence of resiliently yieldable means tending to rock said divider plate in one direction, a second detent mounted for movement with said divider plate and projecting from the other side of said divider plate for engaging said stop members when said divider plate is rocked in the opposite direction against the action of said yieldable means, said second detent being normally disengaged from said stop members when the divider plate is rocked under the influence of said yieldable means.

3. In a filing cabinet drawer having a divider plate rockably mounted on a longitudinally slidable shoe, a guide element for the shoe, a longitudinal row of spaced upstanding stop members on the element below the shoe, detents carried by the divider plate and projecting from either side thereof, for alternately engaging said stop members when the divider plate is rocked from one extreme position to the other, and resiliently yieldable means tending to rock said divider plate to one of its extreme positions.

4. In a filing cabinet drawer having a divider plate rockably mounted on a longitudinally slidable shoe, a guide element for the shoe, a longitudinal row of spaced upstanding stop members on the element below the shoe, detents carried by the divider plate and projecting from either side thereof, for alternately engaging said stop members when the divider plate is rocked from one extreme position to the other, resiliently yieldable means tending to rock said divider plate to one of its extreme positions, and a resilient tongue integral with the shoe and projecting longitudinally of the drawer, said tongue being in constant sliding contact with said stop means.



5. In a filing drawer having a bottom wall and side walls, a divider plate rockably mounted on a longitudinally slidable shoe, a guide element for the shoe, a longitudinal row of spaced upstanding stop members on the element below the shoe, detents carried by the divider plate projecting from either side thereof, for alternately engaging said stop member when the divider plate is rocked from one extreme position to the other, abutment means for limiting the rocking of said divider plate between its extreme positions, and yieldable means tending to rock said divider plate to one of its extreme positions.

6. The subject matter of claim 3 in which one of the detents comprises an L-shaped member pivotally mounted with its vertical leg in engagement with a face of the divider plate and its horizontal leg projecting outwardly therefrom.

7. The subject matter defined by claim 3 in which the resiliently yieldable means comprises a resilient wire mounted on the shoe having a portion thereof bearing against a face of the divider plate and having intermediate tensioning coils between the divider plate and the shoe, a member including one of said detents, said member being L-shaped and having shanks projecting outwardly for pivotal engagement with said coils, the vertical leg of said member being disposed against a face of said divider plate and having tabs projecting outwardly therefrom for engagement between the divider plate and the said portion of the resilient wire.

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