Feb. 18, 1941. E. R. HOUSTON ET AL 2,232,531

FILING CABINET AND THE LIKE

Filed Oct. 9, 1939 3 Sheets-Sheet 1

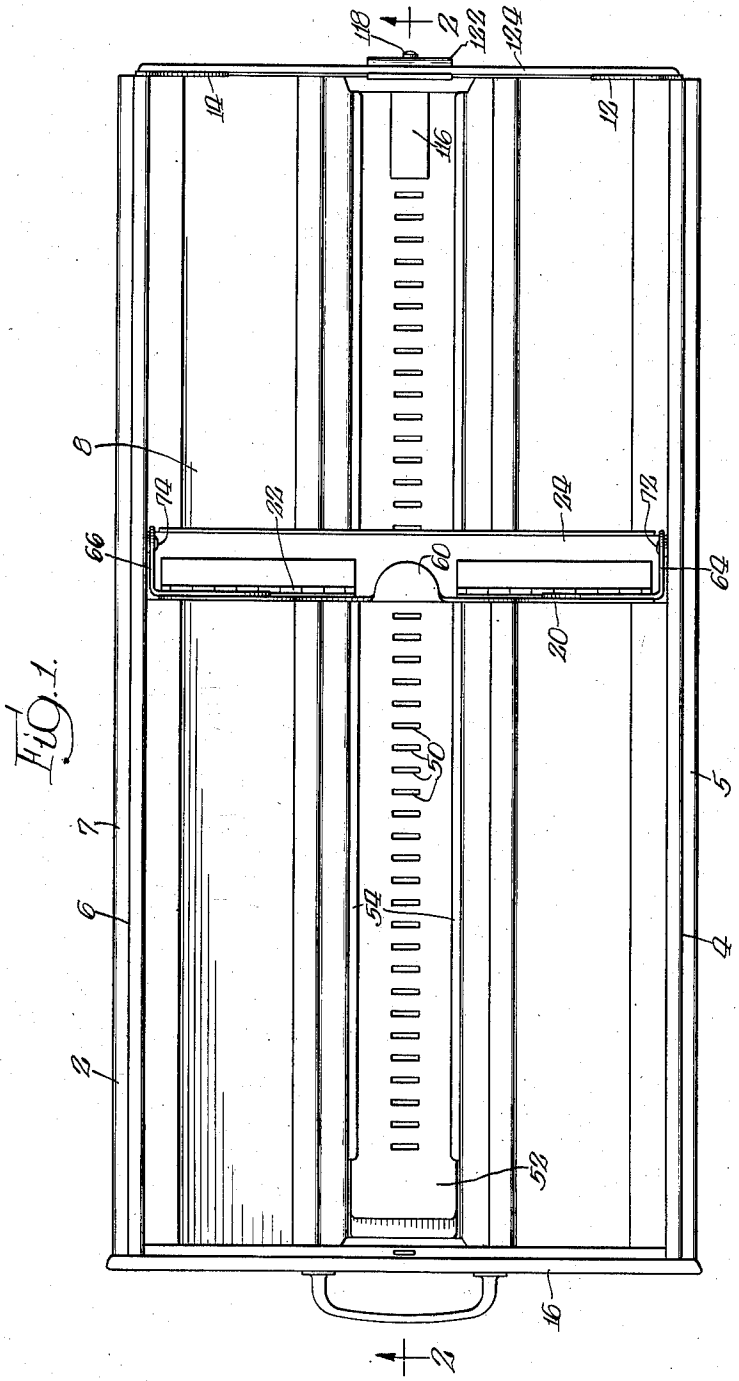


FIG. 1.

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Filed Oct. 9, 1939 3 Sheets-Sheet 2

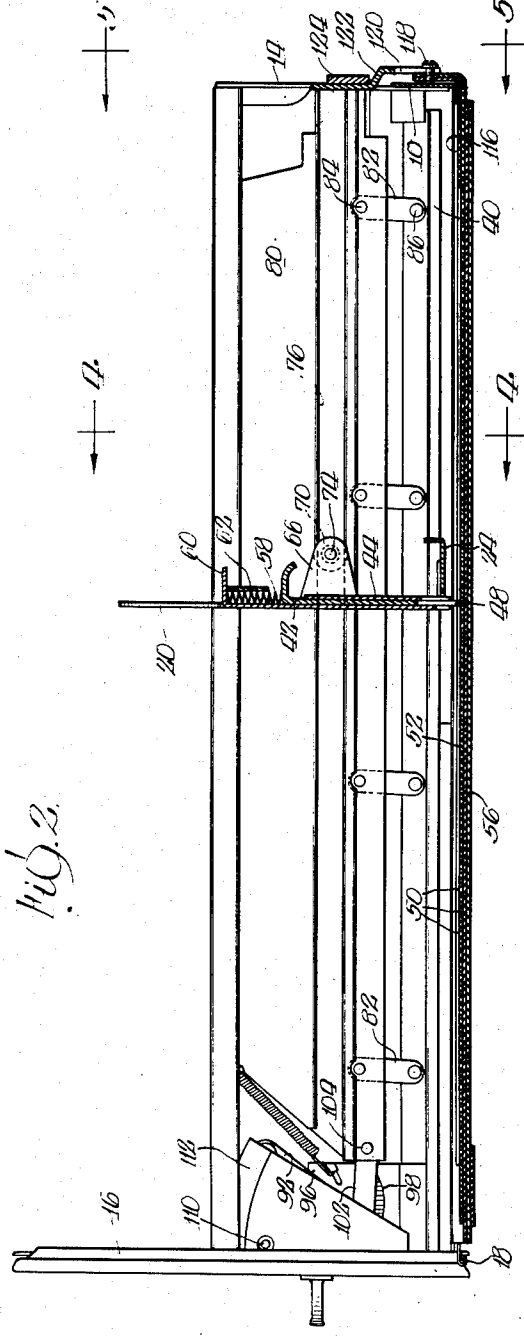


Fig. 2.

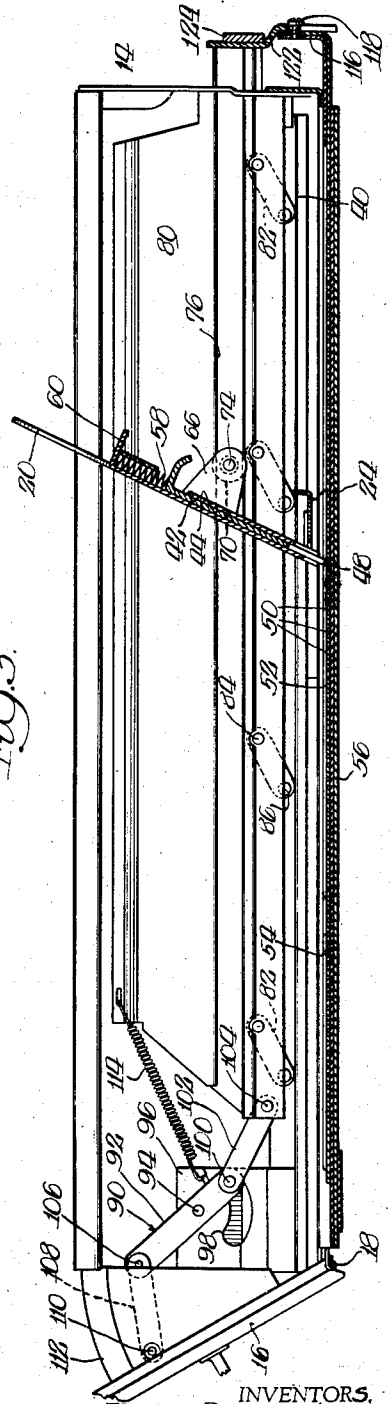


Fig. 3.

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Fig. 4.

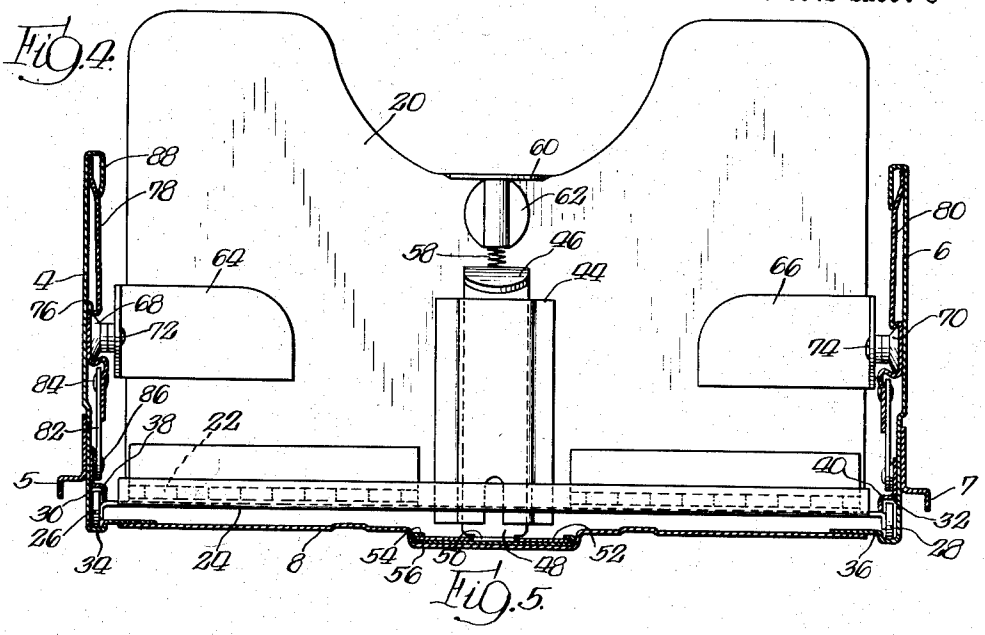
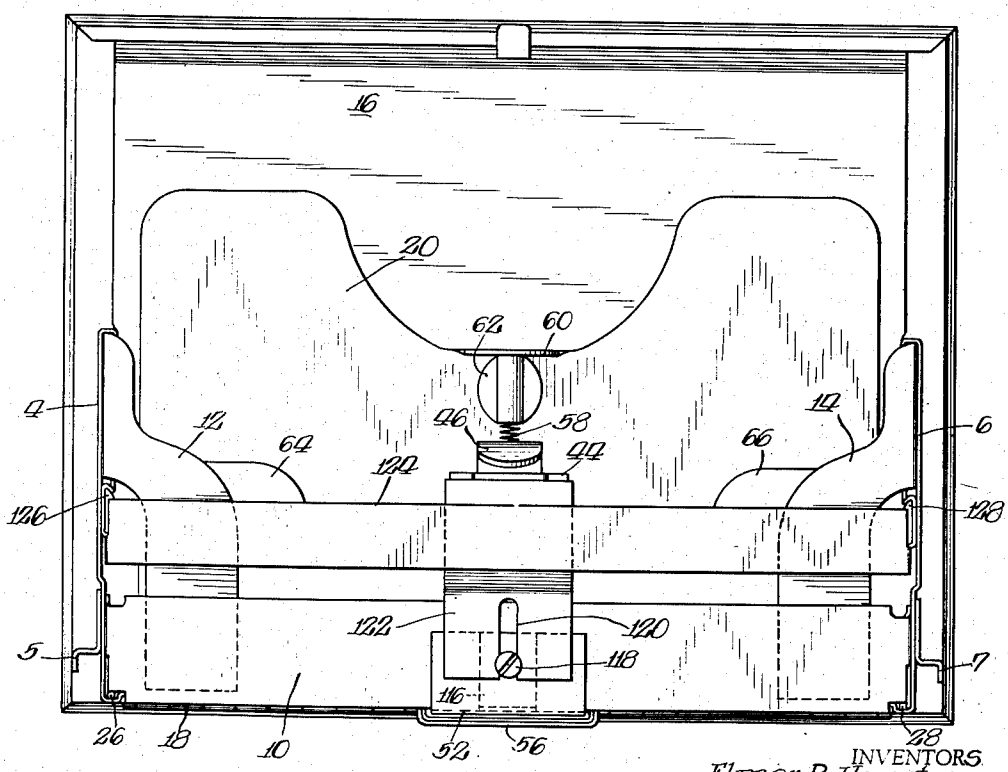


Fig. 5.



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Patented Feb. 18, 1941

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UNITED STATES PATENT OFFICE

2,232,531

FILING CABINET AND THE LIKE

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Application October 9, 1939, Serial No. 298,604

7 Claims. (Cl. 129—26)

The present invention relates to filing devices, and more in particular to novel mechanisms for expanding certain elements thereof.

Heretofore in filing devices, and particularly drawers, certain difficulties have been experienced in providing means adapted to properly hold the files in place when the filing device is not in use and to provide sufficient room to manipulate the files when the filing device is being used.

Improvements to date include a pivoted front, as well as a pivoted follower member in opposed relation thereto for such devices, but even with this construction insufficient space is provided for proper manipulation of the files, and upon operation of the said front and follower member to file retaining position there is a tendency for the follower to exert an undue amount of force at the lower part of the files, thereby causing the filed material to become vertically displaced because of the arrangement and operation of these elements with respect to the filed material. In view of these deficiencies existing in present known structures of the type herein contemplated, the present invention has been based primarily on a consideration of these disadvantages and involves novel mechanisms particularly adapted for manipulating the said follower or abutment member to provide increased expansion adjacent the lower portion of the filed material, and which mechanism operates the said abutment or follower member to file retaining position so as to more uniformly compress the filed material, thus preventing vertical displacement of the same.

The present invention has therefore been directed to novel mechanisms adapted to provide for certain movements of an abutting or follower member in filing devices whereby the same is expansible to permit sufficient room for manipulation of files carried by the device.

Still another object within the purview of the present invention is to provide a novel abutting or follower member in a filing device which is operated by suitable mechanism for expanding said member adjacent the lower part of the files carried by the device in order to give greater freedom of movement to an operator in handling the said files.

More particularly, the invention has been directed to the theory of embodying novel expansion means for an abutting or follower member operable in conjunction with mechanism now provided in certain filing devices whereby expansion of the follower in respect of the files takes place in accordance with the operation of said mechanism.

The present invention also embraces in its various embodiments novel structure cooperating with mechanism for adjustably positioning the follower in any of its selected positions to expand the follower both linearly and angularly with respect to the support therefor.

Another object of the present invention is to provide novel means for expanding an abutting or follower member which is operatively associated by suitable mechanism with an expansible front of a drawer or the like, whereby the expansion of the follower takes place in accordance with the manipulation of the front expansible member, such movement ordinarily occurring upon withdrawal of the device or drawer from a support or enclosure housing. More particularly, the novel means for expanding the abutment or follower member is operated simultaneously through proper connections with mechanism operated by the expansible front which causes angular movement of the said follower upon movement of the said expansible front.

Other objects, features, capabilities and advantages are comprehended by the invention, as will later appear and as are inherently possessed thereby.

Referring to the drawings:

Figure 1 is a top plan view of a filing drawer embodying a drawer expansion mechanism constructed in accordance with the present invention;

Figure 2 is a longitudinal cross sectional view taken in the plane represented by line 2—2 of Figure 1 of the drawings;

Figure 3 is a longitudinal sectional view similar to Figure 2 but disclosing the mechanism of the present invention in its expanded position;

Figure 4 is a transverse sectional view taken in the plane represented by line 4—4 of Figure 2 of the drawings; and

Figure 5 is an end view in elevation of the drawer taken substantially as indicated by line 5—5 of Figure 2 of the drawings.

An embodiment of the present invention is shown in the drawings in its operative relation to a drawer 2 for a filing cabinet. This drawer 2 comprises side walls 4 and 6 and a bottom wall or plate 8, and which side walls are connected at their rear ends by an end wall 10 reinforced by brackets 5 and 7 and the front space therebetween being closed by a front 16 expansible in

respect thereto by its hinged connection at 16 with the bottom plate 8.

Oppositely disposed with respect to the expansible front 16 and transversely of the drawer is an abutment or follower 20 hingedly connected through suitable hinge mechanism 22 with a base 24 provided with rollers 26 and 28 guided in guideways 30 and 32 formed in part by the offset and inwardly disposed flanges 34 and 36 of walls 4 and 6, respectively, to which plate 8 is connected, and in part by brackets 38 and 40 spaced in relation to said flanges 34 and 36 and providing a slot for projection of the base 24 into said guideways.

The follower 20 through the guide rolls 26 and 28 can be moved linearly with respect to the drawer into any selected position, the same being normally held in any selected position by means of a plunger 42 slidably mounted between the rear face of the follower and a bracket 44 connected thereto, the same being provided at one end with handle 46 and having its other end 48 formed with a latch projection adapted to engage in any one of a plurality of slots 50 formed in alignment one with the other in spaced relation and transversely of a slide 52 movably mounted in and partially embraced by a guide 54 fixed within offset 56 formed as a part of the bottom plate 8.

The plunger 42 is normally urged into engagement with the slots 50 by means of coil spring 58 disposed between the handle 46 and a lug 60 extending rearwardly of the follower, and said spring being positioned by means of a housing 62 connected to said follower between the lug 60 and handle 46.

The follower 20 is provided with the oppositely disposed brackets 64 and 66 forming supports for guide rolls 68 and 70 through suitable pins 72 and 74, which guide rolls are disposed for operation within the offset recesses 76 of cheeks 78 and 80 adjacently disposed with respect to the walls 4 and 6 for movement longitudinally thereof. The lower parts of these cheeks are connected to a plurality of links 82 through pivot pins 84 and which links are mounted on the side walls by pivot pins 86. The upper marginal edges of these cheeks are mounted for sliding movement within the overhanging channels 88 of the side walls 4 and 6 whereby the said cheeks, during their operative movements, are retained in association with said side walls. The mounting of the cheeks 78 and 80 upon the links 82 provides mechanism which, in its cooperative relation with rolls 68 and 70, is connected to the follower 20 for pivotally moving the said follower about its hinge connection.

In order to move the cheeks 78 and 80 longitudinally with respect to the side walls, suitable mechanism 90 is provided on each side of the drawer and is connected to said cheeks and to the expansible front 16. These mechanisms in the embodiment disclosed are of the same construction and each comprises a lever 92 pivoted as at 94 to a guide plate 96 and having a guide roller (not disclosed) operable in a slot 98 of said guide plate. One end of the lever as at 100 is pivotally connected to a link 102, which link in turn is pivotally connected as at 104 to the cheek. The opposite end of lever 92 is pivoted as at 106 to a link 108, which link is pivotally secured as at 110 to an ear or the like mounted on the front 16, this mechanism being enclosed by a wing member 112 connected to front 16 and operatively guided in a channelway of the side wall. This mechanism is so constructed and arranged in relation to said front 16 and the cheeks associated therewith that the said cheeks are normally held in their extended position toward the rear of the drawer when said front is in expanded position, springs 114 being provided between levers 92 and the cheeks for assisting in the return of the said cheeks to their normal position when the expansible front 16 is closed.

In order to provide for expansion of the follower member, the slide 52 can be moved rearwardly when the follower is in any of its selected positions. In order to automatically move the said slide 52 in accordance with the movement of the expansible front 16, a suitable connection between the said slide and the said cheeks 78 and 80 is provided. In the particular embodiment, the slide 52 is provided at its rear end beyond reinforcing member 10 with an upstanding portion 116 provided with a pin 118 operably engaging in a slot 120 of bracket member 122, which bracket is suitably secured to a cross brace 124 extending between and being connected to extensions 126 and 128 of cheek members 78 and 80, respectively.

It will therefore be clearly appreciated that upon rearward movement of cheeks 78 and 80, such movement is transferred through the pin and slot connection of member 122 to the slide 52, which slide, through its connection by way of plunger 42 to the follower 20, causes said follower to move linearly with respect of the drawer during and simultaneously with the pivotal movement thereof about its hinge 22 caused by its operative engagement through rollers 68 and 70 with the cheeks 78 and 80. This arrangement therefore facilitates filing, due to the increased amount of space provided at the lower part of the drawer during expansion of the front 16, as well as the follower 20, and further provides the advantage of more uniformly compressing the material contained between said front and follower, thus preventing disarrangement of the various filed materials when the drawer is moved into its closed position within the file cabinet. It is to be further noted that movement of the follower is automatically accomplished through the described mechanisms in accordance with the operation of the expansible front, it being understood that any desired relative linear and angular movement of the follower can be obtained by suitable arrangement and design of the elements of the said mechanisms.

While we have herein described and upon the drawings shown an illustrative embodiment of the invention, it is to be understood that the invention is not limited thereto but may comprehend other constructions, arrangements of parts, details and features without departing from the spirit of the invention.

We claim:

1. In combination, a file drawer having an expansible drawer front, a file follower mounted in said drawer, means for selectively positioning said follower with respect to said drawer, means having an operable connection to said follower for angularly and linearly moving the same with respect to said drawer in any of said selected positions, and means for connecting said last-named means to said front whereby said follower is moved in accordance with the movement of said front.

2. In combination, a file drawer having a bottom and side walls, a file follower mounted in said

drawer, a member slidably mounted with respect to said bottom, means connecting said member and follower, follower operating mechanism extending rearwardly from the front of said drawer and associated with at least one of said side walls, and a connection at the rear of said drawer between said member and said operating mechanism.

3. In combination, a file drawer having a bottom and side walls, a file follower pivotally and slidably mounted in said drawer, a member movably mounted with respect to said bottom, means associated with said follower releasably cooperating with said member to hold said follower in any selected position in said drawer, follower operating mechanism associated with at least one of said side walls and connected to said follower to tilt the same about its pivotal mounting, said mechanism being operable from adjacent the front of said drawer and having a connection at the rear of said drawer with said member whereby said follower is moved linearly with respect to the drawer upon operation of said mechanism to tilt the same.

4. In combination, a file drawer having a bottom and side walls and being provided with an expansible front, a file follower pivotally and slidably mounted in said drawer, a member movably mounted with respect to said bottom, means associated with said follower releasably cooperating with said member to hold said follower in any selected position in said drawer, follower operating mechanism associated with at least one of said side walls, said mechanism being connected to said expansible front for operation thereby and having a connection to said follower for tilting the same about its pivotal mounting, said mechanism being further connected to said member adjacent the rear of said drawer whereby said follower is moved linearly with respect to the drawer upon operation of said mechanism to tilt the same.

5. In combination, a file drawer having an expansible drawer front, a file follower disposed in said drawer, means for tiltably and linearly movably mounting said follower with respect to said drawer, and means interconnecting said drawer front and said file follower to move said file follower angularly and linearly with respect to said drawer in accordance with the movement of said drawer front.

6. In combination, a file drawer having an expansible drawer front, a file follower mounted in said drawer, said drawer front and file follower being tiltable about their connection with said drawer, and means interconnecting said drawer front and said file follower whereby said file follower is tiltable in accordance with the movement of said expansible drawer front and movable linearly with respect to said drawer front.

7. In combination, a file drawer, a file follower disposed in said drawer, means for tiltably and linearly movably mounting said follower with respect to said drawer, and means operable from adjacent the front of said drawer and operably connected to said follower to positively move the same angularly and linearly with respect to said drawer.

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