Sept. 21, 1954 A. F. FOEHRENBACH 2,689,573

FILE DRAWER COMPRESSOR

Filed April 26, 1951

Fig. 1

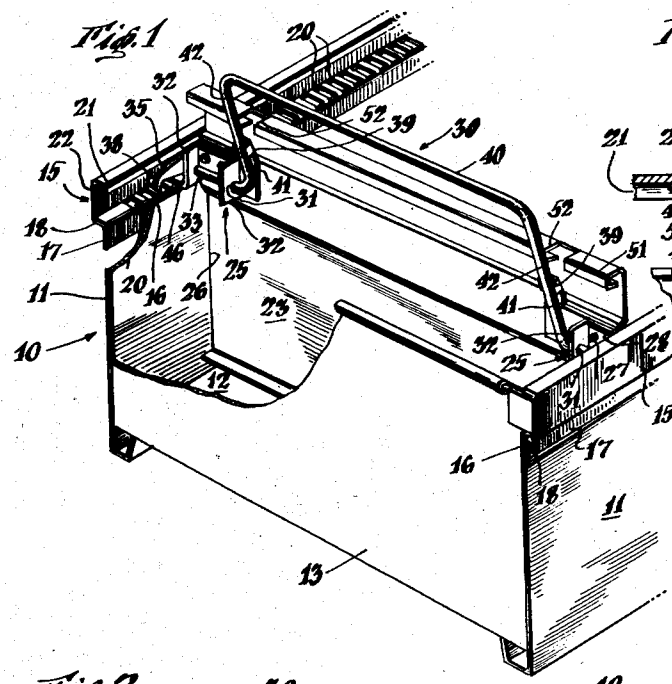


Fig. 4

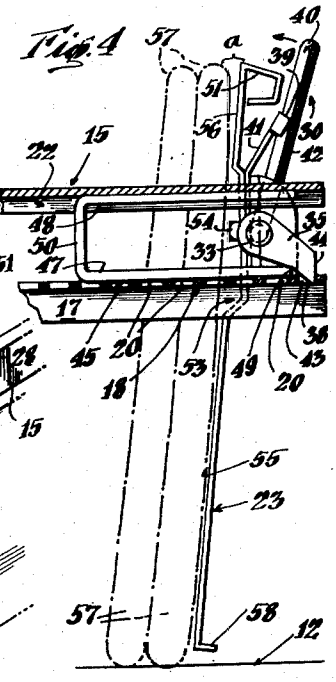


Fig. 2

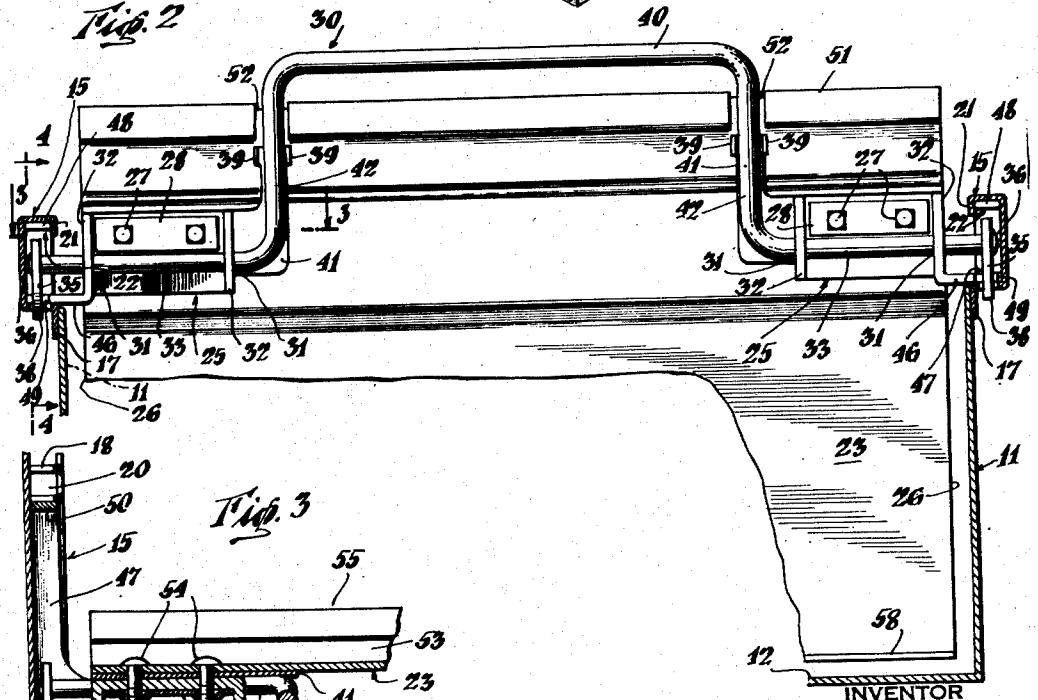


Fig. 3

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FILE DRAWER COMPRESSOR

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2 Claims. (Cl. 129—28)

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This invention relates to compressors for file drawers and more particularly is concerned with means for positively locking a compressor in any one of a number of predetermined positions in a file drawer.

In letter and other types of file drawers, compressive plate members, which may be referred to generally as compressors or alternatively as followers, are employed to maintain the material deposited in the file drawer in an upright, compact group. Such compressors are usually disposed substantially parallel to the front and rear of the drawers and arranged to be moved toward and away from the front of the drawer. Various devices have been employed to fix compressors releasably at positions with respect to the front of the drawer. One device has been to provide a bar or trackway along the floor of the drawer and have means on the compressor for slidably guiding the compressor along the trackway and releasably engaging the bar trackway. Such devices are relatively unsatisfactory because the compressors are not fixed positively at their two sides to the drawers and have no lateral stability. Such compressors, therefore, tend to become misaligned in the drawers and frequently jam on the trackways so that they are difficult to slide forward or back therealong when the means for locking the compressors on the trackways are released.

Another type of device which has been used with compressors includes means for slidably engaging a trackway or trackways and has means for cam locking the compressor at the desired positions. However, to move the compressor and secure it in a new position, it was necessary to unlock and lock positively, by manually actuating the cam mechanism in each case. Furthermore, because of the binding of the cam mechanism on the trackways, it was frequently necessary to use two hands to actuate such mechanisms, and therefore the operator of the file frequently was required to lay aside material to be filed in order to make the necessary adjustment of the compressor.

The prior devices did not always provide positive locking means and thus the compressors were subject to slippage which would cause the filed material to become disarranged because they were not held compactly.

Furthermore, the locking devices were frequently located near the bottom of the file drawers at the rear of the compressors and were therefore inconvenient to operate.

An important object of the present invention is to provide a positive bi-laterally locking apparatus which may be operated conveniently with one hand from a central position.

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Another object is to provide a device which is of simple construction and which may be locked without positive actuation of the locking device.

A still further object is to provide a positive locking device which may be operated with one hand and which is readily accessible adjacent the top of the compressor.

The invention is adapted for use in a file drawer having a compressor or follower member disposed substantially parallel to the front and rear of the drawer and slidably mounted for movement toward and away from the front of the drawer. The invention includes apparatus for positively positioning the compressor member in a plurality of predetermined parallel positions with respect to the front of the drawer, comprising a combination of parallel trackways extending at right angles from the front of the drawer, a compressor member with guiding means connected thereto slidably mounted in the trackways. The combination also includes a plurality of spaced arresting means formed in the trackways, and means attached to the compressor for releasably engaging the spaced arresting means.

In the following more detailed description reference is made to the drawings wherein:

Fig. 1 is a perspective rear view of a file drawer, with parts cut away, showing apparatus embodying the invention;

Fig. 2 is a rear elevation of a compressor with parts cut away, showing the locking apparatus of this invention;

Fig. 3 is a cross-sectional detail view of the apparatus taken along the line 3—3 in Fig. 2; and

Fig. 4 is a side view of the apparatus, partly in section taken along the line 4—4 in Fig. 2.

The drawer 10 represents a standard type file drawer which is made of sheet metal or other suitable material shaped to form drawer sides 11, bottom 12, and a rear or back portion 13 and front portion (not shown).

Guides or trackways 15, also of sheet metal or other suitable material are welded or otherwise permanently fixed to the upper edges 16 of the sides 11, the trackways 15 being attached along the strips 17 depending from the trackways. The trackways 15 are open on their inner sides and each is provided with a shoulder or floor portion 18 which has formed therein a plurality of spaced apertures 20, for example rectangular apertures (as shown) closely and regularly spaced

in a row lengthwise of the trackway shoulder 18. The upper part of each trackway is defined by a depending strip member 21 which forms an inverted channel 22.

The compressor 23 is positioned in the drawer between and transverse to the sides 11 and substantially parallel with the rear 13 and the front of the drawer (which is not shown). Bracket members 25 are fixed to the compressor adjacent the sides 26 thereof, at about the level of the trackways 15. The brackets 25 may be fixed to the compressor by screws 27 and threaded retaining plates 28. Co-axial holes 31 are provided at the bases of the outwardly extending ears 32 of the brackets 25, cooperating with a transverse slot in the body of each bracket to provide co-axial bearing channels. A release bar 30 having a crank shape is provided with two co-axial portions 33 adjacent its ends. The co-axial portions 33 of the release bar 30 are supported in the channels that are defined by the holes 31 provided in the ears 32, the release bar being thus pivoted to rock about the axis of the portions 33.

These co-axial portions 33 of the release bar also extend beyond the sides 26 of the compressor 23 and are received in the trackways 15. Pawls 35 are fixed on the ends 36 of the co-axial portions 33 of the release bar 30. The pawls 35 may be suitably mounted on the ends 36 of the release bar by riveting or other means and are provided with tongues 38 adapted to engage in the openings 20 in the floor portions 18 of the trackways 15. The pawls are arranged with respect to each other so that the tongues 38 of the two pawls engage corresponding openings 20 in the trackways 15 simultaneously when the bar is rotated about the axis of the co-axial members 33, to the position shown in Figs. 2 and 4. In order to remove the tongues 38 of the pawls 35 from their position in engagement with the corresponding openings 20 of the two trackways 15, the crank handle or bail 40 of the release bar 30 is pulled forward in the direction indicated by the directional arrow in Fig. 4 thereby rotating the co-axial portions 33 and moving the tongues 38 of the pawls out of engagement with the openings 20.

Resilient means, such as leaf springs 41, suitably fixed to the rear of the compressor, may be arranged for resilient engagement with the arms 42 of the release bar 30. In the form shown, the springs 41 are L-shaped members which are held in place by the brackets 25 which, in turn, are bolted to the compressor 23. Ears 39 extend from the sides of the springs 41 to embrace the arms 42 of the bar 30 to prevent the lateral displacement of the springs. The resilient spring members 41 act rearwardly with respect to the drawer so that the co-axial portions 33 are rotated to bring the tongues 38 of the pawls 35 into the openings 20. Each of the tongues 38 is provided with a front sloping portion 43 and a substantially vertical rear shoulder 44. As the compressor is moved forward the tongues 38 of the pawls are cammed upwardly out of the openings 20 by engagement of the sloping surface 43 against the portions of the floor 18, between the openings 20. Rearward movement of the compressor is arrested by the abutment of the shoulders 44 against the portions of the floor 18 defining the rear part of the openings 20. By this arrangement, it is possible to move the compressor forward in the drawer without operating the release bar 30. Furthermore, when the compressor has been moved forward in the drawer to the desired position, it will automatically lock in that position without the necessity of actuating the release bar 30, inasmuch as the bar is pressed to the locked position by the springs 41.

In order to move the compressor 23 rearwardly in the drawer the bail or crank handle 40 of the release bar 30 is pulled forward, i. e. toward the upper face 56 of the compressor, and is maintained in the forward position while the compressor is moved to the desired rearward location. When the compressor is in the desired position, the crank handle is released and the springs 41 cause the handle to move rearwardly thereby rotating the co-axial portions 33 of the release bar 30 to cause the tongues 38 of the pawls 35 to seat in corresponding openings in the trackways 15.

Guide members 45 which are fixed to the sides 26 of the compressor 23 slidably engage the upper inverted channel 22 of the trackways 15 and also the floor portion 18. The members 45 act to give vertical and horizontal stability to the compressor and effect the desired smooth sliding of the compressor as it is moved along the bi-lateral trackways 15.

The guide members 45 may be formed as integral parts of the brackets 25, for example being connected to the brackets by the web portions 46 as best shown in Figs. 2 and 3. The members 45 have a lower extension arm 47 parallel to the trackways and in slidable engagement with the floor portion 18 and an upper extension arm 48 parallel to and in slidable engagement with the inverted channels 22. The upper and lower arms are connected by an integral web portion 50 which serves to maintain the members 47 and 48 in engagement with the respective portions of each trackway. The rear portion 49 of each lower arm 47 of the guide members 45 serves to limit the downward movement of the pawl 35 so that the tongue 38 may not become jammed or locked in the openings 20.

The compressor member 23 may be formed of sheet metal or other suitable material and may take any desired shape so that it will support material against which it is pressed in the file drawer. As shown in the figures, the upper part of the compressor 23 has been returned upon itself to form a beaded portion 51 along the top of the compressor so that the operator will have a convenient, reinforced, gripping portion with which to draw the compressor forward. Slots 52 are provided in the beaded portion 51 to permit the arms 42 of the release bar 30 to be drawn forward against the rear of the upper face 56 of the compressor 23 so that the co-axial portions 33 of the release bar 30 may be rotated sufficiently to effect the described release of the tongues 38 of the pawls 35 from the openings 20.

The compressor plate 23 is formed with a recessed channel 53 which stiffens the plate in a horizontal direction and which also accommodates the screw heads 54 so as to keep the papers or other material in the file drawer from engaging the screw heads. The lower portion 55 of the compressor 23 may be arranged to occupy a substantially vertical plane, forward of, but substantially parallel to the plane of the upper portion 56 of the compressor 23. In operation, the material 57 in the file will be engaged chiefly by the lower portion 55 of the compressor so that a space a (Fig. 4) will be left or will be easily obtainable between the compressed material 57 and the upper face 56 of the compressor, to give the operator access to the

upper face of the compressor. By this arrangement the operator may insert his thumb in the space *a* between the file material **57** and the upper face **56** and grasp the crank handle **40** in order to move the crank handle **40** forward conveniently.

The lower edge of the compressor **58** may be turned at right angles rearwardly to the face **55** so that there is suitable reinforcement at the bottom and so that no sharp edge of the compressor is exposed to the material in the drawer.

It will be understood from the foregoing description that by the use of apparatus embodying the invention, the compressor can be positively locked and held bi-laterally in a file drawer. It can be released readily with one hand from a central position adjacent the top of the compressor. Furthermore, the compressor can be moved forwardly to any desired position and locked without the necessity of unlocking and relocking the mechanism. Additionally, it should be noted that once the compressor has been fixed in the locked position, it will not slide rearwardly when pressure is exerted against its front face, until the locking mechanism is released. The compressor is also bi-laterally guided in the drawer so it cannot become misaligned and may be readily moved rearwardly and forwardly in the drawer, being maintained throughout its movement substantially parallel to the front and rear of the drawer.

In accordance with the provisions of the patent statutes, the principles of this invention have been described together with the best mode of applying those principles; however, it should be understood that the structure disclosed is but one mode of utilizing the invention and the structure described is merely illustrative, for the invention may be carried out by other and alternative means. Also, while it is contemplated to use the various features and elements in the combinations and relations described, some of these may be altered and modified in ways other than those suggested, without departing from the spirit and scope of the invention.

What is claimed is:

1. In a file drawer having a compressor member disposed substantially parallel to the front of the drawer and slidably mounted between the sides of the drawer for movement toward and away from the front of the drawer, an apparatus for positively positioning the compressor member in a plurality of parallel predetermined positions with respect to the front of the drawer, comprising, in combination, parallel trackways fixed to the sides of the drawer, each of said trackways being formed with an inverted U-shaped channel, and a flat shoulder, the channel and shoulder being joined by an upright outer wall, the flat shoulder of each trackway having defined therein a plurality of corresponding openings successively remote from the front of the drawer, the openings in each trackway being separated by intermediate portions of the trackway shoulder, a compressor member disposed between the trackways, substantially at right angles thereto, and with the sides of the compressor adjacent the respective trackways at the sides of the drawer, guiding means fixed to the sides of the compressor member and slidably mounted in said trackways for slidably engaging in the U-shaped channel and on the flat shoulder, pawls rotatably and co-axially mounted on a rigid member having co-axial portions rotatably mounted at the sides of said compressor, tongues on said pawls for rotation into engagement with the openings in the trackways, cam surfaces on the pawls adapted to engage the intermediate portions of the trackways for camming the tongues on said pawls out of the openings when the compressor member is slidably moved in one direction along the trackways, abutments on the tongues of the pawls to engage the said intermediate portions of the trackways for retaining the pawls in the openings and for preventing movement of the compressor in the other direction, resilient means for rotating the pawls into engagement with the openings and maintaining them therein, said guiding means having portions for limiting the movement of the pawls into the openings.

2. In a file drawer having a compressor member disposed substantially parallel to the front of the drawer and slidably mounted between the sides of the drawer for movement toward and away from the front of the drawer, an apparatus for positively positioning the compressor member in a plurality of parallel predetermined positions with respect to the front of the drawer, comprising, in combination, parallel trackways fixed to the sides of the drawer, each of said trackways being formed with an inverted U-shaped channel, and a flat shoulder, the channel and shoulder being joined by an upright outer wall, the flat shoulder of each trackway having defined therein a plurality of corresponding openings successively remote from the front of the drawer, the openings in each trackway shoulder being separated by intermediate portions of said shoulder, a compressor member disposed between the trackways, substantially at right angles thereto, and with the sides of the compressor adjacent the respective trackways at the sides of the drawer, guiding means fixed to the sides of the compressor member and slidably mounted in said trackways, for slidably engaging in the U-shaped channel and on the flat shoulder, a rigid member having co-axial portions rotatably mounted at the sides of said compressor, pawls fixed to the ends of said co-axial portions and rotatable therewith, said pawls having tongues for rotation into engagement with the openings in the trackways, cam surfaces on the pawls adapted to engage the intermediate portions of the trackways for camming the tongues of the pawls out of the openings when the compressor member is moved in one direction along the trackways and shoulders on the tongues of the pawls to engage the said intermediate portions of the trackways for retaining the tongues in the openings and thereby preventing movement of the compressor in the other direction, a bail member connected to the co-axial portions of the rigid member upon which the pawls are mounted for manually rotating the pawls out of engagement with the openings in the trackways, said bail being adjacent the top and disposed between the sides of the compressor, resilient means for rotating the pawls for moving the tongues into engagement with the openings and maintaining them therein, and said guiding means having portions for limiting the movement of the pawls into the openings.

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