

Dec. 3, 1963

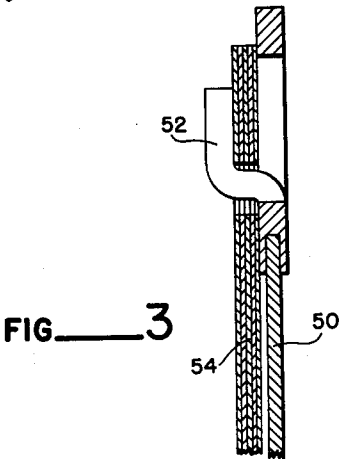
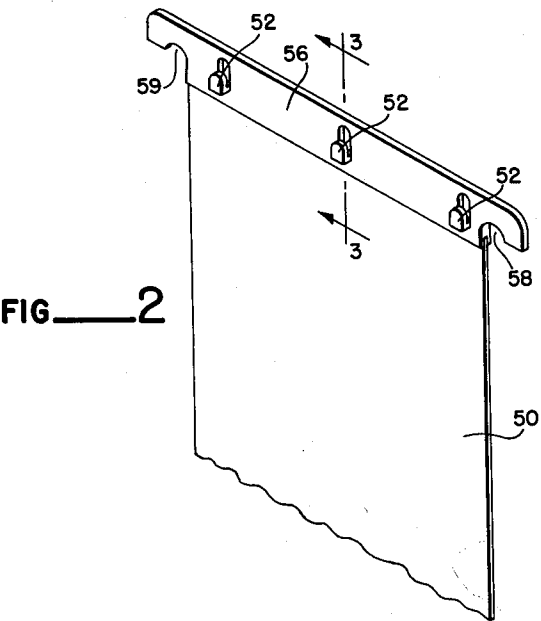
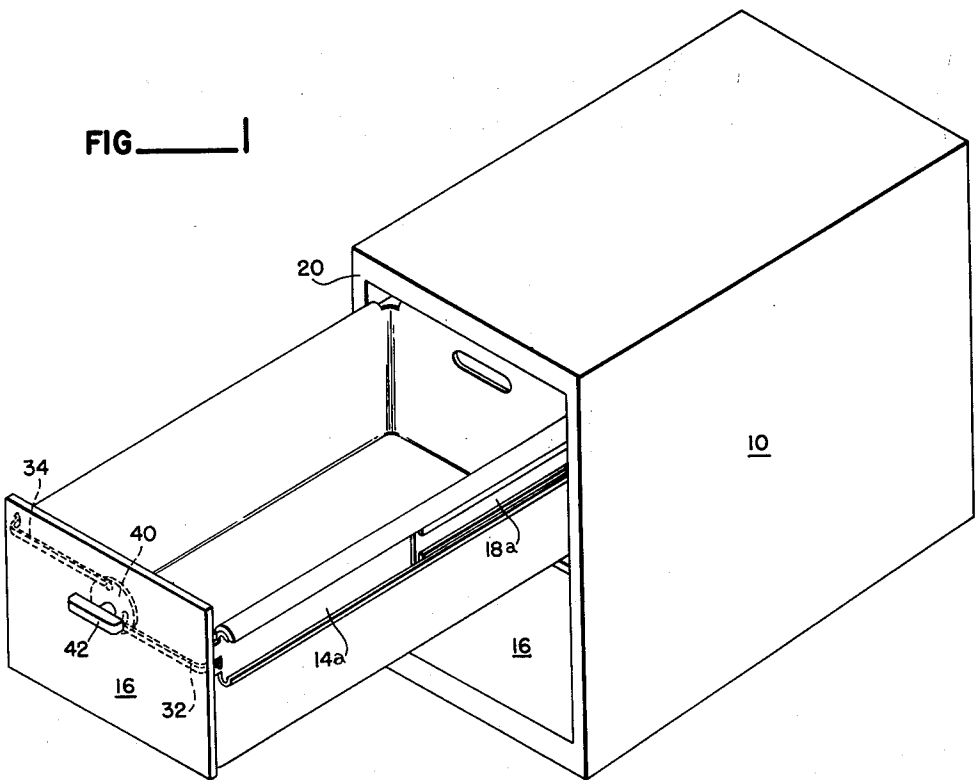
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3,112,967

CONVERTIBLE FILE FOR SHEET MATERIALS

Filed Oct. 21, 1960

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

FIG. 4

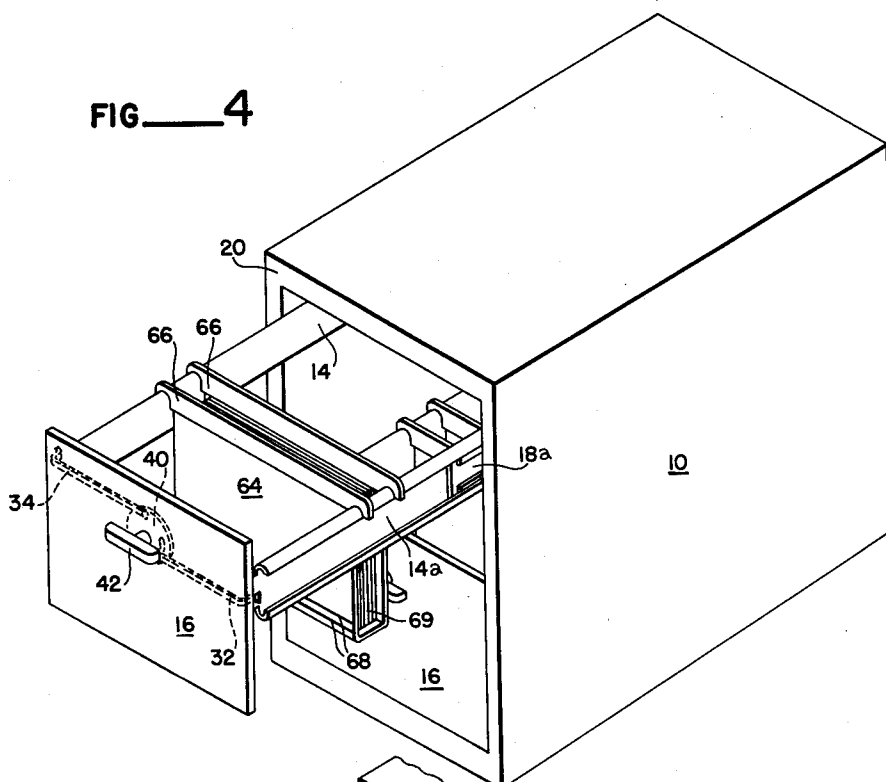
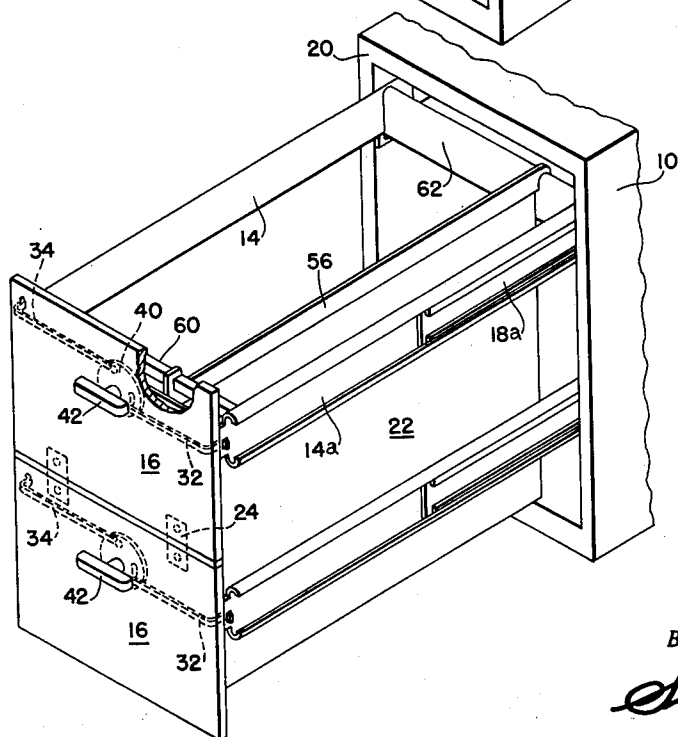


FIG. 5



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3 Sheets-Sheet 3

FIG. 6

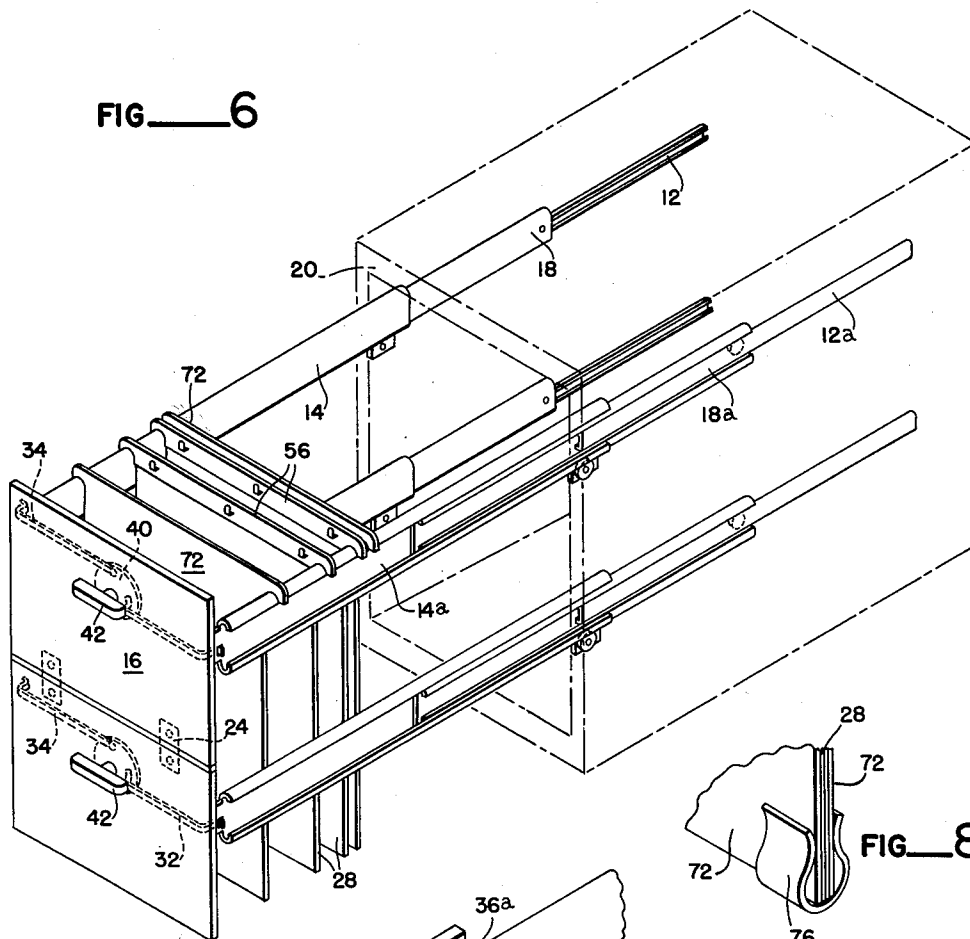


FIG. 8

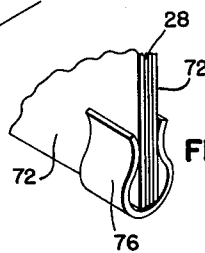
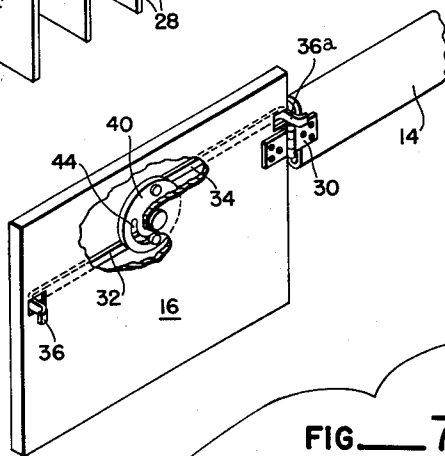


FIG. 7



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CONVERTIBLE FILE FOR SHEET MATERIALS

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7 Claims. (Cl. 312-184)

This present invention relates to the general art of filing cabinets and more particularly to a filing cabinet having the general appearance of the usual multi-drawer vertical file but which is especially arranged to make it easily adaptable to the vertical filing of sheet materials such as drawings, tracings, prints of drawings and similar materials that can be retained in much better condition filed vertically than in horizontal drawers.

In the past many attempts have been made to provide vertical files for drawings, tracings and the like but as a very wide variety of tracing and drawing sizes are normally used this greatly complicates the filing problem and as a result horizontal drawers with their attendant difficulty of indexing are quite commonly used. In this present filing cabinet means are provided so that a filing cabinet, having the general appearance of a three or four drawer vertical file, can be readily adapted to the storing of a wide variety of drawings and tracing sizes in a vertical arrangement which admits of such an excellent indexing means. In a typical example of this present file, having the general appearance of a standard four drawer file, one of the drawers may be used for filing legal size sheets and the remainder of the drawers may be used for the storage of relatively large sheets. With this present arrangement it is only necessary to provide means for securing the front closure members, corresponding to the front of the ordinary individual file drawers, so that they will all open at the same time when an opening force is applied to any one of them. Hangers that will accommodate the particular size drawings that are to be filed must be provided but otherwise there is no real problem in converting the file from one size sheet to another. This arrangement thus provides a solution of a perplexing indexing and filing problem for many types of offices.

A principal object of my present invention, therefore is to provide a convertible drawer file for the storage and filing of sheet materials such as drawings, tracings of drawings, blue prints and the like which will hold the sheet materials vertically with means embodied to insure that the sheet material will be held in a planar manner.

A further object of this invention is to provide a combination drawer file which may be readily adapted for use with various sizes of sheet materials as the user's needs may change.

A further object of this invention is to provide a simplified filing system in which, in effect, the drawers can be coupled together so as to provide combined drawers of varying vertical extent.

A further object of this invention is to provide hanger means for the acceptance of sheet materials of various types that will hold these sheet materials in a vertical position.

A further object of this invention is to provide sheet compressor means which will insure that the sheet material will not fall down in the file and will be kept in a planar arrangement at all times.

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Further objects, advantages and capabilities will be apparent from the description and disclosure in the drawings or may be comprehended or are inherent in the device.

FIGURE 1 is a perspective view illustrating a filing cabinet made after the teachings of this invention and showing the same as having two standard legal size drawers.

FIGURE 2 is a perspective view illustrating one preferred form of hanger for sheet materials.

FIGURE 3 is a vertical sectional view, on an enlarged scale, taken along the line 3-3 of FIGURE 2.

FIGURE 4 is a perspective view illustrating a filing cabinet made after the showing of FIGURE 1 in which each individual drawer is adapted to hold relatively small sheets of material and to employ a special hanger therefore so that the individual sheets will be readily available without having to be removed from some special hanger.

FIGURE 5 is a perspective view illustrating the two drawers, as of FIGURE 4, which are used together when larger sized prints are arranged parallel to the longitudinal axis of the drawers and extending downwardly through a plurality of drawers.

FIGURE 6 is an illustrative perspective view in which the cabinet proper is shown in dashed lines so that the supporting or suspension means may be more fully illustrated.

FIGURE 7 is a bracketed, perspective view showing a preferred manner of mounting the front closure means and illustrating how it may be disconnected from one side and revolved about the hinge of the other side of the drawer.

FIGURE 8 is a perspective view illustrating a special compressor spring used with two compression plates to insure storage of sheets in a planar manner.

Referring to the drawings, throughout which like reference characters indicate like parts the numeral 10 designates a typical form of cabinet forming the housing for my present file. The cabinet is provided with two opposite sides, a top, a bottom and a back fixedly secured together as a unitary structure. The front is open as far as the initial cabinet is concerned and it is noteworthy that there are no cross members intermediate the top and bottom as is quite common in the usual vertical drawer files. The purpose of this arrangement will be apparent as the invention is more fully disclosed.

In the interest of simplicity and in order to keep the elements shown on a sufficiently large scale to be readily understandable, a cabinet of the general size of a two drawer vertical file cabinet is shown. However, as vertical file cabinets are available in two, three and four drawer sizes it will be obvious that at least the same range of sizes would also be available in files made following the present disclosure. In order to take advantage of the capabilities of a file which will be readily adapted to various types of vertical sheet filing, a conventional three stage suspension system is employed. There are many well developed suspension systems of this order, generally characterized by having three elements, one secured to the file as 12, an outer unit 14 secured to the front closure element 16, and an intermediate member 18. These units are operatively spaced by anti-friction means. This arrangement permits the withdrawal of the entire drawer so that the inner end of the file can

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be brought out to the face 29 of the file cabinet proper.

FIGURE 4 illustrates a filing cabinet in which relatively small sheets are filed vertically, normally using a single front closure member 16.

In FIGURE 5 the file portion is shown in a preferred arrangement in which it can be moved outwardly so that a longitudinally disposed sheet, as is illustrated at 22, may be lifted vertically out of the file when needed for use. In this instance it is noteworthy that two of the end closure members 16 have been employed and these are usually secured together by metal tie straps 24, preferably held in place by sheet metal screws. The screws will normally be put in from the rear of the closure member, either in a folded back metal reinforcing portion of the closure member or in the back of the closure member if it is of pressed board, fiber board or even hardward lumber.

In FIGURE 6 sheets 28 are filed transversely of the drawer and again require two or more front closure members depending upon the depth of sheets 28. It is to be noted that the form of FIGURES 5 or 6 might be used with a four drawer size cabinet and the entire four front closure members secured together to form a single closure member. In this way sheets of unusual size can be held vertically and adequately housed in a convenient, readily accessible manner by this present file cabinet arrangement.

The front closure members are preferably hingedly secured at 30 to the outward member 14 of the suspension means. The opposite side engages the opposite outer suspension member as 14a. The suspension members are substantially identical except that they are reversed so that members 12, 14 and 18 may be made from identical dies as members 12a, 14a and 18a. Ordinarily handle 42 is drawn forward to bring the top of the contents into view. The suspension members are arranged in the usual file drawer manner to prevent their disengagement and the resulting upsetting of the contents. To enable quick access to a number of filed items or to allow easy filing of a number of items the front closure member may be opened on hinge 30. For security and firmness it is preferable to employ a double locking arrangement composed of the bolt elements 32 and 34, each terminating in a hook member 36 and 36a respectively. As shown in FIGURE 7 hook member 36 engages opening 38 in suspension member 14a. A convenient means of reciprocating the locking members 32 and 34 is by means of the centrally pivoted member 40 having the exterior handle 42. This provides for the reciprocation of members 32 and 34 by turning the exteriorly disposed handle 42 substantially ninety degrees. An arcuate slot 44 is provided for the purpose of withdrawing bolt 34 and hook 36 before bolt 32 is withdrawn. When bolt 32 is withdrawn, the front closure member may be turned on hinge 30.

Sheet material such as drawings, tracings, large photographs, blueprints and the like may be variously hung in the files. A convenient means for handling single sheets is shown in FIGURES 2 and 3 in which a firm board or plate 50 is employed. At the upper margin of board 50 are a plurality of out-struck lugs in the form of hooks 52. The number of these will depend on the width of the sheet to be filed.

FIGURE 3 shows a plurality of sheets 54 secured on hooks 52 as it is a common practice to group a number of drawings of a single subject together for ease of handling and filing. The top bar 56 may be made of a variety of materials, as aluminum, steel, or plastic, the choice depending somewhat upon the use required. The length of top bar 56 is sufficient so that guide and supporting notches 58 and 59 may be provided at each end of the bar, to be engaged over the top of suspension members 14 and 14a after the showing of FIGURES 4 and 6, or over transverse bars 60 and 62 which are employed when the sheet material is filed parallel to the

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longitudinal axis of the cabinet. Many additional hanger arrangements will be used and may be improvised for the particular need of the user, the pocket arrangement illustrated at 64 being an example in which two top bars 66 are employed supporting the pocket 64 so that a number of small sheets may be supported together.

In all instances it is desirable that the sheets standing on edge or hung from the top edge should be so supported that they will neither buckle nor fold and will be maintained in a vertical position. In the case of pockets 64, means should be provided for different folding lines as 63 so that the thickness of the pocket can be readily adapted to the number of sheets 69 to be contained within the hanger 64. An alternate arrangement is shown in FIGURE 6 in which sheets 28 are vertically supported from suitable top bars 56 and additional plates in the form of stiff separators 72 are employed. In the larger sizes these plates should be metal, such as aluminum or steel which has been ribbed or otherwise strengthened to have the stiffness and the planar form to press together against each side of a group of sheets 28 thereby compressing them. One or more spring clips 76, as illustrated in FIGURE 8, may be employed to press the stiff sheet tightly onto the supported material to hold them without wrinkles and in a manner to prevent damage as other adjacent sheet materials may be placed in the file or removed therefrom.

It is believed that it will be clearly apparent from the above description and the disclosure in the drawings that the invention comprehends a novel construction of a convertible file for sheet materials.

Having thus disclosed my invention, I claim:

1. A convertible file for vertical storing of sheet material, comprising: a housing having an open front without intermediate cross supports and conforming generally with the proportions of a multi-drawer vertical file; a conventional suspension system secured to the inner wall surfaces of the opposite sides of said housing having material supporting bars and adapted to move the supported material entirely out of said housing; a top bar having means at each end to be engaged over the top of said supporting bars and having means for supporting and positioning flat sheets for storage; a rigid front closure element of sheet material of a size to fill the said open front used by said suspension system and the materials it supports; said front closure element having a double locking bolt means for securing said front closure element to said material supporting bars and a handle secured to the outer surface of said closure element for moving said locking and suspension system.

2. The subject matter of claim 1 in which said supporting bars are supported transversely of said housing by said suspension system.

3. The subject matter of claim 1 in which said supporting bars are supported longitudinally of said housing by said suspension system.

4. A convertible file for the vertical storing of sheet materials, comprising: a housing conforming generally with the proportions of a multi-drawer vertical file and having an open front without intermediate cross supports; a plurality of front closure members for closing said open front; each said front closure member engaged with a conventional suspension system secured to the inner wall surfaces of the opposing sides of said housing; material supporting bars attached to said suspension system in a manner to allow the supported material to be moved out of said housing; said front closure members being provided with detachable coupling means to provide varied vertical lengths; and a handle secured to the outer surface of said closure means for moving said suspension system.

5. The subject matter of claim 4 in which said front closure means is hingeably attached at one side to said suspension means; said front closure means being secured

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to said suspension means by a double locking bolt means; said locking means being operated by said handle.

6. The subject matter of claim 4 in which said supporting bars are supported transversely of said housing by said suspension system.

7. The subject matter of claim 4 in which said supporting bars are supported longitudinally of said housing by said suspension system.

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