March 18, 1958 F. L. WASSELL ET AL 2,827,354

CABINET FOR ROTARY FILE

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FIG.1.

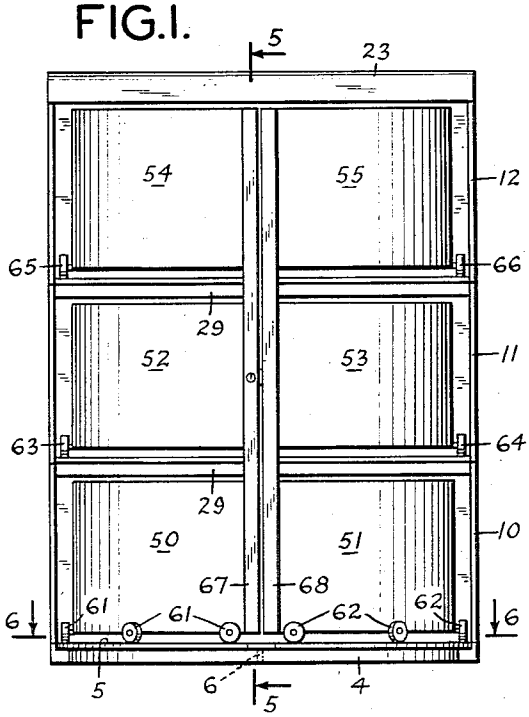


FIG.2.

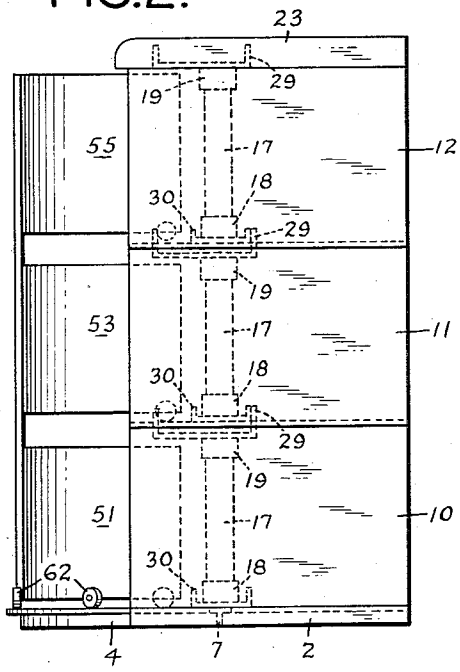


FIG.3.

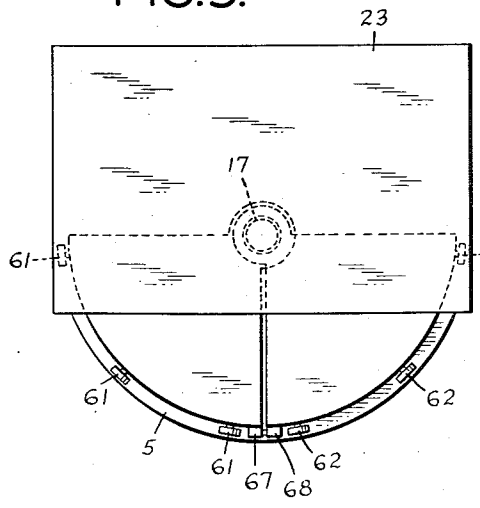
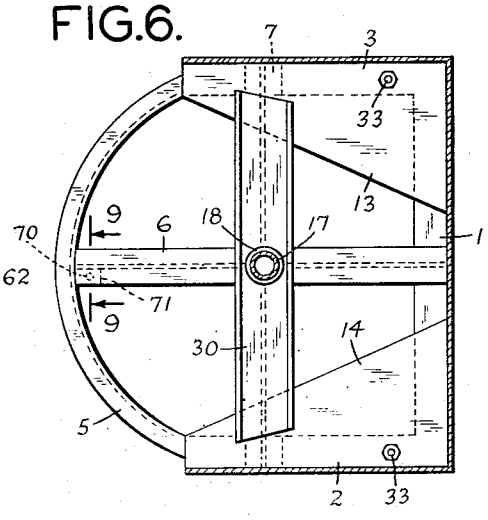


FIG.6.



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FIG.7.

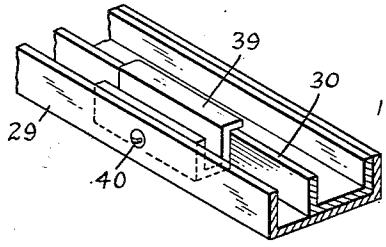


FIG.8.

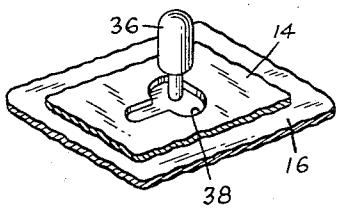


FIG.4.

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FIG.5.

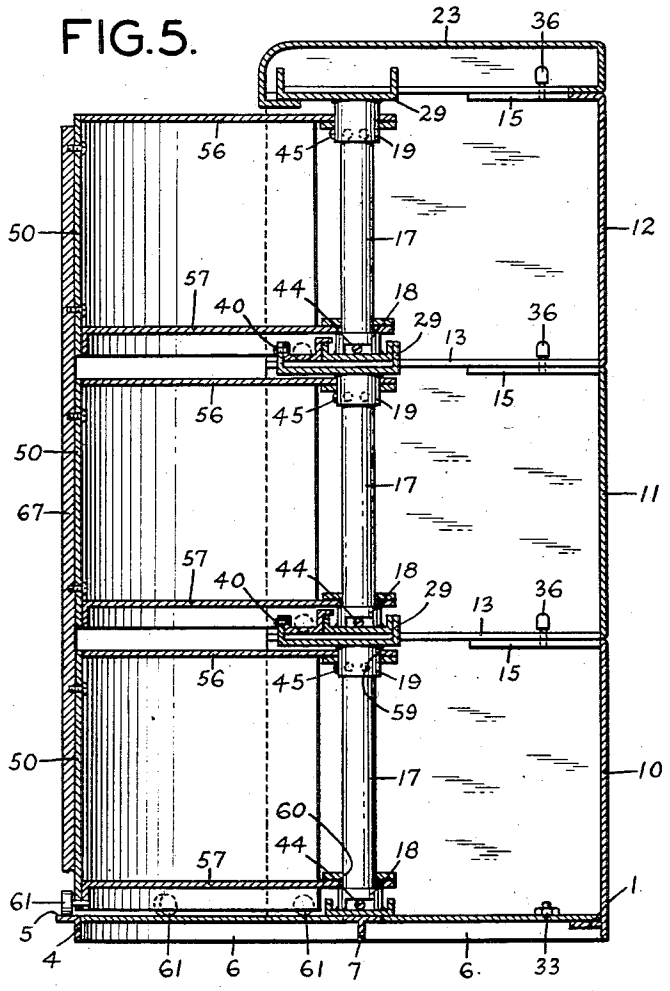


FIG.9a.

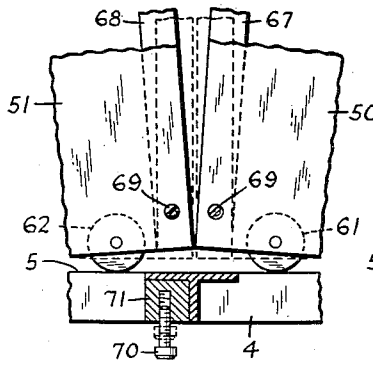
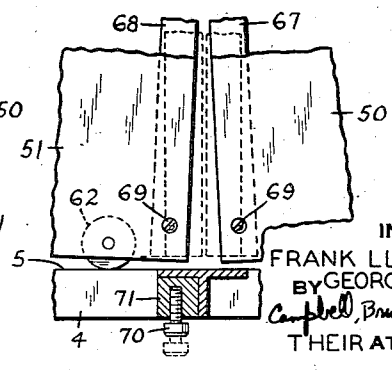


FIG.9b.



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CABINET FOR ROTARY FILE

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Application April 16, 1954, Serial No. 423,682

6 Claims. (Cl. 312—305)

The present invention relates to a cabinet for rotary filing mechanism, more particularly to a cabinet for such mechanism which is composed of a dismantleable assembly of prefabricated sections and components.

In the copending application of Frank Lloyd Wassell, Serial No. 80,540, filed March 9, 1949, now Patent No. 2,711,741, entitled "Circular File" there is described a rotary filing mechanism which is composed of a plurality of rotating platforms superimposed on a common shaft. Rotary files of that type have come into widespread use and, as an accompaniment to such files, the art has demanded a cabinet or housing which will serve the purpose of protecting the rotary file and its contents from dirt and theft and which will also improve the appearance of the room in which such files are kept.

Unitarily constructed cabinets for the above purpose have been previously manufactured, but it was quickly found that, of necessity, their size was such that they could not be moved through room doors of average size. For this reason it has been necessary to manufacture cabinets in the form of prefabricated sections which can be assembled on the spot and which can be transported in the form of such sections. Because of the unusual design of rotary filing mechanisms, the manufacture of cabinets from prefabricated sections has imposed unusual problems which are complicated by the fact that such cabinets are preferably of inexpensive construction and must require only a minimum of floor space.

It is a primary object of the present invention to provide a cabinet for rotary filing mechanisms which is composed of a plurality of prefabricated sections and which combines the attributes of simplicity of construction and ease of assembly and disassembly.

In accordance with our invention, we provide a cabinet for a rotary filing mechanism which comprises a dismantleable assembly of prefabricated components and which is characterized by slidably rotating doors of quarter-cylindrical shape which open to provide access to the rotary filing mechanism housed therein.

The invention will be more fully described in connection with the accompanying drawings in which:

Fig. 1 is a view in elevation looking toward the front of the filing cabinet with the doors in closed position;

Fig. 2 is a view in elevation looking toward the left side of the filing cabinet with the doors in closed position;

Fig. 3 is a plan view of the filing cabinet of Fig. 1;

Fig. 4 is an exploded view in perspective of the filing cabinet showing the details of assembly;

Fig. 5 is a sectional view taken along the line 5—5 of Fig. 1, and looking in the direction of the arrows;

Fig. 6 is a sectional view taken along the line 6—6 of Fig. 1, and looking in the direction of the arrows;

Fig. 7 is a view in perspective showing a detail of the assembly of the filing cabinet;

Fig. 8 is a perspective view showing another detail of the assembly;

Fig. 9*a* is a partial view in section taken along the line 9—9 of Fig. 6, and looking in the direction of the arrows; and

Fig. 9*b* is another partial view in section taken along the line 9—9 of Fig. 6, and looking in the direction of the arrows.

Referring more particularly to the drawings, there is shown a filing cabinet which rests upon a generally horizontal base comprising a straight member 1 forming the rear of the base and straight members 2 and 3 forming the sides of the base. Joined to the front ends of the sides 2 and 3 is a semi-circular member 4 provided with a flange or track 5. The base is reinforced by cross members 6 and 7 which intersect at the approximate center of the base. There is also provided an adjusting screw 70 which is threaded into a block 71 affixed to the bottom of cross member 6 near the juncture of member 6 and semi-circular member 4, as illustrated in detail in Figs. 9*a* and 9*b*.

Superimposed on the base is a series of three identical box-shaped sections 10, 11 and 12, respectively, which are each composed in part of a back and two sides. Each of these box-shaped sections 10, 11 and 12 is reinforced at the bottom rear corners by triangular gussets 13 and 14 which are provided with keyholes 38 and at the top rear corners by smaller triangular gussets 15 and 16 which are provided with lugs 36. Connected to the front portions of the triangular gussets 13 and 14 is a U-shaped brace 30 which extends horizontally almost the full width of the box-shaped section. Each section is also provided with an upper U-shaped brace 29, somewhat wider than brace 30, which approximately connects the two upper front corners of each section. There is also provided for each section a slotted collar 18 which is welded or otherwise affixed to the top of U-shaped brace 30 at the approximate center of said brace and there is further provided another collar 19 which is welded or otherwise affixed to the bottom of U-shaped brace 29. Engaged in the collars 18 and 19 of each section, there is shown a shaft 17 which is rotatably adjustable. As shown most clearly in Fig. 5, the upper end of each shaft 17 is provided with a series of circumferential holes one of which is shown engaged by a screw 45 through a hole in the collar 19. When screw 45 is removed the shaft may be rotated to a position in which another hole in the shaft is aligned with the hole in the collar 19 and the screw replaced. Each shaft 17 is further provided at the bottom with a screw 44, which extends outwardly through the slot in collar 18. Thus, the shaft is free to turn, when screw 45 is removed, but vertical movement of the shaft is arrested by screw 44.

The manner in which the box-shaped sections 10, 11 and 12 are mounted and assembled in superimposed relationship in the brace is shown particularly in Figure 4 where it is seen that the section 10 rests upon the rear and sides 1, 2 and 3 of the brace and is secured to the sides 2 and 3 by means of nut and bolt arrangements 33. Section 11 is superimposed on section 10 by inserting the lugs 36 of section 10 through the enlarged portions of the keyholes 38 of section 11 (as shown in the enlarged detail in Fig. 8) and then by sliding section 11 to the rear so that the restricted portions of the keyholes 38 engage the smaller shanks of the lugs 36. Section 11 is then secured against lateral movement (as shown in enlarged detail in Fig. 7) by inserting an anchor bar 39 in the open space between the upper U-shaped brace 29 of section 10 and the lower U-shaped brace 30 of section 11, and the anchor bar is then bolted tightly to brace 29 by means of screw 40. In a similar manner, section 12 is mounted on top of section 11 by means of the lugs 36 of section 11 and the keyholes 38 of section 12.

There is also provided a top 23 which is shown mounted upon the top of box-shaped section 12, being likewise provided with keyholes (not shown) and mounted on the box-shaped section 12 in a manner similar to that in which the sections are mounted one on the other.

It can be seen from the preceding description of the drawings that the shafts 17 of each box-shaped section are thus aligned, when the cabinet is properly assembled, so that the shafts together form a discontinuous vertical upright member on which horizontal circular platforms may be rotatably mounted.

The doors of the cabinet are illustrated as being formed of six individual door sections 50, 51, 52, 53, 54 and 55, each of which is quarter-cylindrical in shape and each of which has triangularly shaped arms, such as the arms 56 and 57 of the door 50 (Fig. 4) or the arm 58 of door section 51 (Fig. 4). Further, each arm of each door section terminates in an eyelet, such as the eyelets 59 and 60 of the arms 56 and 57 of the door sections 50 and 51, respectively (shown in Fig. 4).

The lower door sections 50 and 51 are each provided with three wheels 61 and 62, respectively, which are spaced approximately equidistant along the lower periphery of these door sections. The upper door sections 52, 53, 54 and 55, however, are each provided with only one wheel 63, 64, 65 and 66, respectively, which in the case of each section is located at the rear of its lower periphery.

In the completed assembly, the door sections are rotatably mounted about the shafts 17 by threading the eyelets, such as 59 and 60, on the collars 19 and shafts 17 in such manner that the door sections 50 and 51 form the lower sections of the completed doors with the sections 52, 53, 54 and 55 being superimposed thereon. In the arrangement illustrated, the door sections 50 and 51 are threaded on the shaft 17 to close the front of box-shaped section 10 and the door sections 52, 53, 54 and 55 are threaded in such a manner as to form closures for the front of box-shaped sections 11 and 12.

In the assembled cabinet, as shown in the drawings, the six wheels 61 and 62 of the lower door sections 50 and 51 travel along the flange 5 which forms the front of the base and, when the door sections are rotated to provide access to the cabinet, along the gussets 13 and 14 in the rear of the section. Thus, the weight of the door sections 50 and 51 is effectively supported by the wheels of each section. However, since door sections 52 to 55 are each provided with only one wheel which is located at the rear of each section and which travels on the corresponding lower triangular gusset of section 11 or 12, it is necessary to provide other means for supporting these doors sections at the fronts thereof.

Therefore, in order that the upper door sections 52 to 55 may be effectively supported in the front and prevented from sagging downwardly under the influence of their own weight, there are provided rigid connecting arms in the form of door bars 67 and 68 which are bolted to the individual door sections, in the manner shown in Fig. 5, by a plurality of screws 69. The right-hand door sections 50, 52 and 54 are thus firmly held in spaced relationship and caused to rotate as a unit about the shaft. The left-hand door sections 51, 53 and 55 are similarly held in spaced relationship by door bar 68 and operate as a unit rotating about the shaft. It is to be observed that since the upper door sections 52 to 55 are not provided with wheels except at the rear corner of their periphery, the weight of the front-most part of these door sections is transferred by means of bars 67 and 68 to the wheels 61 and 62 at the front of the lower door sections 50 and 51, respectively. This arrangement simplifies the construction and assembly of the cabinet.

If desired, the bars 67 and 68 may be provided with

locking mechanism to secure the doors in a closed position and to guard against theft and tampering.

In Figs. 9*a* and 9*b* there is shown the manner by which the adjustable screw 70 can be utilized to level the base of the cabinet to assure that the bars 67 and 68 will fit flush against each other when the doors of the cabinet are closed. In Fig. 9*a*, it is seen that the door bars do not fit flush and diverge at the top. This can be remedied by adjusting the screw 70 to the position shown in dotted lines, thus lowering the base and causing the bars to acquire the position shown in dotted lines. In Fig. 9*a* the reverse of Fig. 9*b* is shown, the door bars diverging at the bottom. This can be remedied by raising the base by adjusting the screw 70 to the position shown in dotted lines.

Although it forms no part of the invention, it is to be understood that in the normal construction a plurality of rotatable platforms of the type illustrated in the aforesaid copending application Serial No. 80,540, filed March 9, 1949, will also be rotatably mounted on the shafts, one platform being provided for each box-shaped section of the cabinet assembly. Thus, the cabinet of the invention provides an attractive and practicable housing for a multiple tier rotary file.

It is further to be understood that many modifications and changes in the cabinet described may be made without departing from the spirit of the invention. For example, the invention need not be limited to the specific number of box-shaped sections and door sections illustrated, but instead may be provided with any number desired as would be within the skill of the art. Further the shafts 17 may be made of any desired length so that they may be removed from engagement with the collars 18 and 19 for purposes of assembly and disassembly.

A particularly important feature of the invention described above is that it requires a minimum of floor space, i. e., an area not substantially larger than the area of the rotating platforms of the filing mechanism itself. This would not be the case if other types of door construction were used, such as doors which pivot on the sides of the cabinet and swing outwardly. Another important feature is the fact that the cabinet is easily assembled and disassembled by virtue of its simplicity of construction.

It is intended to cover all such changes and modifications within the spirit of the invention which do not constitute departure from the scope of the appended claims.

We claim:

1. A cabinet for housing a multiple platform rotary file comprising: a plurality of detachable, open front, compartments each having a front-to-back center line and walls to either side of the center line, and being attached together in vertically superimposed relation; a plurality of vertical shafts respectively mounted within said compartments in vertically aligned relation with each other; each shaft being horizontally located within its compartment on the center line to have a distance on said line to the open front of the compartment which is less than the distance of the shaft laterally of said center line to either of the walls of the compartment, a plurality of cylindrically curved doors corresponding to each shaft; each door having a radius of curvature for its outer cylindrical surface which is greater and less in value than, respectively, the said distances of the corresponding shaft from the open front and from the walls of the corresponding compartment, each door being supported by its corresponding shafts to be coaxial therewith and rotatable about the axis thereof; and a straight rigid, vertically extending arm disposed at the vertical margins of said doors and connecting all said doors together to form a door unit.

2. A cabinet for housing a multiple platform rotary file comprising; a plurality of detachable, open front, compartments each having a front-to-back center line and walls to either side of the center line, and being attached together in vertically superimposed relation; a plurality

of vertical shafts respectively mounted within said compartments and in vertically aligned relation with each other; each shaft being horizontally located within its compartment on the center line thereof to have a distance on said center line to the open front of the compartment which is less than the distance of the shaft laterally of said center line to either of the walls of said compartment; a pair of left and right-hand cylindrically curved doors corresponding as a pair to each shaft, each door of a pair having a radius of curvature for its outer cylindrical surface which is greater and less in value than, respectively, the said distances of the corresponding shaft from the open front and from the walls of the corresponding compartment, and each door of a pair being supported by the corresponding shaft to be coaxial therewith and rotatable about the axis thereof; and first and second straight, rigid, vertically extending arms respectively disposed at the vertical margins of said left hand and right hand doors and connecting, respectively, all the left-hand doors together and all the right-hand doors together to form left hand and right hand door units.

3. A cabinet for housing a multiple platform rotary file comprising; a plurality of detachable, open front, compartments each having a front-to-back center line and walls to either side of the center line, and being attached together in vertically superimposed relation; a plurality of vertical shafts respectively mounted within said compartments and in vertically aligned relation with each other; each shaft being horizontally located within its compartment on the center line thereof to have a distance on said center line to the open front of the compartment which is less than the distance of the shaft laterally of said center line to either of the walls of said compartments; a plurality of cylindrically curved doors corresponding to each shaft; each door having a radius of curvature for its outer cylindrical surface which is greater and less in value than, respectively, the said distances of the corresponding shaft from the open front and from the walls of the corresponding compartment; a pair of vertically spaced radial hinge members extending from each shaft to support each corresponding door in spaced coaxial relation with the shaft and in rotatable relation about the axis of the shaft; and a straight rigid vertically extending arm disposed at the vertical margins of said doors and connecting all said doors together to form a door unit.

4. A cabinet for housing a multiple platform rotary file comprising; a plurality of detachable, open front, compartments each having a front-to-back center line and walls to either side of the center line, and being attached together in vertically superimposed relation; a plurality of vertical shafts respectively mounted within said compartments in vertically aligned relation with each other; each shaft being horizontally located within its compartment on the center line thereof to have a distance on said center line to the open front of the compartment which is less than the distance of the shaft laterally of said center line to either of the walls of said compartment; a plurality of cylindrically curved doors corresponding to each shaft; each door having a radius of curvature for its outer cylindrical surface which is greater and less in value than, respectively, the said distances of the corresponding shaft from the open front and from the walls of the corresponding compartment, each door being supported by its corresponding shaft to be coaxial therewith and rotatable about the axis thereof; a straight, rigid, vertically extending arm disposed at the vertical margin of said doors and connecting all said doors together to form a door unit; a horizontal base supporting said compartment and having a portion horizontally extending forward of said compartments and underneath the path of angular movement of the lowermost door, and at least one roller interposed between the lowermost door and said base to transmit at least a fraction of the weight of said door unit to said base.

5. A cabinet for housing a multiple platform rotary file comprising; a plurality of detachable, open front, compartments each having a front-to-back center line and walls to either side of the center line, and being attached together in vertically superimposed relation; a plurality of vertical shafts respectively mounted within said compartments in vertically aligned relation with each other; each shaft being horizontally located within its compartment on the center line thereof to have a distance on said center line to the open front of the compartment which is less than the distance of the shaft laterally of said center line to either of the walls of said compartment; a pair of left and right-hand cylindrically curved doors corresponding as a pair to each shaft, each door of a pair having a radius of curvature for its outer cylindrical surface which is greater and less in value than, respectively, the said distances of the corresponding shaft from the open front and from the walls of the corresponding compartment; a pair of vertically spaced, radial hinge members extending from each shaft to support each corresponding door in spaced coaxial relation with the shaft and in rotatable relation about the axis of the shaft; first and second straight, rigid, vertically extending arms respectively disposed at the vertical margins of the left hand and right doors, and connecting, respectively, all the left-hand doors together and all the right-hand doors together to form left hand and right hand door units; a horizontal base supporting said sections and having a portion horizontally extending forward of said compartments and underneath the paths of movement of the lowermost left-hand and right-hand doors; and at least two rollers respectively interposed between the left-hand and right-hand lowermost doors and said base to respectively transmit at least a fraction of the weights of said left-hand and right-hand door units to said base.

6. A cabinet as in claim 5 further comprising an adjusting member mounted by said base to project downward therefrom in adjustable amount from a point on said base forward of said compartments and on the common center line thereof, said adjusting member being adapted by adjustment to produce a variable flexure of said base about said center line when both said adjusting member and base are resting on a supporting undersurface.

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