June 28, 1955 F. L. WASSELL 2,711,741

CIRCULAR FILE

Filed March 9, 1949 5 Sheets-Sheet 1

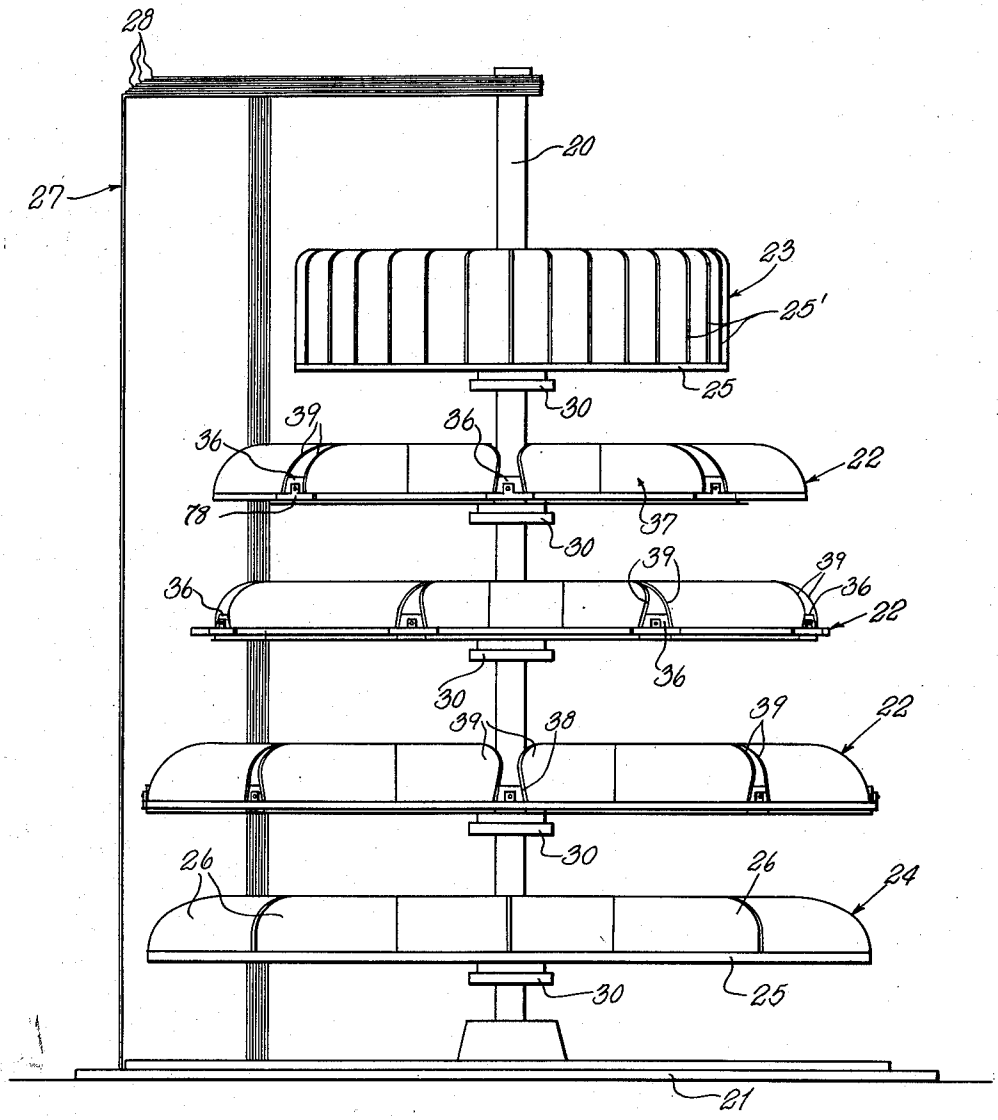

Fig. 1.

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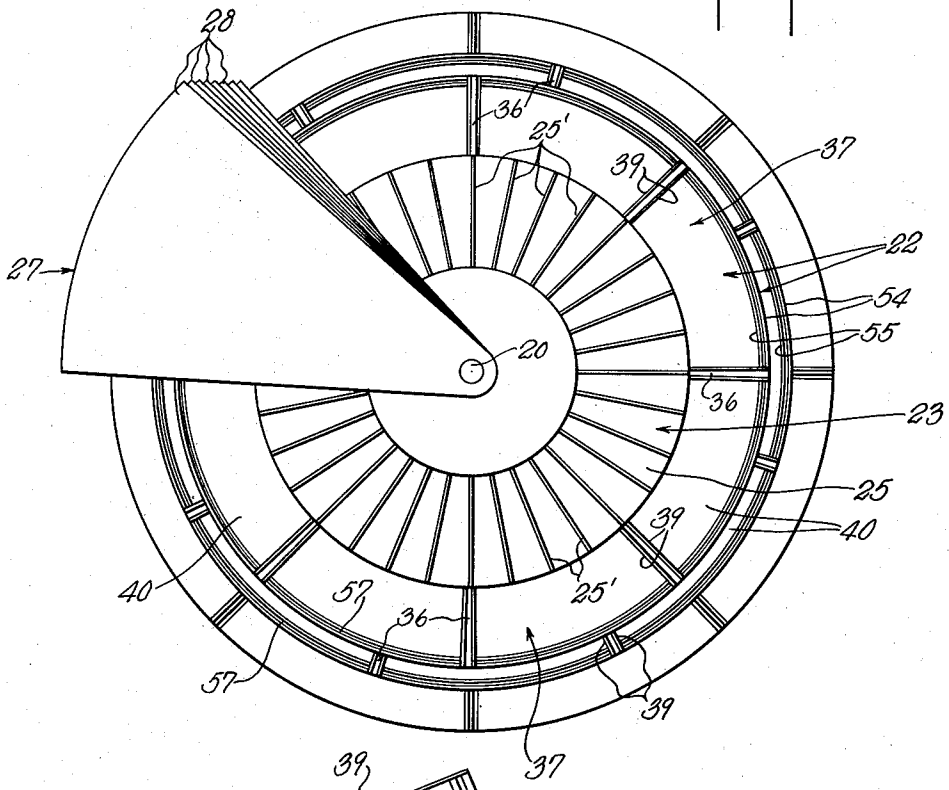
Fig. 2.



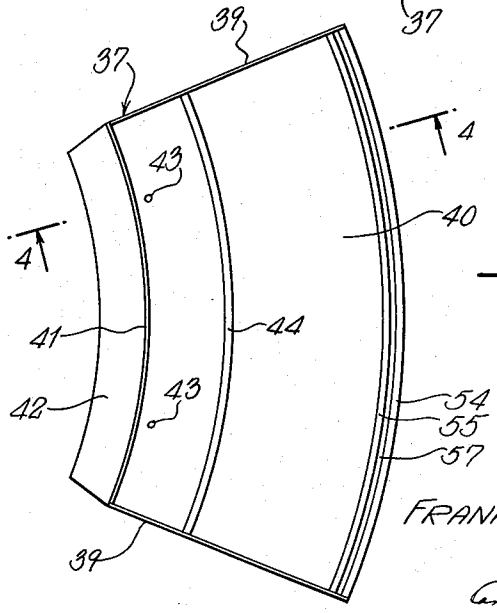


Fig. 3.

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Filed March 9, 1949 5 Sheets-Sheet 3

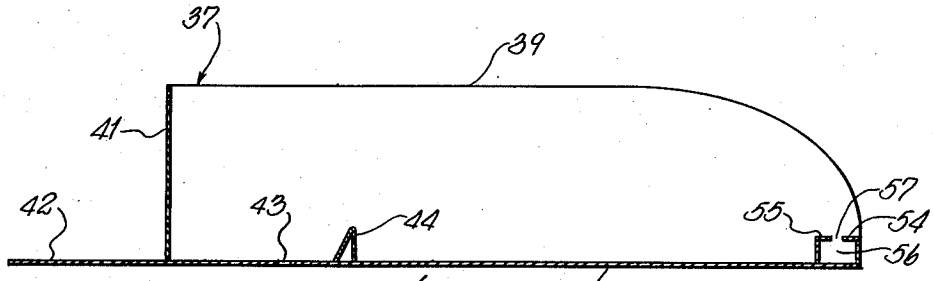

Fig. 4.

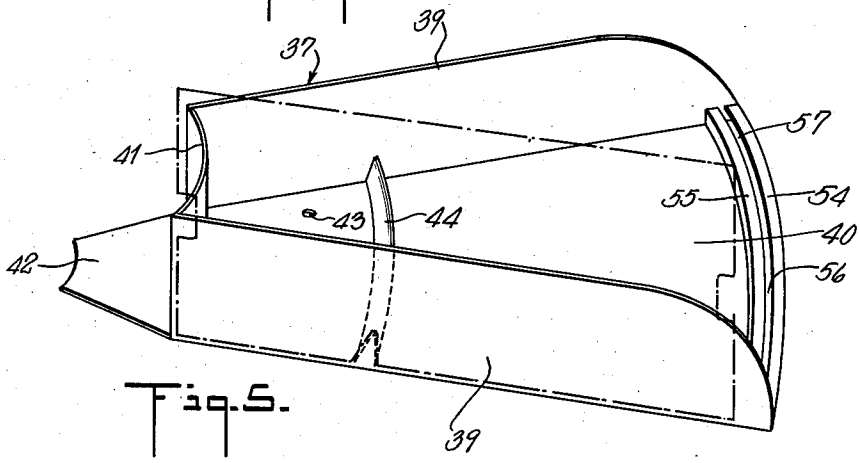

Fig. 5.

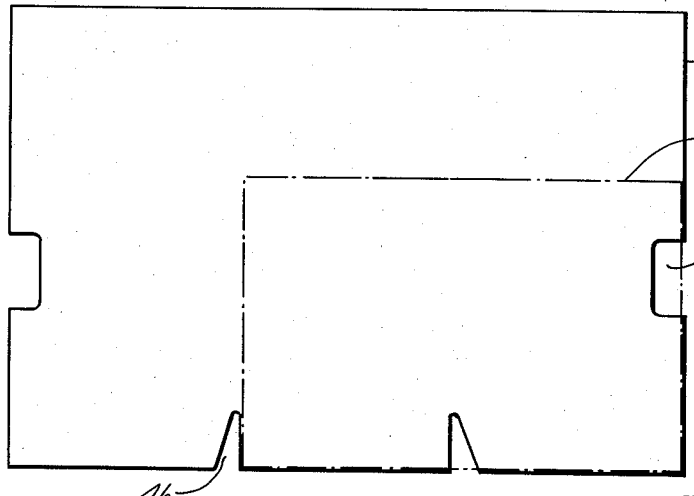

Fig. 6.

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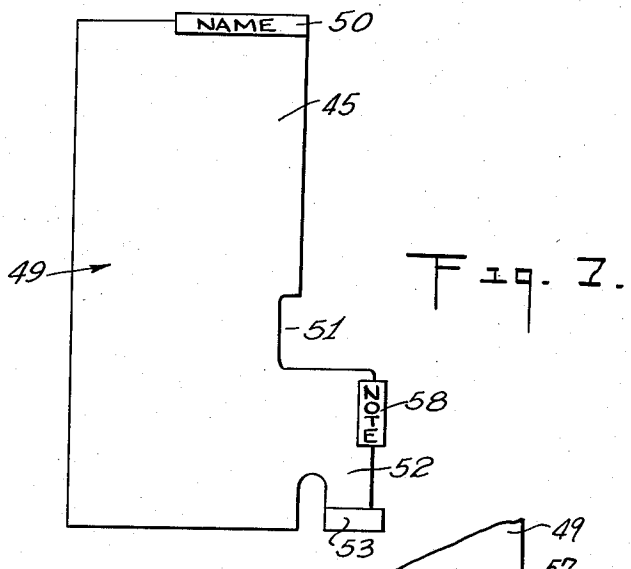

Fig. 7.

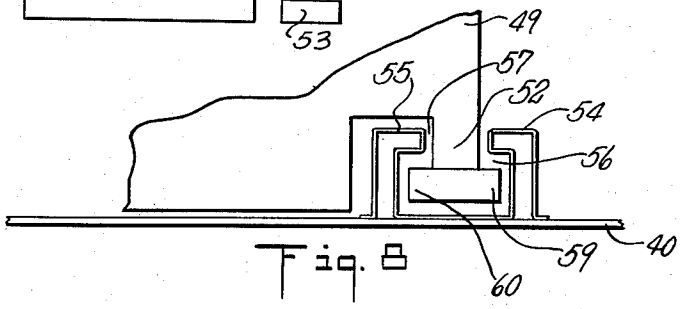

Fig. 8

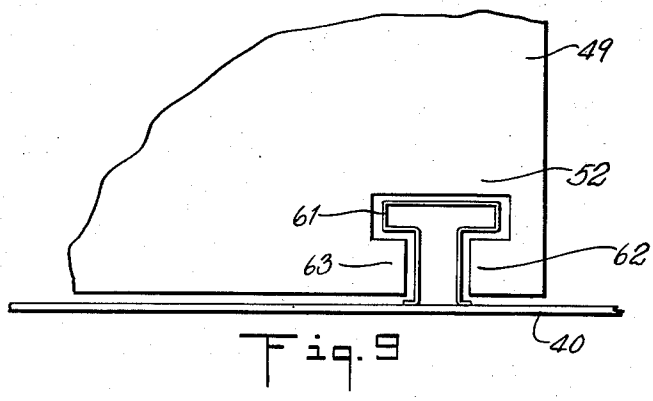

Fig. 9

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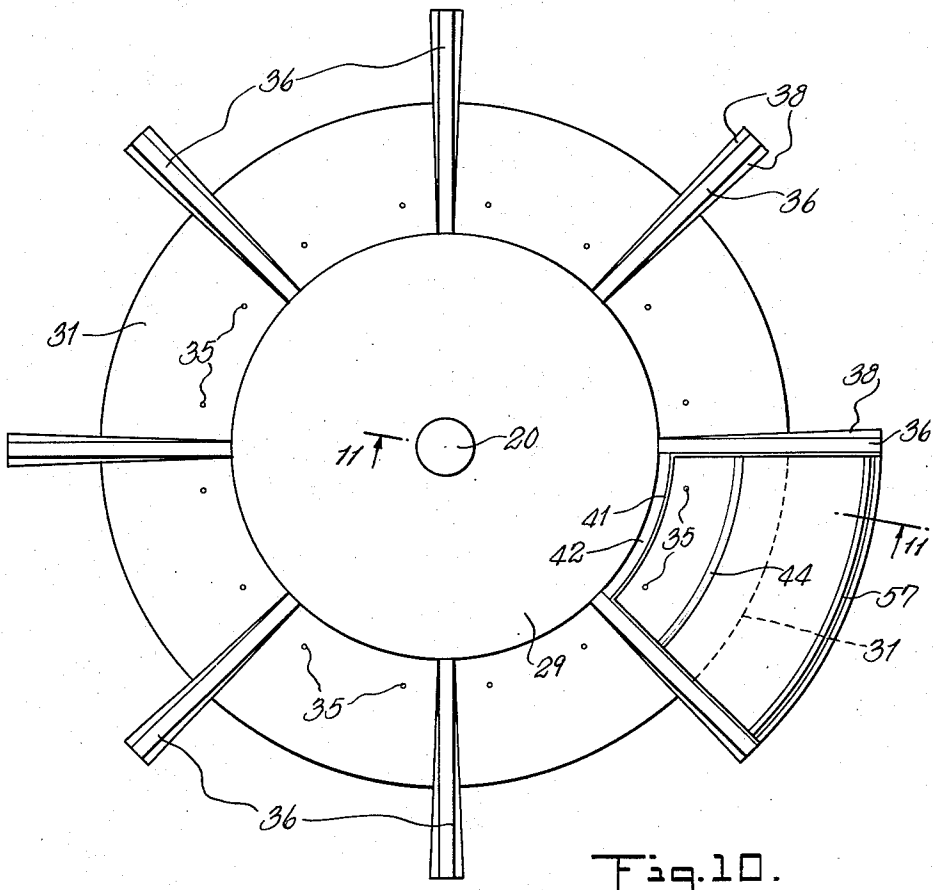

Fig. 10.

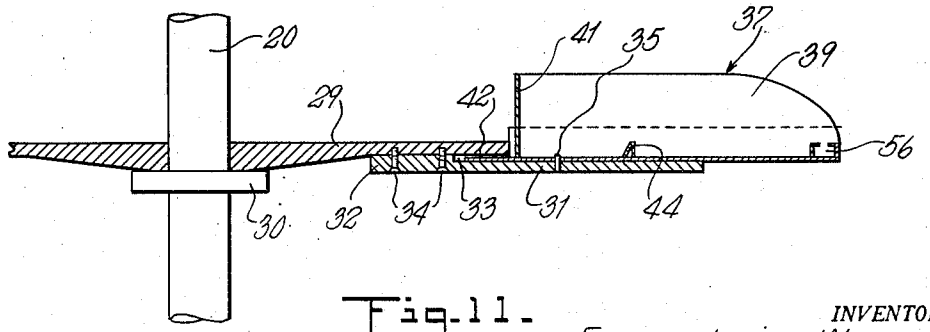

Fig. 11.

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United States Patent Office 2,711,741 Patented June 28, 1955

2,711,741

CIRCULAR FILE

Frank Lloyd Wassell, Westport, Conn., assignor to Georgene Parkin Wassell, Westport, Conn.

Application March 9, 1949, Serial No. 80,540

3 Claims. (Cl. 129—16)

The present invention relates to card index and similar files and embodies, more specifically, an improved form of such file wherein the card supporting structure is formed of rotatable elements.

A well recognized disadvantage of conventional forms of files in which cards, lists, and the like are carried in "pull-out" drawers and the like resides in the fact that, not only do these files require a considerable amount of space in order that they may be used effectively, but also persons using the files are required to move about considerably in order to obtain access to various stacks of files as well as to move in and out the various file drawers containing cards and like information, access to which is desired.

It is an object of the present invention to provide a file mechanism by means of which information bearing documents may be maintained in a conveniently accessible condition in which the operator or person or persons using the file will not be required to move about, nor to move file drawers in and out.

Another object of the invention is to provide a filing mechanism of the above character wherein means is provided for maintaining specific kinds of information in readily available form.

Yet another object of the invention is to provide filing mechanism of the above character, wherein the indexing of subject matter to be filed is accomplished by utilizing the availability of circumferentially stacked cards, each of which lies substantially in a radial plane, the entire mechanism being maintained so that the circumferentially stacked cards may be moved rotatably to desired positions where the operator may inspect portions of the mechanism.

The foregoing objects are realized by providing a file mechanism having at least one rotatable element which is formed to receive and correctly position file cards so that cards may be maintained in one or more circumferential stacks or series, each of the cards lying in a plane passing through the axis of rotation of the device, the mechanism also including index elements that preferably occupy only a limited space adjacent the outer circumferential edges of the stacks of cards.

The invention will be more readily apparent as the invention is described in greater detail in connection with the accompanying drawings, wherein:

Figure 1 is a side elevation view of a mechanism constructed in accordance with the present invention;

Figure 2 is a plan view of the device shown in Figure 1;

Figure 3 is a detail plan view of one of the trays illustrated in Figure 1;

Figure 4 is a view in section taken on line 4—4 of Figure 3 and looking in the direction of the arrows;

Figure 5 is a perspective view of the tray shown in Figure 3, and illustrating the manner in which the tray is designed to support cards;

Figure 6 is a detailed view showing a card suitable for use in connection with the filing mechanism of the present invention;

Figure 7 is a detail view of one form of index guide or spacing member;

Figure 8 is a partial view in section showing a modified form of mounting for the index card of Figure 7;

Figure 9 is a view similar to Figure 8 showing a further modification of the mounting of the index card;

Figure 10 is a detail plan view of one of the rotatable card filing members shown in Figure 1; and

Figure 11 is a partial view, in section, taken on line 11—11 of Figure 10 and looking in the direction of the arrows.

Referring to the above drawings, and particularly to Figures 1 to 7, the rotatable file mechanism of the present invention is formed with a vertical spindle 20 having a base 21. Upon this spindle a plurality of rotatable card supporting mechanisms 22 are provided. In the mechanism shown in Figures 1 and 2, three of such rotatable elements are shown, but the specific number is unimportant insofar as the present invention is concerned.

In order to facilitate the use of the rotatable members 22, a rotatable sorting device 23 may be provided upon the spindle 20 and also, if desired, a rotatable letter file 24 may be provided, both of which may be keyed to the filing mechanisms 22. As illustrated in Figures 1 and 2, the rotatable sorting device 23 is formed of a circular bottom plate 25 that is rotatably mounted upon the spindle 20 and a series of radial partition plates 25' providing spaces which may be indexed alphabetically or in any other similar manner.

The rotatable letter file 24 is also formed with a circular bottom plate 25 that is journaled upon the spindle 20 and is provided with a series of radial partitions 26.

A cover 27 may be provided for the file, this, in the form shown in Figures 1 and 2, being composed of a series of telescoping members 28 that are pivoted to move about the axis of the spindle 20 and form a closure for the filing members rotatably mounted upon the spindle.

Each of the rotatable files 22 is formed of a central plate 29 (Figures 10 and 11) that may rest upon a flange 30 formed upon the spindle 20. If desired, anti-friction bearings (not shown) may be provided to facilitate rotation of the rotatable files. These bearings could be of conventional form and would lie between the central plate 29 and the flange 30.

The plate 29 is provided with an outwardly extending flange 31 having, at its inner end, a circular boss 32 by means of which a suitable space 33 is provided between the flange 31 and plate 29. Flange 31 is secured to the plate 29 by means of screws 34 or the like and is provided with a series of locking pins 35 that are adapted to lock in position the card trays that are presently to be described. Radial arms 36 extend outwardly from the plates 29 and serve to locate and position card trays 37 (shown in detail in Figures 3, 4, and 5). The arms 36 are formed with sloping sides 38 against which the side plates 39 of the trays 37 lie.

Referring to Figures 3, 4, and 5, the filing device includes a plurality of the aforementioned trays 37, each tray comprising a bottom plate 40 to which the side plates 39 may be secured or with which the side plates may be formed integrally, the tray also being formed with a circularly formed back wall 41 and an inwardly extending flange 42. As illustrated in Figure 11, the flange 42 is adapted to be inserted within the space 33 and when the tray is in its operative position, an aperture 43 formed in the bottom 40 of the tray registers with the locking pin 35, and the tray is thus secured in position against accidental displacement.

In order that the trays may be utilized in such manner that index and information cards may be properly positioned therein, a circular rib 44 is formed in or secured to the bottom 40 of the tray. This rib may be

adjustably positioned to suit the requirements of the individual service, and as illustrated in Figures 5, 6, and 7, individual cards 45 may be formed of such size and shape as to fit within the trays, as illustrated in Figure 5. The bottom of each of such cards is formed with a notch 46 that is adapted to fit over the rib 44 and thus maintain the card in the desired position, as illustrated in Figure 5. The outer end of the card 45 may be formed with a notch 47 in order to expose information cards, or the like, such as sales slips shown in dotted lines at 48. This sales slip or information card is of such size that it may be located in the position illustrated in Figure 5 by means of the rib 44, and a portion of its outer edge is thus displayed in the notch 47 of the card 45. In this fashion, the operator or user of the file may be immediately apprised of the information cards or sales slips to be found in the file.

The cards carried by each of the trays may be indexed or operated by means of index or spacer cards 49 that are sufficiently high to extend above the cards 45, and at the upper edges of the index cards 49, indexing indicia 50 is provided. Notches 51 are formed in the index cards 49 to register with the notches 47 in the cards 45. An outwardly and downwardly extending positioning arm 52 is formed on each of the index cards 49, and at the foot of the arm 52 the locking flange 53 is provided. As illustrated in Figures 3, 4, and 5, the outer extremity of the bottom 40 of each of the trays is provided with channel-forming flanges 54 and 55, being spaced to form a channel 56 with a slot 57 opening thereinto. The bottom portion of the flange 52 is received within the slot 57 and the locking flange 53 engages under the channel-forming member 54 in order that the index card 49 may be secured in position and yet may be moved circumferentially around the tray 37. If desired, an indexing plate 58 may be provided on the side of the flange 52. In this connection either or both of the indexing plates 50 and 58 may be utilized.

Two modified forms of securing the index cards in position are illustrated in Figures 8 and 9. In Figure 8, for example, the flange 52 is provided with oppositely extending flanges 59 and 60, or these flanges may be formed with a radial extending plate or rib which is secured to the bottom of the flange 52. In any event these members lie within the channel 56 and beneath the respective channel-forming members 54 and 55.

In the form of the invention shown in Figure 9, a T-shaped locating member 61 is provided on the bottom 40, and the index card 49 is formed with oppositely extending flanges 62 and 63 to secure the card in the desired position.

From the foregoing description it will be apparent that the rotary file provides a mechanism for positioning cards in such fashion that the outer edges of adjacent cards may be more readily spaced apart than in a stack of cards in a drawer thus to facilitate viewing the outer edge portions. If desired, inverted T-shaped pivoted locking plates 73 (Figure 1) may be used to help maintain the trays in the assembled position. The structure of the rotary members and trays is such that the trays are interchangeable, and in this fashion the trays may be easily rearranged. By providing suitable collars or other spacing devices on the spindles, the vertical distance between rotary file members may be adjusted as desired. The entire file may be readily manipulated and the cards and other information therein contained viewed by one who may stand in one position only and readily bring to view whatever portions of the file he desires.

While the invention has been described with specific reference to the accompanying drawings, it is not to be limited save as defined in the appended claims.

I claim:

1. A circular shelf adapted to rotate about a vertical spindle in a rotary filing system, said shelf having an upwardly projecting arcuate rib extending circumferentially of the center of the shelf at a point intermediate the center and outer edge of the shelf, said rib being receivable into matching notches of radially lying information cards to forestall radial movement thereof while permitting vertical movement thereof for withdrawal and return thereof to the file on said shelf, and said shelf being provided with an arcuate guiding member means attached to the shelf adjacent the outer edge thereof and outside the outer margins of information cards radially held in position by said rib, said guiding member means being characterized in structure by a pair of separated, arcuate shoulders which are undercut to form respective spaced apart and radially oppositely facing arcuate recesses between the undersides of said shoulders and said shelf, said guiding member means through an interlocking relationship with index cards each having a portion passing downwardly past said shoulders and entering said recesses being adapted to forestall both radial and vertical movement of said index cards while maintaining the outer margins of said index cards radially outward of the outer margins of said rib held information cards.

2. A circular shelf adapted to rotate about a vertical spindle in a rotary filing system, said shelf having an upwardly projecting arcuate rib extending circumferentially of the center of the shelf at a point intermediate the center and outer edge of the shelf, said rib being receivable into matching notches of radially lying information cards to forestall radial movement thereof while permitting vertical movement thereof for withdrawal and return thereof to the file on said shelf, and said shelf being provided with a pair of arcuate flanges attached to the shelf in spaced apart relation to form an inverted T-shaped channel at the outer edge thereof, the inner arcuate flange being outside the outer margins of information cards radially held in position by said rib, said channel through an interlocking relationship with matching tabs of index cards being adapted to forestall both radial and vertical movement of said index cards while maintaining the outer margins of said index cards radially outwards of the outer margins of said rib held information cards.

3. A circular shelf adapted to rotate about a vertical spindle in a rotary filing system, said shelf having an upwardly projecting arcuate rib extending circumferentially of the center of the shelf at a point intermediate the center and outer edge of the shelf, said rib being receivable into matching notches of radially lying information cards to forestall radial movement thereof while permitting vertical movement thereof for withdrawal and return thereof to the file of said shelf and said shelf being provided with an arcuate T-shaped member extending upwardly from an attachment with said shelf along the outer edge thereof and outside the outer margins of information cards radially held in position by said rib, said T-shaped member through an interlocking relationship with matching slots of index cards being adapted to forestall both radial and vertical movement of said index cards while maintaining the outer margins of said index cards radially outward of the outer margins of said rib held information cards.

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