

April 1, 1930.

LE ROI E. HUTCHINGS

1,752,300

VERTICAL RECORD FILE

Filed April 28, 1926

2 Sheets-Sheet 1

Fig. 1.

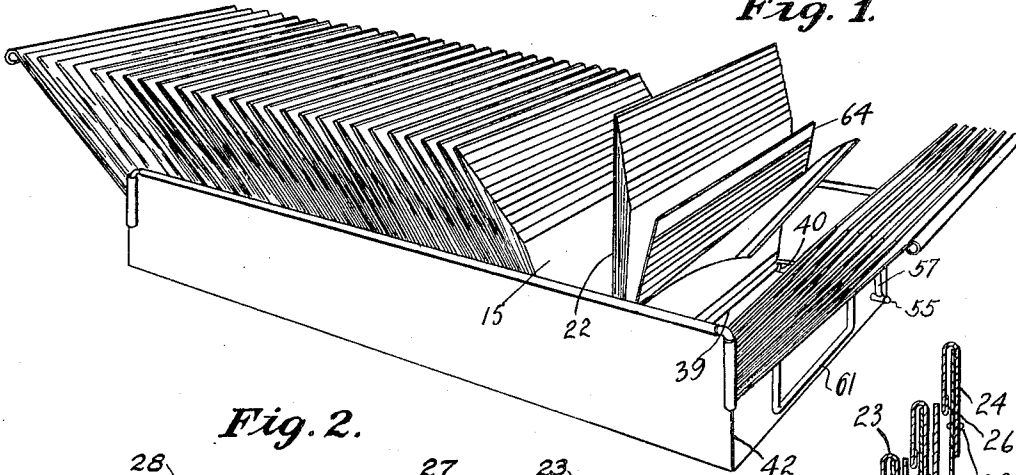


Fig. 2.

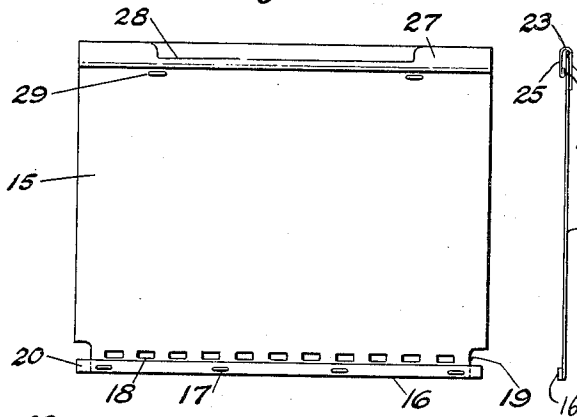


Fig. 11.

Fig. 12.

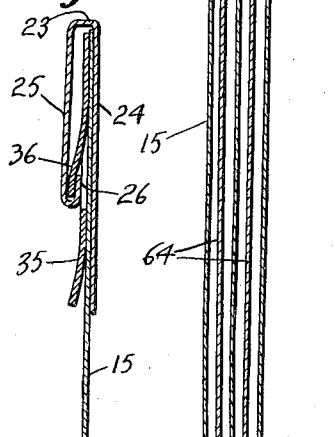


Fig. 9.

Fig. 13.

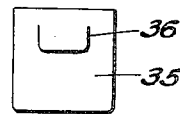
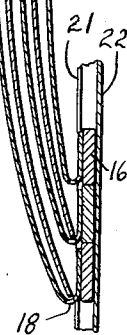


Fig. 10.

Fig. 3.

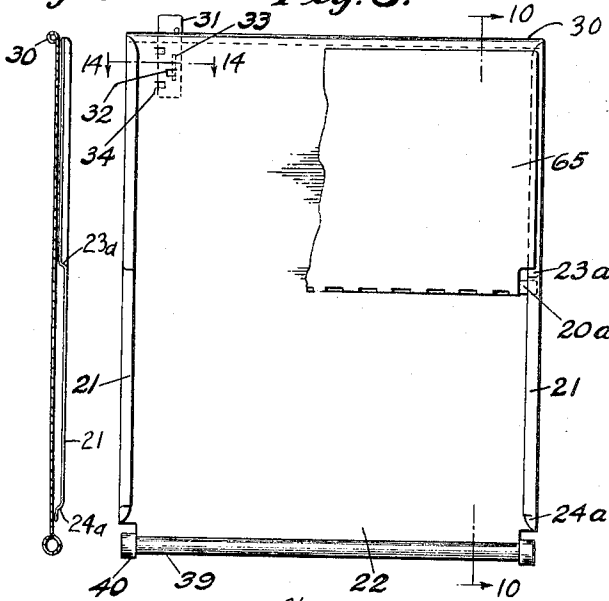
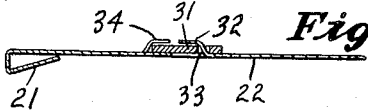


Fig. 14.



Inventor
LE ROI E. HUTCHINGS
Barton A. Beauf
Atty.

April 1, 1930.

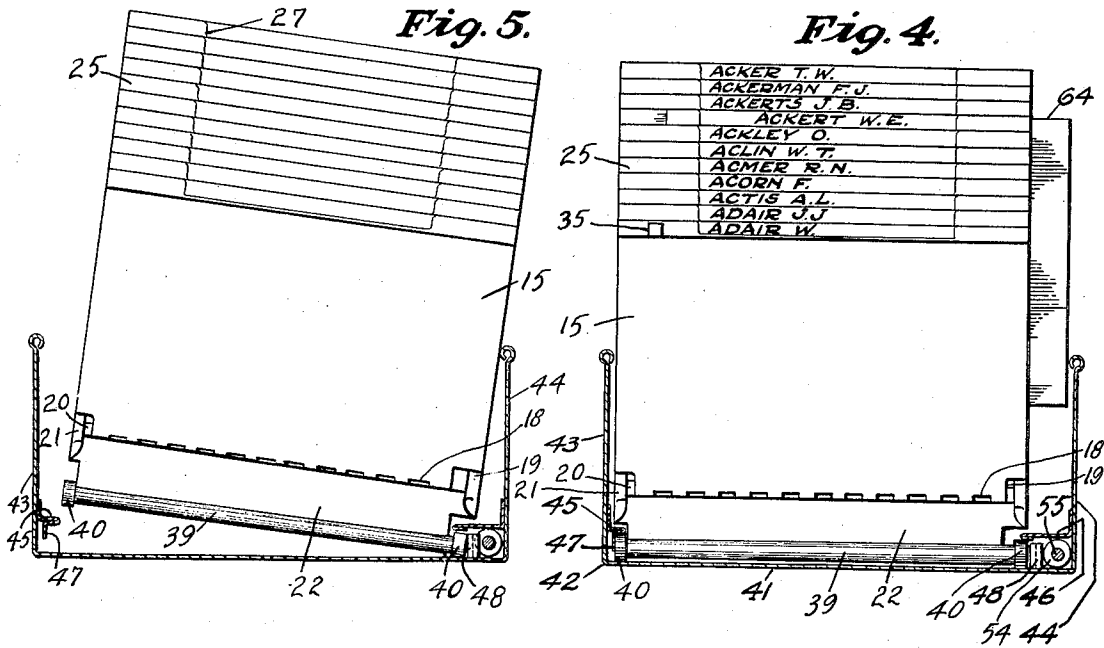
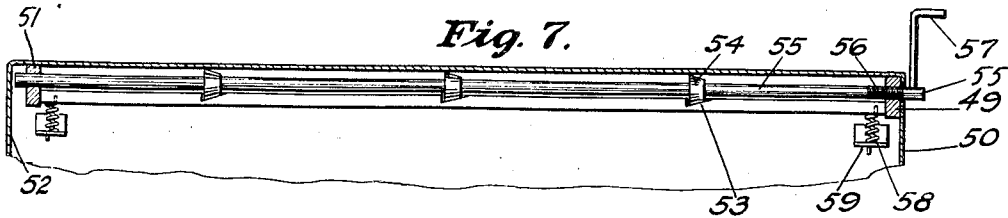
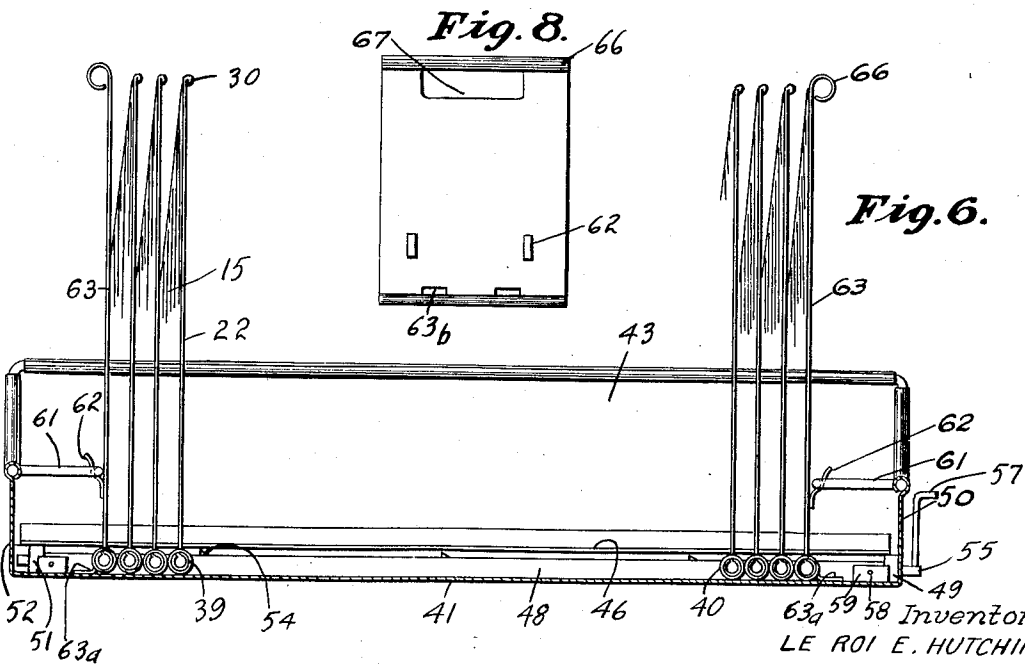
LE ROI E. HUTCHINGS

1,752,300

VERTICAL RECORD-FILE

Filed April 28, 1926

2 Sheets-Sheet 2



Inventor
LE ROI E. HUTCHINGS

Barton A. Bean
Atty.

UNITED STATES PATENT OFFICE

LE ROI E. HUTCHINGS, OF BUFFALO, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO REMINGTON RAND INC., OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

VERTICAL RECORD FILE

Application filed April 28, 1926. Serial No. 105,289.

This invention relates to vertical record files and relates more particularly to record files of the class described in which the record cards are maintained in a substantially vertical position with one card overlapping the adjacent card for index purposes.

Various filing devices have been proposed in which the record cards are supported in overlapping, visible position, but many of these devices are complicated in construction and expensive to manufacture. They frequently occupy considerable room and have a large "build up." Also the reference work with many of these filing devices is slow because of the fact that a maximum visibility of indexing is not secured by proper mechanical arrangements.

In certain cases such as in the filing of insurance records, it is desirable to file two or more cards of different sizes in a single pocket and have one card the index card. Suitable filing devices for cards of different sizes are not available. Many of the filing devices on the market are not flexible because of the fact that new cards or records cannot be added or old cards taken away. Many of the filing devices on the market do not have a simple and convenient type of signalling device with the result that speed in reference work is reduced.

An object of this invention is to provide a filing device which is simple in construction and cheap to manufacture and which will provide maximum speed of reference and maximum visibility.

Another object of this invention is to provide a filing device in which the record cards become self-indexing and in which said cards are supported vertically in overlapping index position.

A further object of the invention is to provide a vertical visible filing device which permits the maximum amount of flexibility as to the ease with which the cards may be added to or taken away from the file.

A still further object of the invention is to provide a filing device in which any number of cards of different sizes may be supported between the separators or pocket members; also to improve filing devices of the class de-

scribed in other respects hereinafter specified and claimed.

Reference is had to the accompanying drawings forming a part of this specification, in which,

Fig. 1 is a perspective view of my filing tray, with the vertical, visible, filing frames in position,

Fig. 2 is a front elevation of one of my improved separator cards,

Fig. 3 is a front elevation of one of my improved separator supporting frames having the top backing card in position,

Fig. 4 is a transverse sectional view through one of the file trays completely assembled,

Fig. 5 is a transverse sectional view through one of the file trays showing method of removal of one of the separator frames,

Fig. 6 is a longitudinal sectional view through one of my improved file trays,

Fig. 7 is a plan sectional fragmentary view of the file tray device for maintaining the separator frames in position,

Fig. 8 is an elevation of one of the end frames used in the file tray,

Fig. 9 is a vertical sectional view through a series of separator cards in overlapping assembled position.

Fig. 10 is an edge sectional elevation of one of the separator frames, on line 10—10 of Fig. 3.

Fig. 11 is an edge elevation of one of the separator cards,

Fig. 12 is a transverse sectional view through the top of a separator card showing the signalling device in position.

Fig. 13 is an elevation of my improved signalling device.

Fig. 14 is a transverse sectional view through a frame signal on line 14—14 of Fig. 3.

Referring to the drawings by numbers, 15 indicates one of my improved separator cards which may be constructed of flexible material such as kraft paper. These separator cards are preferably all identical so that they can be made cheaply in quantity production but they may be made in different sizes if so desired. This separator card has a stiffening

strip 16 secured to its bottom edge by any suitable way such as by staples 17 and a series of slots or openings 18 is formed in the card adjacent said strip so as to form a bend line along said slots and permit the strip 16 to be bent back parallel to the card to form a rounded bottom in the pocket. This will permit a record card to loosely rest in the pocket between the separators and prevent the lower edge of the record card from engaging between two bars 16. It will also tend to prevent any sticking of a record card to any part of the separators. This free supporting of a record card is clearly illustrated in Fig. 9.

15 An inset shoulder 19 is preferably formed by cutting out a small piece at each bottom corner of separator card 15 and strip 17 is attached to the bottom of said card so that the ends of said strip overhang the shoulder 19 to form tongues 20 for the purpose of engaging under the supporting flanges 21 of a separator frame 22 to be more fully described.

Along the top of separator card 15 is secured a sheath or folded member 23, of a transparent material such as celluloid, having a rear fold 24 and a front fold 25, the separator card 15 being positioned between the two folds 24 and 25. The lower edge of the front fold 25 is preferably folded rearwardly and upwardly to form a signal supporting flange 26. An ear 27 is formed on each of the upper corners of the card 15 for convenience in assembly to space the upper edge of the sheath 23 properly with respect to said card 15. An opening 28 is thus formed between the ears for the purpose of permitting the index characters of a file card to be seen through the folds 24 and 25 of the sheath 23. The sheath 23 may be attached to the card 15 in any suitable way such as by staples 29.

The separator frame 22 is preferably rectangular in shape and has formed on its upper edge a bead 30 so as to insure a smooth edge for handling. The flanges 21 are formed on the vertical edges of the frame 22, said flanges preferably extending nearly the full length of said frame. The upper portion of flange 21 may be pressed down flush against the frame 22, as shown in Fig. 14 so as to form a retaining shoulder 23A and a similar portion of flanges 21 is pressed flush against the frame 22 to form a lower retaining shoulder 24A, the flanges 21 between shoulders 23A and 24A being spaced apart from the frame 22 approximately the thickness of the strips 16 so as to slidably receive tongues 20 and maintain the separators 15 in overlapping stepped vertical position with the horizontal edges of strips 16 abutting as shown in Fig. 9. When the separators are in assembled position as shown in Fig. 9, the width of the overlapping portion formed by the upper edges of the sheaths 23, is equal to the width of the strips 16.

A signal 31 is preferably positioned at the top of each frame 22, said frame having an integral ear 32 extending through a slot 33 formed in the signal 31. A pair of ears 34 is formed on the frame 22 adapted to slidably receive one edge of signal 31 so that the signal 31 may be moved upwardly a limited distance into visible position when it is desired to indicate activity in the separators supported by any part of the frame 22.

The activity of the file record cards in any particular separator may be indicated by an improved signal 35 having an outwardly extending ear or tab 36. The signal 35 may be of any desired color and is inserted under the fold 25 and flange 26 until the outwardly extending ear 36 moves into the slot formed by the flange 26, said signal being held in visible position as it can be seen through the transparent fold 25. The removal of the signal 35 from the fold 25 may be readily accomplished by manually moving the signal upwardly to disengage the ear 36 from the flange 26 and then moving the bottom edge of said signal 35 outwardly after which the signal may be easily withdrawn from the fold 25.

A roll 39 is formed on the bottom of frame 22 and cylindrical roller bearings 40 are attached to the outer ends of roll 39 said bearings 40 being adapted to rock or roll on the bottom 41 of a file tray 42 so as to support the frames 22 having the separator cards 15 and permit the easy and frictionless tilting of said frames 22 at will.

The file tray 42 has upwardly extending side walls 43 and 44, the wall 43 having an angle strip 45 secured to its lower inner surface, said strip being spaced apart from the bottom 41 of said tray and angle strip 46 is attached to the wall 44 near the inside bottom edge thereof, the angle strip 46 being somewhat wider than angle strip 45 for a purpose to be hereinafter described. The roller bearings 40 are adapted to be retained under angle strips 45 and 46 so as to prevent the vertical movement of frames 22. A downwardly extending flange 47 is formed on the angle strip 45, said flange being adapted to limit the lateral movement of the roller bearing 40 to the left as seen in Fig. 4. In order to limit the lateral movement of the roller bearing 40 to the right as seen in Fig. 4, a locking bar 48 is positioned under the angle strip 46 between bearings 40 on the frames 22 and file tray wall 44.

The longitudinal movement of bar 48 is prevented by a shoulder 49 formed near the end wall 50 of tray 42 and another shoulder 51 near the rear wall 52 of said tray 42. However it is desired to permit a free transverse movement of the locking bar 48 between shoulders 49 and 51 so that said bar will press against the ends of roller bearings 40 on one side of the frames 22. For this purpose a

plurality of inclined cam surfaces 53 are formed on the outer edge of the bar 48 and a frusto-conical actuating cam 54 engages each of said cam surfaces 53, said cams 54 being secured to a shaft 55. The shaft 55 is rotatably mounted on shoulder 51 at one end and is provided at the other end with threads 56 adapted to be received in a threaded opening in shoulder 49 so that as said shaft 55 is rotated by means of an operating lever 57 at the front of the tray, it is given an axial movement so that the cams 54 act on cam surfaces 53 and move the locking bar 48 inwardly against the ends of the bearings 40. A plurality of springs 58 are retained in sockets 59 on the bottom 41 of the tray 42, said springs being adapted to normally urge the locking bar 48 outwardly so that the cam surfaces 53 are resiliently pressed against the cams 54. When the shaft 55 is screwed to the left as seen in Fig. 7, the locking bar 48 disengages from the roller bearings 40 and permits the lateral movement of frame 22 until the opposite roller bearing 40 is released from angle strip 45 after which the frame 22 may be removed from the file tray 42 and may be moved upwardly at an angle as shown in Fig. 5.

A U-shaped hinge member 61 is pivotally mounted on the top of each of the tray ends 50 and 52. When the file is in closed position, the free end of hinge member 61 is adapted to be received in a clip 62 secured to an end frame 63 so that said frame is maintained in a substantially vertical position as shown in Fig. 6. Clips 63A secured to tray bottom 41, engage the bottom rolls of frames 63 so as to maintain said frames 63 in a tilted or vertical position on said tray bottom 42. These clips extend through openings 63B in frames 63. When it is desired to refer to filing cards, the hinge member 61 is moved upwardly and outwardly out of engagement with clip 62 so that the frames 22 and 63 may be separated as shown in Fig. 1 to permit tilting of the frames and reference to file cards 64 contained between separator cards 15. A filler card 65 is inserted with its tongues 20A under the flanges 21 just below the upper stops 23^a as shown in Fig. 3 so as to receive the top file card 64 and prevent said card from dropping down behind the strips 16. Roll 66 is formed at the top of each end frame 63 and opening 67 is cut out so as to form a hand hold at the top of said end frames 63 thus permitting the cabinet or tray 42 to be easily carried from place to place.

It should be noted that with the arrangements shown one edge of the frames 22 is spaced apart from the wall 44 so that any number of the file cards 64 may be moved edgewise to the right as seen in Fig. 4, to indicate activity. When the file cards are in assembled position in the file tray 42, the index characters are visible through the two

folds 24 and 25 thus causing the file card 64 to be self indexing without necessitating further notations on the separators 22. This self indexing feature of the filing devices considerably simplifies reference work. When the filing device is in assembled position, the separators are supported on the frame 22 in overlapping position and each separator forms a pocket for the reception of record material to be filed.

As seen in Fig. 1 cards or other matter to be filed may be deposited between the frames 22 temporarily until a time is found convenient for classifying the file cards in their proper separators. This feature causes the filing device to be more convenient than has heretofore been possible. The filing device is especially flexible since the file cards are not attached to the separators and may be removed at will. Ordinarily when a file card is removed permanently from the separator it is unnecessary to change the position of the separators since no permanent notation appears on the separators. However, if it is desired to insert different separator cards space may be left at the top of the open portion of flanges 21 and additional separator cards may be added from time to time. The added capacity thus provided is effectual or evenly distributed throughout the filing system thus improving the flexibility thereof. It is seen that the filing cards are arranged in small groups on each frame 22 thus permitting an entire frame with a small group of file cards to be removed from tray 42 and a new one inserted.

In view of the fact that the visibility of all file cards has been made possible by my improved filing device it is not absolutely necessary to arrange all file cards associated with any one frame 22 in strict numerical or alphabetical sequence. File cards showing the greatest activity may be placed in the top separators of each frame 22 as the file card 64 desired for reference can be easily selected regardless of its sequence since all of the index characters of all file cards on a single frame 22 can be seen at a glance. The signals 31 at the top of frames 22 are easily visible along the tops of said frames so that a single signal may control as many as a thousand file cards if so desired.

I have found that my improved vertical and visible filing device occupies less than half the space of any other known filing device having equal capacities. The entire filing device is light in weight and has a maximum portability. Because of the extreme visibility of all file cards the speed of reference is at maximum. Also any number of filing cards of different sizes may be readily filed behind a separator with only the largest card bearing the visible index characters.

I would state in conclusion that while the

illustrated examples constitute a practical embodiment of my invention I do not limit myself precisely to the details herein illustrated and described, since manifestly the same can be considerably varied without departing from the spirit of the invention as defined in the appended claims.

I claim as my invention:

1. In a filing device, a plurality of separator members, a supporting rail hingedly connected to each separator member, a frame member, means for supporting said frame member in a vertical position, and means on said frame member engaging the ends of said supporting rails for supporting a series of the separator members in overlapping substantially vertical position so as to form pockets for loosely receiving record cards.

2. In a filing device, a plurality of similar separator members, a frame member, means for supporting said frame member in a vertical position, and a retaining flange associated with said frame member adapted to securely but detachably engage and support said separators in overlapping substantially vertical position so as to form pockets for loosely receiving record cards.

3. In a filing device, a plurality of separator members of substantially similar shape, a frame member hingedly supported at the lower end thereof, and means for removably attaching said separator members to said frame member to form a series of pockets in stepped position for the reception of record matter in stepped, visible arrangement.

4. In a filing device, a plurality of separator members of substantially similar shape, and a frame member having a flange, a section of the separator member being adapted to be bent back in parallel relation thereto and removably secured under said flange so as to support said separators in stepped, overlapping relation on said frame member for the reception of record cards in visible index position.

5. In a filing device, a frame member supported in a tilting substantially vertical position, a separator card, and a stiffening strip attached to a horizontal edge of said separator card, said strip being adapted to be folded back in parallel relation to said separator and attached to said frame member in stepped position with other similar separator cards, the width of the steps being equal to the width of said strips, said separators being adapted to form pockets for the reception of record cards in visible reference position.

6. In a filing device, a plurality of frame members, a plurality of separators attached to each of said frame members adapted to form pockets for the reception of record matter, and a file tray, for the reception of a series of said frame members in substantially vertical position, said frame members being

hingedly but detachably connected at the bottoms thereof to said tray.

7. In a filing device, a plurality of frame members, a plurality of separators attached to each of said frame members adapted to form pockets for the reception of record matter, a file tray for the reception of said frame members in substantially vertical position, face-to-face, and means for locking said frames in vertical position in the tray, said locking means being adapted to be released for permitting the tilting of said frames out of vertical position for reference to said record matter.

8. In a filing device, a plurality of frame members, a plurality of separators attached to each of said frame members adapted to form pockets for the reception of record matter, a file tray for the reception of said frame members in a substantially vertical position, a plurality of retaining flanges on said file tray adapted to engage said frames and locking means associated with said tray for removably engaging said frame members to permit removal of a frame member without removing other frame members in said tray.

9. In a filing device, a plurality of separator-supporting frame members, a file tray adapted to receive said frame members in substantially vertical face-to-face position, a bearing on each lower corner of said frame members, a plurality of flanges on said tray adapted to engage said bearings, a locking member associated with one of said flanges adapted to removably engage said bearings, and cam means for actuating said locking member into locking position.

10. In a filing device, a plurality of separator-supporting frame members, a file tray adapted to receive said frame members in substantially vertical, face-to-face position, a bearing on each lower corner of said frame members, a plurality of flanges on said tray adapted to engage said bearings, a cam surface being formed on said locking member, a rotatably mounted shaft, a frustro-conical cam associated with said shaft and means for moving said shaft axially during the rotation thereof so that said cam causes a lateral displacement of said locking member.

11. In a filing device, a plurality of substantially vertical separator-supporting frame members, a file tray, a bearing on each lower corner of said frame members, a plurality of flanges on said tray adapted to engage said bearings, a locking member associated with one of said flanges adapted to removably engage said bearings, a cam surface formed on said locking member, a rotatably mounted shaft, a frustro-conical cam associated with said shaft, said shaft being provided with a threaded section and a threaded bearing therefor to cause axial movement of said shaft when rotated, resilient means for urging said cam surface into contact with

said cam, and means for rotating said shaft so that the axial movement thereof causes the lateral displacement of said locking member into locking engagement with said frame members.

12. In a filing device, a plurality of separator members for receiving record file cards, a plurality of frame members, each frame member being adapted to support a series of said separator members, and a file tray for supporting said frame members in a substantially vertical position including a pair of side walls, one of said side walls being spaced apart from the edges of said separator members so as to permit the lateral displacement of said record cards.

13. In a filing device, a plurality of separator members having openings, a frame member for supporting said separator members in stepped vertical overlapping position, so as to form a series of pockets for loosely supporting record file cards, and a transparent sheath near the top of a separator adapted to permit characters or legends on said record cards to be visible through said sheath and the opening in said separator.

14. In a filing device, a plurality of separator members, a frame member for supporting said separator members in stepped, vertical position so as to form a series of pockets for the reception of record file cards, a transparent sheath near the top of a separator, a fold of said sheath being positioned in front of said separator member, an upwardly and inwardly extending flange formed on said front fold, and a signal having an outwardly extending ear adapted to engage said flange and indicate activity of the record card held by said separator member.

15. In a filing device, a plurality of separator cards, a plurality of frame members, each frame member being adapted to support a plurality of said separator cards, each separator having a perforated bend line, a stiffening strip adjacent said bend line for attaching said separator member to said frame member in stepped, vertical relation to adjacent separators so as to form a series of pockets for the reception of record file cards, and means for supporting said frame member in a substantially vertical position.

16. In a filing device, a frame member, a plurality of separator cards, means for supporting a plurality of said frame members in a substantially vertical position, flanges formed on the vertical edges of said frame member for a portion of the length thereof, said flanges being adapted to support said separator cards in vertical, stepped position, and a filler card on said frame member along the length thereof not covered by said flanges adapted with a separator card to form a pocket for the reception of a record card.

17. In a filing device, a plurality of separator members, a plurality of frame mem-

bers, each frame member being adapted to support a plurality of said separator members in a series providing stepped pockets for the reception of record file cards, a file tray having a bottom adapted to support said frame members in substantially vertical position, and a roller bearing at the bottom of a frame member adapted to permit frictionless tilting of a frame member.

18. In a filing device, a plurality of separator cards, a plurality of frame members, each frame member being adapted to support a plurality of said separator cards in stepped relation for the reception of record file cards, a file tray adapted to support said frame members in substantially vertical, face-to-face position, and an end frame member associated with said file tray, said end frame member having a handle adapted to provide portability of said filing device.

19. In a filing device, a plurality of relatively heavy frame members, a substantially horizontal support for said frame members, said frame members being adapted to normally stand in substantially vertical positions, parts on said frame members and on said support connecting said frame members and support and permitting said frame members to be shifted bodily on the horizontal plane of said support while in upright vertical position or tilted angularly with respect thereto, a plurality of removable separator members adapted for connection with each of said frame members, and a pair of vertically extending continuous parts on said frame members for holding the plurality of said separator members on said frame members in overlapping index arrangement.

20. In a filing device, a plurality of frame members, a plurality of separator members supported in substantially vertical position and in overlapping index relation on each of said frame members, and horizontally disposed means for retaining and supporting said frame members in series, said frame members and means being pivotally connected to permit said frame members to be shifted bodily in a horizontal plane on said support while vertically positioned, or to be tilted on said pivots at angles to the horizontal.

21. In a filing device, a plurality of separator supporting frame members, a file tray adapted to support said frame members in a substantially vertical, face-to-face position, bearings on the lower ends of said frame members, a plurality of flanges on said tray adapted to engage said bearings to hold the frame member in tiltable relation, a locking member associated with one of said flanges adapted to engage a plurality of said bearings to detachably secure said frame members to said tray, and spring means connecting said locking member to said tray.

22. In an index device, a frame member, a series of separator cards hingedly connected

at the bottom thereof to said frame member to form pockets for the reception of file cards, and a tray adapted to hingedly support a series of said frame members in a substantially vertical, face-to-face position, said separator cards each having a transparent sheath along its upper edge so that indicia on the upper edges of said file cards will be visible through the transparent sheaths.

23. In an index device, a frame member, a series of separator cards hingedly connected at the bottoms thereof to said frame member to form pockets for the reception of file cards, a tray adapted to hingedly support a series of said frame members in a substantially vertical, face-to-face position, transparent sheaths along the upper edges of said separator cards, and signals adapted to be supported by said sheaths.

24. In a filing device, a tray, a plurality of frame members movably attached in said tray, and a plurality of separators mounted on each frame member in vertical offset overlapping relation, and having pocket-forming cooperation for loosely supporting cards in vertical offset relation.

25. In a filing device, a tray, a plurality of frame members having the lower ends provided with movable pivotal connection in said tray, and a plurality of separators mounted on each frame member having the lower ends attached to said frame member in adjacent relation to support said separators in offset overlapping relation, said separators having pocket-forming cooperation to support cards in offset relation vertically.

LE ROI E. HUTCHINGS.

40

45

50

55

60

65