

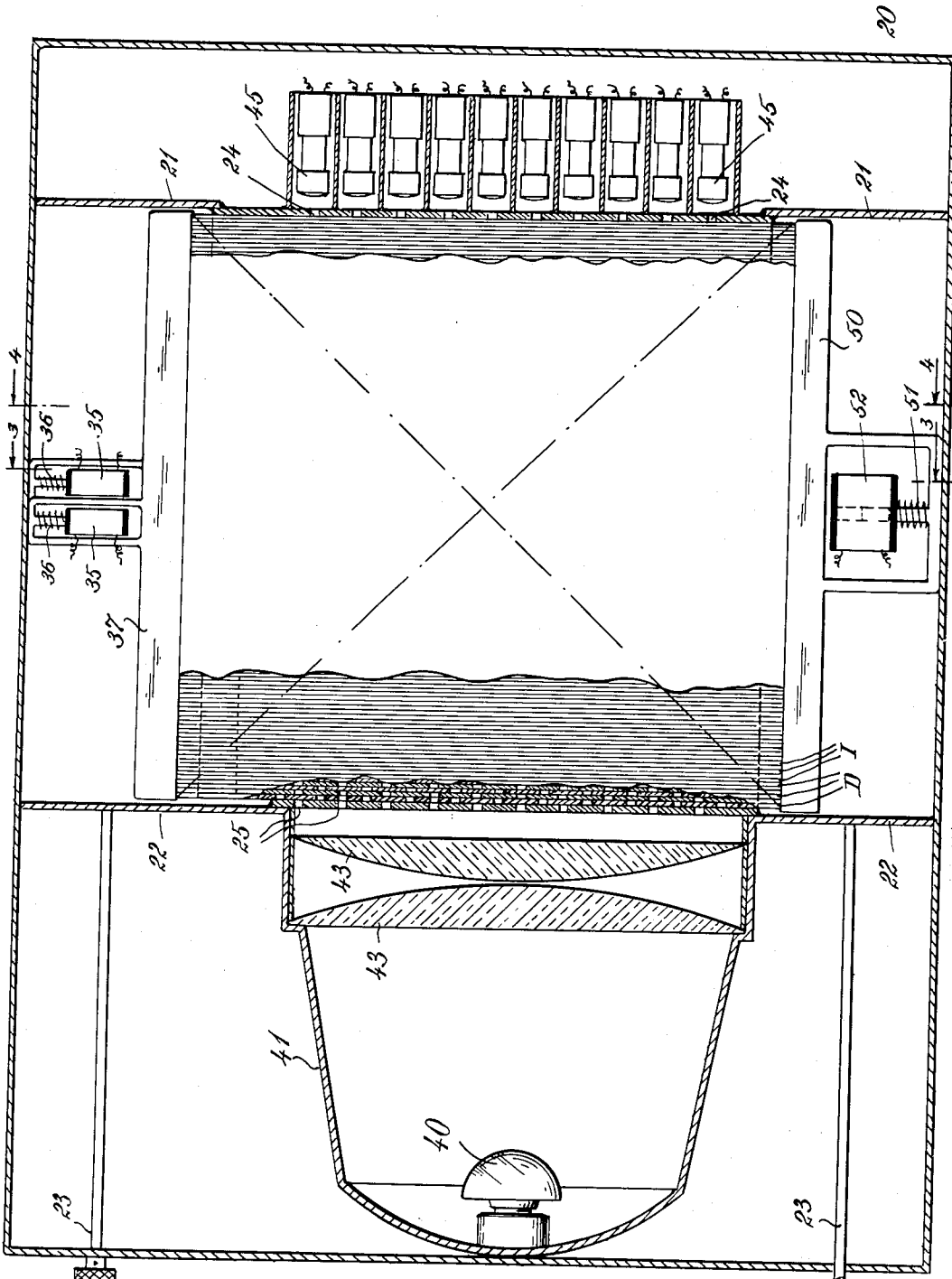
July 31, 1956

J. H. DRILLICK
CARD FILING

2,756,931

Filed Oct. 21, 1950

4 Sheets-Sheet 1



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4 Sheets-Sheet 2

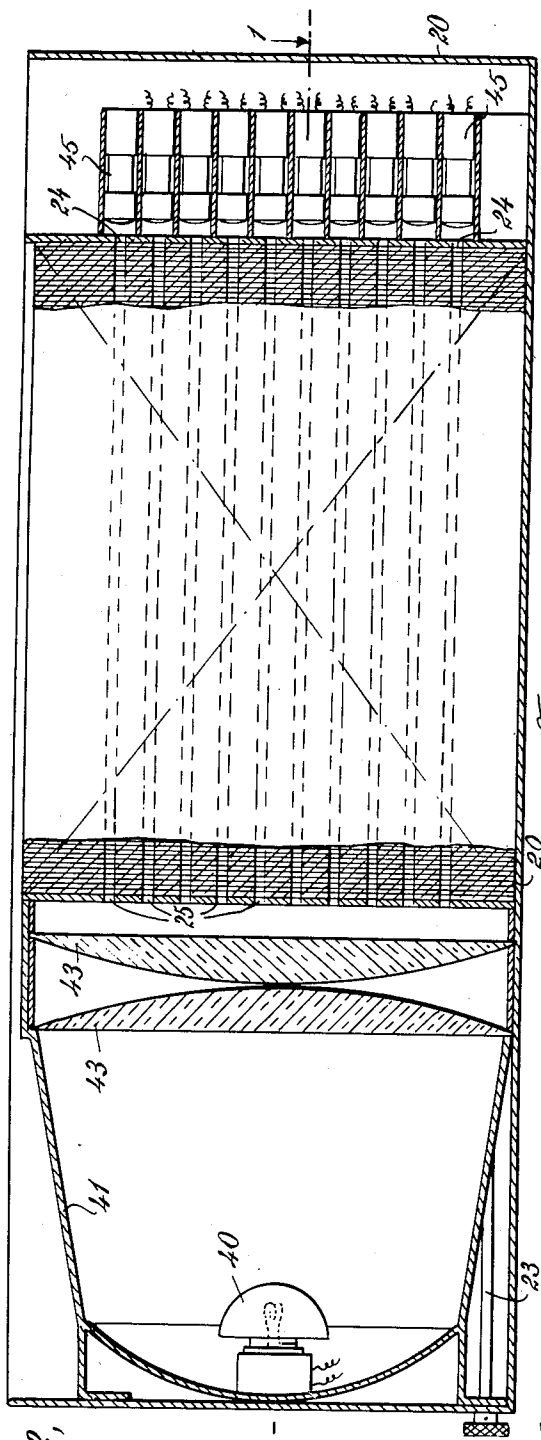


Fig. 2,

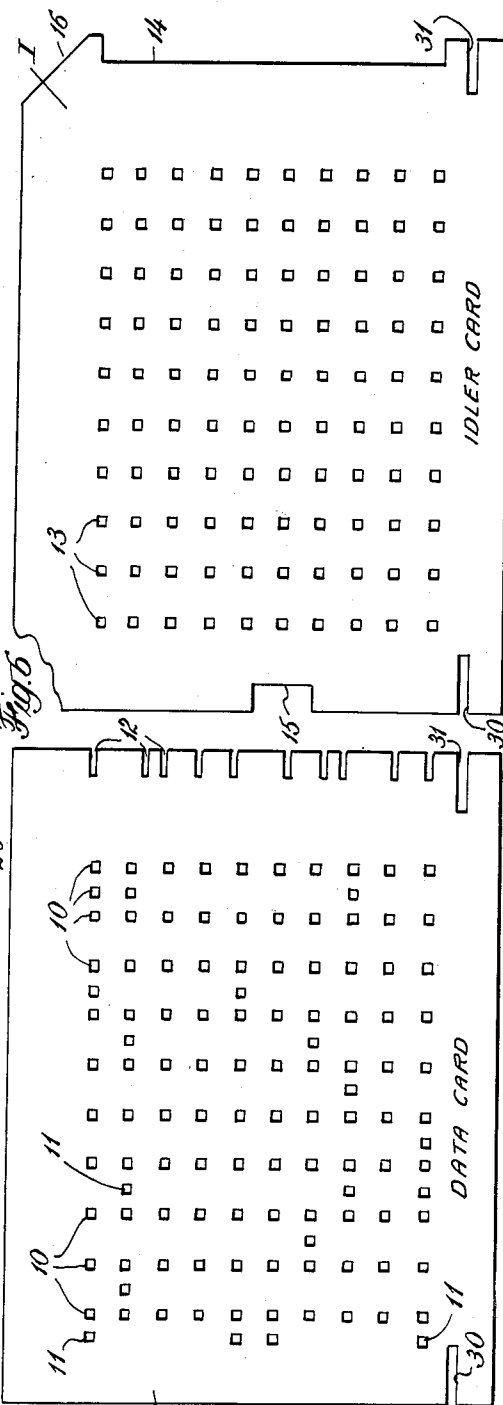


Fig. 5,

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4 Sheets-Sheet 3

Fig. 3,

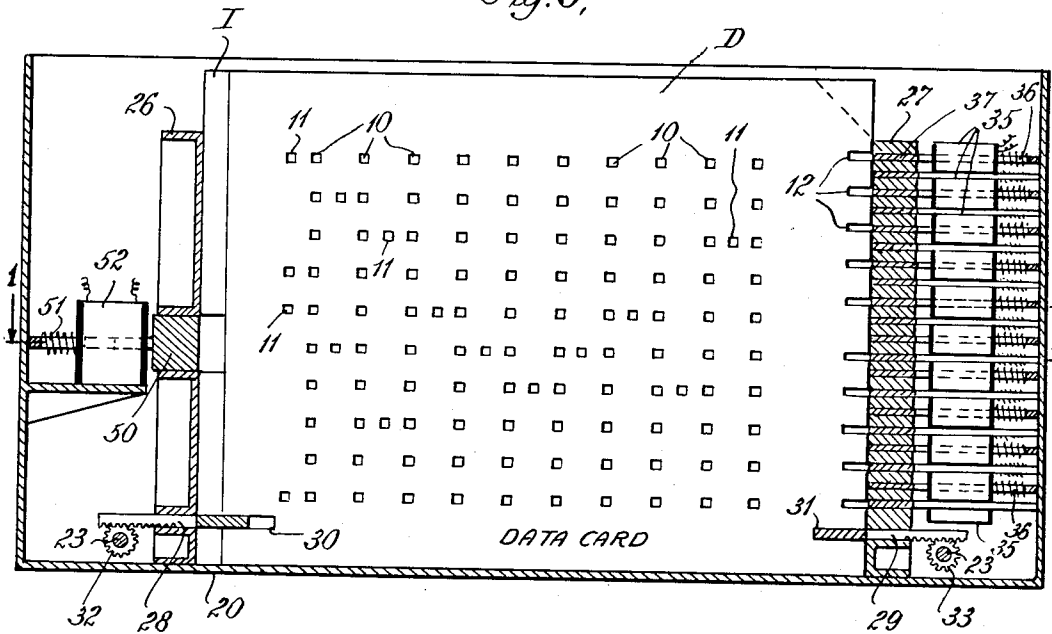
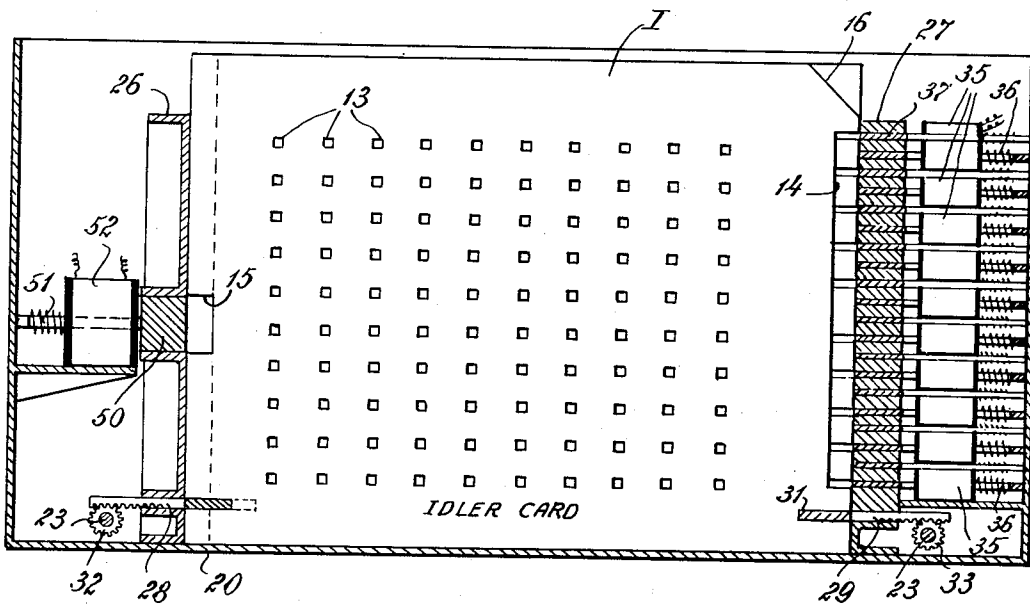


Fig. 4,



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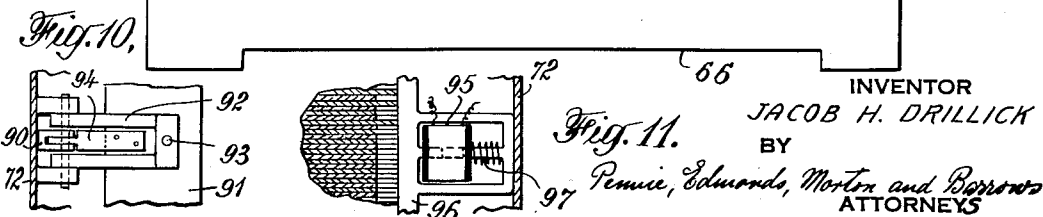
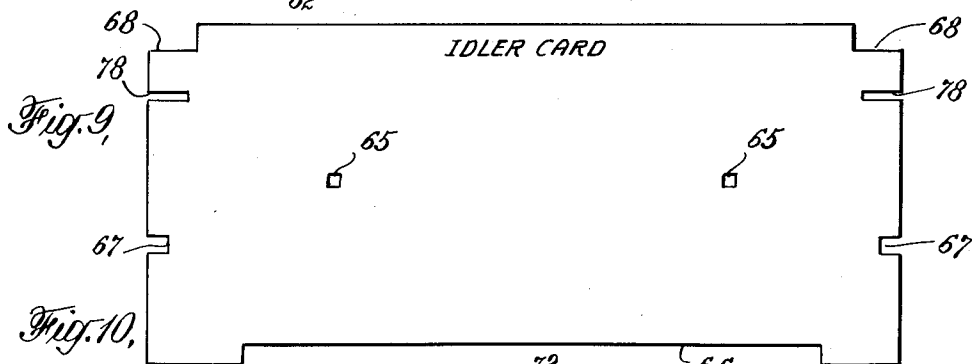
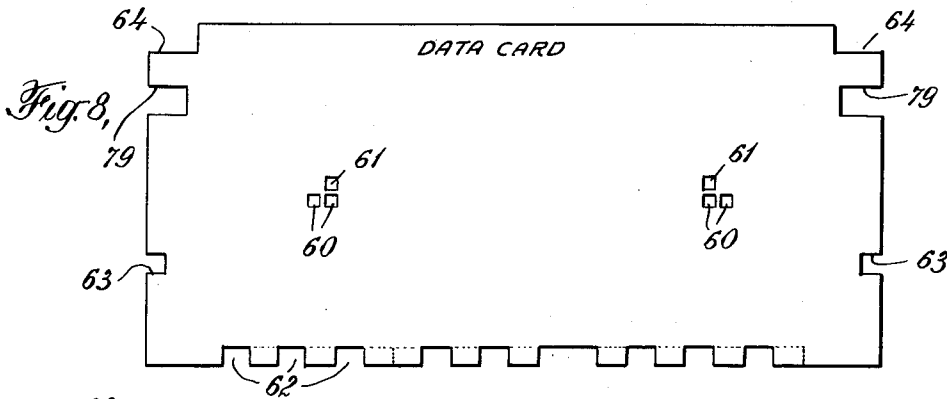
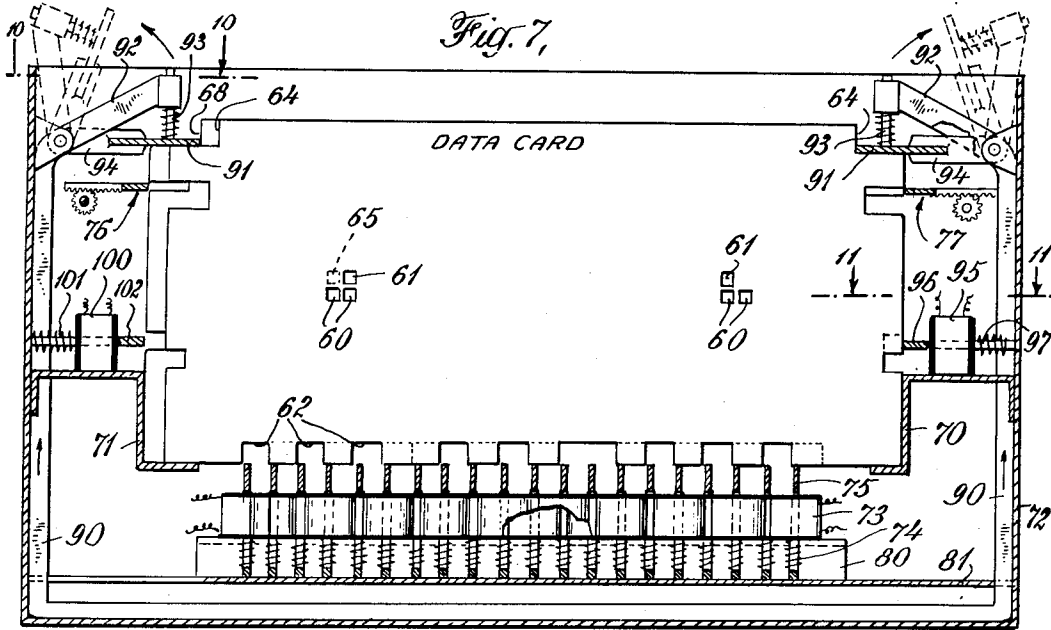
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2,756,931

CARD FILING

Filed Oct. 21, 1950

4 Sheets-Sheet 4



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2,756,931

CARD FILING

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Application October 21, 1950, Serial No. 191,467

3 Claims. (Cl. 235—61.6)

This invention relates to the art of filing and more particularly is concerned with a card filing system including a random card file from which the data on any card may be taken without removal of that card from the file.

Heretofore a myriad of filing systems have been proposed which make use of a plurality of cards each of which contains a certain amount of information, usually in the form of punched holes. In the majority of these systems, in order to obtain the information contained on any card, the entire group of cards must be sorted until that particular card from which it is desired to obtain information has been located and that card then removed from the file or at least from the group of cards and the information removed from it. In such systems it is generally essential that the cards of the group be maintained in a particular sequential order, that is, once they have been removed from the group they may not merely be replaced therein at random.

Another type of filing system which is widely known is the key-sort system wherein the cards, provided with notches or holes along a peripheral edge, are maintained in rather small groups and a particular card or cards selected from any one of the groups by the passage of a pin through a row of holes and notches of the cards of that group, the card or cards being selected not being retained upon the pin, which is lifted, because of notches in their peripheral edges in the row of holes and notches pierced by the pin. It therefore falls from the group and the information contained on it may then be removed. Because of the limitation with respect to the number of cards that may be sorted by this method, random filing of the cards is not satisfactory, each card having necessarily to be maintained in one of the rather small groups. Furthermore, in this type of system as in those previously referred to, a card must be completely removed in order that the information contained thereon may be taken from it and this of course necessarily requires a replacement operation.

It is the primary object of my invention to provide a filing system, capable of handling a substantially unlimited number of cards, in which the cards may be filed completely at random and in which any card may be automatically and substantially instantly selected from the group of cards and have the information contained on it taken off without the removal of that card from the group or file.

Among the novel features of my invention are the cards upon which information is stored, which will be hereafter referred to as data cards, idler cards separating the data cards one from another whereby frictional resistance to relative movement of the data cards is overcome, a file for supporting all of the cards and including means whereby one data card may be selected at random from the entire group of cards, and sensing mechanism whereby the data on any selected data card may be removed therefrom without removal of the data card from the group of cards.

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Accordingly, the filing system of my invention includes a card file having means for supporting a plurality of data cards therein in a normal mutually relative position of alignment. Each data card is provided along one edge with a plurality of locator code notches by which it is identifiable, and means are included in the file adjacent or opposite to the notched edges of the cards for offsetting any one of the cards from its normal mutually relative position of alignment with respect to all of the other cards, the locator code notches in the edge of the card serving to identify it for relative off-setting. In view of the relative movement of the data cards, a plurality of idler cards is employed to separate the data cards one from another to prevent movement of one data card resulting in movement of another due to frictional engagement. Finally a sensing mechanism is employed for reading the data on the off-set card without requiring removal of it from the file.

Two generally different broad ways are now contemplated for placing the data to be stored on the data cards and for removing such data from a particular card selected from the group or file as previously described. One of these ways constitutes the subject matter of my copending application Serial No. 191,468, filed October 21, 1950, now abandoned, and therefore is not here pertinent and need not be described. The other way comprises providing each of the data cards as well as each of the idler cards with a like predetermined regular arrangement of reading windows, the term "reading window" being intended to encompass either holes through the cards or other treated definite areas of the card through which a medium may pass in contrast to its (the medium) being unable to pass through the remainder of the card. The data cards are provided additionally with at least one data window in predetermined spaced relation to the reading windows, the term "data window" being intended to encompass the same breadth or scope of meaning as explained above for the term "reading windows." The reading windows of the data cards and the idler cards and the data windows of a data card, which has been relatively off-set from the other cards as pointed out above, are adapted to be aligned when the relatively off-set card is in off-set position. To obtain the data contained on the relatively off-set data card a sensing mechanism is provided which is adapted to penetrate the entire group of cards through the aligned rows of reading windows in the data cards and idler cards which contain also a data window of the relatively off-set card.

Also contemplated by my invention is a modified filing system wherein the cards are subject to movement in two directions and whereby limited information may be stored. This modified system employs a majority of the novel features set forth broadly above.

For a more detailed understanding of the filing system of my invention reference may be made to the accompanying drawings in which:

Fig. 1 is a sectional, plan view of one form of file according to my invention and taken on line 1—1 of Fig. 2;

Fig. 2 is an elevation, in section, of the file of Fig. 1; Figs. 3 and 4 are sectional views taken on lines 3—3 and 4—4, respectively, of Fig. 1; Fig. 3 showing the normal position of a data card in the file, and Fig. 4 showing the corresponding position of an idler card;

Fig. 5 is an elevation of a data card;

Fig. 6 is an elevation of an idler card;

Fig. 7 is a sectional view of the modified two movement storage file;

Fig. 8 is an elevation of a data card for use in the file of Fig. 7;

Fig. 9 is an elevation of an idler card for use in the file of Fig. 7; and

Figs. 10 and 11 are sectional views taken respectively on lines 10—10 and 11—11 of Fig. 7.

By reference to Figs. 5 and 6, the novel data cards and idler cards which are employed in my filing system will first be described. As seen in Fig. 5, a data card D is substantially rectangular in shape and contains a plurality of vertical rows of reading windows 10 which, in the present case, are in reality holes through the card but which, as previously stated, may in some applications be merely treated areas through which some medium may pass. Reading windows 10 furthermore do not represent any positive data but rather are provided so that a medium employed for reading data from a particular data card may pass unobstructedly through the remaining cards. One or more data windows 11 are formed in the card D in predetermined spaced relation to the reading windows as seen in Fig. 5, and are, in the present case, disposed in vertical rows parallel to the vertical rows of reading windows 10. These data windows 11 represent the information or data carried by the card D.

A plurality of locator code notches 12 are formed in one edge of the data card D and serve to identify the card. In the filing system being here specifically disclosed and described it is intended that a binary locator code system be employed and space is provided for twenty locator code notches, or ten pairs thereof, on the edge of the card. In accordance with the binary system, however, only one notch of each possible pair is formed in one card and therefore each card is provided with ten locator code notches 12. With ten such notches 1,023 cards may be specifically identified, but it will of course be clear that provision may be made for a considerably greater number of pairs of notches and that therefore a considerably greater number of cards may be separately identified by the addition of extra pairs. For instance, the addition of an additional or eleventh pair of notches would double the capacity of the system as shown and the provision of two extra pairs would quadruple it, etc. For the purposes of illustration, however, it is believed that the provision of but ten notches in each card will be satisfactory. The way in which the locator code notches are employed to identify a single card and to thereby select it from a group will be subsequently explained but it perhaps might be well to here state that such notches may be employed equally as well in accordance with a decimal or bi-quinary system or any other system as with a binary system.

An idler card I, the function of which is described below, is illustrated in Fig. 6 and is provided with a plurality of vertical rows of reading windows 13 in a predetermined spaced relation identical with that of the reading windows 10 of the data cards D. These reading windows 13 cooperate in the filing system with reading windows 10 to permit the passage of a medium through the idler card for reading the information from a selected data card D. An elongated notch 14 is formed in the right-hand edge of the idler card I, and is provided to accommodate relative movement of data cards D therewith in one direction, as will be more fully explained. In the opposite edges of idler card I another notch 15 is formed to permit movement of the data card D relative to the idler card in the opposite direction. A further characteristic of the data card is the removal of a portion of the upper right-hand corner thereof, as seen in Fig. 6 at 16, which permits the manual grasping of the corresponding corner of a data card when the data cards and idler cards are aligned in a group in a file as will now be described.

A file in which the data cards and idler cards described may be employed is disclosed in Figs. 1-4 and comprises a box-like casing 20 divided substantially into three portions by partitions 21 and 22. The data cards D and idler cards I are arranged in alternation and are supported

in the central portion of casing 20 between partitions 21 and 22, partition 21 being fixed but partition 22 being adjustable by means of adjusting rods 23. A plurality of windows 24 is formed in partition 21 corresponding in number, arrangement and location to the reading windows 13 of the idler cards supported in the casing. A plurality of similar reading windows 25 is formed in partition 22.

While partitions 21 and 22 maintain stability of position of the cards longitudinally of casing 20, reference must be made to Figs. 3 and 4 for an illustration of the means employed for maintaining the position of the cards transversely of the casing. For this purpose a fixed positioning member 26 is provided at the left-hand side of the file as seen in these figures and a fixed positioning member 27 is provided at the right-hand side thereof. Idler cards I are of sufficient length to extend from member 26 to member 27 and therefore are immovable in a transverse direction, and, thus, for all practical purposes are stationary, whereas data cards D are somewhat shorter in length and therefore may be moved a limited distance transversely of the file between members 26 and 27. In Figure 3 the data card D is illustrated in its normal position, that is, in a position of abutment with positioning member 27. In this position the data windows 11 of the data cards are aligned with the reading windows 13 of the idler cards I, the reading windows 10 being off-set therefrom.

All of the cards are maintained in the file by the inner ends of a pair of racks 28 and 29 which extend, respectively, through positioning members 26 and 27 and which also extend lengthwise completely throughout the length of the group of cards in the file. The inner ends of these racks are, respectively, received in edge notches 30 and 31 of the cards, the edge notches 30 in both types of cards, that is in the data cards and in the idler cards, being of substantially the same length, whereby in view of the shorter length of the data cards, movement of them is permitted with respect to the rack 28. In Figs. 3 and 4, racks 28 and 29 are in card retaining position but gears 32 and 33 are provided whereby they may be respectively withdrawn to permit removal of the cards.

A plurality of solenoids 35, twenty in number to provide for the twenty possible locations of locator code notches in the edges of the data cards, is supported adjacent the right-hand edges of the cards behind positioning member 27, and each supports upon its armature 36 a locator bar 37 which extends longitudinally of the group of cards and is adapted to pass through an opening in positioning member 27. To select a data card D of the group the solenoids corresponding to the locator code notches in its edge are energized. As only one data card, that being the one which it is desired to select, is provided with that particular arrangement of locator code notches 12 in its edge, only that card will not be moved to the left as seen in Fig. 3 by the locator bars 37, at least one of which will engage an unnotched edge portion of each of the other data cards in the group. Thus all of the data cards D, except that one selected, will be off-set to the left as seen in Fig. 3. It will be clear, therefore, that in the selection of any data card in the particular system being described ten solenoids 35 of twenty employed will be energized. The elongated notch 14 in the idler cards accommodates this selecting movement of locator bars 37, the idler card, as heretofore indicated, being stationary.

The function of the idler cards will, it is believed, be clear, that function being to separate the data cards one from another thereby preventing the two data cards adjacent the one being selected from frictionally engaging that selected one and moving it also to the left.

In their offset position, that is in their position of abutment with positioning member 26, the reading windows 10 of the data cards become aligned with the reading windows 13 of the idler cards. The data windows of the se-

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lected or non-off-set data card remaining in alignment with the reading windows of the idler cards as heretofore described. Thus a straight path through the entire group of cards is provided for every data window in the data card D not off-set, and the data contained on the data card D that is not off-set, which is represented by the data windows 11 therein, may be taken off without removal of that data card from the group. The sensing mechanism whereby this removal of data may be accomplished will now be described and for this purpose reference should be made to Figs. 1 and 2.

As illustrated in those figures, a light source in the form of an electric light bulb 40 is supported in a reflector 41 which in turn is supported by partition 22. A pair of convex lenses 42 and 43 are supported at the front of reflector 41 and serve to receive the diverging light rays from bulb 40 and pass them to the windows 25 in partition 22 and subsequently to the reading windows of the cards, parallel to one another and in a direction perpendicular to the faces of the cards. A plurality of photo-electric cells 45, equal in number and arrangement to the reading windows of the cards, are supported at the other end of the group of cards beyond partition 21, each being adapted to receive and be energized by light rays from one window 24 formed in partition 21 and corresponding to an aligned row of reading windows in the cards. When a particular data card has been selected, as previously described, by the off-setting of all of the data cards except that particular one, it will be clear that light will pass through the group of cards only along the path formed by the aligned reading windows of all cards, except that one not off-set, and the data windows of that particular card. That is, the card which is not off-set will interrupt the paths formed by the reading windows of the remaining cards except where it has a data window. Thus only those photo-electric cells 45 corresponding to the data windows of the non-off-set data cards will be energized. In this manner the data represented by the data windows of the non-off-setting card may be read.

After the data on the selected card has been read therefrom by the sensing mechanism above described, all of the off-set data cards must be returned to their original normal positions as illustrated in Fig. 3 to prepare the filing system for subsequent selection of another data card. In order to accomplish this, a bar 50 is provided adjacent the left-hand edges of the cards, as seen in Figs. 3 and 4, behind positioning member 26. It is supported on the armature 51 of a solenoid 52 and is adapted to extend through an opening in positioning member 26 upon energization of solenoid 52 and to engage the edges of the off-set data cards and move these data cards to the right again. The notches 15 in the left-hand edges of the idler cards accommodate this movement of the bar 50.

It is desired to remove any card from the group, that is any data card, to either add or remove information from it by adding or removing data windows, the file may be operated to select that card by off-setting the remainder and the upper right-hand corner of that card may be easily located and grasped by the provision of the cut-off corners of the idler cards as indicated at 16 and the card removed upon withdrawal of racks 28 and 29. As for replacement of a removed card, no thought need be given or care taken that it be replaced in any particular order in the group, for the filing system is a completely random one. However, when a data card is removed from the file one of the idler cards adjacent it should also be removed so that when the card is replaced in the file along with the removed idler card, it may be positioned between a pair of idler cards as is necessary in order that frictional engagement between it and another data card be avoided.

A modified form of filing system according to my invention is described in Figs. 7-11 and in many respects is very similar to that above disclosed and described. This system, however, is intended primarily as a storage system for information and the particular information or

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data derived from any data card is dependent upon the position of that data card with respect to the remainder of the cards.

A data card and an idler card, which are employed in the modified system, are illustrated in Figs. 8 and 9. The data card is provided with two pairs of reading windows 60 and two data windows 61. A plurality of locator code notches 62 are formed in its lower edge, these notches corresponding substantially to locator code notches 12 of the data cards in the previously described filing system. Each data card is provided with ten locator code notches 62 by which it will be identified, as was the case in the previous system, whereby it may be selected from a group of 1,023 cards according to a binary code system. Locator code notches 62, however, are substantially wider than locator code notches 12 of the cards of previous systems for a purpose which will be subsequently described. A pair of movement accommodating notches 63 is provided in each data card, one in each opposite edge. The upper corners of each data card are also removed as indicated at 64 to accommodate members to be subsequently discussed which normally maintain the card in a desired position.

An idler card for the modified system is illustrated in Fig. 9 and is substantially similar in shape to the data cards but is somewhat longer as was the case with the idler cards of the previous system. This idler card is provided with a pair of reading windows 65 located in a predetermined space relation to cooperate with reading windows 60 and data windows 61 of the data cards when all of the cards are aligned in a group. An elongated notch 66 is formed in the lower edge of the idler card and is adapted to accommodate means for shifting the data cards. A pair of notches 67, one in each opposite edge of the idler card, are provided to accommodate lateral movement of the data cards as will be more clearly described below. Additionally, the opposite upper corners of the idler card are cut away as indicated at 68 for the same reason as are the upper corners of the data cards.

The casing by which the data cards and idler cards are supported in alternation as well as the sensing mechanism which it is intended to employ but which is not shown, are very much similar to those employed with the system of Figs. 1-6. However, in this file the cards are supported on longitudinally extending bracket supports 70 and 71 secured to the side walls of a casing 72. They are supported by brackets 70 and 71 substantially above the bottom of the casing 72 so that space is provided for the accommodation of a plurality of solenoids 73 which support on their armatures 74, locator bars 75.

In normal supported position, the idler cards extend from the upstanding portion of support 70 to the upstanding portion of support 71 and are therefore not movable transversely of the file, and the data cards, as shown, normally abut the upstanding portion of support 70 but do not extend to the upstanding portion of support 71 and therefore may be moved transversely of the casing. It will also be seen in Fig. 7 that in normal position of the cards, both idler and data, the lateral movement notches 67 of the idler cards are located above the lateral movement notches 63 of the data cards. The idler cards are maintained in the normal position, with respect to vertical movement, by rack and gear assemblies 76 and 77 the inner ends of the racks of which extend into notches 78 in their opposite edges. The data cards are also provided with notches 79 adapted to receive the inner ends of the racks but the notches in these cards are substantially wider than notch 78 in the idler cards and while the racks will prevent removal of them from the file they will not prevent limited vertical movement of them.

Also when the cards are in their normal position, as shown in Fig. 7, the left-hand windows 65 of the idler card will be located as indicated in dotted lines in Fig. 7,

whereas the right-hand reading windows thereof will be located in alignment with the right-hand data windows 61 of the data cards.

The solenoids 73 are supported on a support 80 secured to a member 81 extending between the side walls of casing 72 at a point substantially above the bottom thereof. The solenoids 73 are twenty in number, that is one is provided for each of the twenty possible notches in the data cards as before, but only ten of them will be employed at any one time to select a particular data card. The selection, as before, is made by energizing the ten solenoids corresponding to the ten locator code notches by which the card to be selected is identified. This results in the raising of all of the other data cards except that which is being selected, for in that card the locator code notches accommodate movement of all of the ten locator bars 75 of the ten energized solenoids and therefore that card does not move. As before the elongated notch in the idler card, namely 66, accommodates movement of any of the locator bars 75 and the idler cards therefore remain stationary.

An assembly comprising a U-shaped member 90 substantially co-extensive with the internal transverse dimensions of casing 72 and a pair of longitudinal card engaging plates 91 serve to normally maintain all of the data cards in normal position, that is in the position shown in Fig. 7, plates 91 engaging the cards in their cut-out portions indicated at 64. This assembly however is freely movable and should one plate 91 be raised so will the other plate 91 through the U-shaped member 90. Resilient means in the form of pivotal brackets 92 are secured to the opposite walls of casing 72 and are provided with spring-urged plungers 93 which resiliently exert a downward force upon plates 91. Thus when selecting a data card from the group by moving the remainder upwardly, should the upward force exerted be not centrally located the cards will nevertheless be evenly raised and the danger of tilting in a vertical plane is avoided. For removal of any card from the file, brackets 92 may be pivoted to their dotted line positions as shown in Fig. 7, as may be plates 91 by reason of a pivot connection between them and supporting arms 94 and U-shaped member 90.

In order to feed information to the selected data card by giving it a location in the group different from that of the remainder of the data cards, a solenoid 95 is provided at the right side of the file as seen in Fig. 7 and supported on bracket support 70. This solenoid serves to control a locator bar 96 which is supported on its armature 97 and extends longitudinally of the group of cards. When this solenoid is energized locator bar 96 is urged toward the group of cards. However all of the data cards except that one selected will be raised and the locator movement notches 63 thereof brought into alignment with locator bar 96. The locator movement notch 63 of the selected data card not raised will not and therefore locator bar 96 will engage its edge above notch 63 and move it to the left as seen in Fig. 7. The idler cards will not be affected by movement of locator bar 96 because of the provision of notches 67 which are normally located opposite bar 96. In this manner any selected data card may be fed information by being moved to the left to a position different from its normal position. It will be clear that any number of data cards may be fed the information individually and will maintain the information which is inserted or particular to them purely by reason of their off-set position until they have been returned from that position to their normal position.

For returning any data card to its normal position a solenoid 100 having an armature 101 upon which is supported a locator bar 102 is provided. The operation of this solenoid and moving of a data card is identical with the operation of solenoid 95. The card to be returned having first to be selected by the vertical off-setting of the remainder of the cards. If, however, it is desired to

return all of the cards which have been fed information by having their positions changed from the normal, there is no raising of them or operating of the vertical off-setting solenoids 73 and solenoid 100 need only be operated by itself.

The parts played by the data windows and the reading windows of both the data cards and idler cards in this system is merely to indicate in which of its lateral positions a data card is, that is whether it is in the left-hand or information position or the normal right-hand position as shown in Fig. 7. This is accomplished by a sensing mechanism of the same form as is employed in the previously described system of Figs. 1-6. To determine which position a data card is in, solenoids 73 are operated to select that particular card by vertically raising all of the other data cards, both those that have been off-set to the left (or fed information) and those in original position. This may be accomplished because of the wide locator code notches 62 in the lower edges of the cards, it being recalled that these are considerably wider than the locator code notches 12 of a card of the previous system. This greater breadth of locator code notches 62 is purely for the purpose of making the data cards responsive or not responsive to movement of the locator bars 75 whether they are in original position or laterally off-set position. When all the data cards except that selected have been raised their reading windows 60 will lie in the same horizontal plane as do reading windows 65 of the idler cards. Therefore despite their lateral position light rays may pass through all of them (the raised cards) and through all of the idler cards. However, but one of the data windows 61 of the data card which has not been vertically raised will be in alignment with the reading windows of the idler cards and therefore light rays may pass only through that aligned row of reading windows of the raised data cards and the idler cards which contains a data window 61 of the not raised data cards. For instance, if the selected data card is in its original or right-hand position, as shown in Fig. 7, the light rays will pass through the aligned row of windows containing the right-hand reading windows of the idler cards as seen in Fig. 9. If, however, the selected data card is in its laterally off-set position, light rays will pass through the aligned row of windows containing the left-hand reading windows 65 of the idler cards as seen in Fig. 9.

It will be clear, of course, that the only information obtained from the filing system specifically disclosed in Figs. 7-11 may be a yes-no variety, that is, either that the selected data card is in one position or the other. It will, of course, also be clear that whereas in the filing system of Figs. 1-6 a relatively large number of photo-electric cells is required, only two are necessary in the sensing mechanism used with the modified system.

The provision of two pairs of reading windows 60 in the data cards of the modified system is, as will have probably been understood, to compensate or allow for the two possible positions of the raised data cards.

The applications in which the modified form of filing system may be employed are very numerous as are the applications in which the previously described form of filing system may be employed. Furthermore it should be clearly understood that various changes and modifications may be made in either form without departing from the scope of the invention as set forth in the appended claims.

I claim:

1. A file of the character described which comprises a plurality of data cards, a plurality of idler cards separating the data cards one from another, means for supporting all of the cards in a normal mutually relative position of alignment, the data cards each having a predetermined regular arrangement of reading windows and at least one data window in predetermined spaced relation to said reading windows, the idler cards each having a like predetermined arrangement of reading windows, means for

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maintaining the idler cards stationary, and selective means for relatively off-setting all of the data cards from said normal position with the exception of one card from which it is desired to obtain data, the data window of the non-off-set card being aligned with aligned reading windows of the off-set cards and with the reading windows of the idler cards when the off-set cards are in off-set position.

2. A file according to claim 1 which includes a sensing mechanism for reading the data on the non-offset card, said sensing mechanism comprising a source of light directed against one end of the group of cards and a light sensitive means opposite the other end thereof, whereby the data on the relatively non-off-set card may be read by the light sensitive means which is energized by the passage of light through the aligned row of reading windows which also contains the data window of said relatively non-off-set card.

3. In a file system of the character described, a plurality of relatively aligned data cards each of which has a plurality of locator code notches in one edge thereof, a plurality of idler cards one located between each two data cards and each having an elongated notch in one edge equal in length to the length of the area of the edge of a data which may contain a code notch and equal in depth to the depth of a code notch, the cards being aligned so that the notched edges thereof are adjacent one another and the notches of each data card being located in its edge at positions therealong such that no two data cards have the same arrangement of notches, a plurality of bars

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located adjacent said notched edges of the cards, one bar being provided to correspond to each possible position at which a code notch may be contained in the edge of any data card, and means for selectively moving said bars toward the notched edges of said cards, each bar so moved engaging the edges of and moving all the data cards except those provided with notches corresponding to and adapted to receive that bar, whereby in order to select a card those bars corresponding to the notches in that card are moved, the idler cards preventing movement of the selected cards.

References Cited in the file of this patent

UNITED STATES PATENTS

15	1,351,692	Soper	Aug. 31, 1920
	1,501,439	Cook	July 15, 1924
	1,744,373	Erich	Jan. 21, 1930
	1,821,459	Casey	Sept. 1, 1931
20	2,231,186	Gould	Feb. 11, 1941
	2,260,748	Houghton	Oct. 28, 1941
	2,379,943	Whitson	July 10, 1945
	2,483,035	Burns	Sept. 27, 1949
	2,541,247	Herr	Feb. 13, 1951
25	2,558,577	Myers	June 26, 1951
	2,605,965	Shepherd	Aug. 5, 1952

FOREIGN PATENTS

770,923	France	1934
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