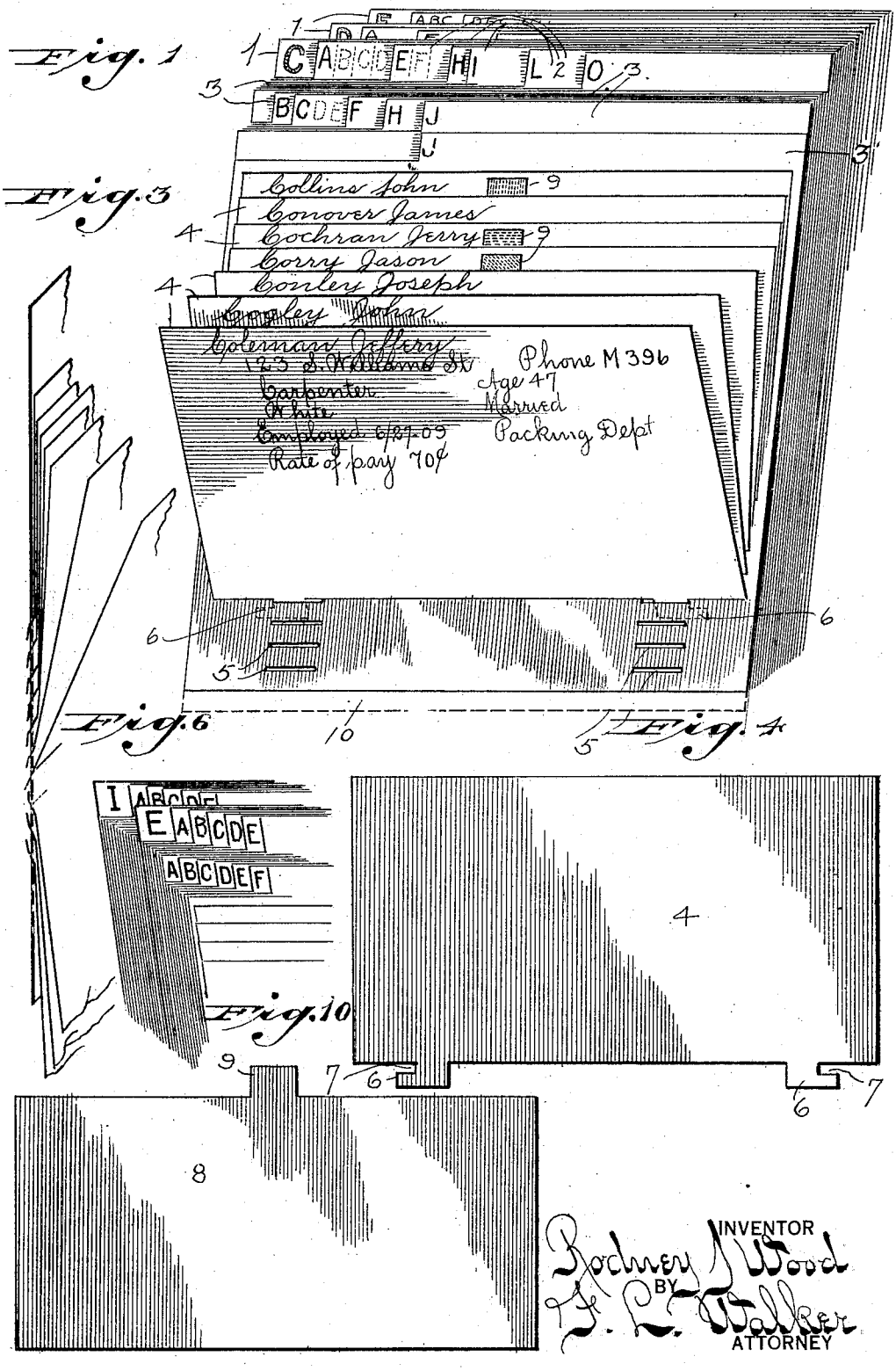
Feb. 28, 1933. R. J. WOOD 1,899,430

FILING SYSTEM

Filed Feb. 7, 1921 2 Sheets-Sheet 1



Feb. 28, 1933. R. J. WOOD 1,899,430

FILING SYSTEM

Filed Feb. 7, 1921 2 Sheets-Sheet 2

Fig. 2

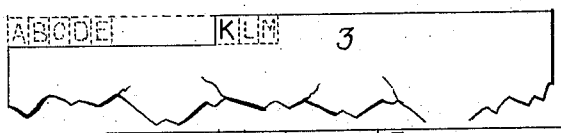
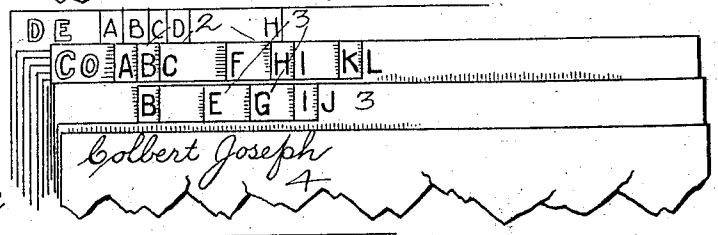


Fig. 7



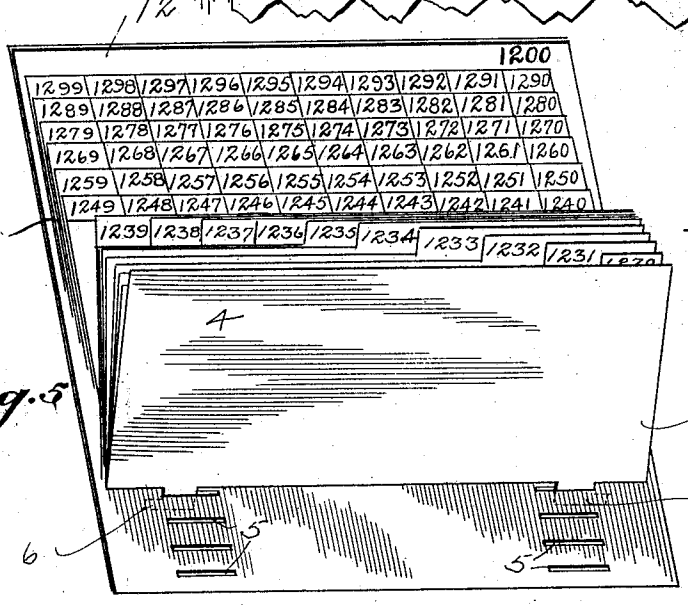


Fig. 9

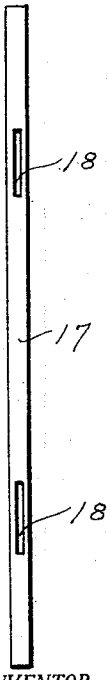


Fig. 5

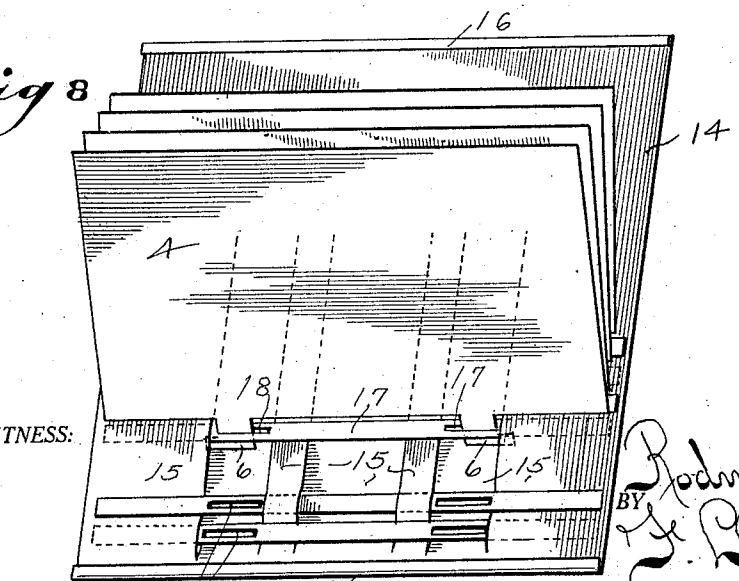


Fig 8

WITNESS:

INVENTOR.

BY Rodney J. Wood

Ly. R. Walker

ATTORNEY.

Patented Feb. 28, 1933 1,899,430

UNITED STATES PATENT OFFICE

RODNEY J. WOOD, OF DAYTON, OHIO, ASSIGNOR TO REMINGTON RAND INC., OF BUFFALO, NEW YORK, A CORPORATION OF DELAWARE

FILING SYSTEM

Application filed February 7, 1921. Serial No. 443,209.

My invention relates to card index systems or filing systems wherein data cards or sheets are arranged in predetermined groups alphabetically, numerically, or according to other arbitrary designations.

The object of the invention is to simplify such systems whereby they will not only be inexpensive, but will be more efficient in operation, compact, permitting a vast number of data sheets or cards to be arranged in minimum space, readily accessible to enable the selection of a desired card or sheet with minimum movement, and further adapted to enable a series of cards to be visible at the same time.

A further object of the invention is to provide such a system wherein entries may be made upon the cards either by hand writing or by passing the cards thru a typewriter or calculating machine without disconnecting or disarranging the cards of a particular series.

A further object of the present invention is to provide an arrangement of cards or data sheets, wherein particular cards may be temporarily indicated, "tabbed" or "flagged" to distinguish such cards from others of the series, without interfering with the selection of the cards, or obstructing the view of other sheets or cards.

A further object of the invention is to provide an improved form of data sheet or card and support therefor by which the cards may be detachably interconnected in overlapping relation to form either a succession of pockets to receive supplemental data sheets, or to afford exposed guide entries on the overlapping portions of successive sheets or cards.

With the above primary and other incidental objects in view as will more fully appear in the specification, the invention consists of the features of construction, the parts and combinations thereof, the arrangement of the cards, and the mode of operation or their equivalents as hereinafter described and set forth in the claims.

Referring to the drawings, Fig. 1 is a perspective view of a series of guide cards, of the first order comprising family name guides, and additional guides pertaining to initials, and in conjunction therewith a series of individual data sheets or cards supported in overlapping relation. Fig. 2 is a fragmentary front view of the top portion of one of the cards removed from the series. Fig. 3 is a detail sectional view of a group of data cards. Fig. 4 is a detail view of a data sheet or card to be interlocked with the supporting card. Fig. 5 is a perspective view illustrating the application of the present card system to a numerical guide system. Figs. 6 and 7 illustrate modifications of the name guide index. Fig. 8 discloses a modification enabling the insertion of cards at intermediate points on the support. Fig. 9 is a detail view of an attachment strip, employed in Fig. 8. Fig. 10 is a view of a "flagging" or signal sheet.

Like parts are indicated by similar characters of reference throughout the several views.

In the particular application of the invention illustrated in Fig. 1 there is employed a main guide card 1, bearing the initial of the family name. A separate division or guide card 1 is employed for each family name initial. That is to say, the guide cards 1 bear the different letters of the alphabet or as many thereof as are necessary to complete the initial list of family names. In the illustration the initial C has been used for illustrative purposes and all family names beginning with C will be associated with this initial guide card. These family names are sub-divided in accordance with a second letter of the name, and such sub-division being indicated by secondary guide cards 2. These guide cards 2 are "cut-outs" having one upper corner preferably the upper left hand corner removed by angular lines, such cut-out portion of each succeeding cards being of greater extent whereby the cut-out angles will overlap to expose the guide letters carried by the cards beneath. Thus the guide cards are arranged in echelon. The relative positions of the different letters of the alphabet are indicated by dotted line inscriptions in Figs. 1 and 2. Thus in the illustration, Fig. 1, all of the names beginning with Ca as Cars, Carnes, Carrey, Canby, etc., are associated with the index card A of the upper

or higher series, while all the names beginning with Co as Collins, Conover, Conklin, Corry, Conley, etc., are associated with the index card bearing the letter O. Thus the proper name is located by the first two letters thereof. Thus having located the section pertaining to the names beginning with C, the name Charlton will be found associated with the secondary card H. Intermediate each of the secondary cards, is a third series of initial guide cards 3, cut out in the same lapping relation as before described to expose the sequence of letters carried thereby. These cards are of less height than the primary and secondary guide cards 1 and 2, and when the series of cards comprising the file is opened at any selected point, there will be exposed this tertiary series of initial guides 3, pertaining to the initial of the given name, as B for Benjamin, Burton, Bess, J for Joseph, James, John, etc. Having located the family name beginning with Co, as Corry, and desiring to locate the data sheet of Jeremiah P. Corry, reference is then had to the initial guide J, of the series of initial cards associated with the letter O. Mounted upon this initial guide card 3, or on a separate support card inserted in association with the initial guide card 3, is a series of individual data sheets or cards 4, arranged in overlapping relation, one with the other. As shown in Fig. 1 these individual data cards are directly connected to one of the initial guide cards 3. The series of individual data sheets or cards pertaining to those names of which the given name begins with J as the family name begins with Co, as John Collins, James Conover, Jerry Conklin, etc., has been selected for illustrative purposes. In the event that a large number of names having the same given name initial is encountered, a duplicate support card 3′ similarly initialed, but of less height than the first initialed guide 3 is inserted in front of the first given-named-initialed guide card, as shown in Fig. 1.

The support card, whether the same comprises the initial guide card, or a separate support card associated therewith, is provided with two vertically alined series of horizontal slots 5, arranged in spaced relation with each other. The individual data sheets or cards 4 have formed on their lower marginal edges projecting tongues 6 of an angular or L-shaped form, and oppositely disposed in relation with each other. The transverse extent of each of these tongues is substantially equal to the lineal extent of the slot 5, while the distance between the re-entrant notches 7 of the respective tongues is substantially equal to the distance between the extreme ends of the alined slots. The relation of these tongues and the slots in such that when the tongues 6 of any individual data sheet or card are thrust thru the oppositely disposed or alined slots of the support cards, the laterally projecting extension of the tongue will extend beyond the end of the slot forming an interlock by which the individual data sheet is flexibly hinged or connected to the support. In order to insert the offset or angular tongue 6 thru the slot 5, it is necessary to buckle or bend the data sheet somewhat to effect this adjustment. The subsequent expansion of the sheet as it is returned to a flat condition projects the angular tongues outwardly within the slots 5 into overlapping relation as shown by dotted lines in Fig. 1. It will be understood that the slots 5 are not only arranged in two series alined vertically, but the slots of the respective series are oppositely disposed, or in alinement with each other. The data sheets or cards 4 being of substantially equal size, the engagement of a succession of such cards in the slots provided in the support card, causes said cards to overlap each other, thereby exposing the upper margin of each card above the margin of the succeeding card. In the arrangement as illustrated this exposed margin is utilized as an index surface on which to inscribe the name of the individual. The concealed portion of the data sheet or card may be utilized for any desired entries pertaining to the individual whose name appears thereon, as is indicated at the bottom of Fig. 1. In lieu of entering the name or data upon the individual sheets or cards attached to the support card, these hinged leaves may be utilized merely as pockets or separating guides between which slips or data sheets may be deposited in the manner shown in Fig. 5.

As a convenient means of "tabbing" or "flagging" the individual records, wherein some temporary condition is desired to be indicated, as absence from work, a rating as to pay, or a credit rating, employed, unemployed, etc., colored sheets of paper having projecting from their upper margins a short tongue 9, as indicated in Fig. 10 may be deposited between the successive individual data sheets or cards, flexibly mounted upon the support card, whereby such tongue 9 will be exposed above the succeeding card as shown in Fig. 1, thereby indicating by the color of such exposed card the particular information to be conveyed.

In the event that the data or record of the individual is to be entered directly upon the individual data sheets or cards 4 in lieu of separate or independent cards deposited between such sheets or cards, entries may be made from time to time without disarranging or disconnecting these data sheets from the support cards. By lifting the support card out of the file or container, the individual data sheets being flexibly connected thereto may be opened at any desired point, the overlying cards being turned in a reverse direction (as in Fig. 3) to a flat or parallel

relation with the support card, whereupon the card with the attached data sheets may be passed thru a typewriter or calculating machine or the necessary entry may be conveniently inscribed by handwriting. Such a construction avoids the necessity of detaching the individual card for posting or making entries thereon, and thereby obviates the danger of disarrangement or misplacement of the individual cards of a series. The initial guide cards 3 whether such cards are employed as support cards for the individual data sheets 4 or merely as guides for independent support cards upon which the data sheets are carried, are preferably provided at their lower margin with an area 10 to be separated therefrom in strips to afford initial guide cards of less height. Whenever in the course of operation, it is found that one initial guide card will not conveniently contain all of the individual data sheets or cards 4, pertaining thereto, or when such series of names having identical initial characters are arranged in more than one group either directly upon the initial guide card, or upon separate support cards associated therewith, an additional guide card 3′ is employed for each group, and is utilized by cutting off of the bottom margin a strip from the area 10, sufficient to lower the lettered head of the card below the level of the main series of the initial guides. Thus each duplicate middle initial guide will be of less height than a preceding guide card of the same initial. Such a construction has been shown in Fig. 1. It will be understood, however, that such lowered or sub-initial guide will not be utilized until the regular initial guide card has been filled with individual data sheets or cards or until the initial group of such individual cards has been completed. In Fig. 7 there is shown a slight modification of the application of the file wherein the initial guide card 1 contains not only the initial of the family name, but also the second letter, while the secondary card 2 carries the third letter of the name, the initial of the given name being carried upon the auxiliary card 3 as before described.

In many instances, records are carried numerically. This is particularly true in records of stock in a factory, or records of manufactured parts and frequently in merchandising establishments, each article of merchandise bears an individual stock number. Likewise in large factories, it is not infrequent that employees are known upon the records by a number, rather than by their names.

In adapting the present index system to a numerical arrangement the individual data sheets or cards as illustrated in Fig. 1 are employed merely as pockets or receivers between which are deposited numerical cards, as is illustrated in Fig. 5. These numerical cards are preferably though not necessarily arranged in groups of ten. Each card of the group is a "cut-out" having the upper corner of the card removed to expose the number on the card beneath, the cut-out of the successive cards being of progressively increasing extent whereby the numerical cards are exposed in echelon. A convenient arrangement is to provide ten of the hinged sheets or cards 4, thereby forming ten pockets and providing in each pocket, ten numerical cards 11, whereby each support card will thereby carry one hundred individual numerical cards 11. The groups of cards are arranged in multiples of ten, thus assuming for example, that the groups of the cards disclosed in Fig. 5 comprise the cards 1200 to 1299; the cards in the first or lowermost pocket will comprise the cards numbers 1200, 1201, 1202, etc. to and including 1209. The second pocket will contain the succeeding ten cards, beginning 1210 to and including 1219. The third pocket will comprise the succeeding ten cards, numbered from 1220 to 1229. In order to locate these groups of cards by hundreds, a series of guide cards 12 is provided corresponding to the initial cards 2 of Fig. 1, which numerical guide cards bear the designations by hundreds, as 1200, 1300, 1400, 1500, etc. In order to locate the cards by thousands, an initial or primary series of guide cards corresponding to the primary guide cards 1 of Fig. 1 may be provided bearing numerical designations by thousands, as 10000, 11000, 12000, 13000, etc. By selecting any support card whether the same is used as a guide card for hundreds or is an independent support card associated with such guide card, an entire group of one hundred individual numerical cards will at once be visible, and the particular card desired is easily selected in its numerical sequence.

It will be obvious that by the arrangement of cards heretofore described, either alphabetically or numerically, whereby entire groups of cards are visible simultaneously, much greater speed can be achieved in the selection of a particular card than where such cards are exposed singly, and must be fingered over in order to find the particular card of the group which may be desired.

As a further aid to locating individual cards of a large series quickly, the entire series may be divided according to vowels, as shown in the modification Fig. 6. In this instance in lieu of the family name initial, as employed in Fig. 1, the first vowel of the name will be utilized as A, E, I, O, U and Y. Associated with each of these vowel guides will be a series of alphabetical guide cards of which the consonant cards will be most used, but in some instances the vowels will be employed as a secondary guide. In the preferable arrangement the associate alphabetical guides will refer to that letter following

the first vowel of the name. In this arrangement, the name is located phonetically by the predominating vowel and consonant or double vowel sound. The third series of guide cards, in this instance, corresponding to the cards 3 of the disclosure of Fig. 1, in lieu of representing initials of the given name will comprise the initials of the last or family name. In using such an arrangement to locate the card pertaining to an individual named Allen, reference will be made to the vowel group A, and thence in such group to the guide reference card L, inasmuch as the AL is the predominating sound of the word. On this card L or a support card associated therewith will be found the individual cards, not only of Allen, but of a number of other names having the same predominating phonetic character, as for instance, Allison, Alloy, Almire, Alread, etc. In such case it is not necessary to refer to the third series of cards, since A is both the first and predominating vowel and also the initial letter. However, if the name should be Cahill, A being the first vowel, reference will be made to the A group, and thence to the H as succeeding consonant sound, whereupon in the third or sub-group of guide letters, reference will be made to C as the initial letter of the family name, thus locating on such sub guide card or support card the name Cahill.

In a large series of cards, divided alphabetically according to the initial of the family name, as indicated in Fig. 1, the various letter groups will be found of different extent throughout a very wide range. Some of these groups will be quite large, and others quite small. A grouping according to vowels as indicated in Fig. 6 will afford a more equalized division of the series and facilitate more rapid allocation of the individual cards desired. It will be understood that in the construction shown in Fig. 6 the same arrangement of interconnected hinged leaves, or individual cards used directly as data sheets or as pockets or receivers to hold data sheets deposited therebehind will be employed. In Fig. 7 there is shown a further modification, wherein the primary guide card is shown carrying the first two letters of the family name, the third letter of which appears upon one of the secondary cards, the arrangement and relation of the cards being otherwise substantially the same as before described.

Under the present conditions, it may be desirable to insert one or more data sheets between the successive sheets of a group in order to maintain a predetermined sequence or succession of names, articles or other data. In the construction shown in Fig. 1 this can only be done by disconnecting the data sheets or cards following the point of insertion, and reconnecting them in a lower slot or opening 5. In order to overcome this difficulty and enable the insertion of additional cards or data sheets at any desired point in the group or series, without the necessity of disconnecting and reconnecting one or more of the sheets, there has been shown in Fig. 8, a modification in which the data sheets or cards are slidably connected with the support. In this construction, the support card 14 is provided with a series of parallel incisions, dividing the lower portion of the support card into a plurality of flexible strips 15. These strips are integral with the support card 14, and interconnected at their ends. To protect the card against being torn, the upper and lower edges of the card are preferably, though not necessarily, re-enforced by being folded or provided with a binding member as at 16. A series of sliding attachment strips or needles 17 having therein slots or openings 18 corresponding to the openings 5 before described, are interlaced over and under the respective flexible strips 15 of the mount. These strips 17 are preferably interlaced in alternate relation, that is to say, one strip extending over and the next one under, particular strips 15 of the series. The slotted openings 18 in the needles or quills are located in spaced relation agreeing with the tongues 6 of the data sheets or cards 4. The cards or sheets 4 are engaged with the quills or strips 17, by thrusting the hooked-shaped tongues 6 thru the slots 18, just as such cards or sheets are interconnected with the support card or mounting shown in Fig. 1. When so interconnected, the hooked tongue 6 prevents the strips or quills 17 from being disengaged longitudinally from the mount or support 14, yet the card and its attachment quill or strip 17 may be slidingly adjusted within the limits of the incisions forming parallel flexible strips 15.

In this arrangement, in the event it is desired to insert an additional data sheet or card it is only necessary to separate the group of cards or sheets by sliding the selected portion thereof apart, and inserting between such divided portions of the group or series, an additional strip or quill 17, by interlacing it under the succeeding parallel flexible strips 15, integral with the mounting 14, and thereafter interlocking the card or data sheet 4 by engaging the hooked tongues 6 within the slots 18 of such inserted attachment strip or quill 17. This same construction also permits the ready removal of the data sheets and the readjustment of the remaining cards so that no vacancy is apparent in the succession or series.

In practice, it has been found expedient and desirable to form the mount or support 14 from sheet-metal and to provide therein only two parallel incisions corresponding to the outermost incisions of Fig. 8. Thus the mount is divided into three portions. The quills or needles are all inserted in the same

manner shown by the lowermost quill of Fig. 8, wherein the ends of the quill are extended behind the outer portions and across the face of the middle portion of the divided support. The quills will rest one upon another and are slidingly adjustable as before described.

In the use of the inserted data sheets wherein a number of removable sheets are positioned behind each card, a very thin or light weight paper is employed. Due to the overlapping arrangement of the cards and sheets, the space occupied thereby is materially reduced. In practice, one hundred such sheets carried by a single support as in Fig. 5, occupy less than half inch of space. The sheets and cards are selected by inserting behind the overlying cards and sheets a thin bladed selecting implement, knife blade, or spatula.

Having thus described my invention, I claim:—

1. In a filing system, a support member having therein spaced alined slots, a leaf to be detachably engaged therewith, oppositely disposed marginal L-shaped tongues upon said leaf to be extended thru the alined slots of the support member, the slots and tongues being so spaced that when interengaged the lateral portions of the L-shaped tongues will extend beyond the ends of the engaged slots.

2. A detachable hinge connection for sheets comprising a sheet having therein spaced alined slots, a second sheet having marginal tongues in spaced relation different from the spaced relation of the slots, said tongues having oppositely disposed lateral notches therein terminating in spaced relation substantially coincident with the spaced relation of the ends of the slots, such tongues being engageable within the slots with such lateral notches straddling the opposite ends of the respective slots.

3. In a filing system, a support member having therein a plurality of parallel slots arranged in two alined series with slots of each series oppositely disposed, and a plurality of detachable leaves, each having marginal spaced tongues insertable thru the oppositely disposed slots of the respective series, each tongue having an offset portion extending laterally beyond the end of the slot when engaged therewith.

4. In a card index filing system, a series of support cards, having slots therein and a plurality of reference cards associated with each support card and tongues on the reference cards having interlocking engagement in the slots of the support cards for oscillatory movement to and from the support whereby the reference cards will be positioned in overlapping relation thereon.

5. In a card index filing system, a support card, a plurality of upturned reference cards associated therewith, and forming a series of pockets to receive additional data sheets and means for detachably engaging said upturned reference cards independently at different spaced elevations upon said support card in separate spaced relation one from another whereby the margins of the reference cards will overlap one upon another.

6. In a card index filing system, a support card, a series of overlapping auxiliary support cards independently engaged therewith in separated spaced relation with each other and series of overlapping leaves interposed between the several auxiliary support cards and supported thereby at different spaced elevations.

7. In a filing device having a compartment therein, a series of support cards, arranged one behind another in said compartment, a series of independent relatively movable upturned leaves, the support cards and leaves being formed for detachable interlocking engagement of the leaves with the support cards at different elevations for relative swinging movement, said leaves forming therebetween a series of overlapping pockets to receive data sheets.

8. In a card index filing system, a main support having therein a series of vertically spaced horizontal slots, upturned auxiliary support cards, marginal tongues thereon engaging in the slots of the main support whereby said auxiliary cards are hinged thereto at vertically spaced intervals for to-and-fro swinging motion relative to the support and form a succession of overlapping adjustable pockets intermediate the auxiliary cards to receive data sheets.

9. An index device comprising, a support card, a plurality of leaves, the support card and leaves being formed to afford interlocking hinge joints by which the leaves are hinged to the support card at vertically spaced intervals for relative to and fro swinging motion in overlapping relation with each other, said leaves being capable of being folded to substantial parallelism with the support card.

10. In a card index system, a plurality of groups of cards, each group being so formed and marked at one edge as to provide a cut-back index, a support common to the plurality of groups, the cards comprising each group being separate and detached from each other and also from said common support, a series of flaps hinged to said common support, at spaced intervals, each group of cards being positioned behind and supported by one of said flaps, the cards of the several groups being arranged upon said common support in vertically overlapped relation so that the indices are simultaneously visible, the horizontal succession of guide characters upon the exposed portions of the cards of each group being offset in spaced relation agreeing with their positions in a predeter-

mined sequence, with guide characters of different groups having common characteristics disposed in visible vertical series upon the exposed portions of corresponding cards of the different groups.

11. In a card index system, a plurality of groups of cards, each group being so formed and marked at one edge as to provide a cut-back index, a main support common to the plurality of groups, a plurality of auxiliary supports, one for each group, hinged to the main support in vertically spaced relation, the several groups being arranged thereon to overlap so that the indices are simultaneously visible, the horizontal succession of guide characters upon the exposed portions of the cards of each group being offset in spaced relation agreeing with their positions in a predetermined sequence.

12. In a file, having a compartment, a plurality of support cards vertically arranged therein, a plurality of upwardly extending leaves mounted on each support card and arranged in overlapping offset relation thereon with one margin of each in visible relation, said leaves having swinging movement relative to each other and said support cards, said leaves providing a plurality of pockets for loosely receiving data sheets, said support cards normally cooperating with each other to retain the pockets in closed position.

13. In a filing device having a compartment therein, a plurality of support cards mounted in said compartment in substantially vertical position, a plurality of upwardly extending leaves mounted on each support card arranged in overlapping offset relation thereon with one margin of each in visible relation, each leaf being hinged relative to its support card, said leaves forming therebetween a series of overlapping pockets adapted to receive data sheets, said support cards in normal position in said container being in adjacent parallel relation with the pockets thereon maintained in closed position by adjacent support cards, the leaves on one support card being released for gravitational hinging movement when such support card is moved relative an adjacent support card to form a space therebetween.

14. A filing device comprising a support card formed with a plurality of substantially parallel incisions providing thereon a plurality of connected strips, a plurality of overlapping leaves, a series of bars mounted on the support card, alternate bars in said series being mounted on said card having common end portions arranged on one face of the card and other portions threaded under certain strips and over certain other of said strips of said card, the remaining bars having similar end portions arranged on the opposite face of the card and other portions threaded over all of the strips, and detachable hinge connections between the bars and the leaves.

15. A filing device comprising a support card formed with a plurality of substantially parallel incisions providing a plurality of connected strips, a series of bars plaited with said strips to form an interwoven structure, and a leaf connected to each of said bars.

In testimony whereof, I have hereunto set my hand this 29th day of January, A. D. 1921.

RODNEY J. WOOD.