Oct. 21, 1969 D. M. PAROBEK 3,473,246

DATA RECORDING DEVICE

Original Filed Aug. 11, 1964 2 Sheets-Sheet 1

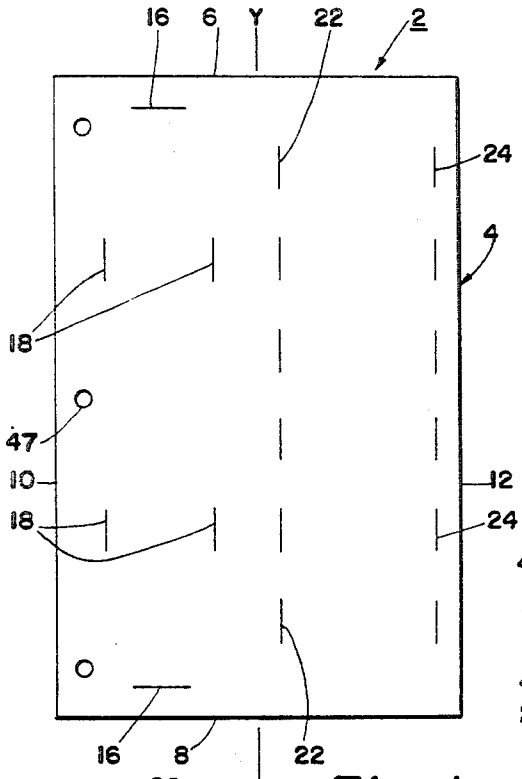

Fig. 1

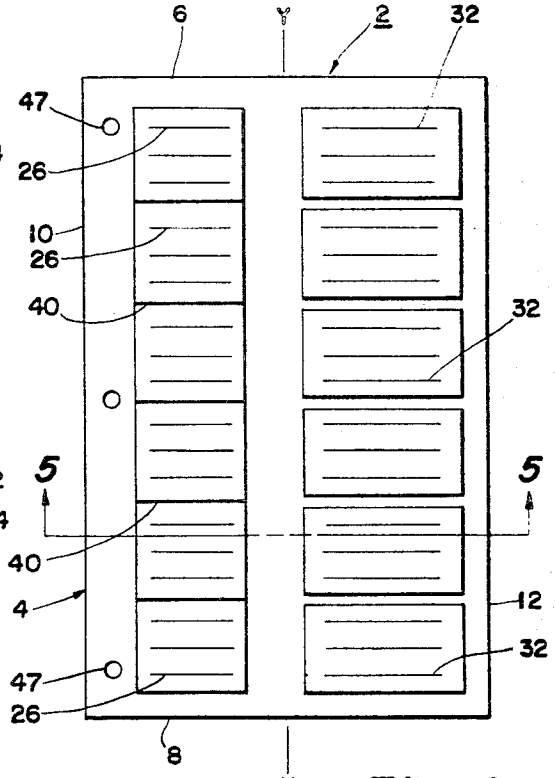

Fig. 4

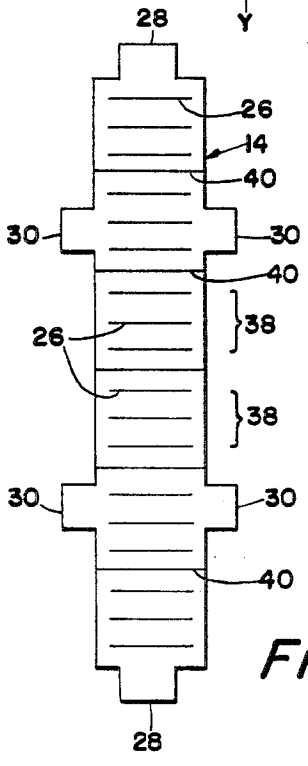

Fig. 2

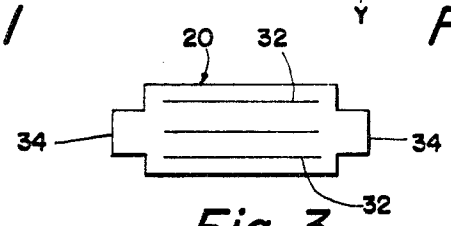

Fig. 3

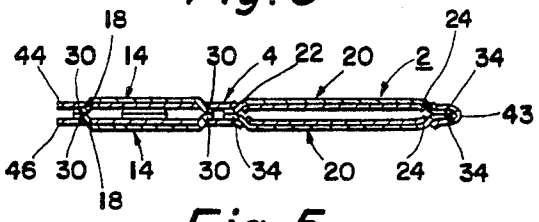

Fig. 5

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DATA RECORDING DEVICE

Original Filed Aug. 11, 1964 2 Sheets-Sheet 2

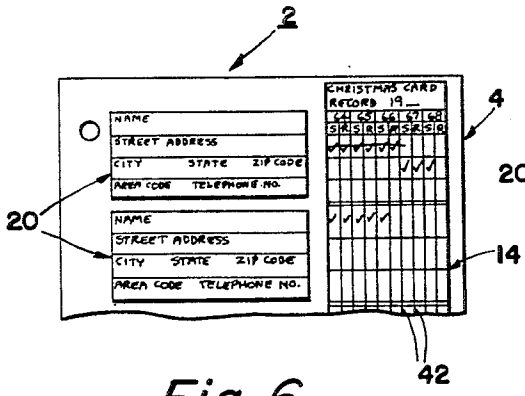

Fig. 6

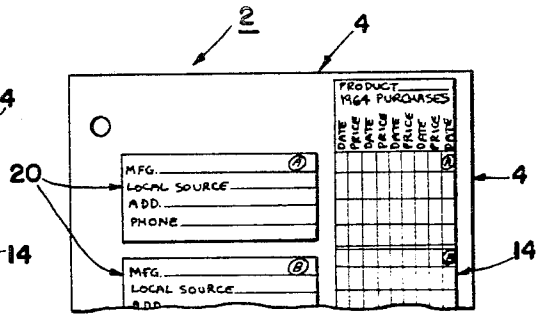

Fig. 7

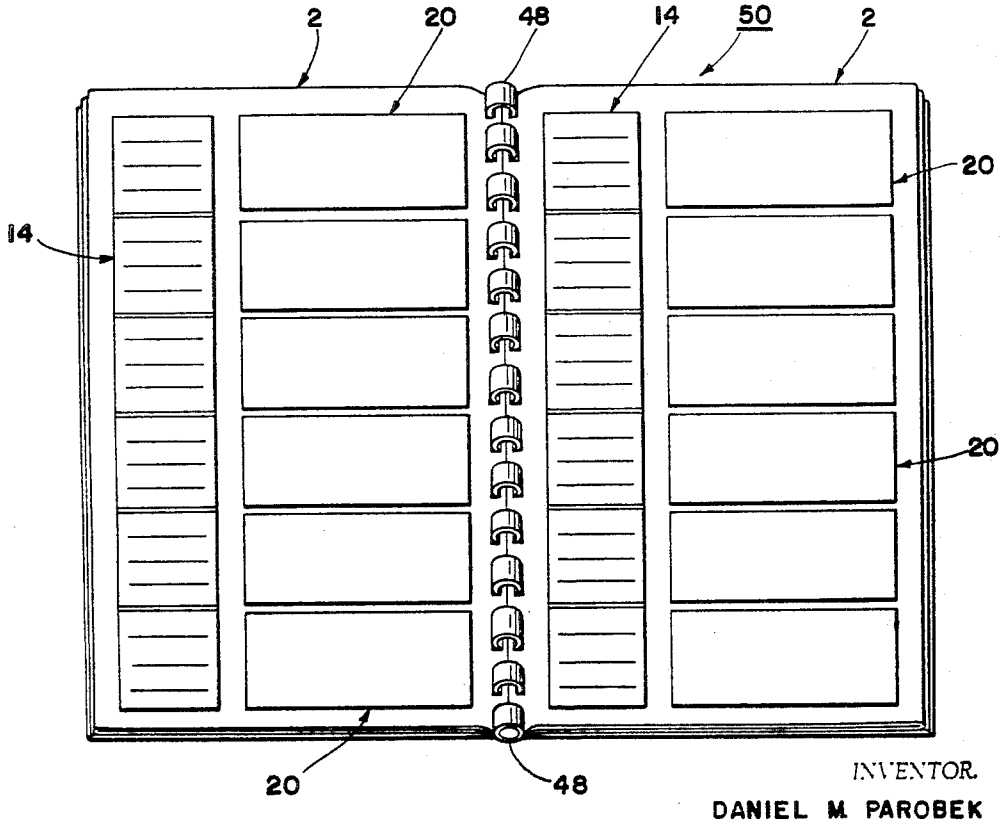

Fig. 8

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DATA RECORDING DEVICE

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Continuation of application Ser. No. 388,837, Aug. 11, 1964. This application May 3, 1967, Ser. No. 635,734

Int. Cl. G09f 1/10, 7/08, 11/00

U.S. Cl. 40—124.4 8 Claims

ABSTRACT OF THE DISCLOSURE

A data recording device. A double leaf page has slits to receive the tabs of a master insert and a plurality of slave inserts. The master insert has a plurality of lines for receiving relatively permanent informational data in a series of key groups. One of the slave inserts, having a plurality of lines, is disposed adjacent each key group.

This invention relates generally to the art of recording data for ready reference, and more particularly relates to improved data recording devices for continuously maintaining informational data as a permanent, yet current record. This application is a continuation of the applicant's co-pending application Ser. No. 388,837, filed Aug. 11, 1964, now abandoned.

Accordingly, an object of the present invention is to provide an improved data recording device for maintaining, continuously current, personal, business records and the like, in a compact and flexible arrangement with a minimum of time and effort.

Another object of the present invention is to provide a data recording device of the character described which automatically and simultaneously records and correlates the relationship between relatively defined and permanent informational data with relatively undefined and unpredictable informational data for continuously current usage.

A further object of the present invention is to provide a compact, flexible record book comprised of a plurality of the data recording devices of the character described which may be readily and simply maintained over an extended period of time without the retention of non-current informational data.

A further object of the present invention is to provide a book of the character described which is susceptible for life-time usage, which is free of hindersome and non-current informational data, and which does not necessitate additions thereto for continuously current usage.

A still further object of the present invention is to provide a book of the character described arranged and constructed to afford maximum visual consideration of current informational data without interference from multifarious cancelled materials, and wherein components thereof can be readily stored and indexed to provide a complete system for informational retrieval.

Other objects and advantages of the invention will be apparent from the foregoing description taken in conjunction with the accompanying drawings wherein:

FIG. 1 is an elevational view of one of the base members having one form of the retention means disposed thereon;

FIG. 2 is an elevational view of one form of the master insert;

FIG. 3 is an elevational view of one form of one of the slave inserts;

FIG. 4 is an elevational view showing the master and slave inserts of FIGS. 2 and 3 detachably secured to the base member of FIG. 1;

FIG. 5 is a cross-sectional view taken along the plane indicated by the line 5—5 of FIG. 4, and illustrating one

form of the double-wall construction of the base member for supporting the master and slave inserts;

FIG. 6 is a fragmentary view of FIG. 4, illustrating one of the typical uses of the data recording device made in accordance with the present invention;

FIG. 7 is a fragmentary view similar to that of FIG. 6, and illustrating another typical use of the device; and

FIG. 8 is an elevational view illustrating a plurality of the data recording devices of the present invention bound into a book.

Referring now again more particularly to the drawings and to FIGS. 1 to 4 thereof, the data recording device, designated generally at **2**, is shown to include a polygonal, such as square or rectangular shaped, base member **4** made from a suitable sheet material, such as paper, cardboard or the like; or from a polymeric material, such as plastic. As shown, the base member **4** includes a pair of parallel top **6** and bottom **8** edges and a pair of parallel side edges **10** and **12** which together define the configuration illustrated.

To record relatively defined and permanent informational data, the base member **4** is provided with a plurality of retention means for removable securement of a master insert, designated generally at **14**, to the base member. In a preferred form, the retention means are provided by a pair of oppositely disposed slits **16** aligned parallel to and adjacent the top **6** and bottom **8** edge of the base member **4**, and two pairs of oppositely disposed slits **18** disposed in parallel alignment with the side edges **10** and **12** and normal to the slits **16**. The slits **16** and **18** may be cut or formed into the base member in any suitable manner, as known in the art.

Similarly, to record relatively undefined and unpredictable informational data, the base member **4** may be provided with a plurality of other retention means for removable securement of a plurality of slave inserts, designated generally at **20**. In this form, the retention means are provided by a pair of oppositely disposed, spaced rows of slits **22** and **24** which rows of slits are offset from the longitudinal central axis Y—Y of the base member **4** and in parallel alignment adjacent one side edge **12** of the base member. In the embodiment shown, the slits in each of the respective rows **22** and **24** are vertically spaced from one another and are disposed generally at right angles or normal to the slits **16** so that, in the assembled position, the slave inserts **20** are disposed substantially normal to the master insert **14**, and for the purposes as will hereinafter be more fully described.

The master insert **14** and as best illustrated in FIG. 2, preferably includes a plurality of linear indicia in the form of a series of vertically spaced, parallel key-lines **26** which extend transversely substantially throughout the full width thereof. The lines **26** are preferably spaced vertically apart a sufficient distance to accommodate informational data therebetween and with the number of lines in each case being determined by the dimensional limitations of the master insert **14**. The master insert, in the embodiment shown, is preferably provided with a pair of outwardly extending generally flexible end tabs **28** and two pairs of laterally extending side tabs **30** which are adapted, upon assembly, to be inserted into the corresponding slits **16** and **18** provided in the base member **4** for securment of the master insert thereto. The master insert may similarly be made from any suitable sheet material, such as paper, carboard or the like; or from a polymeric material, such as plastic, which is of a permanent construction and wherein informational data may readily be applied thereto and erased therefrom without defacement of or damage to the insert.

The slave inserts **20** are preferably made from a similar material, each of which includes a plurality of vertically spaced, parallel lines **32**, as best shown in FIG. 3. The slave inserts are each provided with a pair of outwardly extending tabs **34** disposed at right angles or normal to the tabs **28** of the master insert **14** and which are adapted to be inserted into the rows of slits **22** and **24** for detachable securement of the slave inserts to the base member **4**. The number and/or arrangement of the tabs on the master and slave inserts, respectively, in each case being determined by the dimensional requirements of the same in relation to that of the base member which acts as a support therefor.

In assembly of the data recording device **2**, the master insert **14** may be secured to the base member **4** by inserting the tabs **28** and **30** into the corresponding slits **16** and **18** on the base member. Thus inserted, the master insert is disposed in offset relationship relative to the longitudinal central axis Y—Y of the base member **14** with its length disposed in parallel relationship adjacent one side edge **10** of the base member, as shown in FIG. 4. The slave inserts **20** may then be secured to the base member **14** simply by inserting the tabs **34** into the corresponding slits **22** and **24** so that the length of each of the slaves extends at right angles or normal to the now secured master insert.

Thus, assembled, the number of key-lines **26** and the spacing therebetween on the master insert **14** bears a predetermined correlative relationship to the vertical spacing between the associated slave inserts **20**. In the embodiment shown, the vertical spacing between the rows of slits **22** and **24** is such that each slave insert **20** is positioned opposite at least two, and preferably three or more, of the associated key-lines **26** of the master insert **14**. To facilitate visual keying of the informational data on the master insert **14**, the key-lines **26** carried thereby are preferably pre-selected into key groups **38** (FIG. 2). The key groups **38** are spaced vertically from one another and in a predetermined relationship relative to the vertical spacing between the slave inserts **20**. Such spacing is accomplished by a relatively wide area which includes a heavy line **40** which acts as a visual demarcation between adjacent key groups **38**. Hence, by such spacial arrangement between the key groups **38** of the master **14** and the slave inserts **20**, it is manifest that there need not exist a line-for-line relationship between the key-lines **26** on the master with the lines **32** on the respective slaves in order to correlate relatively permanent informational data on the former with relatively unpredictable informational data on the latter.

In use, relatively defined and permanent informational data can simply be transcribed onto one of the key-lines **26** in the key group **38** of the master insert **14**. When such informational data is no longer current, it may be cancelled, such as by a single pencil line crossed therethrough, thereby retaining such data in a form of permanency on the master insert while at the same time enabling the remaining two, three or more lines, as the case may be, to be utilized for the next successive data entry. More particularly, a base member **4** may be set up in the form of a leaf which mounts ten of the slave inserts **20**. In a situation wherein each of the key groups **38** of the master insert **14** has three lines thereon, thirty data entries can be transcribed and twenty cancelled therefrom before the current and up-to-date usefullness of the entire page is in any manner effected by the accumulation of non-current data. By such an arrangement, another ten data entries can be cancelled before it is required to replace the master insert **14**. Hence, it can be seen the informational data on the slave inserts **20** is always kept current even after the master insert **14** becomes exhausted by thirty or more entries and cancellations. Thus, the slave inserts provide a single, vertical column for ready visual correlation of current data with cancelled data on the master insert. Moreover, the slave inserts not only provide a correlative key to current informational data on the master insert, but also function as a signal system to automatically focus attention on current and non-cancelled informational data.

By the inter-related combination of the foregoing elements a multiplicity of data entries can be transcribed and deleted before it becomes necessary to replace the master insert. Each page thus set up is kept continuously current, and the current items are arranged so as to be rapidly located without interference from random and non-current informational data, yet, the data transcribed on the master insert remains at all times available for reference. Hence, the usual difficulty of a conventional record type book being rendered relatively useless after a number of items have been crossed out is effectively eliminated. Moreover, the key-lines **26** of the master insert may be transcribed with informational data without the need to add additional leaves thereto, thereby decreasing the expense and also eliminating the serious disadvantages present in the use of conventional types of record books. In addition, it will be noted that by the slot and tab construction, the master and slave inserts can readily be reversed and utilized on the opposite side thereof for the transcription of additional informational data, thereby increasing the usefullness of a given one of the master or slave inserts.

In the fragmentary elevation view of FIG. 6, there is illustrated one example of the data recording device which is particularly useful as a continuously current Christmas card record. In this case, the master insert **14** may be provided with a plurality of spaced, generally vertically extending parallel lines **42** which provide a format defining vertical columns which may be marked S and R, designating the terms "sent" and "received." Informational data, such as the name and address of the person who is to be sent or who has received a Christmas card may then be transcribed on the associated slave inserts. If the name of a particular person is to be retained as part of the record, but changes his address, the slave insert need merely be replaced in order to keep the entire record continuously current. If the name of the person itself is to be replaced, then a line need merely be drawn through the relatively permanent and predictable informational data relating to the designation "sent" or "received" which is transcribed on the particular key-like **26** of the master insert. Hence, it will be noted that the vertical column construction of master insert provides a readily accessible and convenient format which is extremely orderly and compact to maximize the efficiency, as well as the life of the master.

FIG. 7 illustrates another example of the date recording device which is particularly useful as a continuously current record for business applications, such as in the recording and retrieval of statistical data and analyses. Hence, in the embodiment shown, informational data, such as the date and price of purchase of a particular product, can be transcribed on the keylines **26** of an associated one of the key groups of the master insert **14** and with the name and address of the particular manufacturer transcribed on one of the slave inserts **20**. By such an arrangement, the frequency of purchases and dollar volumes can readily be determined for a given product in terms of each manufacturer entry. Such information then becomes quickly available for analysis of buying trends, strong product lines, and future planning in relation to given markets.

As can be seen from the illustration of FIG. 7, due to the relative permanency and the compact, unitary construction of the elongated master insert **14**, it is extremely convenient to store and index the same to provide a complete system for future informational retrieval which is completely independent of the relatively undefined and unpredictable data transcribed on the slave inserts. In some instances it may be desirable to permanently associate the data stored on the master insert with that on the

slave inserts. Such may be the case, for example, where in the manufacturer is designated on the master insert with the local sources or representatives for his product designated on the slave inserts. Moreover, when the frequency of change in the outlets in a given locale is high, the sources can nevertheless be maintained current. Such permanent correlation of informational data can be accomplished by means of a single codification, for example, which associates one of the key-lines **26** on one of the key groups **38** to one of the particular slave inserts.

In FIG. 5, there is illustrated a sectional view of the data recording device **2** of FIG. 4, wherein the base member **4** is folded over upon itself, as at **43**, to provide a pair of spaced sheets **44** and **46** which together define a double-walled or leaf construction. In another arrangement, the double leaf construction can be achieved simply by attaching two sheets together along at least a portion of their periphery, such as at the ends, by means of a suitable fastener or by means of an adhesive. By this arrangment, enhanced stability and permanency is added to the device and a convenient construction is provided for facile duplication of the slits for receiving the tabs of the master or slave inserts. Furthermore, the utilization of such double type page construction maintains the respective slits in registration with one another and permanently interlocks the tabs of the master and slave inserts in their assembled position within their associated slits.

In FIG. 8, there is illustrated a convenient arrangement for joining any number of the data recording devices **2** of the present invention into a compact, unitary unit for ready reference and permanent storage. As shown, each of the individual devices may be provided with spaced apertures **47**, such as by conventional type punching techniques or the like, for permanent binding to associated rings **48** of a book-type binder **50**. In another form, the individual devices may be detachably secured to the binder in loose-leaf fashion so that any number and/or arrangement of additional devices may be assembled therewith for extended usage.

From the foregoing description and accompanying drawings it can be seen that the improved data recording device of the present invention provides a high density, compact, and extremely flexible arrangement for maintaining, continuously current, and over an extended period of time, many varied types of informational data, such as personal and business records, statistical averages and analysis, classified services, or other such type of data from practically any source or origin. Moreover, though the data recording device of the present invention has been illustrated as being generally manually operative, it is to be understood that the principles embodied in such devices can also be advantageously applied to mechanical and/or electro-mechanical apparatus and/or systems wherein it is desired to continuously record, store and correlate current informational data.

I claim:

1. A data recording device for substantially automatically correlating relatively defined and permanent informational data with relatively undefined and transitory informational data for substantially continuously current usage comprising, in combination, a plurality of individual base members and retainer means adapted for holding said base member in assembled relationship, each of said base members including a pair of juxtaposed leaves joined together at one end and adapted to provide a space therebetween, each of said leaves being generally planar and having a polygonal shape, in plan, defined by oppositely disposed generally parallel side edges and oppositely disposed generally parallel end edges, an elongated one-piece master insert detachably mounted adjacent one side edge of each of said leaves, and each master insert having a plurality of linear indicia, line means extending transversely thereof, said line means spaced vertically from one another along the length of the respective master insert by demarcation line means so as to divide said first mentioned linear indicia, line means into a predetermined number of key groups, and each of said key groups having at least three indicia lines for transcription thereon of relatively permanent informational data, each of said master inserts including a plurality of outwardly extending tabs disposed in corresponding slits provided in the respective of said leaves for holding the respective master insert in assembled relationship on said leaf, a plurality of individlal slave inserts detachably mounted adjacent the other side edge of each of said leaves and said slave inserts being disposed in laterally spaced and generally parallel relationship relative to the respective master inserts, the number of said slave inserts corresponding to the number of key groups on each of said master inserts, each said slave insert being in general lateral alignment with a respective one of said key groups, each of said slave inserts having a plurality of indicia line means thereon and the number of indicia lines in each of the key groups on said master insert corresponding at least to the number of indicia line means on each of the respective slave inserts for correlatable transcription thereon of relatively permanent informational data as compared to relatively transitory informational data to be transcribed on the indicia line means of the respective slave inserts, each of said slave inserts having a pair of outwardly extending tabs disposed in corresponding slits provided in the respective of said leaves for detachably mounting the respective slave inserts thereon, the lengthwise dimension of each of said master inserts being at least as great as the combined corresponding lengthwise dimension of all of the slave inserts on each of the respective of said leaves so that relatively permanent informational data on the respective master insert is substantially automatically correlatable with the relatively transitory informational data on the respective slave inserts to provide a continuously current record of informational data, the slits for the respective master inserts including horizontally and vertically extending slits disposed adjacent the respective side and end edges of said leaves, and the slits for said slave inserts including a pair of laterally spaced, generally parallel rows of vertical slits disposed substantially at right angles with respect to the horizontally extending slits for the respective master inserts, and wherein each of said master inserts has a lengthwise dimension generally equal to the lengthwise dimension of the respective leaf, and wherein said slave inserts have a substantially greater widthwise dimension as compared to the corresponding widthwise dimension of the respective master inserts.

2. A data recording device in accordance with claim **1**, including fastening means joining the respective pairs of leaves of each of said base members together at said one end to provide a double-leaf construction.

3. A data recording device in accordance with claim **1**, wherein each of said base members is of a unitary, one-piece structure folded over upon itself at said one end to provide said leaves and to provide a double-leaf construction.

4. A data recording device in accordance with claim **1**, including a cover member, and the leaves of each of the respective base members being attachably mounted at one end with said cover member.

5. A data recording device in accordance with claim **1**, wherein said inserts are detachably mounted on the outer surface of the leaves of each of the respective base members with said tabs projecting through the slits in said leaves into the space between juxtaposed of said leaves, whereby the free ends of said tabs are located in the assembled position in said space and completely interiorly between said leaves.

6. A data recording device in accordance with claim **1**, wherein the indicia lines in each of the key groups on the respective of the master inserts are disposed in substan-

tially horizontal alignment with the indicia line means on the associated slave inserts.

7. A data recording device in accordance with claim 1, wherein said master inserts each include a plurality of spaced, vertical lines extending lengthwise thereof to provide a plurality of side-by-side rows of vertical columns, said vertical lines intersecting said indicia lines in each of sad key groups at right angles to provide a plurality of side-by-side rows of horizontal columns disposed in general alignment with the indicia line means on the associated of said slave inserts, whereby informational data may be progressively correlated from one of the horizontal columns in a respective one of the key groups and other informational data transcribed on the next succeeding one of said horizontal rows for continuous correlation with the informational data on the associated one of said slave inserts without removal of either the master or the respective one of the associated slave inserts.

8. A data recording device in accordance with claim 1, wherein said inserts each have a plurality of indicia line means on both sides thereof for transcription thereon of informational data upon inversion of the same with respect to the respective leaf.

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U.S. Cl. X.R.

40—63, 158; 283—66