United States Patent [19]

Rex, Jr.

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[54] **DATA RECORDER**

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[73] Assignee: **The Upjohn Company**, Kalamazoo, Mich.

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[52] **U.S. Cl.** ..... **235/61.6 E**, 35/2, 35/24 A, 235/12 N

[51] **Int. Cl.** **G09b 19/18**, G06k 19/04, Go6k 21/04, G09c 1/02

[58] **Field of Search** ..... 35/37, 38, 2, 24 R, 24 A, 35/53; 235/61.11 A, 61.6 E, 61.11 E, 61.12 R, 61.12 N; 194/4 F; 346/14 MR

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[57] **ABSTRACT**

A flat rectangular container having front and rear walls which are flat, parallel and spaced from each other. A partition wall is disposed between and spaced from the front and rear walls and all three of these walls are held in spaced relationship by a peripheral member which extends along three edges of the front, rear and partition walls, thereby leaving one end of the container open. The front and rear walls have apertures therethrough which are alignable with preidentified locations upon a card properly inserted into the container. Indicia are provided on the external surfaces of the front and rear walls adjacent said apertures, and such indicia identify the entries made on the cards by a marking instrument.

2 Claims, 8 Drawing Figures

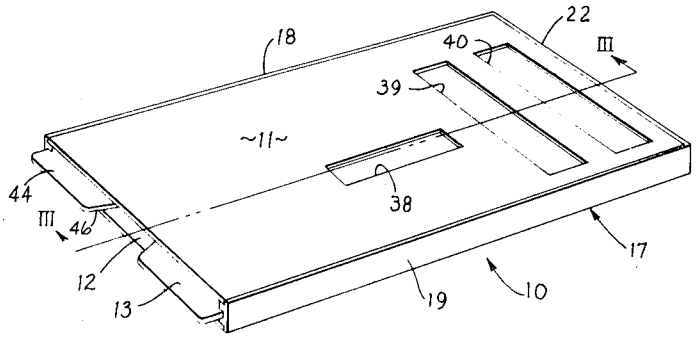
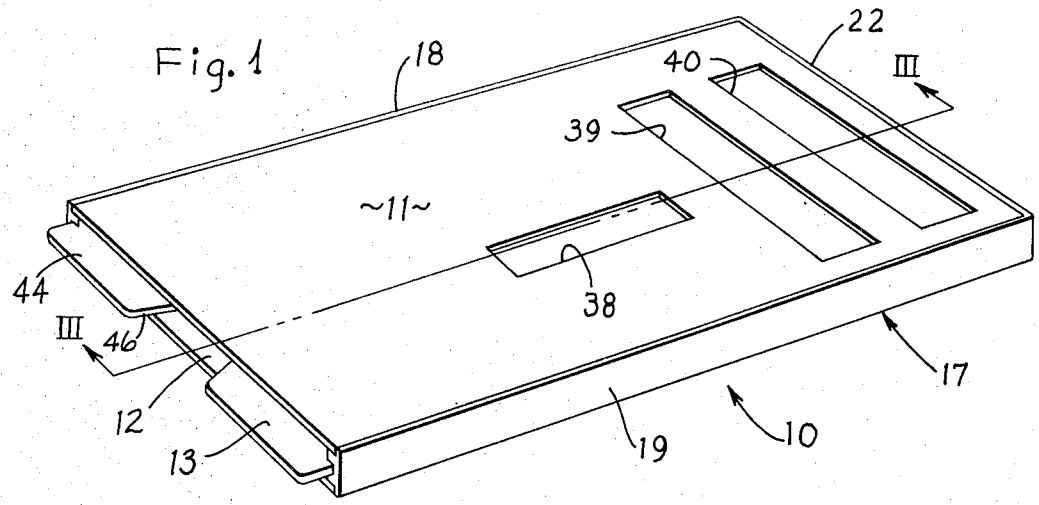


Fig. 1



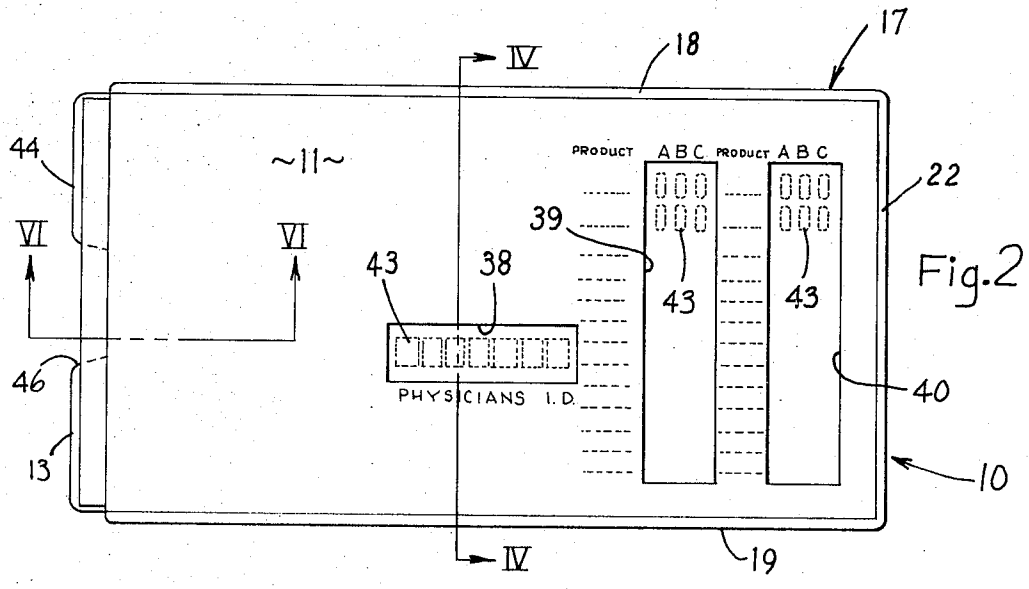


Fig.2

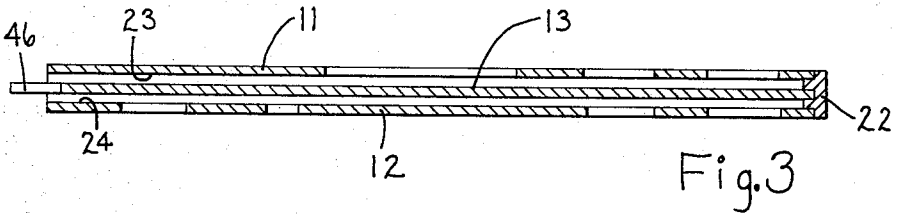


Fig.3

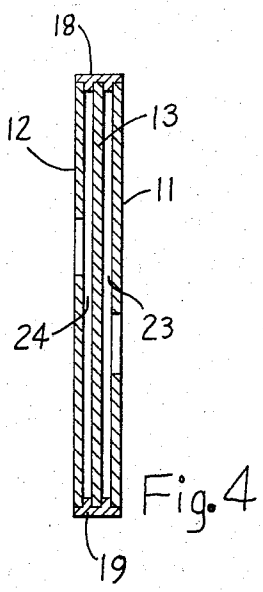


Fig. 4

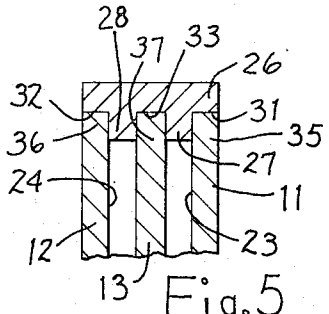


Fig. 5

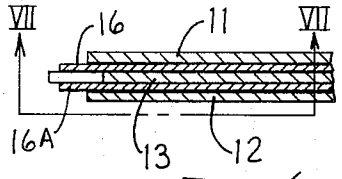


Fig. 6

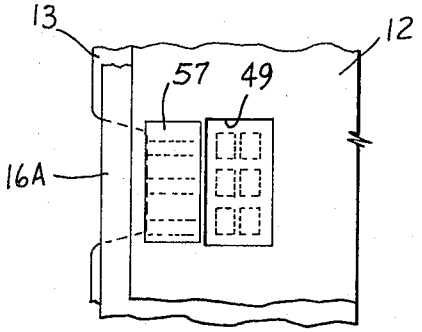


Fig. 7

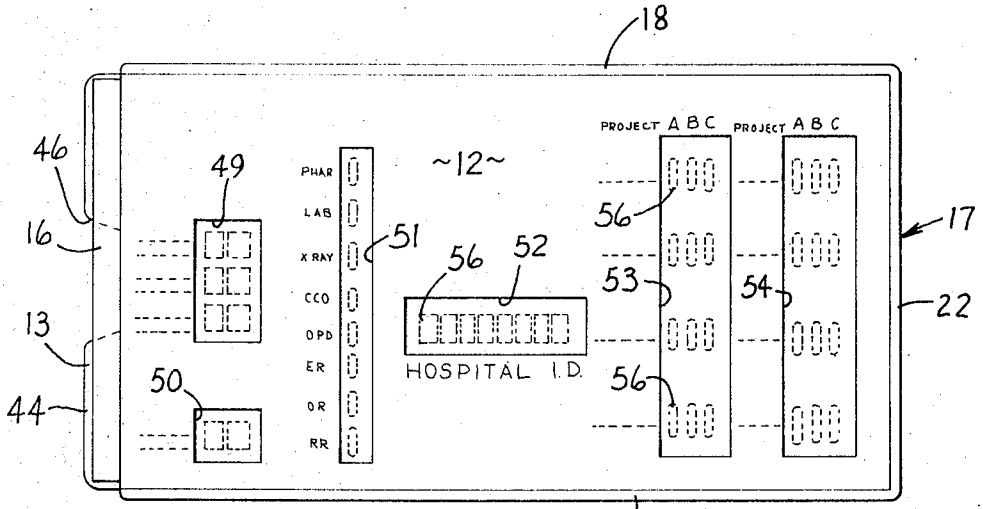


Fig. 8

DATA RECORDER

This invention relates in general to a device for recording information on a sheet member which can then be fed into a computor and, more particularly, to a device of this type capable of use by salesmen contacting various types of customers so that the number, type and effectiveness of such contacts can be recorded and analyzed by a computor.

It has been standard practice for many years in large sales organizations to keep records of the contacts made by salesmen with their customers. By this means, management can determine whether the proper number of contacts are being made, the effectiveness of the salesman, the reception given new products and the need for sales aids, such as advertising, and management can obtain by this procedure other important information which would not otherwise be available.

In order to assemble such information for use, it has been, and still is, necessary to maintain large staffs of personnel, the main function of which is to transfer the information, placed upon cards or other data sheets by the salesman, to cards that can be fed into the computor or other gathering means, in a manner which is familiar to persons involved in data processing. Obviously, the more data to be processed, the larger the staff required to do it. Having studied the foregoing, it was conceived that much time and effort could be saved by furnishing each salesman with a device which would permit him to enter the information which he collects upon a card which could be fed directly into the computor or other analyzing system or machine. Clearly, it would be necessary to furnish the salesman with a recording mechanism and method which would be relatively easy for him to use, which would at least minimize the possibility of inaccurate entries and which would minimize the number and type of different indicia to be recorded by the salesman upon the card used for this purpose.

Heretofore, it has been common practice to assign a separate type of information recording card for each customer or each type of customer, thereby often necessitating the provision of a huge inventory of different types of cards for each salesman's use. Moreover, the inventory has often differed from salesman to salesman. This is especially true in the case of salespeople representing pharmaceutical houses where personal contacts must be made with doctors and with purchasing agents and/or with heads of central services and the like. However, the same problem is also found in other sales fields.

Accordingly, an important object of this invention is the provision of a data recording method and device whereby a salesman, for example, can record the results of conferences with all of his customers on one, two or a few cards which cards can be fed directly into a computor for recording and analysis by supervisory personnel and by management to overcome problems to increase sales and to improve marketing procedures.

A further object of this invention is the provision of a recording device, as aforesaid, which can be carried by the salesman in his pocket along with a small supply of universally applicable recording cards which are adapted for use in a computor or other data analyzing means.

A further object of this invention is the provision of a recording device, as aforesaid, which minimizes the opportunity for inaccurate entries, which uses a minimum of different types of entries upon said cards and which minimizes the complexity of such entries in order to permit the use of such cards in a computor. Other objects and purposes of this invention will become apparent to persons familiar with this type of equipment upon reading the following specification and examining the accompanying drawings, in which:

FIG. **1** is a perspective view of a data recorder embodying the invention and by means of which the method of the invention can be carried out.

FIG. **2** is a front elevational view off said data recorder.

FIG. **3** is a sectional view taken along the line III—III in FIG. **1.**

FIG. **4** is a sectional view taken along the line IV—IV in FIG. **2.**

FIG. **5** is an enlarged fragment of FIG. **4.**

FIG. **6** is a sectional view taken along the line VI—VI in FIG. **2.**

FIG. **7** is a sectional view taken along the line VII—VII in FIG. **6.**

FIG. **8** is a rear elevational view of said data recorder.

For convenience in description, the terms "upper", "lower", "front", "rear" and words of similar import will have reference to the data recorder as shown in FIG. **2** which discloses the front side thereof. The words "inner", "outer" and derivatives thereof will have reference to the geometric center of said recorder box and components thereof.

SUMMARY OF THE INVENTION

The objects and purposes of the invention have been met by providing a flat rectangular and somewhat elongated container having front and rear walls which are flat parallel and spaced from each other. A partition wall is disposed between and spaced from the front and rear walls, and all three of these walls are held in spaced relationship by a peripheral member which extends along one end edge and two side edges of each of the front, rear and partition walls, thereby leaving one end of the container open. The front and rear walls have apertures therethrough which are alignable with preidentified locations upon a card properly inserted into the container. Indicia are provided on the external surfaces of the front and rear walls adjacent said apertures, and such indicia identify the entries made on the cards by a marking instrument.

DETAILED DESCRIPTION

The data recorder **10,** a preferred embodiment of which is disclosed in FIGS. **1** and **2,** is comprised of a front wall **11,** rear wall **12** and partition wall **13** which are parallel and spaced from each other a distance slightly greater than the thickness of the card **16** which is preferably insertable between the front wall and partition wall or the rear wall and the partition wall. The three walls are preferably relatively stiff and thin, and they may be fabricated from any suitable material such as metal, preferably light weight, plastics or the like, and at least the front and rear walls are preferably opaque, but could be translucent. Also, the cards **16** are preferably opaque.

The recorder 10 includes an edge member 17, which is preferably an elongated plastic or metal extrusion having side edge portions 18 and 19 and one end edge portion 22. Thus, as appearing in FIG. 3, the walls and edge member 17 define two flat, thin and relatively wide slots 23 and 24 into which a card 16 (FIG. 2) can be inserted. The card 16 may be fabricated from any suitable material, such as paper, paperboard, plastic or the like and, therefore, the term "card" is used merely as a means of identifying the data receiving member.

The edge member 17, in this embodiment, is comprised of a flat narrow edge strip 26, which bears against the peripheral side and end edges of the three walls, and a pair of spaced and parallel ridges 27 and 28 projecting inwardly from, and extending along, the edge strip 26. As shown in FIG. 5, the ridges 27 and 28, which are preferably integral with the strip 26, are spaced transversely thereof in order to provide a front notch 31, a rear notch 32 and an intermediate groove 33. The lateral edges 35, 36 and 37 of the front wall 11, rear wall 12 and partition wall 13, respectively, are disposed within the notches 31 and 32 and the groove 33, respectively, where they are preferably held by an adhesive. Where the edge strip 26 and/or the walls 11, 12 and 13 are fabricated from a thermoplastic resin, the connection may be effected by heating thereof.

The data recorder 10, in this particular embodiment, was designed by way of example for use by a salesman of pharmaceutical products and, therefore, the following description may be restricted to terminology relating to the pharmaceutical field. Specifically, the front wall 11 contains a plurality of elongated apertures 38, 39 and 40 which are particularly designed for use in conferring with physicians about specified products. Accordingly, the card 16, which is inserted between the front wall 11 and partition wall 13, carries guide markings 43 which are aligned with the apertures 38, 39 and 40 when the card 16 is properly disposed within the slot 23. The guide markings appearing in aperture 38 provide precise locations for the entry of the physician's identification number. The specific products which might be discussed with the physician are identified by indicia located on the front wall 11 along the left side of the apertures 39 and 40. The letters A, B and C at the top of apertures 38, 39 and 40 may, for example, be symbols for the type of activity which occurred. For example, a mark in the column A could mean that the product was discussed with the physician; a mark in column B could means that samples of the product were left with the physician, and/or a mark in column C could means that the physician placed an order for some of the product identified. Thus, the salesman need only mark the card within the guide markings 43 in the apertures 39 and 40 to signify what action occurred during his contact with the physician identified on the card. The guide markings 43 are located so that they will conform precisely to the requirements of a computor or other data processing means, for recording and analyzing the information represented by the marks entered on the card by the salesman.

It will be noted from FIGS. 2 and 7 that the left end 44 of the partition wall 13 projects beyond the corresponding ends of the front wall 11 and rear wall 12, thereby facilitating entry of the card 16 into the slot 23. In the same manner, the leftward extension 44 of the partition wall 13 facilitates insertion of the card 16A into the slot 24 (FIG. 6). The cards 16 and 16A are preferably shorter than the portion of the partition wall 13 engageable thereby when said cards are in the slots 23 and 24, in order to protect the leftward edges of the cards, particularly if they must be fed after completion into a computer. Accordingly, the partition wall 13 has in its leftward extension 44 a centrally disposed notch 46 which permits the salesman to grasp the leftward edge of the card 16 or 16A, or both, and removed same from the recorder 10.

The rear wall 12 (FIG. 8) has apertures 49, 50, 51, 52, 53 and 54 which are particularly designed to identify activities of the salesman during a visit to a hospital, clinic or the like. The guide markings 56 are especially arranged on the card 16A to align with said apertures 49 through 54 and with the indicia appearing on the rear wall 12 along the leftward sides of the apertures 49, 50, 51, 53 and 54.

Aperture 52, in this embodiment, is reserved for entry of the hospital's identification number. Aperture 49 may be reserved for entry of the identification symbols of professional people attached to the hospital. Aperture 50 may be reserved for identification of special activities, such as displays, lectures, demonstrations or the like, performed by the salesman or his employer at the hospital for the benefit of a few or many of their employees or prefessional people. Aperture 51 may identify specific departments, including personnel in such departments, which were visited by the salesman. Apertures 53 and 54, as in case of apertures 39 and 40 discussed above, are reserved for identifying the products which can be discussed by the salesman with hospital personnel, and the type of activity which occurred during, or as a direct result of, such discussion.

It will be recognized that changes may be required from time to time in the indicia located along the edges of the various apertures in the front wall 11 and rear wall 12. This can be easily accomplished by furnishing strips 57 (FIG. 7) of sheet material, such as paper, having a pressure sensitive adhesive on one side thereof and the new or replacement indicia on the other side thereof. This will eliminate the necessity for furnishing a new recorder, simply to change the indicia appearing on a wall thereof.

While it is conceivable that a single card can be provided with guide markings on one side for the physician and with guide markings on the opposite side for a hospital, thereby reducing the number of cards required to an absolute minimum, it may be desirable to have two different cards, one for the physicians and one for the hospitals, in order to avoid complications at the point of gathering and analyzing the data collected on the cards.

The operation of use of the data recorder 10 will be apparent to persons skilled in the art by reference to the foregoing description. However, for convenience, they will be summarized hereinafter.

The salesman is furnished with a data recorder 10 and a supply of cards 16 and 16A in sufficient quantity to meet his requirements for a reasonable period of time. Since only two different cards are utilized in the adaptation discussed hereinabove, about the only limitation on inventory of cards would be the likelihood of changes in the number and/or location of apertures in the front and rear walls.

Changes in the indicia located along the said apertures in said front and rear walls can be readily accom-

modated by furnishing the salesmen with adhesive coated strips **57** (FIG. 7) which are attached to the appropriate wall of the recorded adjacent the appropriate aperture.

Assuming that the salesman plans to visit a physician, he will insert the card **16** into the slot **23** in the recorder **10,** preferably before he makes his call. Either before or promptly after such call, he will enter the physician's identification number on the card **16** through the aperture **38** and, during his conference with the physician, or promptly thereafter, he will make appropriate entries, as by a pencil, within the guide markings on the card **16** through the apertures **39** and **40.** It may be desirable to furnish the salesman with a special type of writing instrument for this purpose.

After the interview has been completed, the card **16** can be removed from the data recorder and placed in a container where it will be protected until it, with other similar cards, can be returned to the home office.

A similar procedure will be utilized in entering data on the card **16A** through the apertures in the rear wall **12.**

It has been found that, with minimal instructions, the salesman can make appropriate entries within the limitations of the guide markings **43** and **56** so that they can be accurately recorded and analyzed by a computor or other data processing means.

Although a particular preferred embodiment of the invention has been disclosed in detail for illustrative purposes, it will be recognized that variations or modifications of the disclosed apparatus, including the rearrangement of parts, lie within the scope of the present invention.

The embodiment of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A device for recording data on substantially flat rectangular sheet members, said device comprising:

elongated rectangular and substantially flat container means defining therein a flat compartment adapted to accommodate therein at least two of said sheet members, said container means being open at only one end thereof for permitting said sheet members to be inserted into or removed from said compartment;

said container means including a pair of substantially flat parallel rectangular sidewalls disposed slightly spaced apart from one another and defining said compartment therebetween, said container means also including a substantially U-shaped edge means fixedly connected to and extending between adjacent edges of said sidewalls, said edge means being fixedly connected to three of the edges of each sidewall;

said one end of said container means having an elongated slotlike opening formed therein for communication with said compartment, said slotlike opening being defined between a pair of adjacent edges on said sidewalls;

partition means fixed to said container means for dividing said compartment into a pair of substantially flat and parallel subcompartments, said partition means including a substantially flat and rectangular partition wall positioned within said compartment between said pair of sidewalls, said partition wall being spaced from and substantially parallel with said sidewalls and having edges thereof fixedly connected to said edge means;

said partition wall extending outwardly through said elongated slotlike opening and having an exposed end portion extending outwardly beyond the open end of said container means as defined by the adjacent edges of said sidewalls, the extending end portion of said partition wall having a central notchlike recess formed therein which extends inwardly of said partition wall toward the adjacent edges of said sidewalls;

said rectangular sheet members being slightly longer than said sidewalls and slightly shorter than said partition wall whereby each sheet member, when inserted into one of said subcompartments, will have one end thereof projecting outwardly through said opening beyond the adjacent edges of said sidewalls but terminating short of the free edge of said partition wall, said one end of said sheet member overlapping said recess, the other end of said sheet member being disposed in abutting engagement with said edge means which functions as a stop for closing the other end of said compartment;

means defining a plurality of apertures through said sidewalls adapted to expose said partition wall therethrough, said apertures being located to align with first indicia upon said sheet members when they are inserted into said compartment; and

second indicia on the external surfaces of said sidewalls adjacent said apertures and adapted to correspond with said first indicia.

2. A device according to claim **1,** wherein said edge means includes three elongated marginal strips disposed in substantially perpendicular relationship to one another to define a substantially U-shape, each strip having three elongated notches facing inwardly thereof and extending longitudinally of the respective strip in substantially parallel relationship, each of said sidewalls having a side edge thereof projecting into one of the outer notches and adhesive means for fixedly securing each of said sidewalls to the marginal strips, and said partition wall having an edge thereof projecting inwardly into the centermost notch.

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