

ABSTRACT
(Figure 3 refers)

A printed sheet for use with a blister card trapped between two panels of a medication dispensing folder, is divided by a fold line (14) into two sheet portions having writing on them but the writing (15) on one sheet portion being upside down with respect to the writing (13) on the other sheet portion which is provided with a rectilinear array of rupture lines (20).



AUSTRALIA

P/00/011 28/5/91
Regulation 3.2

Patents Act 1990

**ORIGINAL
COMPLETE SPECIFICATION
STANDARD PATENT**

Invention Title: Improvements in, or relating to medication dispensing folders

The following statement is a full description of this invention, including the best method of performing it known to me:-

(see within)

THIS INVENTION relates to the dispensing of packaged medication by a pharmacist and is more specifically concerned with the assembly of a re-chargeable medication dispensing folder providing several days supply of medication to be taken by a patient requiring different medication doses at different times of the day. Such a folder is shown in our Australia Design Registration Number 99042.

One form of folder is made from a stiff plastics material and is provided with a hinge dividing it into two panels which can be folded together about the hinge axis. Each of the panels is provided with an array of registering rectangular windows and with releasable fastenings for retaining the panels in a face-to-face relationship. The front of one of the panels is provided with markings associated respectively with the different rows of windows and signifying the days of the week, and with further markings associated with the columns of windows and denoting the times of the day when medication stored in the folder is to be administered.

A blister card, prepared by a pharmacist, is mounted between the panels of the folder and has a rectilinear array of transparent blisters formed on a blister sheet and which respectively protrude through the windows of the front panel. The blisters are made of a finger-depressible material and each contains the doses of medication to be administered to a patient on the day and at the time denoted by the position of the blister in the array. The medication doses are held in their blisters by a rupturable metal foil backing which covers the back of the blister sheet and is adhesively attached to it around the periphery of each blister.

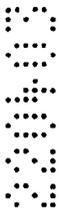
The exposed face of the metal foil behind the blisters is covered by an adhering thin paper web on which is printed information identifying the medication doses contained in each of the blisters. This printing is confined to the region of the web immediately

behind each of the blisters. Such printing is carried out by the pharmacist during the assembly of each blister card. Although theoretically one could print this information directly on the foil, special techniques involving relatively expensive apparatus would then have to be employed which is beyond the means of a normal pharmacy. As a consequence the pharmacy has to purchase relatively expensive web-backed foil from a supplier.

The provision of suitable web-backed foil to the pharmacist and its subsequent ink printing, represents a significant component in the overall cost of the assembled blister packaging used in conjunction with the folder.

An object of this invention is to provide improved blister packaging for use with a medication-dispensing folder.

In accordance with one aspect of this invention there is provided a re-chargeable medication dispensing folder providing several days supply of medication to be taken by a patient requiring different medication doses at different times of the day, the medication doses being stored in finger-depressible blisters located at respective positions in the folder corresponding to the days and times at which the medication doses are to be taken by the patient, the folder being formed with hinged-together panels which can be turned about the hinge axis so that they lie face-to-face and held in this position by openable fasteners, one of the panels being formed with an array of windows through which respective blisters protrude and which have associated marking denoting the days of the week and the times of the day at which the medication doses are to be taken, and a second panel being formed with apertures registering with the windows when the panels are folded together face-to-face; the blisters being formed on a blister card and being closed by respective areas of a rupturable foil secured to the card and covered by a printed sheet which is separate from the card and is held at a fixed position between the foil and the apertured panel of the folder so that printing on the

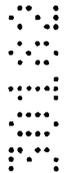


sheet which is exposed in a particular aperture provides data relevant to the particular blister in registration with the aperture, each zone of the printed sheet in registration with an aperture being deliberately weakened so that the action of depressing a particular blister ruptures the foil backing to it and also the corresponding weakened zone of the sheet to allow the contents of the blister to be ejected through the aperture.

The deliberate weakening of the zones of the sheet may be affected by providing it with lines of perforations. These may extend around each zone or across each zone. Their function is to confine the area of rupture of the sheet to the immediate vicinity of the back of the blister being depressed. Other ways of weakening the sheet may also be employed so that the action of depressing a particular blister to eject its contents has no effect on the foil or the zones of the sheet associated with blisters which have still to have their contents ejected.

Preferably the sheet comprises a paper web which can be written on by a laser. Laser printing is a cheap and effective way of printing paper but it is not easily employable and cannot therefore be satisfactorily used when the sheet is bonded as a web over a metal foil backing.

The sheet may be provided with means which fold over one end of the foil-backed blister sheet when mounted in the folder, to maintain the correct registration of the written areas of the sheet with the corresponding associated blisters. Alternatively, the paper sheet may have one marginal edge adhering to a corresponding edge of the foil. This allows the sheet to be printed on by a laser printer when folded back from the foil. When the printing is complete the foil can be cemented to the back of a



blister card loaded with the required doses, and the sheet then folded back over the foil before the loaded card is placed in the folder.

The invention will now be described in more detail, by way of example, with reference to the accompanying drawing, in which:-

5 FIGURE 1 is a front view of a closed folder containing an assembled blister card loaded with the doses of a patient's medication;

FIGURE 2 is a back view of the closed folder of figure 1; and,

FIGURE 3 is the back view of a paper sheet having a rectilinear array of zones in which are printed details of the doses contained in individual blisters of the folder.

10 Figure 1 shows a closed plastics folder 1 made from a stiff plastics material and formed with a rectilinear array of windows 2. The folder 1 is formed by two panels 3 and 4 folded together about the axis of a hinge line on one edge 4 of the folder. A loaded blister card 5 is sandwiched between the two panels 3 and 4 of the folder so that the 15 individual blisters 6 of the card protrude through respective windows 2 and, being transparent, display their contents. The front panel 3 is provided along its margin opposite the hinge line 24 with legend giving the days of the week on which the medication is to be taken, and, along the top of window columns, with further legend denoting the times of the day when the medication is to be taken. Above the columns is 20 a large rectangular opening 7 containing identification details of the patient.

The back panel 4 of the folder, shown in figure 2, is also provided with an array of rectangular apertures 8 which register with the windows of the panel 3 when the folder is closed. In each of these apertures is displayed a rectangular written zone 10 containing information relevant to the doses of medication in the blister corresponding to the zone. An elongated rectangular opening 11 in the upper portion of the folder 4 contains information relevant to the medication and provided by a doctor's prescription.

The blisters of the card are backed by metal foil, or a foil and paper laminate as is conventional in such a blister package. The foil or laminate is adhered to the regions of the blister card surrounding each blister 6 so that its contents are hermetically sealed within it. However, unlike a conventional foil or foil laminate there is no writing on it. Instead the required written information is provided on a paper sheet or web 13 shown in figure 3.

Referring to figure 3, the sheet 13 is formed with an array of C-shaped perforations 20 each corresponding in position to one of the apertures of the panel 4. These perforations provide the sheet or web with lines of weakness along which the sheet and web can easily be ruptured. Each of the C-shaped lines of perforations 20 defines within it a zone on which the written information or legend concerning the contents of the associated blister appears. This may be formed cheaply and easily by a laser printer. The sheet or web 13 is provided with a fold line 14 above which the writing on the sheet is reversed, as shown at 15. The fold line enables a pharmacist to print one side of the sheet or web 13 with the required information relating to the patient and the medication. The sheet or web 13 can then be folded along the fold line 14 to provide a pocket in which is inserted the upper end of the blister card prior to mounting it in the folder 1. When the card is mounted in the folder the reversed

writing giving details of the patient, appears the right way up in the window 6 of the folder, and the data giving the doctor's script information also appears the right way up in the rectangular window 11 at the back of the folder. The information relating to the individual doses of the blister is displayed in the aperture behind each blister so that the appearance of the loaded folder is identical to the conventional loaded folder.

The folder is used the same way as previously. The blister corresponding to a particular day and time is manually depressed so that its contents are ejected through the foil backing or laminate. As the sheet or web 13 behind the foil is provided with zones of weakness, it is also ruptured immediately behind the blister being depressed, along the C-shaped perforation behind it. This occurs without the sheet or web being otherwise torn so that the information concerning the contents of the other blisters remains intact.

From the above it is to be understood that, in accordance with a second aspect of the invention, there is provided a paper sheet for use in a blister card assembly of a folder as described above, having a fold line separating an extension which is to be folded over the blister card from the remainder of the sheet, the extension having writing which is upside down with respect to the writing on the remainder of the sheet when the sheet is unfolded, and the sheet additionally having an array of zones for registering with the blisters of a blister card and providing areas in which can be written information concerning the contents of each of the associated blisters, each of the zones being provided with a line of perforations to localise its rupturing to the vicinity of the corresponding blister when it is manually depressed to eject its contents from the back of the blister card



The Claims Defining the Invention are as follows:

1. A re-chargeable medication dispensing folder providing several days supply of medication to be taken by a patient requiring different medication doses at different times of the day, the medication doses being stored in finger-depressible blisters located at respective positions in the folder corresponding to the days and times at which the medication doses are to be taken by the patient, the folder being formed with hinged-together panels which can be turned about the hinge axis so that they lie face-to-face and held in this position by openable fasteners, one of the panels being formed with an array of windows through which respective blisters protrude and which have associated marking denoting the days of the week and the times of the day at which the medication doses are to be taken, and a second panel being formed with apertures registering with the windows when the panels are folded together face-to-face; the blisters being formed on a blister card and being closed by respective areas of a rupturable foil secured to the card and covered by a printed sheet which is separate from the card and is held at a fixed position between the foil and the apertured panel of the folder so that printing on the sheet which is exposed in a particular aperture provides data relevant to the particular blister in registration with the aperture, each zone of the printed sheet in registration with an aperture being deliberately weakened so that the action of depressing a particular blister ruptures the foil backing to it and also the corresponding weakened zone of the sheet to allow the contents of the blister to be ejected through the aperture.
2. A folder as set forth in claim 1, in which the deliberate weakening of the zones of the sheet is effected by providing lines of perforations which confine the area of rupture of the sheet to the immediate vicinity of the back of the blister being depressed.

3. A folder as set forth in claim 1 or claim 2, in which the sheet comprises a paper web.
4. A folder as set forth in any one of the preceding claims, in which the sheet is provided with an extension delineated from the remainder of the sheet by a fold line so that, when the sheet is folded along the fold line it provides a pocket for the reception of one end of a blister card which thus retains the folded sheet in the required position in the folder.
5. A folder as set forth in any one of claims 1 to 3, in which the sheet is attached along one edge to an edge of a metal foil forming a backing to the blisters.
6. A paper sheet for use in a blister card assembly of a folder as set forth in any one of the preceding claims, having a fold line separating an extension which is to be folded over the blister card from the remainder of the sheet, the extension having writing which is upside down with respect to the writing on the remainder of the sheet when the sheet is unfolded, and the sheet additionally having an array of zones for registering with the blisters of a blister card and providing areas in which can be written information concerning the contents of each of the associated blisters, each of the zones being provided with a line of perforations to localise its rupturing to the vicinity of the corresponding blister when it is manually depressed to eject its contents from the back of the blister card.
7. A folder as claimed in claim 1, arranged and adapted to be used as described in the accompanying drawings.

8. A sheet as claimed in claim 6, arranged and adapted to be used substantially as described with reference to figure 3 of the accompanying drawings.

Dated this 12th. Day of April 2003.

MANREX PTY. LTD.

By: *H.J. Rantzen*
Applicant's Patent Attorney

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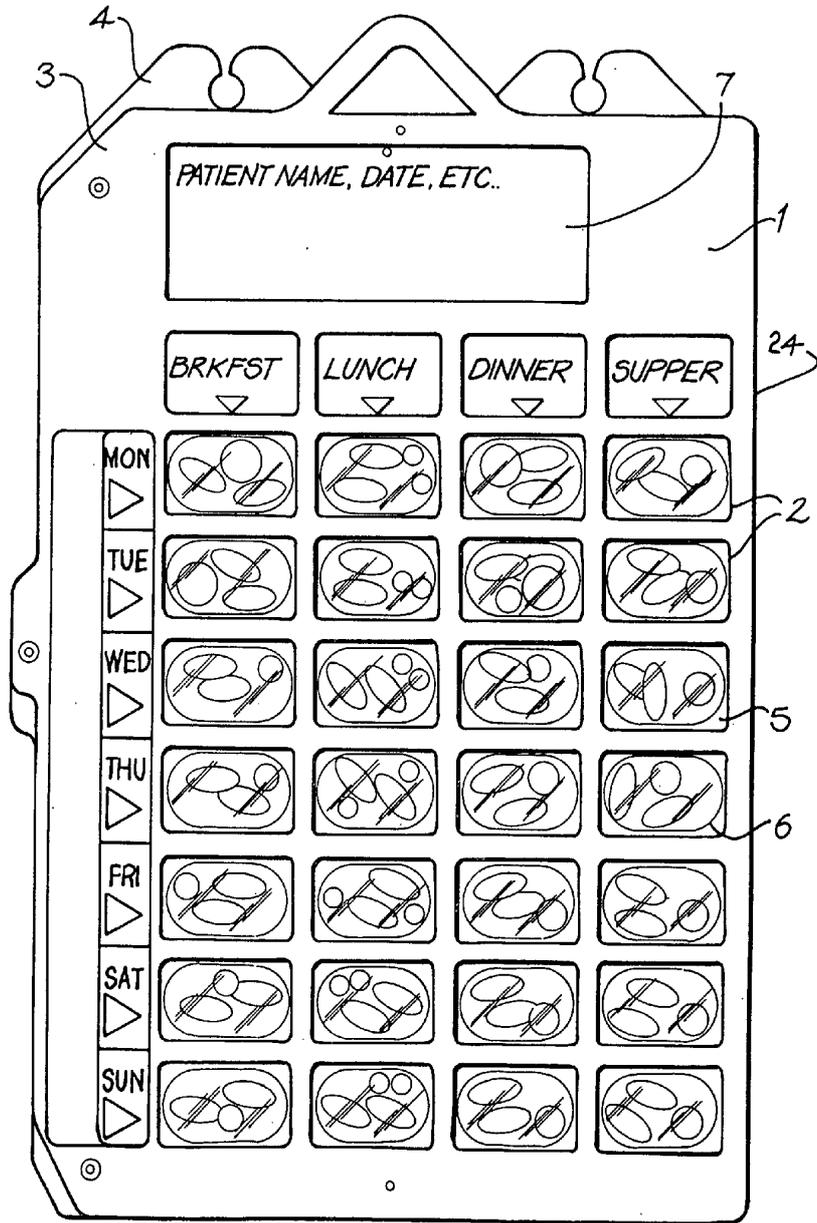


FIG. 1

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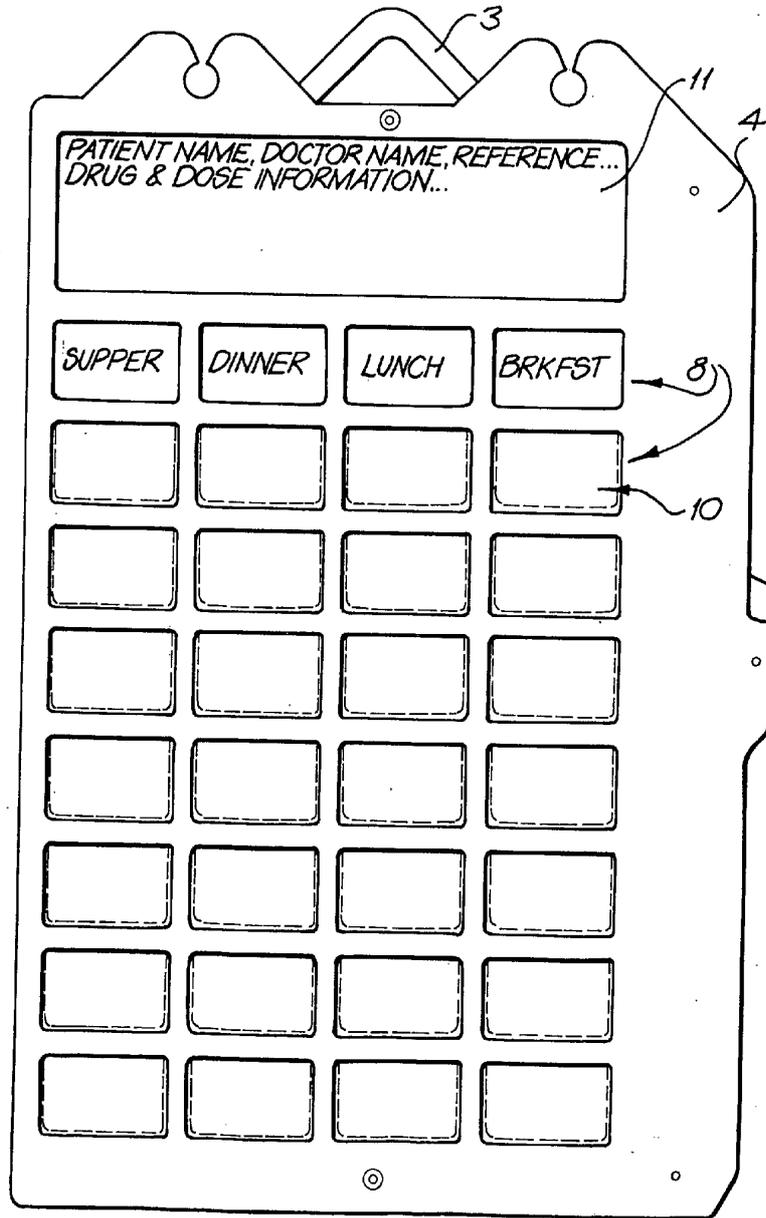


FIG. 2

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FIG. 3