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3,494,322

PILL DISPENSING MEANS

Filed April 23, 1968

2 Sheets-Sheet 1

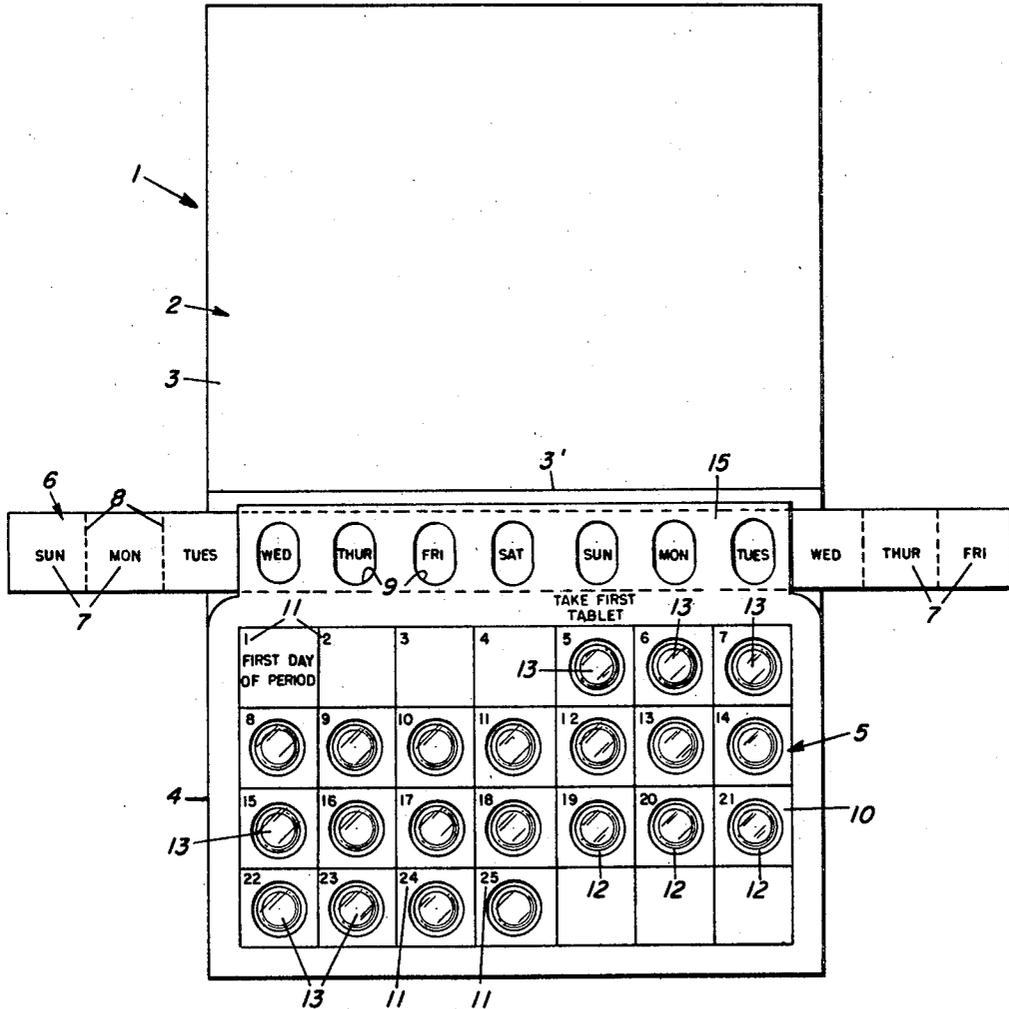


FIG. 1

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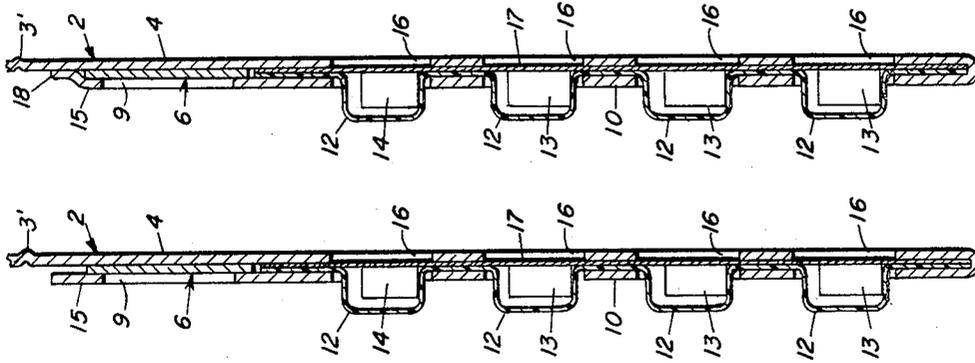


FIG. 5

FIG. 4

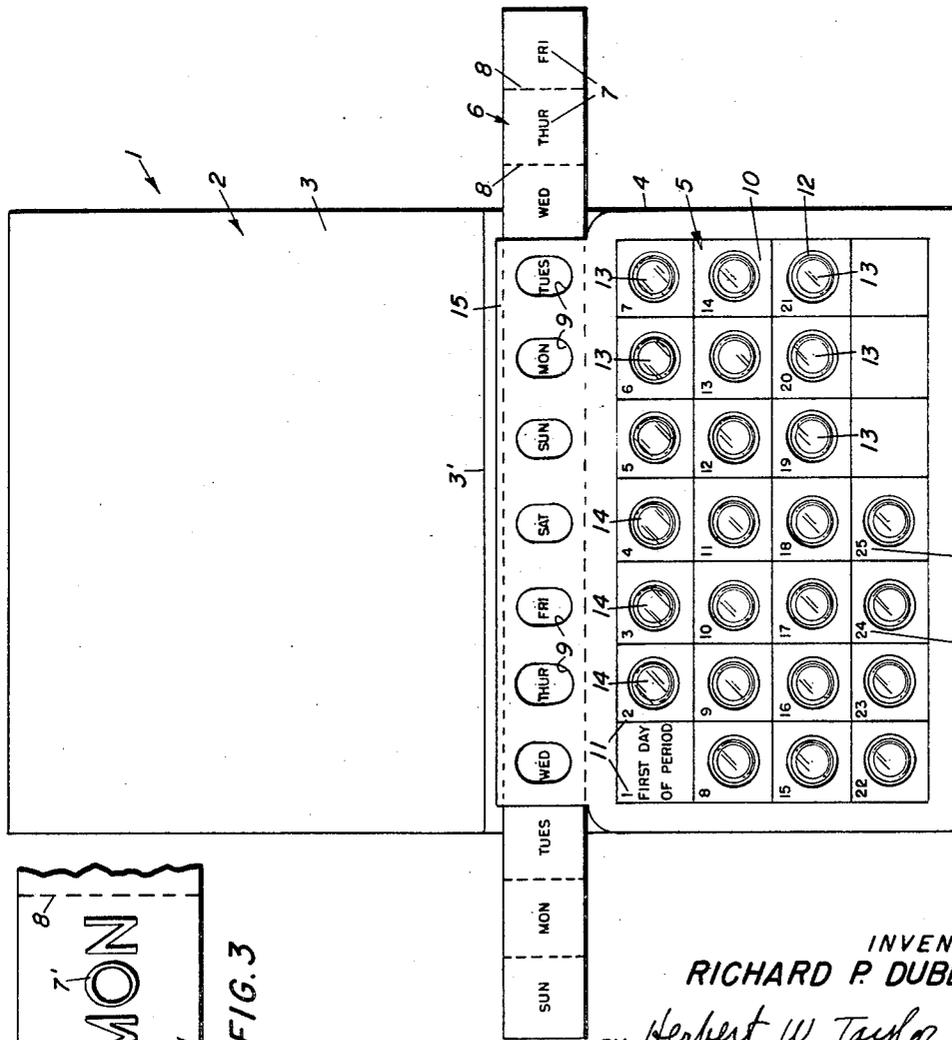


FIG. 2

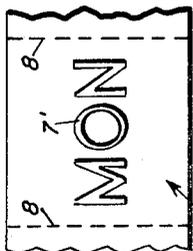


FIG. 3

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PILL DISPENSING MEANS

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12 Claims

ABSTRACT OF THE DISCLOSURE

Disclosed herein are pill dispensing devices used in dispensing contraceptive pills. Such devices are formed of a support card having thereon a calendar card which is composed of a calendar of consecutively numbered boxes arranged in seven vertical columns and four overlapping columns perpendicular therewith to thereby define a box having 28 spaces. Spaces numbered 5-25 or 2-25 are provided with plastic push-out bubbles containing 21 birth-control pills, one pill per space and bubble. In those instances where spaces 2-25 are provided with bubbles, the first three bubbles are provided with placebos. Above this calendar and aligned with the vertical columns are seven viewholes in the calendar card, one viewhole aligned with each column. Behind the calendar card and viewholes but in front of the support card, is a slidable horizontally extending day-of-the-week card sectionalized into 13 sections, each section having printed thereon a day of the week and each day being in consecutive and chronological order from the last. When the first day of the menstrual period is set in the first viewhole by adjusting the day-of-the-week card, one is provided with a simple and effective means for preventing error in birth-control pill taking.

Background of the invention

This invention relates to medicament dispensing devices. More particularly, this invention relates to devices which may be used for dispensing birth-control pills.

For certain prescribed medicines, a patient is required to start taking a dosage at some set time after a certain reference date or event occurs and then continues to take further dosages at specific time intervals until the medicine is fully consumed. One such prescribed medicine is the well known contraceptive birth control pill. In the most conventional situation, a woman must take the first of twenty-one pills on the fifth day of her menstrual period, i.e. 4 days after the first day of her period. In order for the contraceptive protection of these pills to be effective, she must thereafter take one pill a day for twenty consecutive days starting with the day after she took the first pill. Should she start taking the pill on the wrong day or miss taking a pill during the twenty-one consecutive feeding days, the contraceptive effectiveness of the birth-control pill is materially reduced. It is, therefore, very important that the woman be provided with means which both dispenses the birth control pills and at the same time instructs her as to when the first pill should be taken, when a pill has been taken, and when the next pill must be taken.

Generally speaking the art has devised numerous means for accomplishing one or more of these functions. However, most of these means are quite complicated to use and expensive to make. Thus, there exists a definite need in the art to provide a pill dispensing means which is simple to use, economical to make and yet effectively instructs a patient in the pill-taking procedure to be used to thereby materially reduce the chance of error during a prescribed medicament treatment.

Summary of the invention

This invention provides a pill dispensing means which is simple to use, economical to make and which, by its indicating means, instructs a patient when to take his first dosage, when a dosage has been taken, and when the next dosage is to be taken.

Basically, the pill dispensing devices of this invention comprise a support structure, a calendar card mounted on the support structure, and an adjustable day-of-the-week card located between the support structure and the calendar card. The calendar card is provided with viewholes for viewing individual days of the week printed or formed in separated spaces on the day-of-the-week card. The calendar card is also provided with a plurality of consecutively numbered spaces aligned with the viewholes such that each space represents a different day, at least some of the spaces being provided with pill dispensing means such as plastic push-out bubbles.

When used for birth-control pill dispensing, the above described calendar means is a box of 28 spaces (i.e. smaller boxes) formed by the intersection of seven longitudinally extending columns and 4 overlapping laterally extending columns. Each longitudinally extending column is aligned under one of seven viewholes which extend laterally across the calendar card. At least 21 of the spaces are provided with pill dispensing means. By adjusting the day-of-the-week card so that the medication reference day (i.e., the first day of the menstrual period) shows through the first of the seven viewholes and 6 consecutive and chronologically ordered days are shown thereafter in the remaining six viewholes, the seven longitudinal columns represent different days of the week and the lateral, overlapping columns represent different weeks. An effective instructing and pill dispensing means is thereby provided.

The above-described pill dispensing means will be more fully appreciated from the following detailed description of the preferred embodiments selected for purposes of illustration and shown in the accompanying drawings.

Brief description of the drawings

FIG. 1 illustrates a front plane view of one embodiment of this invention.

FIG. 2 illustrates a front plane view of still another embodiment of this invention.

FIG. 3 is an enlarged fragmentary view of a day-of-the-week card having raised lettering thereon.

FIG. 4 illustrates a sectional side view of one embodiment of this invention.

FIG. 5 illustrates a sectional side view of still another embodiment of this invention.

Detailed description of the invention including preferred embodiments

Referring to FIG. 1, there is illustrated one embodiment of a pill dispensing device as contemplated by this invention. Pill dispensing package 1 is formed of a support card 2 having a foldover flap 3 and a foldover line 3'. Although this foldover flap 3 is in no way mandatory, and indeed may be eliminated, its presence has been found especially beneficial since it serves a variety of functions. For example, it provides a convenient space for printing instructions for using the device. In addition, it serves to protect the device from damage during shipping, storage and when in use in the patient's possession. Foldover line 3' may be of any convenient form such as a slight perforation, indentation or merely a printed line for reference.

Support card 2 also has a bottom portion 4 which supports a calendar card 5 and a day-of-the-week card 6. Card 6 is provided with a number of sections, preferably

13, separated by tear or perforated lines 8. Within each section bordered by perforated lines 8 is printed a day of the week. As shown in the figure, the days of the week are printed across card 6 in consecutive and chronological order.

Calendar card 5 is mounted on bottom portion 4 of support card 2 by any suitable means such as with an adhesive. Card 5 is provided with seven viewholes 9 aligned in such a manner in card 5 that the days of the week on card 6 may be fully viewed through viewholes 9 in consecutive and chronological order.

Card 5 is further provided with a calendar means 10. In practice, calendar means 10 may be of any suitable size and number of spaces depending upon the type and amount of medication being prescribed. For purposes of illustration, however, calendar means 10 in the figures depicts a calendar device suitable for dispensing contraceptive pills for birth control. As explained hereinabove, a woman is usually required to take one pill a day for 21 days starting from the fifth day of her menstrual period. For this reason, calendar means 10 is provided with seven longitudinally extending columns and four laterally extending, overlapping columns perpendicular therewith which thereby define a box of 28 spaces. Each space defined by the intersection of these overlapping columns is numbered as illustrated, the numbering being laterally consecutive from left to right. Calendar means 10 is located on calendar card 5 so that each of the seven longitudinally extending columns of calendar means 10 is aligned directly beneath one of the viewholes 9. By aligning calendar means 10 in this manner, each longitudinal column may be used to represent a different day of the week and each column running perpendicular to the longitudinal columns may be used to represent a different week.

In the embodiment illustrated in FIG. 1, each space from number 5 through number 25 of calendar means 10 is provided with a pill dispensing means. Although such dispensing means may assume any conventional form, one convenient form especially preferred for use in this invention is a well known plastic push-out bubble 12 which contains a single pill 13 therein. As shown more clearly in FIGS. 4 and 5, pill 13 is easily dispensed by pressing rearwardly on bubble 12 until pill 13 breaks through this aluminum foil strip 17 and dispenses through hole 16 in support card 2. Spaces numbered 1 through 4 in this embodiment are not provided with pill dispensing means since a pill is only first taken on the fifth day of the menstrual period as stated above. For convenience, space number 1 has been labelled "FIRST DAY OF PERIOD" and space 5 is headed "TAKE FIRST TABLET."

Although the embodiment in FIG. 1 has proved successful in instructing as to the day of the week on which the first pill is to be taken and thus has adequately protected against error, FIG. 3 illustrates another embodiment of the invention contemplated herein which reduces the chance of error still further. This embodiment is similar in all respects to the embodiment illustrated in FIG. 1 except that spaces numbered 2 through 4 are provided with push-out bubbles 12 each of which contains a placebo 14 and space number 5 is no longer headed "TAKE FIRST TABLET." Such an embodiment materially reduces the chance of error by eliminating a time delay of 3 days between the setting of the first day of the menstrual period and the taking of the first pill. Such an elimination of time delay serves, among other things, to get a woman in the habit of taking a daily pill before the actual contraceptive pill must be taken. FIG. 2 has been illustrated for simplicity to show the provision of placebos in the spaces numbered 2 through 4. It is, of course, well within the scope of this invention to also provide a placebo in the space numbered 1. In such an instance, the space numbered 1 would for convenience merely be headed by the lettering illustrated therein.

Day-of-the-week card 6 may be provided with any

convenient type of lettering which will clearly show the days through viewholes 9. In an especially preferred form, however, the type lettering of the days of the week is raised or 3-dimensional lettering. An example of raised lettering is illustrated in FIG. 3. When raised lettering 7' as shown is used, such lettering serves to lock day-of-the-week card 6 between card 2 and flap 15 of calendar card 5. Such locking prevents card 6 from slipping out of position once it is set.

Day-of-the-week card 6 is a slidable card which, as illustrated in FIGS. 4-5, is preferably located between flap 15 of calendar card 5 and bottom portion 4 of support card 2. Card 6 is aligned in such a manner with flap 15 that lettering 7 or 7' will clearly show through and be framed by viewholes 9. As illustrated, flap 15 preferably may be of two types. The first type is an open-end flap as illustrated in FIG. 4. The second type is a closed-end flap as illustrated in FIG. 5 wherein end 18 of flap 15 is attached, as with adhesive, to bottom portion 4 of support card 2. The closed-end flap 15 as illustrated in FIG. 5 provides for better locking of card 6 and materially reduces the chance of its loss from dispenser means 1 during shipping, use, etc.

As stated above, the pill dispenser packages of this invention are designed to be operated as general pill dispensing devices especially when a time lapse occurs between a reference time and the first taking of a pill. The term "pill" as used in this application is, of course, used in its generic sense in that it is used to describe a medicinal dosage of any type, regardless of form. A preferred use and operation for these devices, however, is in the field of contraceptive pill medication as discussed hereinbefore.

The above devices when used by a woman for dispensing 21 contraceptive pills, one pill per day, is most conveniently operated as follows. On the first day of her menstrual period, for example, Wednesday, the woman adjusts card 6 by sliding it laterally until Wednesday (WED.) appears above the space numbered 1 and the next six days of a seven day (i.e. THURS. through TUES.) week appear consecutively in the other six viewholes. The sections of card 6 extending past the borders of card 2 may then be removed as by tearing. Card 6 is now safely in place such that the seven longitudinal columns represent the seven consecutive days Wednesday through Tuesday as indicated by the seven viewholes. The four columns perpendicular with the longitudinal columns thus represent four successive weeks. By viewing the calendar card, the woman on the 5th day, Sunday, as indicated by space number 5, dispenses pill 13 by pressing on plastic bubble 12. The calendar means 10 now indicates that she has taken one pill on the 5th day, Sunday, and her next pill should be taken on the sixth day, Monday. In like fashion the calendar means correctly indicates the last day on which a pill has been taken and the next day on which a pill should be taken until all 21 pills are consumed. After complete consumption, the package, which is conveniently made of cardboard, may now be thrown away and a new package provided for the next cycle.

As seen from the above description, the pill dispensers of this invention provide an economical and simple means for effectively instructing a patient as to when a pill was and is to be taken.

I claim:

1. A pill dispensing device which comprises a supporting structure, a calendar mounted on said support structure, and an adjustable day-of-the-week card located between said supporting structure and said calendar card, said calendar card being provided with (a) seven viewholes for viewing individual days of the week on said day-of-the-week card and (b) at least 25 consecutively numbered spaces, each representing a different day, said spaces being aligned in seven longitudinally extending columns and at least four laterally extending

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columns overlapping and perpendicular to said seven columns, said columns forming a box of at least 28 spaces, each of said longitudinally extending columns being aligned under one of said seven viewholes, and at least some of said spaces being provided with pill dispensing means.

2. A pill dispensing device according to claim 1 wherein said calendar card and day-of-the-week card are located on one half of said support structure, and said other half of said support structure comprises a foldable flap.

3. A pill dispensing device according to claim 2 wherein said day-of-the-week card comprises at least 13 sections, each section representing a single day of the week and wherein said seven longitudinally extending columns represent a different day of the week and said laterally extending columns represent a different week.

4. A pill dispenser according to claim 3 wherein said adjustable day-of-the-week card comprises a laterally extending card located between said support structure and that portion of said calendar card wherein the viewholes are located, said viewholes being in side-by-side relationship with each other and extending laterally with said day-of-the-week card, said sections of said day-of-the-week card being aligned such that a week of seven days is viewable through said viewholes, one day in each of said seven viewholes.

5. A pill dispensing device according to claim 4 wherein said consecutively numbered spaces are consecutively numbered laterally, left to right, said numbering starting with the laterally extending column closest to said viewholes, the spaces aligned under the first day of said week of seven days viewable through said viewholes being numbered 1, 8, 15 and 22 respectively.

6. A pill dispensing device according to claim 5 wherein spaces numbered 5 through 25 are provided with pill dispensing means.

7. A pill dispensing device according to claim 5 wherein spaces numbered 2 through 25 are provided with pill dispensing means.

8. A pill dispensing device according to claim 5 where-

in said days of the week on said day-of-the-week card are in raised letter form.

9. A pill dispensing device according to claim 4 wherein that portion of said calendar card which contains the viewholes is a flap.

10. A pill dispensing device according to claim 9 wherein the lateral edge of said flap is secured to said support structure.

11. A pill dispensing device according to claim 4 wherein said calendar card is mounted on one half of said support structure, the other half of said support structure being a flap means for folding over and protecting said calendar card.

12. A pill dispensing device comprising a supporting structure, a calendar card mounted on said support structure, and a slidable day-of-the-week card located between said supporting structure and said calendar card, said calendar card being provided with (a) seven viewhole means for viewing individual days of the week on said day-of-the-week card and (b) a plurality of consecutively numbered spaces aligned with said viewholes such that each space represents a different day, said spaces being aligned in seven longitudinally extending columns and at least four laterally extending columns, at least some of said spaces being provided with pill dispensing means.

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U.S. Cl. X.R.

40 40—107; 206—42, 56