

Dec. 16, 1969

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3,483,845

ROTARY SEQUENTIAL DRUG DISPENSER

Filed May 27, 1968

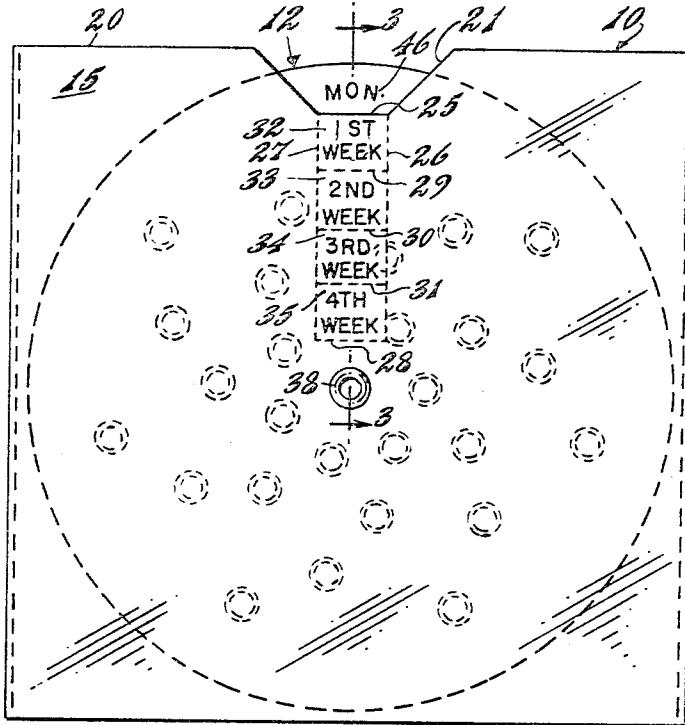


Fig. 1.

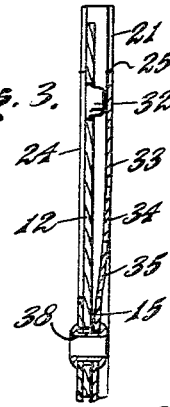


Fig. 3.



Fig. 2.

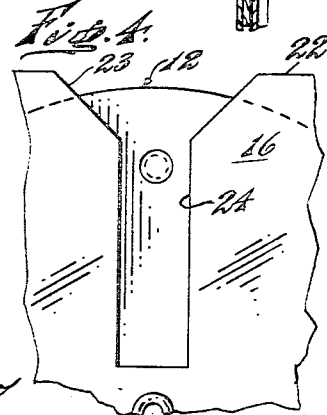


Fig. 4.

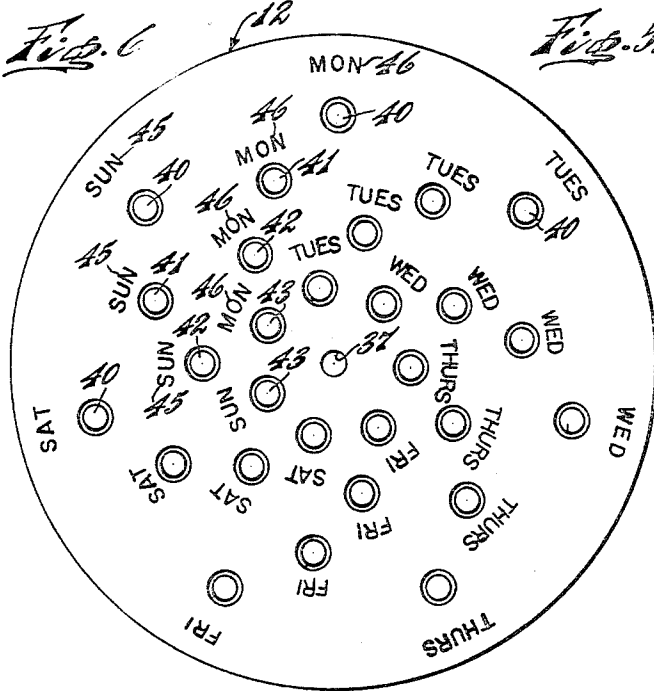
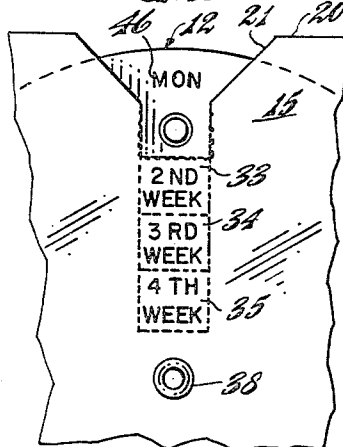


Fig. 6.

Fig. 5.



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ROTARY SEQUENTIAL DRUG DISPENSER

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Filed May 27, 1968, Ser. No. 732,369

Int. Cl. G09f 9/00

U.S. Cl. 116—121

8 Claims

ABSTRACT OF THE DISCLOSURE

Disclosed herein is a sequential drug dispenser wherein a carrier is centrally pivoted to and covered by an outer cover. The other cover is provided with a series of initially closed windows and the carrier with a plurality of drug holders. The holders are located radially coincident with respective windows for sequential access to drugs contained in the holders.

BACKGROUND OF THE INVENTION

As is well known to those versed in art, many drugs are now being prescribed for sequential dosage over relatively long periods of time. For example, certain drugs are prescribed for consumption of predetermined dosage daily for a number of weeks, others being prescribed for consumption hourly or every so many hours for periods of days or weeks. This presents the problem to the consumer of whether or not the proper dosage has been consumed at the proper time over the entire period. Record keeping for this purpose becomes onerous, and often results in errors of omission of commission producing defective drug treatment. While there have in the past been proposed drug-dispensing devices, these previous devices have lacked the inherent record-keeping characteristics essential to present-day drug treatment, or have been relatively expensive and complex, so as to lack general acceptance by the consumer.

SUMMARY

Accordingly, it is an important object of the present invention to provide a sequential drug dispenser of the type described which overcomes the above-mentioned difficulties in the prior art, providing an extremely simple sequential drug-dispensing device which is positive and accurate in maintenance of records as to drugs consumed, very easily operable by all persons without special training or skill and without tedious record keeping, and which is extremely simple in construction for mass production at low cost.

It is still another object of the present invention to provide a sequential drug dispenser having the advantageous characteristics mentioned in the preceding paragraph, which is capable of use in the sequential dispensing of drugs under many different sequences, occupies relatively little space for convenient portability by the user, and which is entirely reliable throughout its intended life. Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawing, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

BRIEF DESCRIPTION OF THE DRAWING

FIGURE 1 is a front elevational view showing a drug dispenser constructed in accordance with the teachings of the present invention.

FIGURE 2 is a top view of the device of FIGURE 1.

FIGURE 3 is a partial sectional elevational view taken generally along the line 3—3 of FIGURE 1.

FIGURE 4 is a partial rear elevational view taken generally along the line 4—4 of FIGURE 3.

FIGURE 5 is a partial front elevational view showing an early stage of use.

FIGURE 6 is a front view showing a drug carrier of the present invention apart from the remainder thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now more particularly to the drawing, and specifically to FIGURES 1 and 2 thereof, a sequential drug dispenser is there generally designated 10, and includes an outer cover 11 and a carrier 12 substantially covered by the cover.

The cover 11 may assume various structures, and in the illustrated embodiment is shown as a vertically tubular envelope having a generally rectangular front wall 15, and generally congruent back wall 16 in rearwardly faced spacing relation with the front wall. The side edges of the front wall 15 and back wall 16 may be integral or suitably connected together, as by bends 17 and 18, while the lower and upper ends of the cover 11 may be open.

The cover front wall 15 may have its upper edge 20 provided medially thereof with a cutout 21, say of downwardly tapering trapezoidal configuration. Similarly, the upper edge 22 of the rear cover wall 16 may be medially formed with a downwardly convergent cutout 23, in substantial registry with the cutout 21. Extending generally downward or inward of the rear cover wall 16, opening from the smaller inner or lower end of cutout 23, the rear wall may be formed with an elongate opening 24.

The front-wall cutout 21 terminates at its inner end in an edge 25 generally parallel to the upper front cover-wall edge 20. Formed in the front wall 15, extending in parallelism with each other from opposite ends of the edge 25, are a pair of perforate or otherwise weakened lines 26 and 27. The perforate or weakened lines 26 and 27 extend downwardly toward and terminate substantially spaced from the lower edge of the front cover wall 15, having their lower ends connected by an additional weakened or perforate line 28, generally parallel to the edge 25. In addition, a plurality of parallel spaced perforate or weakened lines 29, 30 and 31 extend laterally between the weakened lines 26 and 27, in parallelism with and spaced between the edge 25 and lowermost weakened line 28. This arrangement of perforate or weakened lines 26—31 subdivides the front-wall area therebetween into a plurality of removable front-wall portions or windows 32, 33, 34 and 35. The plurality of removable portions or windows 32—35 are thus arranged in a series or row extending toward and terminating short of a central region of the front cover wall 15, in substantial registry with the back cover-wall opening 24.

The carrier 12 is shown apart from the remainder of the structure in FIGURE 6, and may be defined by a disc-shaped member or sheet having a central opening 37 and inserted in the cover 11, the central opening 37 receiving a rivet or pivot 38, whereby the carrier is mounted for generally axial rotation within the cover. Further, as best seen in FIGURE 1, a peripheral marginal portion of the disc or carrier 12 extends radially beyond the inner edge 25 of cover front-wall cutout 21, so as to expose a segment thereof through the cutout. A similar segment on the rear side of the carrier 12 may be exposed through the rear cover-wall cutout 23.

The carrier is provided with a plurality of drug holders, which may each assume the form of a blister, having rupturable rear walls or other suitable drug holder for removably retaining a desired dosage of drugs. The holders are arranged in a plurality of generally concentric

annular arrays, an outer array of drug holders being designated 40, the next inner annular array of drug holders being designated 41, the next inner annular array of drug holders being designated 42, and an innermost annular array of drug holders being designated 43. Thus, the annular arrays of drug holders 40-43 are disposed concentric with each other and with the central carrier opening 37 and its received pivot 38. Further, the several annular arrays of holders 40-43 may each include an equal number of holders, as in the illustrated embodiment, although this is not necessary. As illustrated, the equal number of holders per annular array are not radially aligned, but rather are each angularly offset from the adjacent holders of adjacent arrays. In the illustrated embodiment, a series of holders of respective arrays each forms a generally spiral path emanating outward from the central carrier opening 37. Along each spiral path of holders 40-43, the carrier 12 is provided with suitable indicia or marking, said indicating a day, each of which marking may be identical and located radially outward of and adjacent to a respective holder of a spiral path of holders. For example, one spiral path of holders 40-43 are each provided with indicia or marking representing a day of the week "Sunday," as at 45, a next adjacent spiral configuration of holders 40-43 being provided with markings or indicia representing a day of the week "Monday" and designated 46.

In the assembled condition as seen in FIGURES 1-5, the series of windows 32-35 extends generally radially of the carrier 12 and pivot 38, as does the back cover-wall opening 24. Also, the several windows 32-35, or at suitable location in association with respective windows, there may be provided indicia corresponding to successive periods of drug consumption, the periods being indicated as successive weeks in the illustrated embodiment.

In use, a consumer may begin the sequential drug consumption on any required day, Monday being shown by way of example. The user removes the "First Week" window 32 with the radially outermost Monday marking 46 exposed in the cutout 21, and consumes the drug contained in the adjacent radially outermost holder 40. The next day's dose may be obtained by merely rotating the carrier 12 counterclockwise until the next radially outermost holder 40 is exposed through the removed "First Week" window. This proceeds until the entire "First Week" dosage is consumed, and is repeated for the second week, as by removal of the "Second Week" window 33 and location for exposure through the previous position of the "Second Week" window of the next radially inward drug holder 41 carrying the "Monday" indicia 46. In this condition, it will be apparent that only a single unbroken or drug-containing holder will be presented through the space of the removed window 32, so that drug dispensing is substantially foolproof. The above-described procedure continues in sequence throughout the several days and weeks, or other periods, until the drugs are totally consumed. At any point in the drug consumption, the user may check to ascertain that the drugs are being properly taken, as by reference to a calendar, or the like.

From the foregoing, it is seen that the present invention provides a sequential drug dispenser which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture and use.

Although the present invention has been described in

some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention.

What is claimed is:

1. A sequential drug dispenser comprising an outer cover, a carrier covered by said cover, pivot means centrally mounting said carrier for rotation relative to said cover, a plurality of initially closed windows on said cover, said windows being arranged in a series disposed generally radially of said pivot means for successive opening in said radial direction, and a plurality of drug holders on said carrier, said drug holders being arranged in a plurality of concentric annular arrays about said pivot means, each annular array of holders being located radially coincident with a respective window, whereby the opening of a window affords sequential access to the holders of a respective array upon carrier rotation, and the opening of successive windows affords sequential access to drugs of the remaining arrays.

2. A sequential drug dispenser according to claim 1, in combination with an annular array of carrier indicia means on said carrier selectively located with respect to said windows, to indicate successive periods for consumption of respective drug doses of each annular array.

3. A sequential drug dispenser according to claim 2, in combination with window indicia means associated with respective windows to indicate successive periods for consumption of respective annular arrays of drugs.

4. A sequential drug dispenser according to claim 3, said carrier extending partially beyond said cover to expose a peripheral marginal portion of said carrier, and said annular array of carrier indicia means being provided on the peripheral margin of said carrier for successive exposure beyond said cover.

5. A sequential drug dispenser according to claim 3, said carrier extending beyond said cover in radial alignment with said windows for exposing a peripheral marginal portion of said carrier beyond said windows, and said annular array of carrier indicia means being provided on the peripheral margin of said carrier for successive exposure beyond said cover.

6. A sequential drug dispenser according to claim 5, said cover comprising an envelope having front and back walls receiving said carrier between said walls.

7. A sequential drug dispenser according to claim 6, said windows being provided in the front wall of said cover, and said back cover wall having an opening in substantial registry with said windows.

8. A sequential drug dispenser according to claim 7, said drug holders having rupturable rear walls for removal of drugs through said back cover wall opening.

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U.S. Cl. X.R.

206-42