

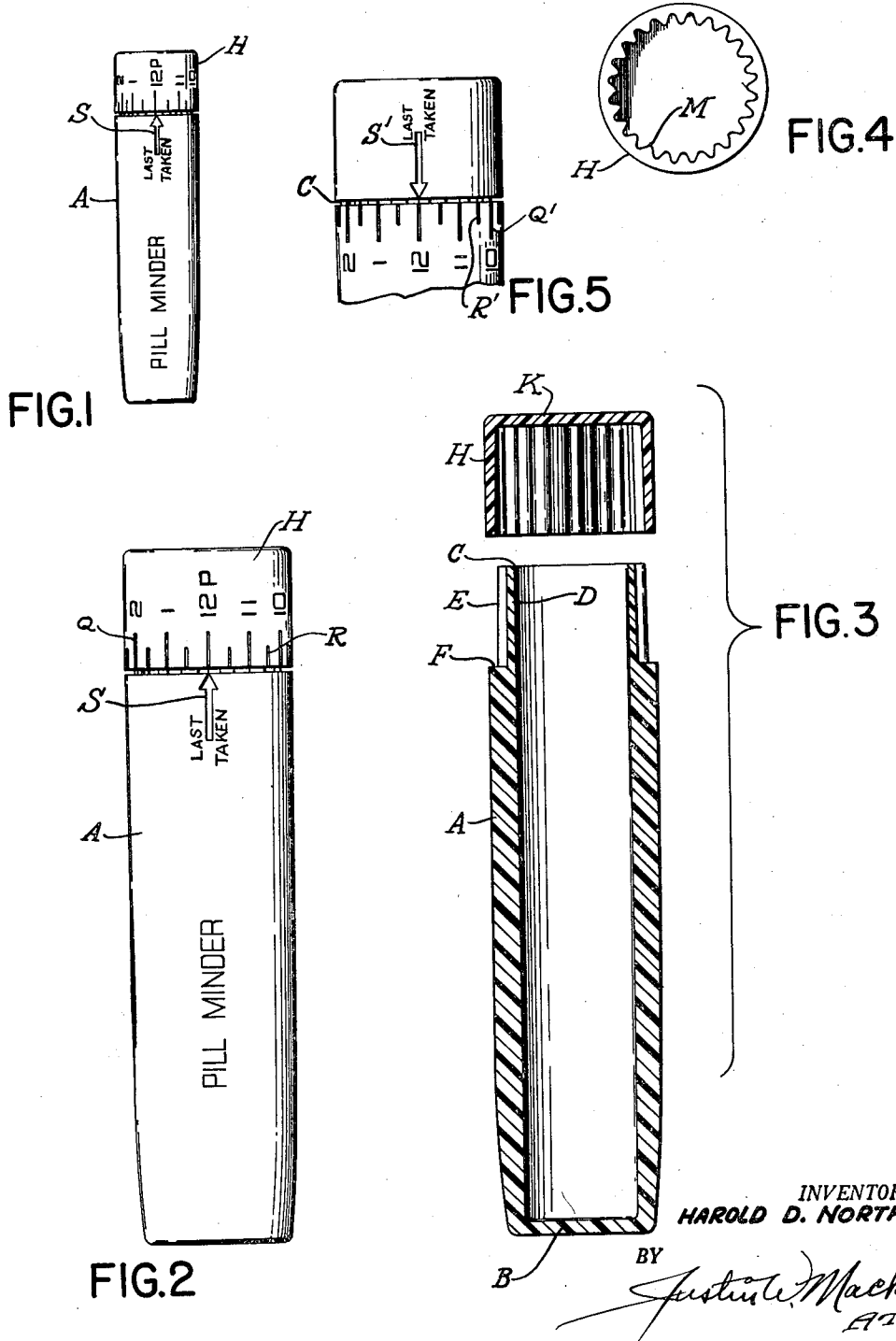
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TWO-ELEMENT DOSE-TIME-INDICATING CONTAINER

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## TWO-ELEMENT DOSE-TIME-INDICATING CONTAINER

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2 Claims. (Cl. 116—121)

This invention relates to a two-piece container for medicinal capsules, pills, or the like, and which is provided with a novel dose-time-indicating means.

In its preferred embodiment the container is small, compact, and its time-indicating closure is secure in any of the various closed and indicating positions.

The shape and size of this two-element container is preferably such as to be conveniently carried in a pocket or handbag. The time-indicating and securing characteristics are of a novel arrangement whereby cheapness of manufacture is attained.

Other objects and advantages will become apparent in the following description which relates to the accompanying drawings, and in which:

Fig. 1 is a side elevation in approximate full scale of a preferred size;

Fig. 2 is a similar elevation on an enlarged scale;

Fig. 3 is a sectional view of the container and the closure, showing the closure removed, and also showing the locking and time-indicating coacting ribs;

Fig. 4 is a bottom plan of the cover or cap, showing the same ribs; and

Fig. 5 shows a modified arrangement of the time-indicating means.

Referring to the drawings by the use of reference characters, the container proper is shown as comprising a substantially cylindrical wall A, having a bottom or end closure B and an open upper end at C. The thickness of the wall A may vary somewhat, depending upon the material of which the container is formed, and, as shown, the outer surface is preferably tapered and slightly curved toward the bottom to contribute a more pleasing appearance.

Near the top of the cylindrical part of the container, the diameter is slightly reduced, and on a somewhat thinner wall portion D are formed evenly spaced longitudinally extending ribs E. These are preferably slightly tapered so that at the ends of the ribs terminating at the shoulder F, the maximum diameter, that is, across the outer part of the ribs, is slightly larger than at the upper end.

The closure member H comprises a cylindrical side wall and a top wall K, the length of the side wall H longitudinally of the axis is preferably slightly greater than the length of the ribs E, and on the inner surface are formed evenly spaced ribs M of the same number as the ribs E, and adapted to interfit therewith. These may have a slight taper, not attempted to be shown in the drawings, but sufficient to form a tight frictional grip when the cap is fitted onto the ribs and grooves of the container proper.

The number of ribs and grooves preferably corresponds to time divisions; thus, twenty-four ribs and grooves may correspond to twenty-four half hour positions corresponding to twenty-four graduation marks indicating twelve hour intervals and twelve half hour intervals therebetween.

This time-indicating means in Figs. 1 and 2 is shown as formed on the outside wall H of the cap; the hour indicators constituting longer lines opposite numerals there shown, while half hour lines are shown as shorter and evenly spaced therebetween, as indicated at R.

A pointer, normally registering with any one of the twenty-four lines Q and R on the cap, is positioned on the outside of the cylinder of the container, as indicated at S in Figs. 1 and 2, and adjacent to which may appear a legend, such as "Last Taken" or "Taken At."

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These and other indicia, such as "Pill Minder" or "Instructions" may be imprinted, molded upon, or depressed into the outer surface of the wall, as shown.

In order to eliminate the expense of providing and affixing any external element or elements, movable or otherwise, the time indications or cylindrical dial indicia are preferably impressed into the material of the cap and wall of the container, whereby the complete device constitutes only two physical elements. The depressed lines and numerals may be filled with paint or suitable colored material to render them more readily visible.

As has been stated in prior patents, as early as sixty or more years ago, the present inventor is "aware that it is not new to employ a dial having a pointer thereon in connection with medicine-bottles to indicate the hour or time when the dose is to be taken . . .," but, as in the patent just quoted from, No. 398,012, of February 19, 1889, mechanical means in addition to the basic elements of container and closure have been uniformly employed, even up to the present time.

An essential point of novelty of the present invention is to so construct a container for pills or capsules that it comprises only two mechanical parts, and yet the effective time indication, the secure closing thereof, and great convenience, as described, as well as the most economical construction, is attained with these two physical elements only.

In the present instance the secure locking in the time-indicating position by the firm frictional grip, preventing removal of the cap while the given timing is physically locked by the ribs and grooves, constitutes the unique two-piece structure.

This structure may be made by modern methods of plastic molding, as, for example, by thermo-plastic injection, by which both the base and cap portions may be formed of firm rigid material such as polystyrene, or either or both of the cylindrical body and cap portions may be made of polyvinyl materials, or the like. By using some materials, such as the latter, a frictional grip may be sufficient that it may not be necessary to use the coacting ribs and grooves on the cap and container.

In the modified form shown in Fig. 5, the graduations indicating the hours and half hours may be placed on the cylinder with the hour and half hour lines Q and R, and numerals appearing below the top C while the indicator arrow is formed on the cap, as indicated at S', the hour and half hour lines being designated Q' and R'.

In addition to the device comprising only two physical elements and yet having the complete provision for dose-time indication and effective in operation, the shape and size are unique and convenient, distinguishing essentially from bottle and cork arrangements or screw cap devices with separate movable time indicators thereon, and it will be seen that it may safely contain and protect even fragile types of capsules or pills.

Further, it is psychologically very comforting to realize that whatever time setting is given, it is certain to remain so set until the next dose is taken and the cap is again reset firmly.

Having thus described my invention, what I claim is:

1. A two-piece container for medicinal capsules, pills or the like provided with dose-time indicating means, and comprising a molded plastic substantially nonyielding cylindrical body member having a substantially uniform cylindrical interior and a reduced cap receiving neck portion extending a substantial distance from the open end of the body and having thereon uniformly spaced ribs and grooves corresponding to divisions of twelve-hours, the ribs and grooves being slightly tapered with respect to the axis of the body, and a closure member having interfitting correspondingly tapered and spaced ribs and grooves and adapted to be frictionally held in any selected angular position when pressed longitudinally upon the body, and the container and closure having coacting graduations and numerals and an indicating pointer imprinted upon the exterior of the surfaces of the body closure.

2. A container comprising an elongated slender cylinder having a closed end and an open end, a reduced slightly tapered portion extending longitudinally from

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its open end while the inside diameter remains substantially the same, a cap having a cylindrical wall and a slightly tapered surface adapted to tightly fit said reduced portion and having a top wall adapted to close the container, and a coating time indicator and characters imprinted on the cap and container walls whereby relatively different circumferential positioning of the cap on the container may indicate dose time, said interfitting tapered surfaces being formed to present uniformly spaced longitudinally extending ribs and grooves, and the number of said grooves corresponding to the spacing of the time indications imprinted on the cap.

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169,992  
2,450,949  
2,587,147  
2,600,811

10

68,109

4

## References Cited in the file of this patent

## UNITED STATES PATENTS

Hawkins ----- Nov. 16, 1875  
Gattuccio ----- Oct. 12, 1948  
Guion ----- Feb. 26, 1952  
Suinot ----- June 17, 1952

## FOREIGN PATENTS

Germany ----- Apr. 18, 1893