

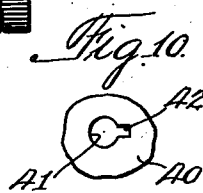
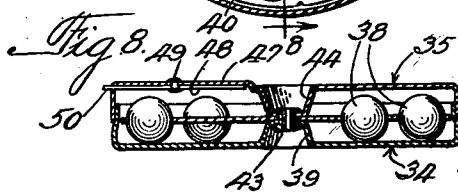
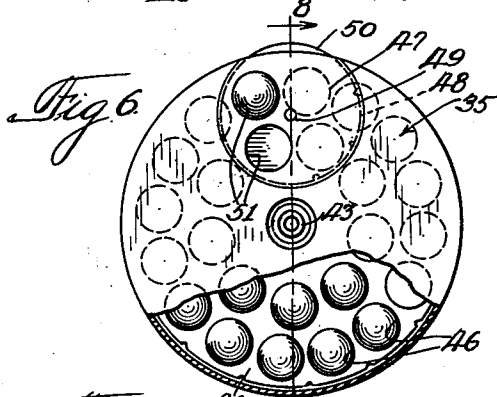
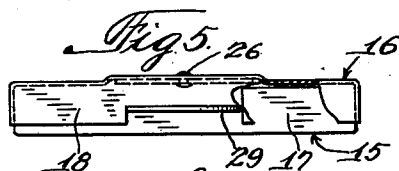
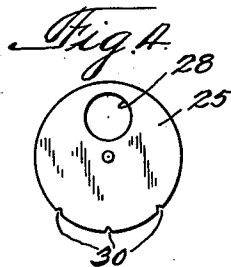
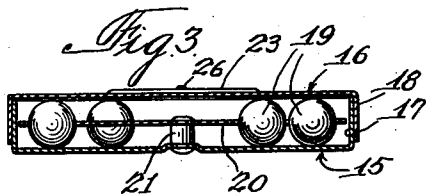
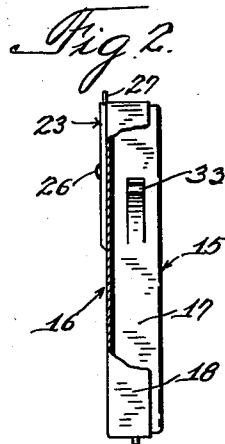
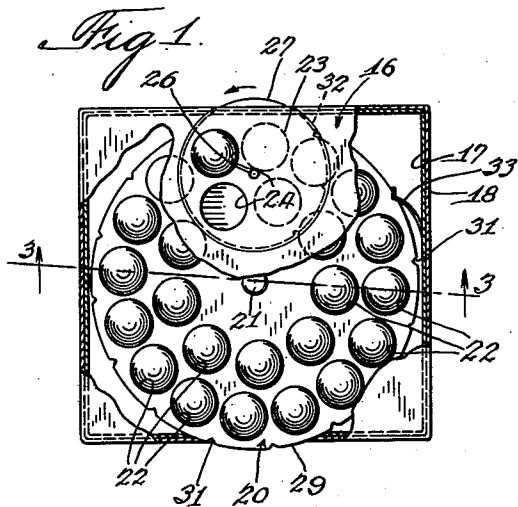
Oct. 14, 1941.

R. S. SANFORD

2,258,866

DISPENSING CONTAINER

Filed Aug. 18, 1939



Inventor
Roy S. Sanford
By Amos, Phin, Chas. Meekins, Inc.
Attys.

UNITED STATES PATENT OFFICE

2,258,866

DISPENSING CONTAINER

Roy S. Sanford, Oakville, Conn., assignor to The
Autoyre Company, Incorporated, Oakville,
Conn., a corporation of Connecticut

Application August 18, 1939, Serial No. 290,721

10 Claims. (Cl. 206—42)

This application relates to a dispensing container and has special reference to a container for holding food or medicinal capsules or like articles in a spaced relation from each other and for ejecting the articles singly while being normally substantially closed.

More particularly, this invention relates to a container for dispensing food or medicinal capsules or like articles comprising a body section and a cover section therefor housing a rotatable plate with the plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis of the plate, one of the sections being provided with an opening for each of the rows through which an article may be removed from one of the recesses thereof and a closure disc normally closing each of the openings of the section and having a single aperture for selectively registering with one of the openings upon movement of the disc to dispense only the articles contained in one of the recesses in one of the rows.

Food or medicinal capsules are preferably provided with a gelatin coating which is dissolved when taken internally. Under certain conditions, as when stored in a cool place, the coating for the capsule is a substantially rigid shell although when exposed to higher temperature conditions such as is occasioned in storing and in shipping, the shell becomes somewhat soft and sticky. A container desirable for the purpose of holding such capsules is preferably provided with means for holding the capsules in a spaced relation to prevent the capsules from sticking together and from becoming deformed and unsightly. Further, since the capsules are ordinarily taken periodically during the day it is necessary, for the most part, to carry the capsules about the person. It is thus further desirable to seal the capsules from foreign materials and from the atmosphere and to dispense the capsules from the container in such fashion that no more than one thereof be emitted at one time.

In order to provide a small and compact container for carrying about the person and in order that such a compact container may hold a maximum number of articles, the present invention contemplates the provision of a plate housed within the container having a plurality of rows of recesses therein arranged in concentric circles of different diameters. Applicant is aware that containers have been provided for spacing capsules or like articles within a container but such spacing means ordinarily comprises but a single row of recesses whereby a minimum number of

capsules are stored. The present invention provides a dispensing member having a single aperture common to each of the openings of the plurality of rows of recesses in the several concentric circles, the dispensing means normally closing the openings although being adapted to selectively register with one of the openings to dispense only the article contained in one of the recesses in one of the rows.

It is one of the objects of this invention to provide a dispensing container of the character indicated above which is of simple and inexpensive construction and operates in a convenient and expeditious manner.

It is a further object of this invention to provide a dispensing container of the type hereinabove mentioned wherein a plurality of rows of recesses are arranged in concentric circles of different diameters with a closure disc normally closing the openings to the recesses and having a single aperture for selectively registering with one of the openings upon manipulation of the disc to dispense only the article contained in one of the recesses in one of the rows.

Other objects and advantages of this invention will hereinafter be more particularly pointed out and, for a more complete understanding of the characteristic features of this invention, reference may now be had to the following description when taken together with the accompanying drawing, in which latter:

Figure 1 is a face view of a dispensing container embodying the features of this invention, a portion thereof being partly broken away to show the article-holding and spacing plate;

Fig. 2 is a side elevational view of Fig. 1, a portion of the container being broken away to show the means for releasably holding the plate in positions of adjustment;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a face view of the closure disc of Fig. 1;

Fig. 5 is a top plan view of Fig. 1 with a portion of the container being partially broken away to show the openings thereof through which a peripheral portion of the plate extends;

Fig. 6 is a face view of a modified form of dispensing container embodying the features of this invention, a portion thereof being partially broken away to show the article-holding and spacing plate thereof;

Fig. 7 is a side elevational view of Fig. 6;

Fig. 8 is a horizontal sectional view taken on the line 8—8 of Fig. 6;

Fig. 9 is an enlarged sectional view of the

pivotal connection between the relatively rotatable sections of the construction of Fig. 8; and

Fig. 10 is a front elevational view of a central portion of the article-holding and spacing plate.

Referring now to the drawing and more particularly to Figs. 1 to 5, inclusive, thereof, the dispensing container shown as embodying the features of this invention comprises a body section 15 and a cover section 16 therefor, the sections having a square periphery and having peripheral flanges 17 and 18 respectively. The periphery of the container may, of course, be of any desired configuration. The peripheral flange 18 telescopically engages the peripheral flange 17 to form a box-like construction. The body and cover sections may preferably be formed of sheet metal or other relatively stiff sheet material and may be provided with a coating substantially inert to the ingredients of the food or medicinal capsules or like articles 19. The sheet material of the sections may be of aluminum or stainless steel which materials are substantially inert to the ingredients of the usual gelatin capsules, or the sheet material may be coated with an enamel or a lacquer of some non-toxic and inert material.

A plate 20 preferably of circular contour is rotatably mounted on a stud shaft 21, the latter preferably comprising a rod having reduced end portions which latter pass through apertures respectively in the plate 20 and body section 15. The ends of the reduced portions of the shaft 21 may be upset to provide heads for preventing separation of the plate and body section. The plate 20 may likewise be formed of a relatively stiff sheet of material and of a material which is preferably non-toxic and substantially inert to the ingredients of the capsules or like articles held in the container. The plate 20 is provided with a plurality of rows of recesses 22 which, in the instance shown in the drawing, comprise apertures cut out of the plate. It is, of course, to be understood that the recesses may be depressions formed out of the material of the plate or may be ledges formed from the material of the apertures formed in the plate.

The cover section 16 is provided with an embossed portion 23 formed upwardly and outwardly from the material of the cover section. The embossed portion 23 is provided with openings 24, one opening for each of the rows of recesses in the plate 20. The plurality of rows of recesses 22 are arranged in concentric circles of different diameters about the axis of the stud shaft 21. A rotation, therefore, of the plate 20 on the stud shaft 21 will bring the recesses 22 into registration with the apertures 24 of the respective rows.

The embossed portion 23 of the cover section 16 is preferably circular to receive a circular closure disc 25 shown more particularly in Fig. 4, the closure disc being preferably rotatably mounted on a pin 26 in a manner such that a peripheral portion 27 of the disc may extend through a suitable slit in the side wall of the embossed portion 23. The closure disc 25 is provided with a single aperture 28 for selectively registering with one of the openings 24. In a normal position the closure disc 25 covers each of the plurality of openings 24 but when manipulated by the thumb or finger engaging the extending peripheral portion 27, the closure disc 25 may be rotated to a position such that the aperture 28 engages one of the openings 24 which latter being concentrically arranged with respect to the rows of apertures 22 will present a single

article to be dispensed from one of those rows.

The rotatable plate 20 has an extending portion 29 protruding between registering openings cut in the peripheral flanges 17 and 18 of the body and cover sections 15 and 16, respectively, as shown more particularly in Fig. 5. The peripheral portion 29 of the plate 20 extending through the registering openings may be manipulated by the thumb or finger to bring one of the recesses 22 into registration with one of the openings 24. In order to releasably hold the disc 25 and plate 20 in desired positions of adjustment with respect to the openings 24, the peripheral edges of the disc and plate may be provided with notches 30 and 31, respectively. The notches 30 and 31 are engaged by resilient fingers 32 and 33, respectively, the finger 32 being indented from the material of the wall of the embossed portion and the finger 33 being cut and deformed from the flange 17 of the body section.

Referring now more particularly to Figs. 6 to 10, inclusive, the structure therein shown as embodying the features of this invention comprises a body section 34 and a cover section 35 therefor. The cover and body sections are preferably circular and are provided with flanges 36 and 37, respectively, which flanges telescopically engage each other. Both the body section and cover section may be formed of relatively stiff sheet material and the material or a coating which may be provided therefor are preferably substantially non-toxic and inert to the ingredients of the capsules or other articles 38 as above described with reference to the preceding modification.

The body section 34 is provided with an embossed portion 39 extending inwardly thereof to form a seat upon which a circular plate 40 may rest. The plate 40 is provided with an aperture 41 having a communicating key slot 42. The embossed portion 39 is likewise provided with an aperture for receiving a rivet 43, the rivet extending through the aperture 41 of the plate 40 and into an aperture of an embossed portion 44 of the cover section 35. An ear 45 is cut and deformed from the material bounding the aperture of the embossed portion 39 into the key slot 42 in communication with the aperture 41. The extension of the ear 45 into the slot 42 prevents relative rotation between the plate 40 and the body section 34 although a relative rotation is obtained between the cover section 44 and the assembly of the plate 40 and body section 34.

The plate 40 is provided with a plurality of rows of recesses 46 arranged in concentric circles of different diameters about the axis of the rivet 43. The recesses are preferably apertures cut from the material of the plate 40 although this may be varied as desired to effect a spacing of the capsules or like articles from each other and positioning them for removal from the container. The cover section 35 is provided with an embossed portion 47 preferably of circular contour into which is rotatably housed a closure disc 48, the disc being secured on a pin 49 extending through an aperture in the embossed portion 47. A portion 50 of the disc 48 extends through a slit in the peripheral flange 37 of the cover section for manipulation by the thumb or finger to rotate the disc 48 within the embossed portion 47.

The embossed portion 47 is provided with a plurality of openings 51, one opening for each row of recesses 46. The openings 51 are of a size to permit the passage therethrough of the capsule 38. The openings 51, however, are normally closed by the disc 48 although the disc is pro-

vided with a single opening which may register with either of the plurality of openings 51. Since the openings 51 are arranged concentrically with the rows of recesses 46 and since the single aperture of the closure disc 48 may be brought into registration with any one of the openings 51, one of the articles in one of the recesses 46 in one of the rows may be selectively dispensed through the aperture in the disc 48.

While but two embodiments of this invention are herein shown and described, it is to be understood that various modifications thereof may be apparent to those skilled in the art without departing from the spirit and scope of this invention and, therefore, the same is only to be limited by the scope of the prior art and the appended claims.

I claim:

1. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate housed in said sections, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof, one of said sections being provided with an opening for each of said rows through which an article may be removed from one of said recesses thereof, and a closure disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon movement of said disc to dispense only the article contained in one of said recesses in one of said rows.

2. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate housed in said sections, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof, one of said sections being provided with an opening for each of said rows through which an article may be removed from one of said recesses thereof, and a movable closure disc housed within one of said sections and having a portion extending beyond the confines thereof through a slit in said section, said disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon manipulation of the extending portion of said disc to dispense only the article contained in one of said recesses in one of said rows.

3. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate housed in said sections, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof, one of said sections being provided with an opening for each of said rows through which an article may be removed from one of said recesses, a movable closure disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon movement of said disc to dispense only the article contained in one of said recesses in one of said rows, and means for releasably holding said disc and said plate in desired positions of adjustment.

4. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate housed in said sections, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the

axis thereof, one of said sections being provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a circular closure disc rotatably mounted within one of said sections and having a peripheral portion extending beyond the confines thereof through a slit in said section, said disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon manipulation of the peripheral extending portion of said disc to dispense only the article contained in one of said recesses in one of said rows.

5. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section having telescopic engagement therewith, a rotatable plate mounted on said body section, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof, said cover section being provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a movable closure disc mounted on said cover section for normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon movement of said disc to dispense only the article contained in one of said recesses in one of said rows.

6. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate housed in said sections, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof, said cover section having an embossed portion provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a closure disc housed in said embossed portion and having a peripheral portion extending beyond the confines thereof through a slit therein, said disc normally closing each of said openings of said embossed portion and having a single aperture for selectively registering with one of said openings upon movement of said disc to dispense only the article contained in one of said recesses in one of said rows.

7. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate mounted on said body section, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof and having a portion extending beyond the confines of said sections for the rotatable manipulation thereof, said cover section being provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a movable closure disc mounted on said cover section and having a portion extending beyond the confines thereof, said disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon the manipulation of said extending portions of said rotatable plate and said movable disc to dispense only the article contained in one of said recesses in one of said rows.

8. In a container for dispensing food or medicinal capsules or like articles, a body section, a cover section therefor, a rotatable plate housed in said sections and mounted on said body sec-

tion, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof and having a portion extending beyond the confines of said sections for the rotatable manipulation thereof, said cover section having an embossed portion provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a rotatable closure disc mounted within said embossed portion and having a peripheral portion extending beyond the confines thereof, said disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon the manipulation of said extending portion of said rotatable plate and disc to dispense only the article contained in one of said recesses in one of said rows.

9. In a container for dispensing food or medicinal capsules or like articles, a body section, a separable telescopic cover section therefor, a rotatable plate housed in said sections, said rotatable plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis thereof, one of said sections being provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a closure

disc normally closing each of said openings of said section and having a single aperture for selectively registering with one of said openings upon movement of said disc to dispense only the article contained in one of said recesses in one of said rows.

10. In a container for dispensing food or medicinal capsules or like articles, a body section having a circular peripheral flange, a cover section therefor having a circular peripheral flange telescopically engaging the flange of said body section, a plate housed in said sections and mounted on said body section against relative movement therebetween, said plate having a plurality of rows of recesses therein arranged in concentric circles of different diameters on the axis of the circular flange of said body section, said cover section being provided with an opening for each of said rows through which an article may be removed from one of said recesses, and a closure disc normally closing each of said openings of said cover section and having a single aperture for selectively registering with one of said openings upon movement of said disc and relative movement of said sections to dispense only the article contained in one of said recesses in one of said rows.

ROY S. SANFORD.