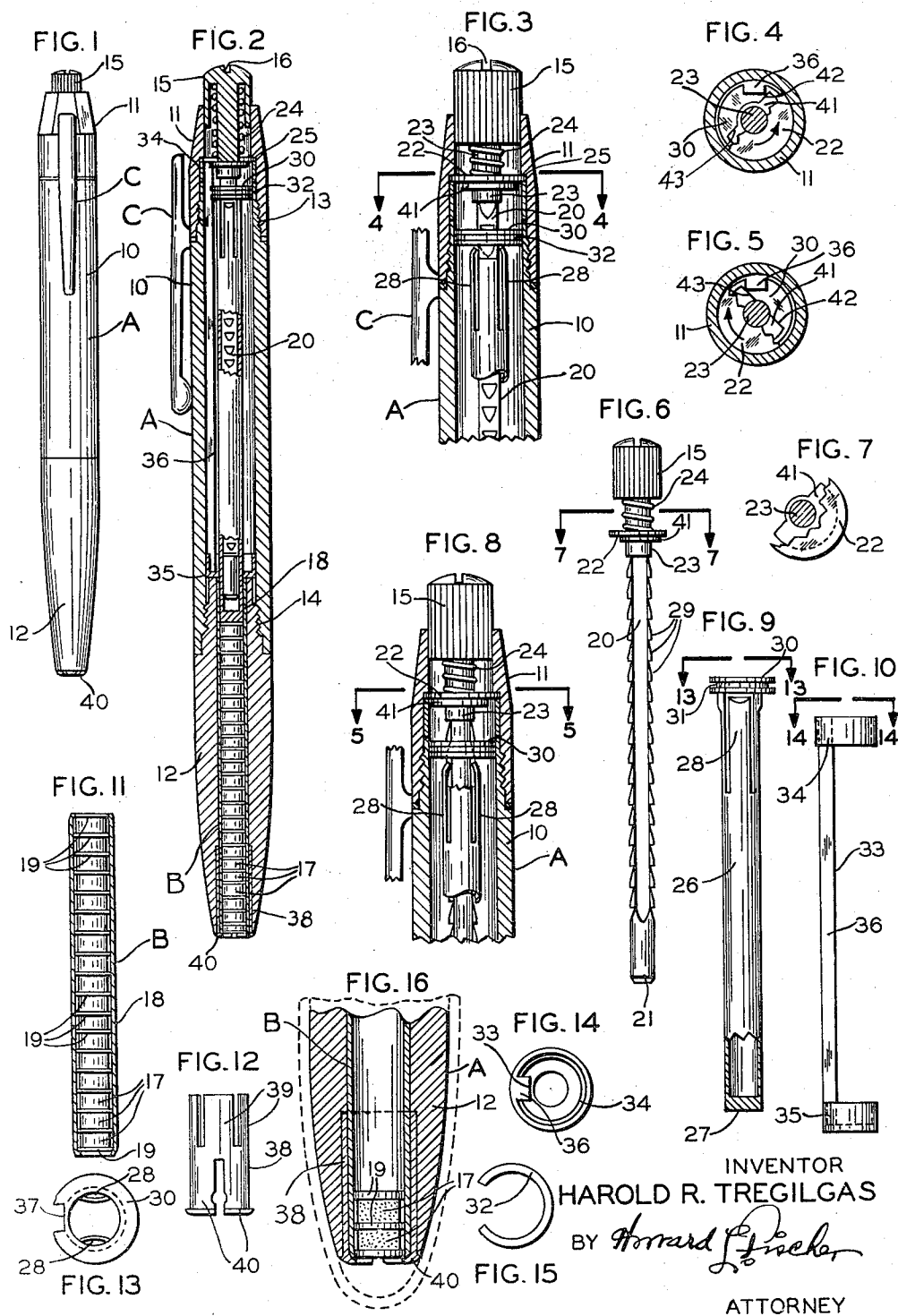


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POCKET TABLET DISPENSER AND UNIT
TABLET CONTAINER THEREFOR
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POCKET TABLET DISPENSER AND UNIT TABLET CONTAINER THEREFOR

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My invention relates to a pocket tablet dispenser and unit tablet container for the dispenser wherein a series of tablets may be contained to be kept in a convenient manner within one's pocket and having a similar appearance to an ordinary pen or pencil with a pocket clip for holding the same.

A feature resides in providing a tablet dispenser wherein the tablets are held concealed within the dispenser ready for immediate use and without contaminating or exposing the tablets, remaining in the dispenser, to the air.

It is a feature to provide a unit tablet container which may be in the form of a plastic tube containing about 20 tablets, more or less, with both ends of the container hermetically sealed and each tablet being separated from another by a gelatin disk which acts to seal the individual tablets within the unit container so that when the unit container with a series of tablets is placed within the dispenser, one tablet at a time may be dispensed from the lower end of the dispenser.

It is a feature to provide a dispenser and a holder for a series of tablets wherein the user of the dispenser may quickly dispense a tablet when needed without being evident to other people or to cause any embarrassment to the user of the dispenser. My dispenser is particularly adapted for use for nitro-glycerin tablets, and my unit container provides a means of sealing the tablets individually from moisture; consequently, the tablets retain their strength much longer than where they are dispensed or taken from a bottle such as the old method which is now employed for dispensing such tablets. It is extremely difficult for an older person in pain with heart trouble to get a small bottle from the pocket and then extract a small pill from the bottle.

My dispenser can be designed to carry any size tablet to provide a convenient and quick means for the user to carry various tablets such as saccharin tablets for diabetic cases. I have found that the quick convenience provided by my dispenser to the user is of primary importance, particularly in heart cases where it is important that the patient be able to use the nitro-glycerin tablets as prescribed by his doctor. Thus, a life may be saved in the convenience provided by my dispenser to the user.

A compact nature and the convenient manner in which it may be carried in one's pocket provides the user with a dispenser which is ready at hand. If the user desires, the tablet may be dropped directly on one's tongue or into the mouth. Furthermore, the inconspicuous nature of my dispenser having a character similar to an ordinary fountain pen or pencil provides the user with a more desirable means of dispensing tablets than where the same were ordinarily carried as heretofore in vials or pill boxes.

It is a feature to provide a dispenser wherein a half turn twist of the button at the top of the dispenser in one direction will lock the same against the dispensing of tablets therefrom, while a half turn twist in the other

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direction will release the dispensing mechanism of the dispenser so that a tablet may be readily ejected therefrom when the operating button is pushed downward. Spring means hold the operating button normally out of operation.

It is a further feature to provide a dispenser wherein the unit tablet container is supported in the lower end of the dispenser while the upper end thereof is provided with a push rod operated by a ratchet rod and spring means to move the push rod a step at a time in the operation of ejecting a tablet. The operating button which is depressed to eject a tablet may be marked with a red cross on the top end thereof or the top end may be formed polygonal in shape so that the dispenser may be easily distinguishable on sight or feel from other pocket pens or pencils. This button may be of a white nature so that the red cross will show up readily. It is desirable that either the entire dispenser be made of a transparent plastic material or at least the lower end thereof be of such a construction so that the operator may see exactly how many tablets remain in the dispenser. With the unit tablet container of a transparent nature, the operator has the convenience of being fully advised as to the number of unused tablets remaining in the container. Pills may be supplied in the unit tablet container for use in the dispenser, and when filled the ends are sealed to preserve the potency of the pills against exposure to air.

The unit tablet container which holds the individual tablets is preferably translucent and may be colored red for nitro-glycerin tablets, blue for saccharin tablets or any other identifying color may be incorporated in the body of the container.

The features of my invention will be more fully and clearly hereinafter defined.

In the drawings forming a part of this specification: Figure 1 is an outside view of my dispenser.

Figure 2 is an enlarged longitudinal section thereof.

Figure 3 is a further enlarged sectional detail of the top portion of the dispenser.

Figure 4 is a section on the line 4—4 of Figure 3.

Figure 5 is a section on the line 5—5 of Figure 8.

Figure 6 is an enlarged detail of the operating button with the toothed ejecting rod, showing a portion of the operating spring.

Figure 7 is a section on the line 7—7 of Figure 6.

Figure 8 is an enlarged sectional detail of the upper end of the dispenser similar to Figure 3 showing the parts within the dispenser in a different position than that shown in Figure 3.

Figure 9 is an enlarged view of the hollow tablet ejector plunger into which the toothed ejector rod slides.

Figure 10 is a side view of a guide member removed from the dispenser but normally positioned within the same and formed with a collar on either end thereof.

Figure 11 is a longitudinal sectional view of the unit tablet container showing the individual tablets supported therein and the separating disks between each tablet.

Figure 12 is an enlarged view of a restricting sleeve which has been removed from the casing.

Figure 13 is an end view on the line 13—13 of Figure 9 as indicated by the arrows.

Figure 14 is an end view on the line 14—14 of Figure 10 as indicated by the arrows.

Figure 15 is an enlarged view of a spring locking member which is adapted to fit on the upper end of the member shown in Figure 9.

Figure 16 is an enlarged sectional view of the dispensing end of my dispenser with an optional air tight cap thereon shown in broken lines.

The drawings illustrate my tablet dispenser A which is formed with a tubular central casing portion 10, an upper

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portion 11 and a lower end portion 12. These portions 10, 11 and 12 are threaded together at 13 and 14. Thus, the hollow casing of the dispenser A may be taken apart for disassembling the same or putting it together to form a unit dispenser for tablets, pills or other items which are usually adapted to be prescribed by a physician for a patient or where an individual wishes to take certain vitamin pills or tablets.

The dispenser A is preferably made of transparent plastic so that the operator or user of the dispenser may readily observe the operation of dispensing tablets and to be quickly advised as to any remaining tablets in the dispenser. The upper portions 10 and 11 may be made translucent or of colored plastic which may not be transparent if desired.

The operating button 15 for my dispenser A is preferably made of white plastic with a red cross 16 formed in the upper end to distinguish my dispenser from ordinary ball point, fountain pens or pencils. This identification is for the benefit of the patient or user of the dispenser A.

My dispenser A is particularly designed to operate with a unit tablet container B. The unit B provides a reservoir for a series of tablets 17 which are adapted to be stored within the transparent tubular casing 18, and each tablet is spaced apart by a separating disk which virtually forms separate compartments for each tablet 17. The ends of the container B are closed by the disk 19 which are held in place by the inward crimping of the edges of the tube 18. A supply of pills may be sold in the container B with sealed ends to preserve the potency of the pills, and the container B merely slipped into the dispenser A.

Thus, the reservoir tube B forms a means of providing a supply of tablets 17 which are adapted to be dispensed out of the dispenser at the will of the operator.

I provide a pocket clip C having a spring nature for holding the dispenser in the pocket of the user. The pocket clip C is held between the portions 10 and 11 as indicated in the drawings.

The operating parts of my dispenser A are of a simple character and comprise the toothed rod 20 with an operating end 21. The rod 20 may be formed integrally with the operating head or button 15 or secured thereto in any suitable manner. A disk member 22 is supported by the collar 23 in a fixed position on the upper end of the rod 20. A coil spring 24 extends around the upper end of the rod 20 and into the recess formed in the operating button 15. This spring 24 is placed in position before the disk 22 with the collar 23 is positioned on the upper end of the rod 20.

A shoulder 25 is formed in the member 11 to limit the outer movement of the operating button 15.

A hollow plunger member 26 formed with the closed operating end 27 is provided to operate on the ejector rod 28. The plunger member 26 is formed with oppositely disposed spring arms 28 near the upper end thereof which are adapted to engage with the teeth 29 formed on the ejector rod 20 when the rod 20 is turned by the button 15 to bring the teeth into engagement with the spring arms 28 of the member 26.

When the ejector rod 20 is in position so that the spring arms 28 engage the teeth or are in line with the teeth 29 so as to engage the same, the operating rod is in the proper position to push the plunger member 26 downward a degree at a time each time the operating button 15 is depressed by the operator. The ejector rod 20 is placed in operating position by turning the button clockwise and out of operating position with the spring arms 28 when the button 15 is turned counterclockwise. When the ejector rod 20 is out of operating position, to operate the plunger member 26 the button 15 may be pressed inwardly without operating the mechanism of the dispenser, and thus, no tablets will be dispensed when the parts are in this position.

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The upper end of the plunger member 26 is provided with a disk member 30 which is formed with an annular groove 31 in which the spring 32 is positioned. The spring 32 frictionally holds the plunger member 26 against free movement in the casing member 10 of the dispenser as illustrated in Figure 3.

A guide member 33 is held in the casing member 10 by collar members 34 and 35. The bar-like portion 36 of the guide member 33 between the collars 34 and 35 is adapted to fit in the notch 37 formed in the disk end 30 of the plunger member 26 when the parts are assembled in the casing of the dispenser A. Thus, the guide member 33 holds the plunger member slideably positioned within the casing and against turning so that the turning of the operating N button 15 will turn the teeth 29 of the rod 20 into or out of engagement with the springs 28 of the plunger member 26.

The unit tablet container B is adapted to be placed in the lower end 12 of the dispenser A. This is accomplished by separating the parts 10 and 12 on the threads 14 and inserting the unit B in the dispenser ready for operation. At the time when the unit B is placed in the dispenser A, the plunger member 26 is placed in its uppermost position so that the end 27 may be brought to bear against the end disk 19 of the unit tablet holder, and thus, force the tablets out of the front end of the unit B when pressure is exerted against the operating button 15. The tablets 17 fit reasonably loose in the tubular casing 18 of the unit B while the disks 19 are sufficiently snug to form close compartments between each tablet 17. The disks 19 are preferably formed of a gelatin-like substance so that if the patient or user of my dispenser drops a disk 19 into his mouth or is carried into the mouth of the user of my dispenser, the disk will cause no harm but will be readily dissolved in the alimentary canal of the patient or person.

The lower end of the dispenser out of which the tablets 17 are dispensed may be provided with a spring restricting sleeve 38 which is formed with inner spring ends 39 and outer spring fingers 40. This sleeve 38 is forced into the outer end of the portion 12 of the dispenser A as illustrated in Figure 16 and is adapted to provide a spring restricting means for holding the disks 19 and the tablets 17 from falling out of the dispenser. As the end 27 of the plunger 26 is forced against the tablets, the lowermost tablet spreads the fingers 40 sufficiently to allow the same to be ejected therebetween whereupon the fingers 40 close and retain the following tablet until further pressure is exerted on the end 27. Thus one tablet may be dispensed at a time. This restricting spring sleeve 38 also holds the unit tube 18 of the unit B from being forced out of the dispenser while the tablets 17 with the disks 19 are being dispensed.

The underside of the disk 22 is formed with a projecting portion 41 which is integral with the disk 22 and is adapted to rotate therewith when the operating button 15 is rotated clockwise or counterclockwise to position the toothed rod 20 in the plunger tube 26. Figure 4 shows a portion of the disk 22 broken away to expose the portion 41 to show the shoulder portion 42 thereof bearing against the guide bar 36 when the disk 22 is turned counterclockwise as indicated by the arrow.

Figure 5 illustrates the disk 22 rotated clockwise in the direction of the arrow causing the shoulder 43 to bear against the opposite side of the guide bar 36 than that shown in Figure 4.

When the operating button 15 is rotated counterclockwise to position the member 41 with its shoulder 42 against the guide bar 36, the ejector rod 20 is turned out of engagement with the spring fingers 28 of the plunger member 26.

When the button 15 is turned clockwise, then the shoulder 43 is brought to bear against the other side of the guide bar 36 (Figure 5), and in this position, the ejector rod 20 is set to cause the teeth 29 thereof to engage with

the spring fingers 28 and by depressing the button 15, the plunger member 26 is caused to bear against the outer disk 19 of the unit B, and continued pressure against the button 15 will eject one of the tablets 17 out of the lower end of the dispenser A.

After a tablet has been ejected by the operator, the button 15 can be turned counterclockwise, as a safety measure, to prevent accidental dispensing of a medical tablet 17.

It will be apparent that my dispenser A provides a very desirable means for inconspicuously dispensing the medical tablets 17. Thus, any patient of a doctor who is required to take certain medical tablets periodically can carry the dispenser in his pocket and not only quickly dispenses a tablet at a time therefrom but without virtually disclosing to anyone that he is taking such a tablet. Furthermore, the convenient manner in which the tablets are supported within the unit B so that a new unit can be supplied for the dispenser A is of primary importance. I have found in critical heart cases my dispenser is invaluable to provide quick means of providing the patient with nitro-glycerin tablets when needed.

It will be apparent that while the drawings and specification illustrate a form of my dispenser that variations may be made in the style, construction and details thereof within the scope of the following claims without departing from the purposes and intentions of my invention.

I claim:

1. A medical tablet dispenser comprising a hollow plastic casing, a tablet ejecting means supported in said casing, an operating button for reciprocating said ejecting means when depressed, a chamber for receiving a tablet container in the forward end of said casing, said ejecting means including a toothed ejector rod connected to said operating button adapted to telescope into a tubular tablet ejector plunger, spring finger tablet retaining members formed on the forward end of said casing, a fixed guide bar in said casing for slideably holding said ejector plunger tube against rotation, diametrically opposed leaf spring means in said tube for engaging the teeth of said ejector rod, annular spring means for frictionally retarding axial movement of said tubular ejector in said casing, coil spring means for normally holding said operating button in outward position, said button being adapted to be rotated clockwise to set the ratchet teeth on said ejector rod in engagement with the spring means of said tubular ejector plunger to move said plunger a step at a time when said button is depressed to eject medical tablets out of said dispenser against the restraining nature of said spring fingers one at a time and shoulder and stop means to permit said operating button to be turned counterclockwise to move the ratchet teeth into inoperative position with regard to the spring means of said ejector plunger tube to prevent accidental dispensing of a medical tablet from the container supported in said dispenser.

2. A tablet dispenser having a sectional casing forming the body thereof including a forward section, an intermediate section, and a rear section, in combination

with a unit tablet container for holding a supply of tablets disposed within said forward section of said casing, an elongated toothed rod having two rows of diametrically opposed teeth extending axially thereon, a hollow plunger engageable about said toothed rod, diametrically opposed spring arms extending inwardly at the top of said hollow plunger engageable with the two rows of teeth on said toothed rod when said dispenser is in operating position, guide bar means positioned within said dispenser adjacent said toothed rod, upper and lower annular collar means extending from said guide bar means to position said guide bar within said casing, an annular disk member formed on the upper end of said hollow plunger, said disk member having a slot therein slidably engageable about said guide bar means to prevent rotation of said hollow plunger, said disk member further having an annular groove therein, spring means disposed within the annular groove in said disk member of said plunger to retard the axial movement thereof, an operating button extending outwardly from said casing reciprocable with said toothed rod, and means attached to said toothed rod contactable with said guide bar means thereby limiting rotation of said toothed rod into either an operative or an inoperative position within said hollow plunger.

3. A tablet dispenser comprising a sectional transparent plastic casing, a unit tablet container removably positioned within said casing, a series of movable spaced apart soluble disks dividing said tablet container into individual tablet compartments, a reciprocable ratchet rod positioned in said casing, plunger ejecting means movable axially about said ratchet rod, a plurality of opposed spring fingers affixed to said plunger means engageable with said ratchet rod, guide bar means cooperable with said plunger means to prevent rotation thereof, spring means associated with said plunger means to frictionally retard axial movement thereof, said ratchet rod and said plunger being operable to dispense only one tablet at a time, a depressible button at the top of said casing movable with said ratchet rod, spring means within said casing biasing said button to an outward position, means for restricting said unit container within said casing to permit the dispensing of tablets therefrom and means for placing said ratchet rod and said plunger ejecting means in either an inactive position or into an active position by rotating said depressible button clockwise or counterclockwise.

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