Jan. 14, 1958 P. R. HATCH 2,819,814

DEVICE FOR RATIONING CIGARETTES

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Fig. 1.

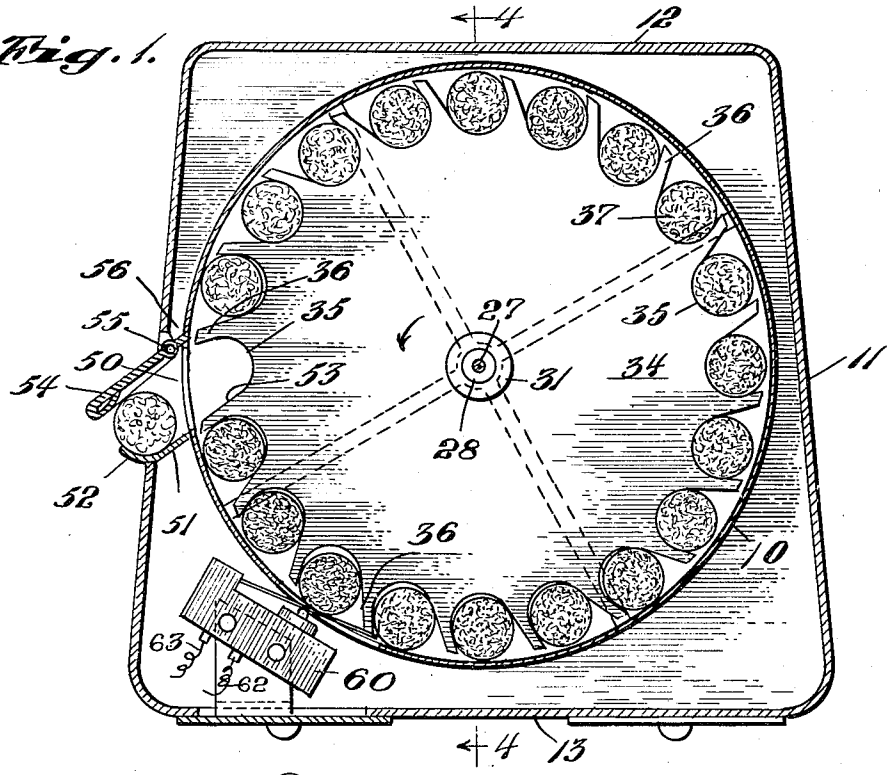
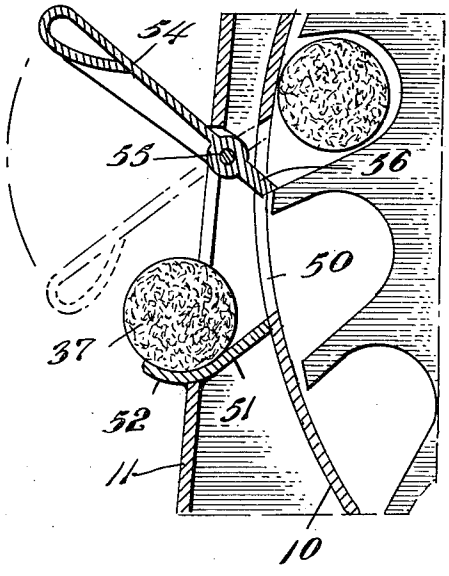


Fig. 2.



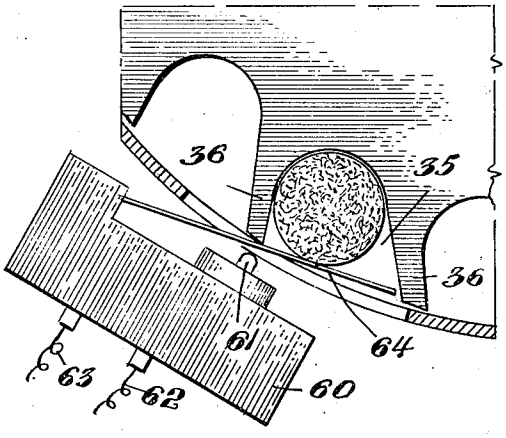


Fig. 3.

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Fig. 4.

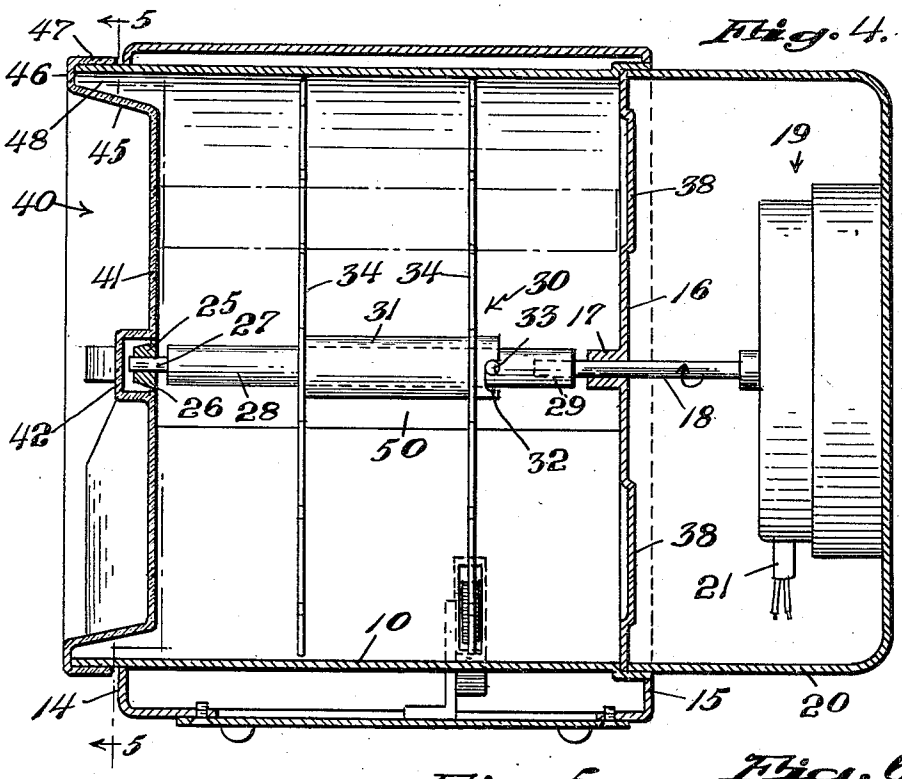


Fig. 5.

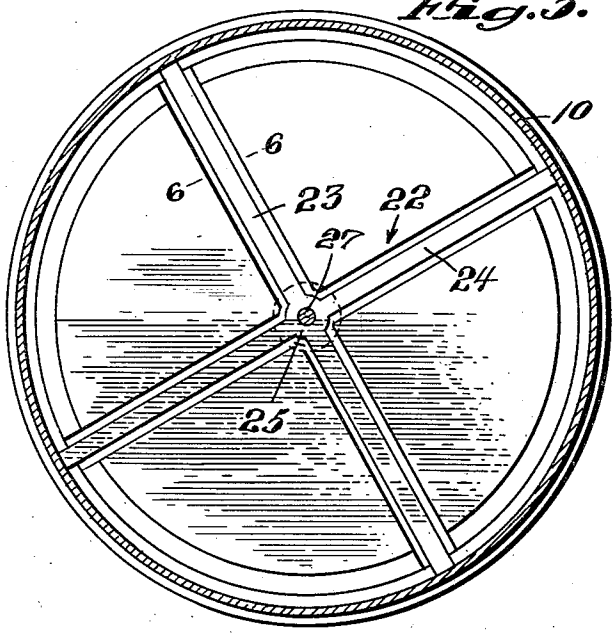
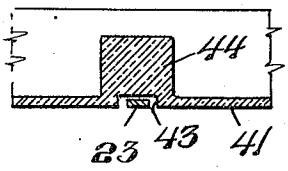


Fig. 6.



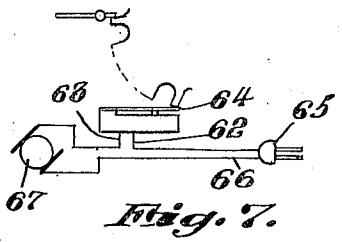


Fig. 7.

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DEVICE FOR RATIONING CIGARETTES

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8 Claims. (Cl. 221—83)

This invention relates to a device for rationing cigarettes.

Cigarettes are furnished in packages of twenty and are usually carried about in the pocket or may be placed in a convenient container on a table, desk, or the like and in such arrangement are very easily obtainable by a person desiring to smoke one. Habitual smokers of cigarettes find it difficult to refrain from obtaining and smoking a cigarette and frequently feel that if some little restraint were placed upon them, they could more easily cut down the number of cigarettes which they smoke.

One of the objects of this invention is to provide a device which, although making cigarettes available, makes these cigarettes available only at certain predetermined times spaced by such interval as may be desired.

Another object of this invention is to provide a device which will present to the user a cigarette which when obtained from the device will mechanically start the device so that only after a predetermined length of time will another cigarette become available to the user. Thus, by the use of the device the number of cigarettes may be predetermined that will be used in a given period of time.

Another object of the invention is to provide a device which may be easily loaded and easily operated.

Another object of the invention is to provide a device which will be simple in its construction and thus inexpensive to manufacture.

Another object of the invention is to provide a device which will be of small dimensions and which may be easily placed upon a table, desk, or article of furniture.

With these and other objects in view, the invention consists of certain novel features of construction as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a sectional view showing the cigarette rationing device equipped with this invention;

Figure 2 is a sectional view of an enlarged fragmental detail of a portion of the device;

Figure 3 is a sectional view of an enlarged fragmental detail of another portion of the device;

Figure 4 is a sectional view on substantially line 4—4 of Figure 1;

Figure 5 is a sectional view on the zig-zag sectional line of Figure 4;

Figure 6 is a sectional view on line 6—6 of Figure 5;

Figure 7 is a diagrammatic view of the electric circuit which is used.

In proceeding with this invention, I have provided a rotary carrier which revolves within a cylindrical casing, the carrier having spaced disks with notches of a size to receive a cigarette, there being sufficient of said notches to receive a package of cigarettes, which at the present time is usually twenty. The cylindrical casing has an opening at such a location that when the cigarette reaches this opening, it will roll from the carrier along a chute which supports the same in a position accessible to the user. Some sort of electrical motor or clock mechanism

is utilized for rotating the carrier, and in the circuit of the electrical energizing means for the motor I provide a switch which when opposite a certain portion of the carrier, will be open and when opposite a certain other portion of the carrier, will be closed. I also provide a cover for the chute which is so arranged that the cover must be lifted in order to obtain the cigarette from the chute. The arrangement is such that by lifting the cover, the carrier is mechanically moved forward and an end of the cover which projects into engagement with the carrier so that by this rotation the switch is moved from open to closed position and the motor drive is again energized for moving the carrier 1/20 of a revolution to present another cigarette to the chute. The motor travels at such timed relation that the interval is as desired, for instance, a half hour, an hour, or whatever is prearranged. Change gears may be utilized for obtaining the desired interval.

With reference to the drawings, I have provided a cylindrical casing **10** which is mounted within a shell **11** having a top wall **12** and bottom wall **13**, the mounting being by means of a front end wall **14** and a back end wall **15** into which the cylindrical casing is positioned. This casing **10** is offset outwardly at one end and closed at the shoulder formed by the offset by a wall **16** having a bearing **17** which supports the shaft **18** of an electric clockwork mechanism **19** which contains a motor and suitable gears for rotating the shaft **18**. A cover **20** encloses this mechanism **19** and serves to provide a housing therefor. The motor is in an electric circuit through the wires **21**, which extends to a switch to be hereinafter referred to.

At the opposite end of the casing **10** a support in the form of a spider **22** (see Figure 5) is provided which comprises a pair of cross members **23** and **24** forming a hub **25** at their center and bearing **26** for a shaft **27** to rotate therein. This shaft is enlarged as at **28** and receives shaft **18** in a socket **29** at the end opposite the end entering the hub **25**. The carrier for the cigarettes is designated generally **30** (Figure 4) and comprises a hub **31** which is rotatably mounted upon the portion **28** of the shaft and has a lost motion connection thereto by reason of the notch **32** in its end and a pin **33** extending from the shaft **28** into this notch for driving the same. A pair of disks **34**, **34** are fixed adjacent opposite ends of the hub **31**, and each of these disks **34** is provided with twenty notches **35** forming arms **36** between the notches, and each notch is of a depth so as to receive a cigarette **37** in the notch. The notches of the disks are in register so that the notches align and a cigarette in position in the notch will maintain its axis parallel to the axis of the shaft **28**. The depth of the notches will be such that the cigarette will fit within the notch and just clear the cylindrical casing **10**. The cigarette when below the horizontal center of the shaft **28** will rest against the casing and be retained in the notch thereby, while when the cigarette is above the center of the axis of the shaft, it will rest at the edge of the disk within the notch.

The wall **16** is substantially in a single plane but has small ribs **38** extending radially therealong which serve to stiffen the same. At the opposite end of the casing **10** a cover designated generally **40** is provided, which comprises transparent material which may be of a molded plastic if desired. This cover has a wall **41** which is deflected as at **42** so as to receive the hub **25**. It is also provided with a recess **43** so as to receive the arms **23** and **24** of the spider. Adjacent this recess in order that the wall may be sufficiently stiff and rigid, the wall is thickened at at **44** so as to provide a handle for removing the cover. From the generally flat wall **41** there flares outwardly the wall portions **45** which then extend radially outwardly as at **46** and are turned backwardly upon them-

selves as at 47 to extend along and frictionally engage the outer surface of the casing 10 and provide a recess 48 for the reception of the end of the casing therein. By removing this cover by forcefully pulling it from the end of the casing, the carrier is exposed so that cigarettes 37 may be loaded endwise into the carrier to fill the same.

An opening 50 is provided in the cylindrical casing 10 at a point just below the center of the horizontal axis through the shaft 28, and there extends from the casing 10 at the lower edge of this opening 50 a chute 51 which has an upturned lip 52 at its outer edge. The edge 53 of the notch 35 will be on a downwardly inclined angle and substantially the same angle as the angle of the chute 51 with reference to the horizontal when in registry with the opening 50, the angle being such that a cigarette will easily slide along this surface by gravity at the location opposite the chute. Thus, when a cigarette in the carrier arrives opposite the opening 50, it will roll out of the carrier and into the chute. A member 54 serving as a cover over the cigarette is of lever-like construction pivoted as at 55 with a portion 56 extending inwardly through the opening 50 in the casing 10 and at such location that this portion 56 when swung about the pivot will engage an arm 36 of the carrier and thus will mechanically move the carrier rotatively in the direction in which it was traveling. The lost motion above mentioned will be sufficient to permit of such movement without turning shaft 18.

A normally closed switch 60 is provided adjacent the casing 10, the switch being of the microswitch type which comprises a plunger 61 which when pressed inwardly will open the contacts of the switch to open the circuit but when moved outwardly under spring action will close the contacts to close the electric circuit formed by the wires 62 and 63. As seen in Figure 7, wire 62 extends to one contact of plug 65, while wire 66 through motor 67 and wire 63 completes the electric circuit. A switch arm 64 (Figure 3) having inherent spring tendency to move upwardly is located above the plunger 61 and will move into the space 35 between the arms 36 so as to close the circuit. By this arrangement when the carrier is rotated to the position shown in Figure 1, the circuit is open, but when the carrier is in the position so that the arm 64 will extend into the notch 35 as in Figure 3, the switch is closed. When the device arrives at the position shown in Figure 1, it will automatically stop because the arm 36 will have moved the switch to open position. However, when a cigarette is taken from the trough by the swinging of the member 54, the carrier will be moved from the position shown in Figure 1 to the position shown in Figure 3 by the action shown in Figure 2, thus closing the circuit and setting the device again in operation so that another cigarette will be presented in the given interval of time.

I claim:

1. In a cigarette rationing device, a rotary carrier, means including an electric circuit to rotate said carrier, a switch in said circuit engaged by said carrier during the movement thereof to open said circuit and stop the carrier, and manual means movable into engagement with said cover for moving the same to disengage with said switch to close the said circuit.

2. In a cigarette rationing device as in claim 1 wherein means are provided for discharging a cigarette and said manual means are actuated in obtaining the discharged cigarette.

3. In a cigarette rationing device, a rotary carrier having arms between which cigarettes are lodged, an electric motor for rotating said carrier, an electric circuit for energizing said motor, a switch for controlling said circuit, said switch being located to be opened by each arm of said carrier when the arm is opposite the switch and closed when opposite the space between said arms, a discharge chute for receiving a cigarette from the carrier, a member covering said chute and liftable to obtain a cigarette from said chute, said member having a portion engageable with an arm of the carrier when lifted to advance the carrier sufficiently to cause an arm engaging the switch to disengage the same and permit the switch to move into the space between said arms.

4. In a cigarette rationing device, a casing, a support carried by the casing at one end thereof and having radial arms extending centrally therefrom, a carrier rotatably mounted in said support, a removable end wall for said casing recessed to receive the said arms and providing therewith a surface in substantially a single plane against which the ends of cigarettes may engage in being rotated by said carrier.

5. In a cigarette rationing device as in claim 4 wherein said end wall is transparent.

6. In a cigarette rationing device, a rotary carrier, means including an electric circuit to rotate said carrier, said carrier having a plurality of spaced radial arms, a switch in said circuit engaged by one of said arms during the rotation of said carrier to move said switch to open position and stop said carrier, and manually operable means movable into engagement with another of said arms for rotating said carrier to disengage the said one arm with said switch to close said circuit.

7. In a cigarette rationing device according to claim 6 wherein said manually operable means is a pivoted lever.

8. In a cigarette rationing device according to claim 6 wherein said carrier has a plurality of notches for receiving the cigarettes and said arms are interposed between adjacent notches.

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