

June 6, 1967

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3,323,720

CALORIE INDICATOR

Filed Aug. 25, 1965

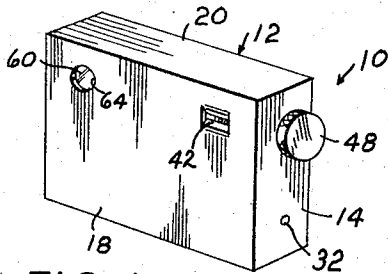


FIG. 1

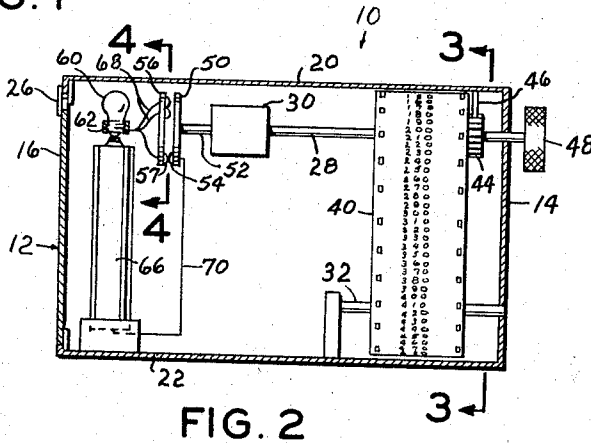


FIG. 2

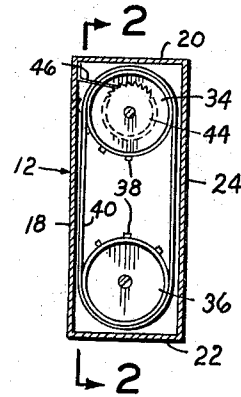


FIG. 3

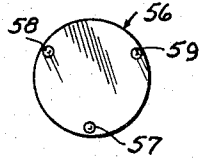


FIG. 4

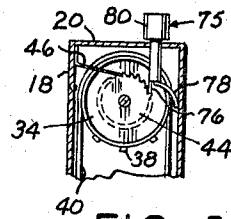


FIG. 5

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3,323,720

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Filed Aug. 25, 1965, Ser. No. 482,376

5 Claims. (Cl. 235-128)

The present invention relates to counting devices and more particularly to a calorie counter or recorder.

Most persons on a diet need to keep track of the calories consumed each meal and as a total for each day, therefore, it is an object of the invention to provide a device for recording the calories consumed each meal and as a total for the day.

Another object is to provide a means which will serve as an encouragement to a dieting person to strive to stay within the limitation for the calories to be consumed per meal or for the day's total.

Another object is to provide a counter of this class which actuates a signal, indicating a predetermined total of allowable calories consumed or about to be consumed, for each meal.

A further object is to provide a counter which is relatively small in overall dimensions and thereby may be carried in a pocket or purse and which will serve as a conversation piece between persons on diets.

Yet another object is to provide a device which has a relatively long useful life and which will not easily get out of working order.

The present invention accomplishes these and other objects by providing a housing having axles extending into one end thereof which journals a pair of drums having an indicia market band entrained therearound and visible through an aperture in a wall of the housing including means for rotating the band and actuating a signal lamp at predetermined times.

Other objects will be apparent from the following description when taken in conjunction with the accompanying single sheet of drawings, wherein:

FIGURE 1 is a perspective view of the device;

FIGURE 2 is a vertical cross-sectional view thereof taken substantially along the line 2-2 of FIG. 3;

FIGURE 3 is a vertical cross-sectional view taken substantially along the line 3-3 of FIG. 2;

FIGURE 4 is an elevational view taken substantially along the line 4-4 of FIG. 2; and,

FIGURE 5 is a fragmentary cross-sectional view, similar to FIG. 2, illustrating an alternative embodiment.

Like characters of reference designate like parts in those figures of the drawings in which they occur.

In the drawings:

The reference numeral 10 indicates the device, as a whole, which is rectangular in general configuration. The device 10 includes a housing 12 having opposing end walls 14 and 16, a front wall 18, a top and bottom 20 and 22 joined to a back wall 24. The end wall 16 is removable from the housing and is normally held in place by a catch 26 for access to the interior of the housing for the reasons presently apparent.

A first axle or shaft 28 extends longitudinally through the end wall 14 in spaced relation with respect to the top 20. The innermost end of the axle 28 is connected to a gear train or a speed reduction unit 30 for the reasons presently explained.

A stub shaft or second axle 32 extends into the housing through the end wall 14 parallel with the first axle 28 and in spaced relation with respect to the bottom wall 22. A pair of drums 34 and 36 are mounted respectively on the axles 28 and 32 within the housing in aligned relation adjacent the end wall 14. At least one and preferably both of the drums 34 and 36 are provided at their respective

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peripheral edges with a plurality of outstanding circumferentially spaced teeth 38. An endless belt or band 40, similar in appearance and construction to a strip of 35 mm. film, having cooperating spaced-apart apertures adjacent its marginal edges, is entrained over the drums 34 and 36 with the apertures in the band cooperatively received by the teeth 38. The band 40 has scored or marked thereon indicia progressively indicating total calories consumed or to be consumed by the user of the device. In its preferred embodiment the band is marked, as shown, in a progression series of tens from zero to 1,000. A slit-like aperture or window 42 is formed or struck-in from the outer surface of the front wall 18 of the housing adjacent the periphery of the drum 34 so that the indicia scored on the band 40 may be successively viewed therethrough.

A ratchet wheel 44, having teeth on its periphery, is coaxially mounted on the axle 28 between the drum 34 and the end wall 14. A lock spring 46, connected at one end to the inner surface of the front wall 18, has its other end positioned in contact with the teeth of the ratchet wheel 44 to form a brake and permit rotation of the ratchet wheel in one direction. A knob or hand wheel 48 is coaxially secured to the end portion of the axle 28 outwardly of the end wall 14 for manually rotating the axle 28 and progressively moving the band 40 to indicate a progressively higher total of numerals, as viewed through the window 42, as the hand wheel 48 is rotated.

A rotating contact disk 50 is coaxially mounted on a rod 52 driven by the gear train 30. The rotating disk 50 has one electrical contact point 54 on its surface opposite the rod 52 and adjacent its periphery. A stationary contact disk 56 is mounted within the housing in coaxial closely spaced relation with respect to the rotating disk 50. The stationary disk 56 has three equally spaced-apart electrical contacts 57, 58 and 59, adjacent its periphery on that surface adjacent the rotating disk 50 so that the contacts 57, 58 and 59 will be progressively contacted by the rotating contact 54 as the disk 50 is rotated for the reasons described hereinbelow.

A lamp 60, preferably colored red, is mounted within a holder 62 in the housing so that the bulb, when excited, may be observed through a second window opening or aperture 64 formed in the housing front wall 18. A dry cell battery 66 is positioned within the housing in contact with the base of the lamp 60. The contacts 57, 58 and 59 are separately connected by wires 68 to the lamp base 62. Another wire 70 connects the other end of the battery 66 to the rotating disk 50 and contact 54 so that when the contact 54 makes with any one of the stationary contacts 57, 58 or 59, a current is completed to the lamp 60 for exciting the latter.

Operation

In operation the band 40 is positioned so that the zero total appears in the window 42 each morning. The user counts up the calories contained by the various foods to be eaten for the first meal and rotates the hand wheel 48 so that the total calories of the meal appear in the window 42. The lock spring 46 prevents any accidental reverse movement of the hand wheel 48 to in effect "erase" a portion of the total calories appearing in the window 42. As the hand wheel 48 is rotated the gear train 30 moves the rotating disk 50 at a slower rate of revolution so that one-third of the circumferential distance of the band must be moved by the window 42 before the rotating contact 54 contacts the stationary contact 57, for example. If such contact is made for the total calories for one meal then the user is signaled or warned by the glowing lamp 60 that he has reached or exceeded the allowable calories for one meal. Similarly the second and third meal limits are recorded visually by the contacts 58 and 59. After record-

ing each day's total the device is reset to zero for the beginning of the succeeding day by simply rotating the hand wheel 48 until the zero appears in the window 42.

An alternative manner of progressively moving the band 40 is illustrated in FIG. 5 wherein the hand wheel 48 is omitted and a plunger or button 75 extends through a suitable aperture in the housing top 20. The plunger 75 is provided at its inner end with a prong-like end portion 76 which contacts the teeth of the ratchet wheel 44 to progressively rotate the latter as the plunger 75 is manually moved inwardly of the housing. A spring 78, secured at one end to the housing back wall 24 and contacting the innermost end of the plunger 75, resets the latter for succeeding inward movements. The plunger 75 is provided with an enlarged outer head portion 80 to limit the inward movement of the plunger 75 by contacting the housing top 20 so that only one figure, indicating total calories, progressively appears in the window 42 for each inward movement of the plunger 75.

Obviously the invention is susceptible to some change or alteration without defeating its practicability, and I therefore do not wish to be confined to the preferred embodiment shown in the drawings and described herein, further than I am limited by the scope of the appended claims.

I claim:

1. An indicating device, comprising: a housing having end walls and a front wall, said front wall having window openings in spaced-apart relation; axles extending into said housing from one said end; a pair of drums mounted on said axles in aligned relation; at least one of said drums having spaced-apart teeth on its periphery; an endless band entrained around said drums, said band having spaced-apart openings adjacent its marginal edges for cooperative engagement by said teeth; means for rotating said one axle; a lamp within said housing; and an electrical circuit, including a battery, connected with said lamp, said electrical circuit having contacts connected with and opened and closed by the rotation of said one axle.

2. An indicating device, comprising: a housing having end walls and a front wall, said front wall having spaced-apart window openings; axles extending into said housing from one said end; a pair of drums mounted on said axles in aligned relation; at least one of said drums having spaced-apart teeth on its periphery; an endless band entrained around said drums, said band having spaced-apart openings adjacent its marginal edges for cooperative engagement by said teeth; a ratchet wheel mounted on one said axle; a spring lock contacting the teeth of said ratchet wheel for forming a brake and permitting rotation of said ratchet wheel in one direction; means for ro-

tating said one axle; a lamp within said housing; and electrical circuit means connected with said lamp, said circuit means including a battery, a stationary first electrical contact, a second electrical contact mounted on said axle and moved, toward and away from said stationary contact for closing and opening said circuit, by the rotation of said one axle.

3. An indicating device, comprising: a housing having a top, end walls and a front wall, said front wall having a window opening and a second aperture; axles extending into said housing from one said end; a pair of drums mounted on said axles in aligned relation; at least one of said drums having spaced-apart teeth on its periphery; an endless band entrained around said drums, said band having spaced-apart openings adjacent its marginal edges for cooperative engagement by said teeth; a ratchet wheel mounted on one said axle; a spring lock contacting the teeth of said ratchet wheel for forming a brake and permitting rotation of said ratchet wheel in one direction; a reduction gear train on said one axle; a stationary electric contact disk mounted in said housing coaxial with respect to said one axle; a rotating electric contact disk, connected with said gear train in face to face alignment with said stationary disk; a lamp mounted within said housing adjacent the second aperture in said front wall; a dry cell battery contacting said lamp; wires interconnecting said battery, said lamp and said rotating disk with the electric contacts of said stationary disk; and means for rotating said one axle.

4. Structure as specified in claim 3 in which said means comprises: a hand wheel coaxially connected to said one axle outwardly of one end wall of said housing.

5. Structure as specified in claim 3 in which said means comprises: a plunger extending inwardly of the top wall of said housing; a prong connected at one end with the inward end of said plunger and contacting, at its other end, the teeth on said ratchet wheel; and a spring secured to said housing and bearing against the innermost end of said plunger for moving the latter outwardly of said housing after each inward movement.

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