

Oct. 8, 1935.

W. V. BLACKWELL ET AL

2,016,534

CIGARETTE CASE

Filed July 25, 1934

3 Sheets-Sheet 1

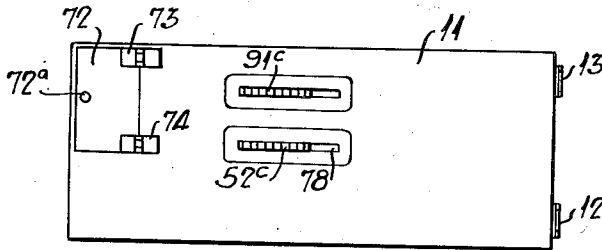


Fig. 2

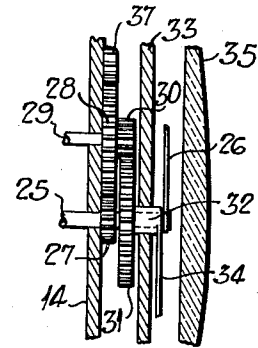


Fig. 15

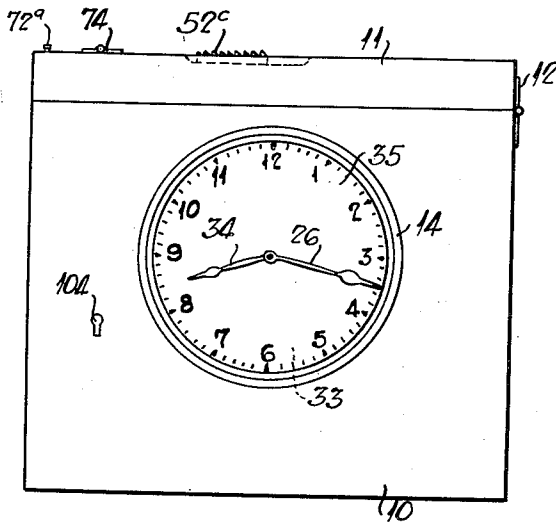


Fig. 1

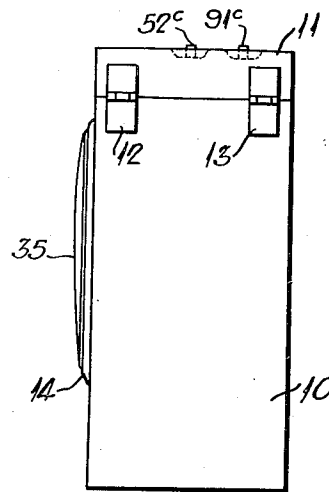


Fig. 3

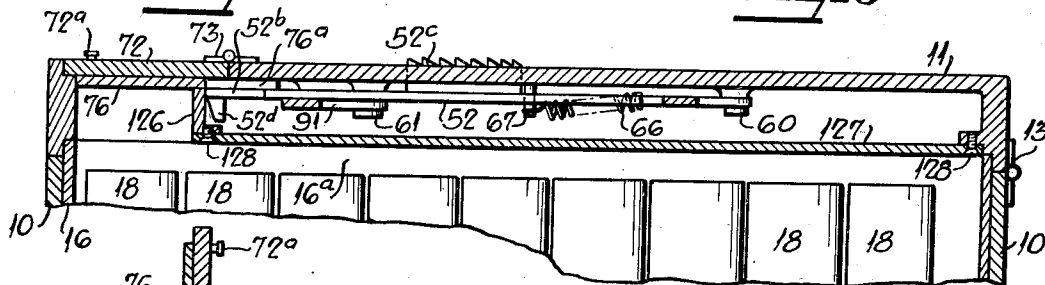


Fig. 6

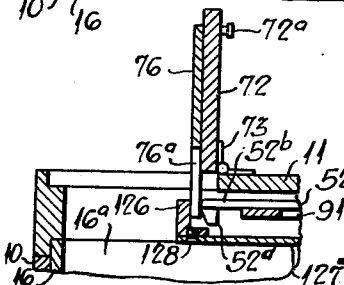


Fig. 7

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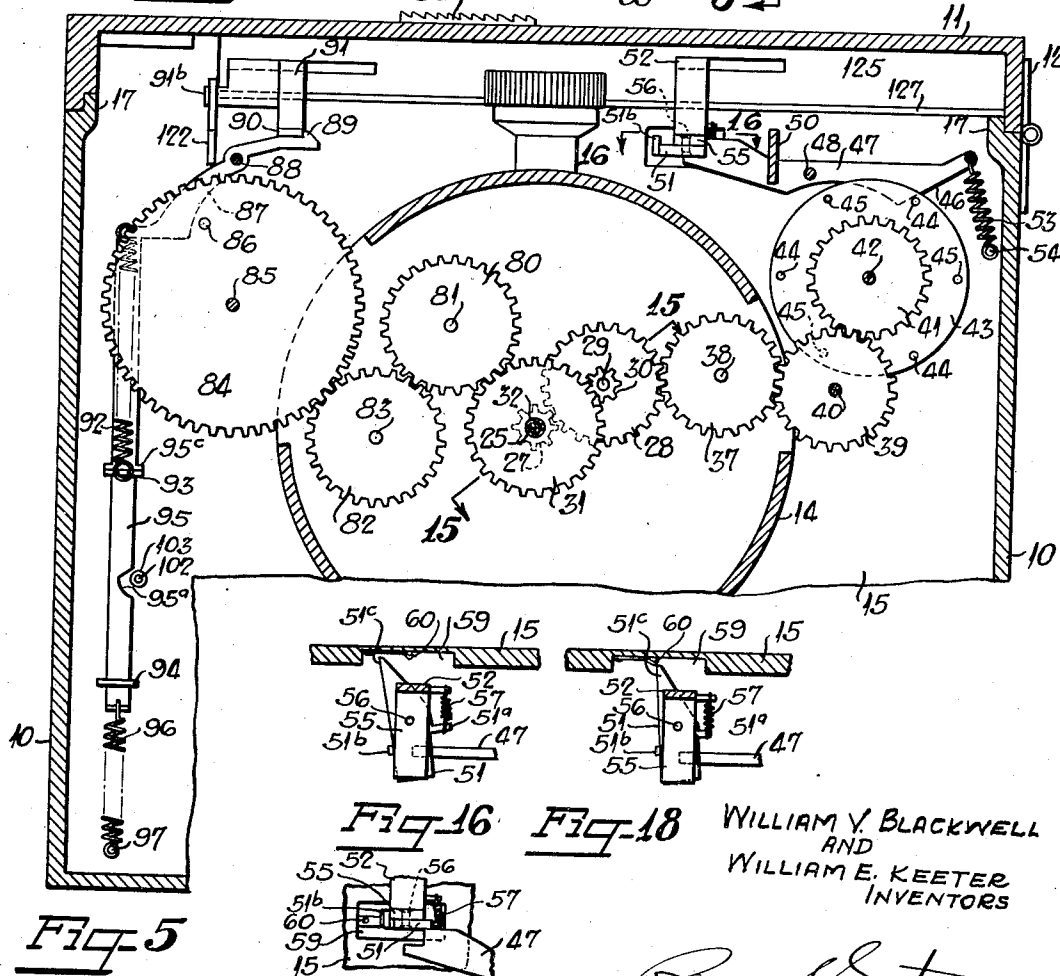
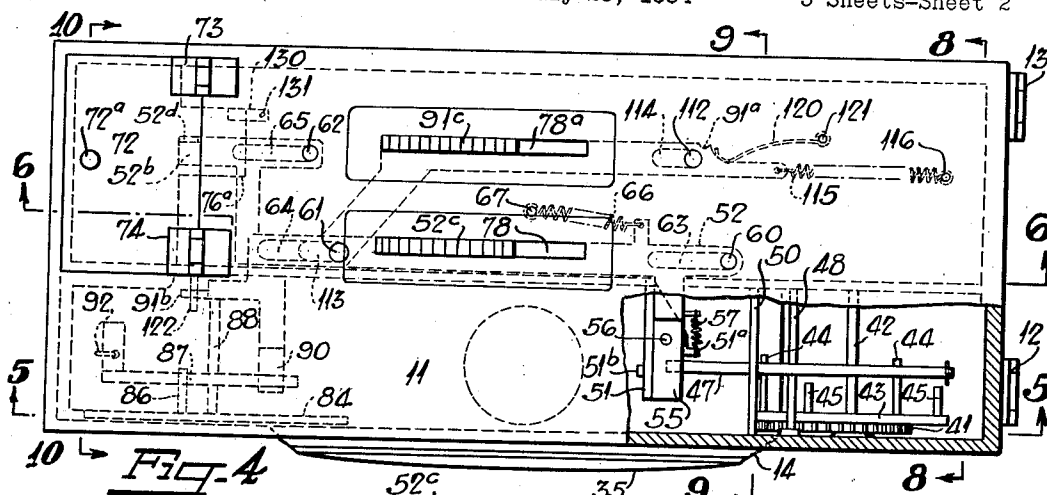
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3 Sheets-Sheet 2



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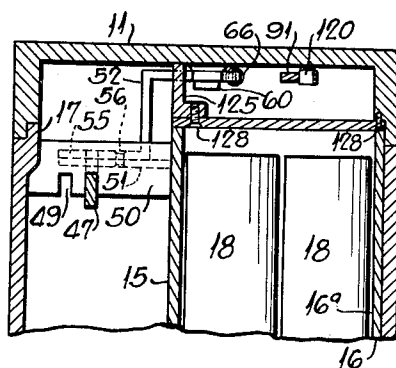
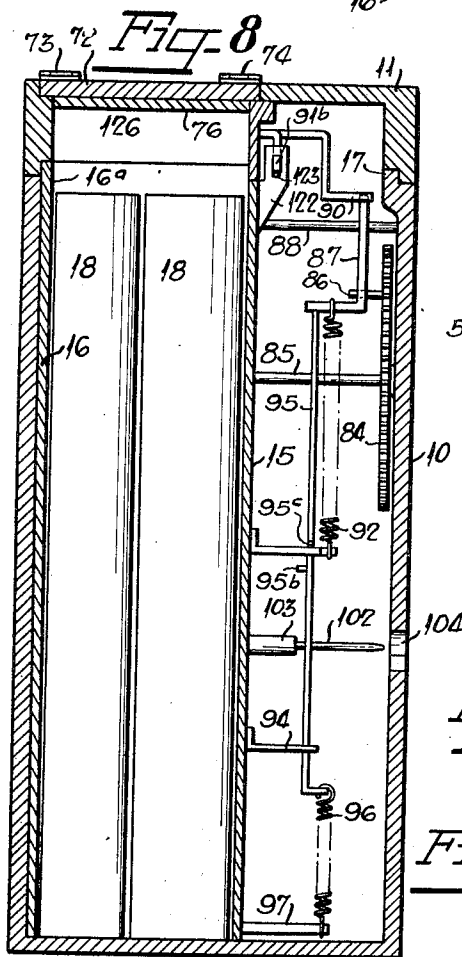
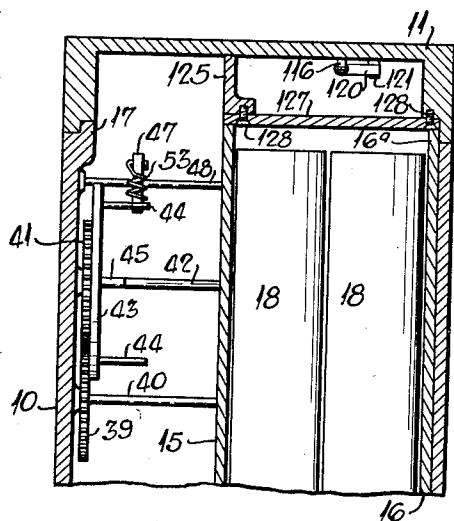
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UNITED STATES PATENT OFFICE

2,016,534

CIGARETTE CASE

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7 Claims. (Cl. 70-26)

This invention relates to a cigarette case and more especially to a cigarette case with a watch built therein with means operated by the watch for unlocking the case at specified intervals. The invention consists of a cigarette case with a compartment for holding the cigarettes and a compartment for mounting the watch and its associated parts. The case has a lid hingedly secured thereto which covers both compartments and is normally latched, but is operated every twenty-four hours by the watch, in the present case, to make it possible to be opened by pressing on a suitable projection on top of the lid. Another lid is hingedly mounted in the lid just described which leads to the cigarette compartment and this lid is operated by the watch so that it may be opened by pressing another projection on top of the first lid at specified intervals. In either case when the mechanism which controls the lids has been unlatched, the parts remain in this position until the particular lid has been opened and again closed.

It is therefore an object of this invention to provide a timed cigarette case with a watch mounted therein and a lid hingedly secured thereto with means operable by the watch for making it possible to open the lid at specified intervals, said means remaining in unlatched position until the lid has been opened and closed.

It is a further object of this invention to provide a cigarette case having a lid hingedly secured thereto covering a cigarette compartment and a mechanism compartment, with a second lid mounted in the first lid and leading to the cigarette compartment, said second lid being operable by the watch to make it possible for it to be opened at specified intervals, said means also remaining in unlatched position until the second lid has been opened and closed.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds when taken in connection with the accompanying drawings, in which:—

Figure 1 is a front elevation of our invention;
Figure 2 is a top plan view of Figure 1;
Figure 3 is an elevation looking at the right-hand side of Figure 1;

Figure 4 is an enlarged top plan view similar to Figure 2 but showing the details disposed below the cover;

Figure 5 is a vertical sectional view taken along the line 5—5 in Figure 4;

Figure 6 is a sectional view through the upper portion of the apparatus and taken along the line 6—6 in Figure 4;

Figure 7 is a sectional view similar to the left-hand portion of Figure 6 but showing the lid to the cigarette compartment in open position;

Figure 8 is a sectional view taken through the upper portion of the apparatus along the line 8—8 in Figure 4;

Figure 9 is a sectional view taken through the upper portion of the apparatus along the line 9—9 in Figure 4;

Figure 10 is a vertical sectional view taken along the line 10—10 in Figure 4;

Figure 11 is an isometric view of the lever which operates the latch for opening the lid to the apparatus;

Figure 12 is an isometric view of the lever 15 which operates the small lid leading to the cigarette compartment;

Figure 13 is an isometric view of the bracket which fits into one side of the container to hold the clock mechanism in position and to form a cigarette compartment;

Figure 14 is an isometric view of the key to unlock our apparatus in case of an emergency;

Figure 15 is a sectional view taken along the line 15—15 in Figure 5;

Figure 16 is a sectional plan view taken along the line 16—16 in Figure 5 but showing the parts in a different position;

Figure 17 is a view looking at the front side of Figure 16;

Figure 18 is a view similar to Figure 16 but showing the parts in a different position.

Referring more specifically to the drawings, the numeral 10 indicates the outer casing for our cigarette container to which is hingedly secured cover 11 by any suitable means such as hinges 12 and 13. A suitable hole is disposed in the face of the casing 10 as shown in Figure 1 through which the face of a conventional watch 14 projects, said watch 14 being secured to a plate 15 disposed within the casing.

Not only is the watch 14 secured to plate 15 but other parts are also secured thereto which will be later described and which operate with our invention. The plate 15 with the watch and its associated parts secured thereto is inserted on the inside of casing 10. When the watch 14 is disposed opposite the hole in the front side of casing 10 it is pushed forwardly to enter the hole and a suitable U-shaped bracket 16 as shown in Figure 13, is inserted on the inside of casing 10 to hold the plate 15 and the watch in fixed position inside the casing.

It is seen by referring to Figures 6, 7, 8, 9 and 10 the upper edge of U-shaped member 16 pro-

jects slightly above the upper edge of casing 10. This is done in order to provide a ledge over which the cover 11 is adapted to fit. Since this U-shaped bracket does not extend completely around the inside of the casing, a suitable ledge 17 is provided on the upper edge of the other portions of the casing 10 where the upper edge of bracket 16 is not present to make the ledge continuous around the top of casing 10, thereby preventing the cover 11 from having lateral play when it is in closed position.

It is seen that the space which exists between the sidewall 16a of bracket 16 and the plate 15, provides a cigarette compartment which is adapted to contain cigarettes 18. The other portion of the container, not occupied by the cigarettes, is occupied by the watch and the mechanism which controls the opening apparatus, and may be much thinner than shown.

By referring to Figure 15 it is seen that the watch 14 is provided with a main drive shaft 25 which drives the minute hand 26 of the watch. Drive shaft 25 is driven from the main spring of the watch which is not shown because it is conventional, and has fixedly secured thereon a pinion 27 which is adapted to mesh with a larger pinion 28 fixedly secured on shaft 29. Shaft 29 also has fixedly mounted thereon a smaller pinion 30 which meshes with a larger pinion 31 said pinion 31 being fixedly secured to sleeve 32 which sleeve is rotatably mounted around shaft 25. The shaft 25 is rotatably mounted in watch 14 and projects through dial plate 33. Fixedly secured to sleeve 32 is an hour hand 34 which makes a complete revolution every twelve hours whereas the minute hand 26 makes a complete revolution every hour. The watch is also provided with a conventional crystal 35 which is secured to the face of the watch to prevent damage to the hands.

It is seen by referring to Figure 5 that the pinion 27 has eight teeth therein which meshes with pinion 28 having twenty-four teeth therein, this amounts to a gear reduction of three to one. It is further seen that the pinion 30 on shaft 29 has seven teeth in it whereas the larger pinion 31 mounted on sleeve 32 has twenty-eight teeth therein which amount to a gear reduction of four to one. In other words, each time the shaft 25 makes twelve revolutions, the sleeve 32 and pinion 31 will make one complete revolution; consequently, the relation of twelve to one is obtained between the hour hand 34 and the minute hand 26.

A pinion 37 is fixedly secured upon shaft 38 of the watch 14 and is adapted to mesh with pinion 28 and also pinion 39 which is fixedly secured upon shaft 40, said shaft 40 having one end rotatably mounted in the front wall of the casing 10 and having the other end rotatably mounted in plate 15.

The pinion 39 also meshes with a pinion 41 which is fixedly secured upon shaft 42 and this shaft 42 is rotatably mounted in the front wall of casing 10 and in the plate 15. By referring to Figure 5 it is seen that pinions 37, 39 and 41 are the same size as pinion 28; consequently each time the pinion 28 makes a complete revolution, the pinion 41 will make one revolution.

In other words, the pinion 41 will make one revolution every three hours since the gear reduction between pinions 27 and 28 is three to one. Pinion 41 has integral therewith a circular plate 43 in which are mounted a plurality of long pins 44 and also a plurality of short pins 45.

The long pins 44 as shown in Figures 4, 5 and 8 are located so as to contact the bevel surface 46 of lever 47, said lever 47 being pivotally secured on shaft 48. The shaft 48 has one end fixedly secured in plate 15 and the other end fixedly secured in the front wall of the casing 10.

By referring to Figure 9 it is seen that the left-hand end of the lever 47 as shown in Figure 5 is adapted to fit in suitable notches 49 in a comb 50 which comb is fixedly secured to the plate 15 and the front wall of the member 10. The left-hand end of lever 47 has a hook on the end thereof which normally engages projection 55 and a dog 51 which is pivotally mounted on projection 55 of lever 52 as at 56.

A spring 57 has one end secured to lever 52 and the other end secured to projection 51a of dog 51. This spring rotates dog 51 in a counter-clockwise manner (Figure 16) when the end of lever 47 has been lowered by the rotation of pins 44 or 45. The lowering of the left-hand portion of lever 47 will cause the parts to assume the position shown in Figures 16 and 17 and since the end of dog 51 nearest the observer in Figure 16 has rotated enough to ride on top of lever 47 instead of engaging the notch in the end thereof, it is evident that the lever 52 may be moved to the right if desired. In the position shown in Figure 5 this movement to the right is not possible since the hook in the end of lever 47 engages projection 55 as well as dog 51.

Lever 52 is adapted to operate the cover to the cigarette compartment.

It is seen that a tension spring 53 has one end secured to the right-hand end of lever 47 whereas the other end is secured as at 54, which causes the beveled surface 46 to normally be pulled downwardly so that the pins 44 will contact this surface and push it upwardly as the disk 43 revolves. Since there are three pins 44 disposed in the plate 43, it is evident that each revolution of the disk 43 will cause the end of lever 47 to be pushed upwardly three times. In other words, since disk 43 makes one complete revolution every three hours, with three pins disposed therein, the right-hand end of lever 47 will be pushed upwardly once every hour.

If it is desired that the lever be pushed upwardly every half-hour, the left-hand end of lever 47 as shown in Figure 5, is pulled downwardly manually, and pulled toward the observer in Figure 5 or caused to slide on rod 48 so that it will be disposed opposite the left-hand notch 49 in Figure 8. It is seen, in this position that the beveled surface 46 will be contacted six times for each revolution of the disk 43 because pins 44 and 45 will contact surface 46 in this position; consequently, the lever will be pushed upwardly every half hour.

Lever 52 is slidably secured to the upper portion of cover 11 by any suitable means such as shoulder screws 60, 61 and 62 which penetrate slots 63, 64 and 65 respectively. Secured to the right-hand portion of lever 52 is a tension spring 66 which has the other end secured as at 67 to the lower portion of lid 11. This spring 66 normally pulls the lever 52 to the left in Figures 4 and 6 and causes the projection 52b to rest beneath projection 76a of plate 76. It is seen that when the right-hand portion of lever 47 is moved upwardly the dog 51 is allowed to escape from the notch in the left-hand portion of lever 47 and the spring 57 will pull the dog to the position shown in Figure 16. When the dog 51 is allowed to escape from the notch in lever 47 the lever 52 may be pulled to the right at any desired time to cause

the portion 52b to move from beneath projection 76a so that the lid to the cigarette compartment may be opened.

Lid 11 has hingedly secured to the upper side thereof a smaller lid 12, said lid 12 being secured to the top of lid 11 by any suitable means such as hinges 73 and 74. A suitable button 72a is secured on top of lid 12 so that it may be engaged and opened at the desired time. It is further seen that by referring to Figures 6, 7 and 10 that lid 12 has disposed on the lower side thereof a plate 76, said plate 76 having a projection 76a which is adapted to fit directly above the projection 52b of lever 52. The projection 52b confines the projection 76a between the lower portion of lid 11 and the upper portion of the projection 52b to prevent the lid 12 from being opened unless the lever 52 has been pushed to the right in Figure 4. The lever 52 also has an upturned portion 52c which has a roughened surface on the upper end thereof. This projects through a suitable slot 78 in the upper portion of lid 11 and is engaged by one's thumb when it is desired to open the cigarette compartment.

It is seen that by constructing the apparatus in this manner that when lever 47 is operated to allow dog 51 to ride on top of lever 47 that the lever 52 may be operated at any time and one may open lid 52 by placing the thumb upon projection 52c and moving the lever to the right until projection 52b moves from beneath projection 76a. In this position of dog 51 the rotation of pins 44 and 45 will have no effect upon lever 52 since this lever is already in unlatched position.

A suitable cavity 59 is disposed in plate 15 in which is mounted a leaf spring 60. When the lever 52 has been operated and the lid 12 opened the projection 52b will assume the position shown in Figure 7 whereas, the point 51c of dog 51 will engage the end of leaf spring 60 (Figure 18) but the position of the dog relative to projection 55 will not be changed. In the position of lid 12 in Figure 7, both of the members 51 and 55 are riding on top of lever 47 but when the lid 12 is closed the projection 76 engages downwardly extending projection 52d and pushes it to the right in Figure 7. When the projection 76a has moved to a horizontal position the end of lever 52 is allowed to move to the position shown in Figure 6 under the tension of spring 66. As lever 52 travels to the left when the lid 12 has been lowered, the point 51 engages the end of spring 60 and rotates dog 51 slightly in a clockwise manner (Figure 18) to allow the hook in the end of lever 47 to engage dog 51 and projection 55. Dog 51 has a projection 51b integral therewith which limits the counter-clockwise movement of the dog about point 56.

Pinion 31 meshes with a similar pinion 80 which is fixedly secured on shaft 81 and pinion 80 also meshes with a pinion 82 which is in like manner fixedly secured on shaft 83 of the watch, shafts 81 and 83 being rotatably mounted in watch 14. The pinion 82 meshes with a larger pinion 84 which is fixedly secured on shaft 85 which shaft has one end rotatably mounted in the front portion of container 10 and the other end rotatably mounted in plate 15. This pinion 84 has a projection 86 which is adapted to contact the lower side of lever 87, said lever 87 being mounted for oscillation on shaft 83. Shaft 83 is also fixedly secured in plate 15 and in the front walls of the casing 10. The right-hand portion of lever 87 has a suitable hook 89 on the end thereof which normally engages projection 90 of lever 91. The left-hand portion of lever 87 has secured to the end

thereof one end of a spring 92 and the other end of this spring is secured to bracket 93, said bracket 93 being mounted on plate 15.

Another bracket 94 which is similar to bracket 93 is also fixedly secured to plate 15 and in the end of brackets 93 and 94 is slidably mounted a member 95. This member 95 has secured to the lower end thereof a tension spring 96, said tension spring having its lower end secured as at 97 to plate 15. The upper end of member 95 normally contacts the lower side of lever 87 at all times and it is seen that this member 97 has lugs 95c disposed directly above the bracket 93 which prevents the spring 96 from pulling the lever 95 too far downwardly. Disposed directly below the bracket 93 is projection 95b which is integral with the member 95 which also limits the upward movement of the member 95. This member 95 has a cavity 95a cut therein which is adapted to be contacted by the end of a suitable key 100 which has a hole 101 thereon. This hole 101 is adapted to fit over a pin 102 said pin 102 having an enlarged portion 103 which is secured to the plate 15. When the key 100 has been inserted through a suitable hole 104 in the front of casing 10, the projection 105 on the key will contact the upper portion of cavity 95a and move the bar 95 upwardly to cause the right-hand end of the lever 87 to move downwardly and allow the portion 90 to be released from engagement from the hook 89 on lever 87.

This makes it possible to release this lever 91 and allow the lid to be opened in case the watch is run down or something should happen to make it very essential to get inside the container when the latch cannot be operated by the watch. Since the pinion 31 makes a revolution in twelve hours the pinions 80 and 83 will likewise make a revolution in the same time, but since the pinion 84 is twice as large as the pinions 31, 81 or 82 the pinion 84 will make only one revolution every twenty-four hours, therefore the pin 86 in the pinion 84 will contact the left-hand portion of lever 87 every twenty-four hours and disengage the lug 89 from the projection 90. This will allow one to open the entire lid 11 and wind up the watch or make the necessary adjustment.

Lever 91 is slidably secured to the lower portion of lid 11 by any suitable means such as shoulder screws 61 and 112 which penetrate slots 113 and 114 respectively.

It is seen that this lever 91 crosses the lever 52 at the shoulder screw 61, therefore, the shoulder screw 61 slidably confines both of these levers to the lid 11 at this point. The right-hand end of lever 91 (Figure 4) has a suitable tension spring 115 secured thereto and the other end of tension spring 115 is secured as at 116 to the lower side of lid 11. Lever 91 has a notch 91a which is adapted to be engaged by the left-hand end of leaf 60 spring 120 when the lever 87 has been operated to release cover 11 so that it can be opened manually. This spring 120 is fixedly secured as at 121 to the lower side of cover 11.

Secured to the plate 15 is bracket 122 which has a slot 123, therein said slot 123 being adapted to receive projection 91b on the end of lever 91 when the lid 11 is in locked position. It is seen that when the pinion 84 makes a revolution that the pin 86 will contact the lower side of lever 87 and cause the hook 89 to be disengaged from the projection 90 of lever 91. When this is done the tension which is caused by spring 115 will pull the lever 91 partially to the right so as to cause the end of leaf spring 120 to engage the cavity 75

91a. In this position the projection 91b has not been entirely removed from the slot 123 and the top will not open with its own accord, but when one engages the projection 91c with the thumb and pushes it backwardly the lid 11 may be opened. Projection 91c projects upwardly through slot 78a in lid 11.

It is seen that lid 11 has secured thereto an end wall 126, and a side wall 125 to which is secured a plate 127 by any suitable means such as screws 128. The plate 127 fits tightly over the cigarette compartment and prevents dirt and trash from getting into the watch.

In order to cause lid 72 to snap upwardly when lever 52 has been pushed to the right in Figure 4, a suitable leaf spring 130 is secured to the lower side of lid 11 as at 131 and the free end of this spring is disposed between the end of projection 76a and the lower side of lid 11 which is compressed when the lid 72 is in closed position.

It is thus seen that there has been provided a cigarette case which can be carried in the pocket or made of a size to be placed on a table or desk in an office and whereby one smoking too many cigarettes can regulate the amount smoked. It is a well-known fact that inveterate smokers will light a cigarette through force of habit, whereas, if the smoker has to secure a key and unlock the case, this will require thought and will not be resorted to except for the purpose of offering a cigarette to a caller, and other special occasions.

In the drawings and specification there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being set forth in the appended claims.

We claim:

1. In a cigarette case having a time lock for releasing the cover thereon, means for locking the cover in closed position, timed means for unlocking said cover at specified intervals and holding the cover in unlocked position until it is manually opened and means automatically locking the case when it is manually closed.
2. In a case for cigarettes having a time lock for releasing the cover thereon comprising a box with an opening, closure means for said opening, means for locking the closure means over the opening, timed means for moving the locking means to unlocked position at predetermined successive intervals and holding it in unlocked position until the closure means is opened and closed, means for automatically locking the closure means in position to await the next "time interval" of opening.
3. In a cigarette case having a time lock for releasing the cover thereon comprising a container with means for locking said cover against opening, timed means for unlocking said cover

at predetermined automatically recurring intervals and holding it in unlocked position until it is opened and again closed, and means operable upon closing of the case for locking it against being opened until the next interval has been reached.

4. In a cigarette case having a time lock for releasing the cover thereon comprising a box having two compartments therein, a hinged lid for closing both of said compartments, means for locking said lid over said compartments, timed means for moving the locking means to unlocked position at predetermined successive time intervals and holding it in unlocked position until said lid is opened and again closed, and means for automatically locking said lid in position to await the next time interval of opening.

5. In a cigarette case having a time lock for releasing the cover thereon comprising a container having a mechanical compartment and a cigarette compartment therein, a closure means for said compartments, means for automatically locking said closure means against opening, timed means for moving the locking means to unlocked position at predetermined successive time intervals and holding it in unlocked position until it is opened and closed again, and means for automatically locking said closure means to await the next time interval of opening.

6. In a cigarette case having a time lock for releasing the cover thereon comprising a container having a mechanical compartment and a cigarette compartment therein, a closure means for said compartments, means for automatically locking the closure means against opening, timed means for moving the locking means to unlocked position and holding it in unlocked position until it is opened and closed again, a second closure means in said first closure means to give access to said cigarette compartment, means for locking said second closure means against opening and timed means for moving the locking means to unlocked position and holding it in unlocked position until it is opened and closed again.

7. In a cigarette case having a time lock for releasing the cover thereon comprising a box having two compartments therein, a hinged lid for closing both of said compartments, means for locking said lid over said compartments, timed means for moving the locking means to unlocked position and holding it in unlocked position until said lid is opened and closed again, a second lid hingedly mounted in said first lid to give access to one of said compartments, means for locking said second lid against opening and timed means for moving the locking means to unlocked position and holding it in unlocked position until said second lid is opened and closed again.

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