Dec. 15, 1936. N. L. JACOBUS 2,064,120

CONTAINER

Filed May 24, 1935

Fig. 1

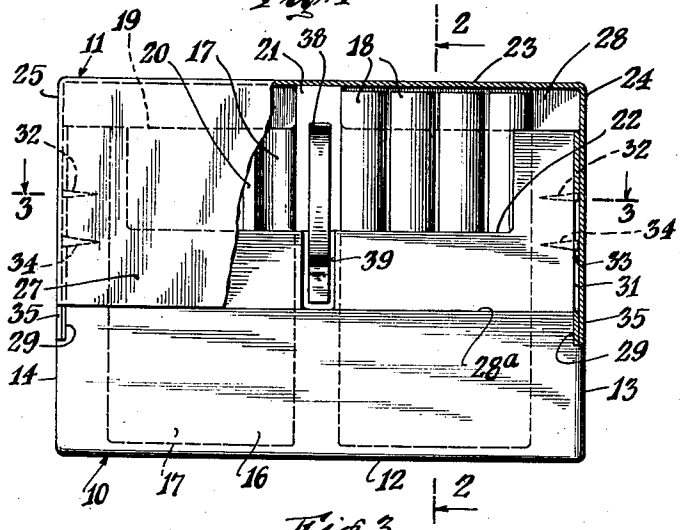


Fig. 2

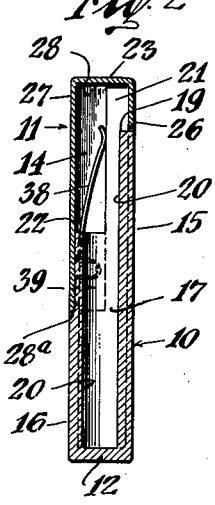


Fig. 3

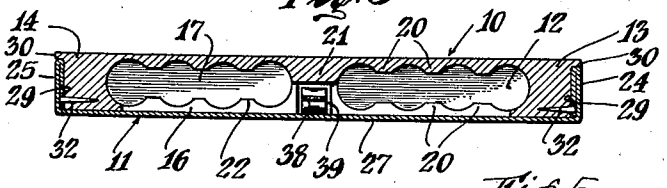


Fig. 4

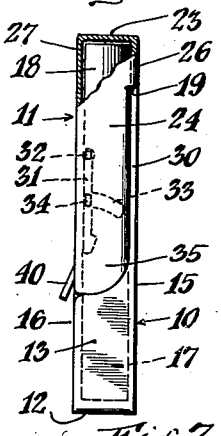


Fig. 5

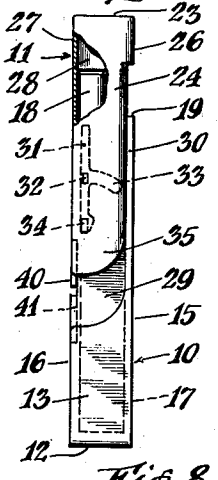


Fig. 6

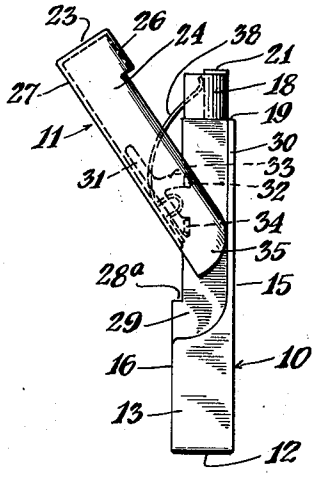


Fig. 7

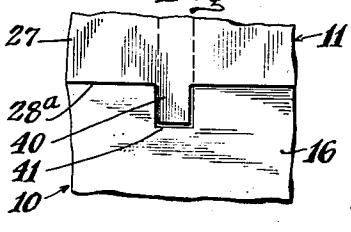
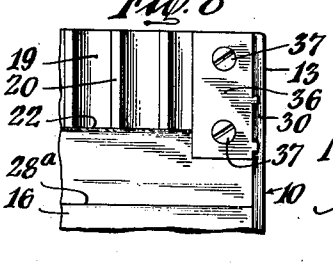


Fig. 8



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CONTAINER

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Application May 24, 1935, Serial No. 23,170

4 Claims. (Cl. 206—41)

This invention relates to containers and is particularly applicable to cigarette cases of the type in which the cigarettes are placed endwise in a recess in the body of the case, and a movable cover is associated therewith.

An object of the invention is to provide an improved arrangement in which the ends of the cigarettes project from the open case for ready seizure. This may be accomplished by shifting the cigarettes endwise in the body recess; but this method requires the use of mechanism, with resulting complication of structure, the use of moving parts subject to damage and to obstruction by tobacco crumbs and the like, uncertainty of operation and difficulty in cleaning, together with substantial risk of damaging the cigarettes by frequent shifting.

A better arrangement, embodied in this invention and avoiding all the enumerated objections, includes the use of a body recess so designed that the cigarette ends project therefrom at all times. This requires the use of a cover enveloping the cigarette ends when the case is closed, and introduces special problems, including the provision of suitable arrangements for connecting the cover and body, and the protection of the cigarette ends against damage when opening and closing the case.

A principal purpose of this invention is to provide a case body and cooperating cover arranged to facilitate the endwise insertion of cigarettes in and their removal from the body recess. In general, this has been accomplished by employing a rear body wall substantially lower than the front wall so that the exposed inner face of the front wall serves as a guide and support for cigarettes during insertion, and provides an increased cigarette surface to grasp during removal.

A further object is to provide a cover permanently associated with a body of this type by means permitting ready access to the cigarettes when the case is open and enclosing fully all exposed parts of the cigarettes when the case is closed.

A principal purpose of this invention is to provide means connecting the cover and the body that will prevent damage to exposed cigarette ends by transverse cover movement. This is accomplished in general by means preventing transverse movement of the cover when the portions of the cover that travel across the end of the body recess are in the zone of the cigarette ends, but permitting such transverse movement beyond said zone to open the case fully. The use of front and rear walls of different heights introduces added problems in providing such a cover arrangement, the solution of which is part of this invention.

An important purpose is to provide a case capable of complete convenient one hand operation in which the cover can be readily shifted to open and close the case by using the same hand that holds the case body. Other objects include the provision of a case operating in the indicated manner that is simple, strong, readily manufactured, easily operated and attractive in appearance. A specific object is to provide an arrangement consisting essentially of only two parts, body and cover, each integral in structure and capable of ready manufacture from advantageous materials such as sheet metal and thermo-plastic compounds.

Other objects and advantages will appear from the following detailed description taken in connection with the accompanying drawing in which:

Fig. 1 is a rear elevation of a cigarette case, part of the cover being broken away;

Fig. 2 is a vertical section on line 2—2 of Fig. 1;

Fig. 3 is a horizontal section on line 3—3 of Fig. 1;

Fig. 4 is an elevation of the right side of the case shown in Fig. 1 with the cover closed and partly broken away, and showing a modified form of cover-shifting device;

Fig. 5 is a similar side elevation with cover in upper position, showing another modification of the cover-shifting device;

Fig. 6 is a similar side elevation with the cover in full open position;

Fig. 7 is a fragmentary rear elevation of the modified cover-shifting devices; and

Fig. 8 is a fragmentary rear elevation showing a modification of the cover-guiding structure.

In the preferred form illustrated the case consists generally of a body 10 and a cover 11. The body 10 includes a bottom 12, end walls 13 and 14, front wall 15 and rear wall 16, surrounding a recess 17 adapted to hold cigarettes 18 with their lower ends resting on bottom 12 and their upper ends extending above the upper edge 19 of the front wall 15. In the embodiment shown, recess 17 is designed to accommodate a single row of cigarettes, though the invention is not restricted to such an arrangement.

If desired, the recess may be provided with means for maintaining individual cigarettes or small groups of cigarettes in normal position when the case is not full. This may be accomplished by the use of suitably spaced projections

on the sides of the recess, such as ridges 20; and if desired the recess sides between said ridges may be suitably curved to fit the sides of the cigarettes. In the form illustrated the recess 17 is provided with a series of opposite ridges 20 spaced and proportioned to provide a series of partial pockets in which individual cigarettes will be maintained in normal position without lateral support from adjacent cigarettes and without depending upon a tight fit in the recess to maintain their position.

The illustrated form is also provided with a central vertical partition 21 which not only serves to maintain cigarettes in position but also reinforces the walls 15 and 16 and may be utilized for other purposes as will hereinafter appear.

The rear body wall 16 is substantially lower or shorter than the front wall 15 in a direction normal to bottom 12, so that a substantial area of the inner face of front wall 15 is exposed above the upper edge 22 of rear wall 16, as shown in Fig. 1. While the proportions of these parts may be varied, the cigarettes will be adequately held by recess 17 and sufficiently exposed above the rear wall edge 22 if the recess 17 embraces at least one-third and preferably at least one-half of a cigarette in normal position, and if at least one-quarter of such cigarette is exposed above the edge 22 of the rear wall 16. In the illustrated example approximately one-third of such cigarette is thus exposed.

The cover 11 includes a top 23, end walls 24 and 25, front wall 26 and rear wall 27, surrounding a recess 28 adapted to enclose the end portions of the cigarettes 18 projecting above the front wall 15 of the body. The cover walls register in closed position with the body walls to form a closed container, with the cover end walls 24 and 25 lying along the body end walls 13 and 14, the rear cover wall 27 preferably overlapping the rear body wall 16 sufficiently to avoid forming a gap between the rear walls 27 and 16 when the case is opened, and the front cover wall 26 preferably butting against the front body wall 15 to minimize the extent of longitudinal cover movement necessary to clear the cigarette ends. With this arrangement the front cover wall 26 is substantially lower or shorter vertically than the rear cover wall 27, corresponding to the difference in height between body walls 15 and 16.

If desired the cover 11 may be arranged flush with the body in closed position by providing a setback 28*a* in the upper part of rear body wall 16, fitting the lower edge of rear cover wall 27, and setbacks 29 in the end walls 13 and 14 of the body, fitting the cover end walls 24 and 25. The said cover end walls 24 and 25 may be narrower from front to rear than the corresponding body end walls 13 and 14, with shoulders 30 along the front edges of setbacks 29 overlying the edges of the cover end walls 24 and 25.

The body 10 and cover 11 are connected by means restricting the movement of the cover to travel in line with the normal locus of cigarettes 18 between closed position, shown in Fig. 4, and an outer position, such as that shown in Fig. 5, in which the front cover wall 26 adjacent said cigarette locus is beyond the outer end thereof and clear to pass transversely across the body to open position shown in Fig. 6 without contact with cigarettes in normal position in the body recess 17. Such means preferably consists of coacting guide elements engaging registering end walls of the body and cover respectively, and the operative parts may conveniently be confined to the contiguous faces of said walls.

In the arrangement illustrated the same structure is used at each end, so only one will be described. It includes in general a longitudinal guide element on one wall and a member on the contiguous wall slidably engaging the guide element. Said element may be an edge or edges of a slot 31, and the member a guide stud 32 fitting the slot 31. In the form shown the base of stud 32 is embedded in an end wall 14 of the body, while slot 31 is formed in the inner face of cover end wall 25 and extends parallel to the rear wall 27 of the cover, preferably close thereto, with the upper end of the slot 31 adjacent the stud 32 in closed position. The slot 31 is long enough to permit the cover 11 to move to the outer position of Fig. 5, and a wall of the slot 31 is broken away opposite the stud when the cover is in said outer position, permitting the stud to travel transversely to the slot and allowing the cover to move laterally. Such movement may be controlled by providing a transverse slot 33 extending from the slot 31, the end of slot 33 serving as a stop.

Where the stud 32 is transversely elongated and fits slot 31 snugly it tends to hold cover 11 in proper longitudinal position during upward movement; but it is desirable to provide additional means for assisting in this function. This may be accomplished by sliding engagement between shoulder 30 and the front edge of the cover end wall 25. It is likewise attained by the use of an additional parallel slot and stud. In the form illustrated, such additional slot forms a downward extension of slot 31 below its intersection with transverse slot 33; and pivot stud 34, mounted on body end wall 14 as by embedding the stud base therein, engages the walls of said slot extension, the lower end of which serves as a stop to limit the upward travel of the cover 11 when guide stud 32 is opposite transverse slot 33.

It is likewise desirable to control the lateral movement of cover 11 when the guide stud 32 passes into transverse slot 33; and preferably to restrain the lower end of cover 11 against lateral movement so that the cover pivots about said end. As the tendency of the lower end of cover 11 is to swing forward as the upper end of cover 11 is impelled to the rear, such pivotal movement is obtained to a certain extent by the engagement of parts of the lower end of cover 11 against suitable abutments preventing forward movement, such as the contact between the lower edge of the rear cover wall 27 and the rear body wall 16, and the sliding contact of suitably curved extensions 35 of end cover walls 24 and 25 with shoulders 30. Where pivot stud 34 is employed, however, it provides a definite pivot for the purpose; and the lower end of slot 31 may be expanded to accommodate such lateral movement of pivot stud 34 as may be required by its elongated section or otherwise.

In the modified form shown in Fig. 8 studs 32 and 34 are formed on the edge of stud plate 36 mounted on the rear of the body 10 as by screws 37 engaging end wall 13.

Means may be provided for shifting the cover 11 rearwardly to open position, either assisting manual operation or providing positive spring actuation. In the illustrated example a leaf spring 38 is mounted on the lower edge of the rear cover wall 27 and bears slidably against the rear face of partition 21, a suitable recess 39 being provided in the rear body wall 16 and parti-

tion 21 to accommodate said spring. To obtain the lateral pressure at the highest point possible, partition 21 may extend above front body wall 15, the extension providing at its rear a lengthened bearing surface for the spring end; and if desired the front of such extension may abut the front cover wall 26 and serve as a transverse support therefor, functioning also to resist premature rearward movement of the cover.

The cover 11 also may be provided with means operated by finger pressure to shift said cover rearwardly. One form is illustrated in Figs. 4 and 7, and comprises a fingerpiece 40 projecting downwardly and outwardly from the lower part of the rear cover wall 27, preferably equidistant from the side edges, and inclined outwardly at an angle sufficient for retracting the cover 11 to full rearward position by pressure on the fingerpiece 40 when said cover is clear for rearward movement. The fingerpiece 40 is also positioned to serve conveniently for initially pushing the cover 11 upwardly. A similar construction is shown in Figs. 5 and 7 in which the fingerpiece 40 is flush with the rear body wall 16 in closed position, fitting into a socket 41 in said wall, and swinging forward into recess 39 when utilized to tilt said cover rearwardly. The cover 11 can be removed completely from the body 10 by springing the cover end walls 24 and 25 outwardly to clear studs 32 and 34.

The arrangement described produces a very simple two piece case, with parts that may readily be designed to have the desired strength and proportions, and readily manufactured by standard processes from usual and most desirable materials. For instance, the body may be molded from any of the condensation products or other thermoplastic substances, or may be shaped or cast from other materials such as wood or metal. The cover can be made similarly, and is especially suitable for simple manufacture from a single sheet of metal, a type of construction that lends itself to convenient formation of slots 31 and 33 by excising them or striking them up on portions of the cover blank and bending said portions inwardly to form the inner parts of cover end walls 24 and 25.

The operation of the case will be reasonably apparent from the foregoing description. When the case is grasped by the hand a slight upward thrust by the fingertips on rear cover wall 27 will lift cover 11 the short distance necessary to clear the cigarettes, studs 30 and 34 traveling down slots 31 and the inner face of front cover wall 26 sliding up along the upper end of partition 21 until in upper position it clears the partition, studs 34 reach the bottom of slots 31, and studs 32 are opposite transverse slots 33. The cover 11 is then flipped back to open position either by spring 38 or by finger pressure on fingerpiece 40, stud 32 traveling in slot 33 to prevent endwise movement of the cover and limiting rearward movement by contact with the end of slot 33. The case is closed by pressing the cover 11 forward with the fingertips till it is over the cigarettes, then drawing it down to closed position by continuing movement of the fingertips. The operation is performed so simply and naturally by one hand that the other is free for withdrawing cigarettes or for other purposes, such as driving a car. The parts are proportioned and arranged for most convenient and effective insertion and removal of the cigarettes, the cover swinging rearwardly far enough to permit ready removal of cigarettes directly with the lips and the insertion of the fingers behind the cigarettes to facilitate withdrawal. The pressure of the fingers on the cigarettes is resisted by the extended straight inner face of the front body wall 15, preventing distortion and breaking through careless grasping. The same surface acts as a guide when inserting cigarettes, which may be laid endwise thereon and slid into recess 17 by a simple finger movement.

While the preferred embodiment has been described and certain modifications indicated, the invention is not limited to the precise disclosure. For instance, while many features are peculiarly adapted to the special requirements of cigarette cases, the invention is not restricted thereto, and includes features applicable to containers of other types. The guide elements on the end walls are of such a nature that equivalents may be substituted and their location transposed or otherwise changed.

I claim:

1. A container including a body and a cover constituting associated units, and means for controlling relative movement of the units, including a guide element on one unit, and an elongated guide means on the other unit slidably engaging said element, said guide means having a longitudinal run engaging the guide element during predetermined relative longitudinal movement of the units in a zone adjacent closed position, and a transverse run engaging said element during transverse relative movement of the units beyond said zone.

2. A container including a body and a cover constituting associated units, and means for controlling relative movement of the units, including stud means on one unit, and a coacting slot on the other unit having a longitudinal run positioned to engage said stud means during relative longitudinal movement of the units in a predetermined zone adjacent closed position, and a connecting transverse run located to engage the stud means beyond said zone, the inner end of said longitudinal run engaging the stud means and serving as a stop and pivot when the transverse run is in position for engagement by the stud means.

3. A cigarette case including a body having a front wall whose height is less than a cigarette length, a rear wall lower than the front wall, end walls, and a bottom positioned to support the ends of cigarettes inserted between said walls, said bottom and walls defining a recess for cigarettes; a cover including a top, front, rear and end walls defining a recess forming in closed position an aligned extension of the body recess; and connecting means between the body and cover requiring the cover to swing back from the front wall of the case as it is opened.

4. A cigarette case including a body having a front wall whose height is less than a cigarette length, a rear wall lower than the front wall, end walls, and a bottom positioned to support the ends of cigarettes inserted between said walls, said bottom and walls defining a recess for cigarettes; a cover including a top, front, rear and end walls defining a recess forming in closed position an aligned extension of the body recess; and connecting means between the body and cover requiring the cover to slide upwardly and then to swing back from the front wall of the case as it is opened.

NELSON LEE JACOBUS.