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CIGARETTE DISPENSING DEVICE

Filed June 25, 1930

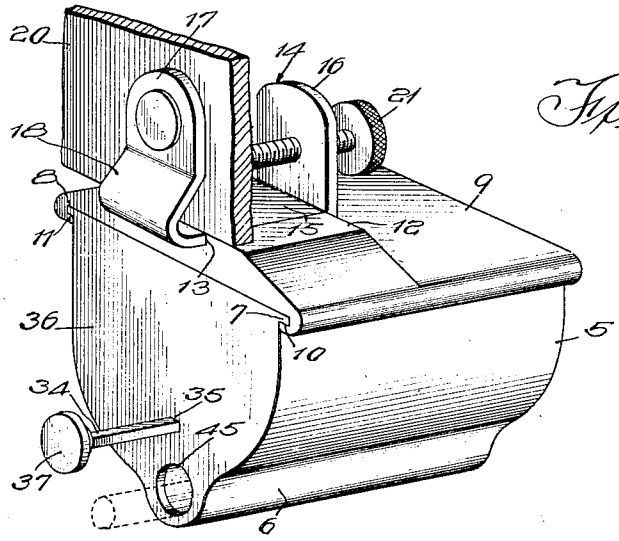


Fig. 1.

Fig. 2.

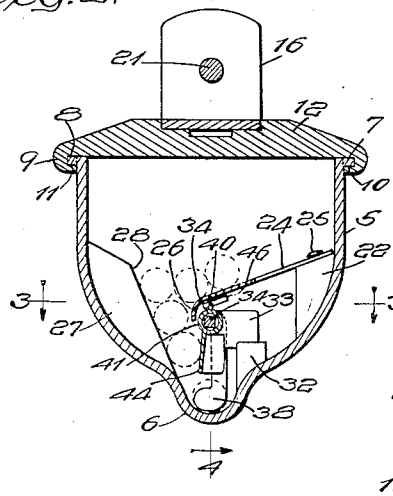


Fig. 3.

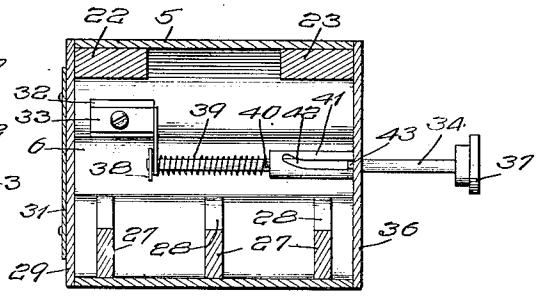
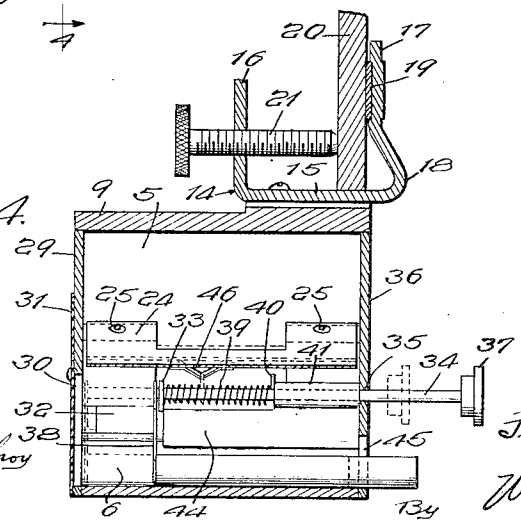


Fig. 4.



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CIGARETTE DISPENSING DEVICE

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This invention relates to cigarette dispensing devices and the salient object of the invention is to provide a novel cigarette dispensing device which will be simple in operation and economical in construction.

Other objects are to provide a novel cigarette dispensing device which may be secured to the dash or instrument board of an automotive vehicle or the like; to provide a cigarette dispensing device embodying a disturbing member for ensuring proper distribution of the cigarettes; and to provide a dispensing device which is so constructed that but one cigarette will be delivered on each operation thereof.

A selected embodiment of the invention is illustrated in the accompanying drawing, and therein

Fig. 1 is a perspective view of a selected form of construction for my invention showing the device associated with the instrument board of an automotive vehicle, the board being fragmentally illustrated.

Fig. 2 is a vertical sectional view of the device as disclosed in Fig. 1.

Fig. 3 is a transverse sectional view taken substantially on the line 3—3 of Fig. 2, and

Fig. 4 is a vertical sectional view taken substantially on the line 4—4 of Fig. 2.

In the accompanying drawing, 5 indicates the body of my improved dispensing device which is in the form of a hollow body including vertically extending side walls terminating in inwardly curved portions which in turn terminate in a rounded trough-like portion 6 at the lower end of the body 5, suitable end walls closing each end of the body. Along the upper edges of the side walls of the body 5 are flanges 7 and 8. A top 9 is provided which includes at the sides thereof depending portions having grooves 10 and 11 therein into which the flanges 7 and 8 are respectively slid, the ends of the grooves 10 and 11 opposite the ends shown in Fig. 1 being closed to limit the movement of the flanges 7 and 8. Preferably these flanges snugly fit in the recesses so that the body 5 will be firmly retained in position. Adjacent the end which is to be the front of the device on the top 9 is a raised portion 12 which has a recess 13 in the medial portion of the upper surface thereof. A clamp member generally indicated by 14 has a flat portion 15 thereof disposed in this groove 13, said portion 15 being secured in any desired or approved manner as by screws. At one end of the portion 15 is an upstanding section 16 and at the opposite end is another upstanding section indicated by 17, the section 17 preferably being joined to the portion 15 by a substantially U-shaped section 18 which has the bight portion thereof arranged outwardly of the forward end of the top 9. In the section 17 is an insert 19 preferably of rubber or other resilient material. The device is intended to be mounted on a flat member 20 which may be, for example, the instrument board of an automotive vehicle or the like. As the section 17 is intended to extend over the front surface of this board 20 it is desirable that the insert 19 be provided in order to prevent marring of this surface. A screw 21 is extended through the section 16 and by running this screw into engagement with the back of the board 20 a clamping action is produced by the co-operation of the screw 21 and the section 17 and thus the top 9 and therefore the body 5 will be suspended from the instrument board and it is manifest that the device may be quickly installed or removed. In order to fill the device with cigarettes or other articles to be dispensed thereby the body 5 is slid forwardly and the cigarettes are introduced thereinto. At each end of the body interiorly thereof along one of the slide walls are bosses 22 and 23, the upper surfaces of which are preferably tapered as best illustrated in Fig. 2. One edge of a plate 24 is rested on these bosses and is connected thereto by screws such as 25, clearance being provided between the heads of the screws and the upper surface of the plate for a purpose to be set forth presently. The edge of the plate opposite that secured to the bosses 22 and 23 is curved downwardly as indicated at 26. On the wall of the body 5 opposite the bosses 22 and 23 are ribs 27 which have the upper and inwardly dis-

posed faces thereof inclined, the inwardly disposed face merging with the adjacent inner wall of the trough-like portion 6. This inner tapered surface 28 of the ribs 27 cooperates with the downwardly bent portion 26 to provide a passage through which the cigarettes may pass one at a time, the cigarettes being longitudinally arranged in the body 5. The rear end wall 29 of the body 5 has an opening 30 therein normally closed by a suitable plate 31. Adjacent the opening 30 on the rounded portion of the wall of the body 5 having the bosses 22 and 23 thereon, there is a boss 32. A foot portion on the bracket 33 is secured to the upper surface of the boss 32 by any suitable means such as a screw and this bracket includes an outwardly extending portion which extends over and terminates above, in spaced relation with, the trough-like portion 6. One end of a bar 34 is extended through an opening in this portion of the bracket 33, this bar also being extended through an opening 35 in the front wall 36 of the housing 5. On the end of the bar 34 extended through the opening 35 is a thumb button 37. At the opposite end of the bar 34 rearwardly of the bracket 33 is a plate 38. A spring 39 is disposed about the bar 34 between the bracket 33 and a pin 40 on the bar 34, this spring acting to urge the end of the bar having the thumb button 37 thereon outwardly. Disposed about the bar 34 between the end wall 36 and the pin 40 is a sleeve 41 and the engagement of the pin 40 with the inner end of this sleeve limits the action of the spring 39. A cam slot 42 is provided in the sleeve 41 and a pin 43 fixed to the bar 34 extends therethrough. A plate 44 has one end thereof secured to the sleeve 41 and depends downwardly as best illustrated in Fig. 2 and when the pin 43 is in the position in the cam slot 42 illutrated in Fig. 3, this plate 44 extends in the manner illustrated in Fig. 2 and prevents cigarettes which have passed between the surface 28 and the curved portion 26 from entering into the trough-like portion 6. In the wall 36 in alinement with the trough-like portion 6 there is an opening 45. When the thumb button 36 is moved inwardly against the action of the spring 39 the pin 43 moves through the cam slot 42 and when this pin moves into the curved portion of the cam slot shown at the inner end thereof in Fig. 3 the plate 44 is pivoted in a direction away from the surfaces 28 and therefore the lowermost cigarette may pass into the trough-like portion 6. The cross-sectional area of this trough-like portion 6 is sufficient to receive but one cigarette and therefore succeeding cigarettes will rest against the cigarette in the trough-like portion 6, thus when the pressure is removed from the thumb botton 37 and the spring 39 returns the parts to the position illustrated in full lines in Fig. 4 the pin 43 will move back into the straight portion of the cam slot 42 and the cigarette resting on the cigarette in the trough-like portion 6 will be held against downward movement. The curved portion in the cam slot 42 is disposed inwardly a distance sufficient to prevent movement of the plate 44 and consequent releasing of the cigarette supported thereby until the plate 38 has moved rearwardly a distance great enough to permit a cigarette to pass into the trough-like portion 6 in front of this plate 38. Therefore, when the spring 39 serves to move the bar 34 this plate 38 will act as an impelling member and will force the cigarette out through the opening 45 as illustrated in Figs. 1 and 4, the end of the cigarette being forced from the housing in an amount sufficient to provide for convenient gripping thereof and it is therefore manifest that the foregoing arrangement will act to dispense cigarettes one at a time. While the foregoing device will operate satisfactorily I have found it advantageous to provide a disturbing arrangement which will ensure the cigarettes passing over the curved portion 26 in a proper manner. This is brought about by providing a raised portion such as 46 on the lower surface of the plate 24 adjacent the curved portion 26. Therefore, when the bar 34 is moved inwardly the pin 40 will strike this raised portion 46 which preferably embodies oppositely inclined surfaces and as the pin moves over these inclined surfaces an up and down movement is imparted to the pin 40, the clearance between the heads of the screws 25 permitting this movement. This disturbs or jogs the cigarettes and they consequently move into the space between the curved portion 26 and the inclined surfaces 28 in a proper manner. The opening 30 is provided to facilitate installation of the mechanisms effecting the releasing and discharging of the cigarettes. For example, the various parts may be mounted on the bar 34 prior to the arrangement thereof in the housing 5. These mechanisms may then be inserted through the opening 30 with the bar 34 extending through the opening 35. The thumb button 37 will then be mounted on the bar 34 and the bracket 33 secured to the boss 32.

It is manifest from the foregoing description that I have provided a cigarette dispensing device which may be easily installed in or removed from a desired location. It is also apparent that I have provided a device which will deliver but one cigarette at a time and further I have provided a novel arrangement for disturbing the cigarettes so as to ensure passage thereof to the releasing or expelling devices.

While I have illustrated and described the preferred form of construction for carrying

my invention into effect, it is to be understood that this is capable of variation and modification without departing from the purview of the following claims.

I claim:

1. A dispensing device including a body having a discharge opening therein and an article receiving trough alined with said discharge opening, bosses in said body at one side thereof, a downwardly inclined supporting plate mounted on said bosses and including a guiding portion at the lower end thereof, ribs on the side of said body opposite said bosses and having guiding surfaces thereon extending to said article receiving trough and cooperating with the guiding portion on the supporting plate to provide an opening through which articles carried by said supporting plate may pass one at a time to move along said guiding surfaces to said article receiving trough, passage preventing means below the supporting plate and cooperating with the guiding surfaces to prevent passage of articles to said article receiving trough, a plunger mounted in said body, a sleeve on said plunger and connected to said passage preventing means, means connecting said sleeve to said plunger for movement therewith, and yieldable means urging said plunger and sleeve into a predetermined position whereby when said plunger is moved against the action of said yieldable means movement is imparted to said sleeve to withdraw said passage preventing means from passage preventing position.

2. A dispensing device including a body having a discharge opening therein and an article receiving trough alined with said discharge opening, bosses in said body at one side thereof, a downwardly inclined supporting plate mounted on said bosses and including a guiding portion at the lower end thereof, ribs on the side of said body opposite said bosses and having guiding surfaces thereon extending to said article receiving trough and cooperating with the guiding portion on the supporting plate to provide an opening through which articles carried by said supporting plate may pass one at a time to move along said guiding surfaces to said article receiving trough, passage preventing means below the supporting plate and cooperating with the guiding surfaces to prevent passage of articles to said article receiving trough, a plunger, a sleeve disposed about said plunger and connected to said passage preventing means, said sleeve having a cam slot therein, a pin on said plunger and disposed in said cam slot whereby inward movement of said plunger moves said pin through said slot to move said sleeve and withdraw said passage preventing means from passage preventing position to permit an article to move into said article receiving trough, means operable with said plunger on the outward movement thereof for moving an article in said trough through said discharge opening, and means for moving said plunger outwardly into a predetermined position to locate said passage preventing means in passage preventing position.

3. A dispensing device including a body having a discharge opening therein and an article receiving trough alined with said discharge opening, bosses in said body at one side thereof, a downwardly inclined supporting plate mounted on said bosses and including a guiding portion at the lower end thereof, ribs on the side of said body opposite said bosses and having guiding surfaces thereon extending to said article receiving trough and cooperating with the guiding portion on the supporting plate to provide an opening through which articles carried by said supporting plate may pass one at a time to move along said guiding surfaces to said article receiving trough, passage preventing means below the supporting plate and cooperating with the guiding surfaces to prevent passage of articles to said article receiving trough, a sleeve connected to said passage preventing means, a plunger, means interconnecting said sleeve and said plunger whereby said passage preventing means will be withdrawn upon the inward movement of said plunger to permit an article to move into said article receiving trough, and means operable with said plunger on the outward movement thereof for moving an article in said trough through said discharge opening.

4. A dispensing device including a body having a discharge opening therein and an article receiving trough alined with said discharge opening, bosses in said body at one side thereon, a downwardly inclined supporting plate movably mounted on said bosses and including a guiding portion at the lower end thereof, ribs on the side of said body opposite said bosses and having guiding surfaces thereon extending to said article receiving trough and cooperating with the guiding portion on the supporting plate to provide an opening through which articles carried by said supporting plate may pass one at a time to move along said article guiding surfaces to said article receiving trough, passage preventing means below said supporting plate and cooperating with said guiding surfaces to prevent passage of articles to said article receiving trough, a sleeve connected to said passage preventing means, a plunger, means on said plunger for operating said sleeve to withdraw said passage preventing means to permit an article to move into said article receiving trough, means carried by said plunger and operable on the outward movement

thereof for moving an article in said trough through said discharge opening, said plate having a cam portion thereon, and a pin on said plunger engageable with said cam portion on the inward and outward movements of said plunger to move said supporting plate to agitate the articles carried thereby to insure movement of said articles into position in engagement with said guiding surfaces for passage to said article receiving trough.

5. A dispensing device including a body having a discharge opening therein and an article receiving trough alined with said discharge opening, bosses in said body at one side thereof, a downwardly inclined supporting plate mounted on said bosses and including a guiding portion at the lower end thereof, ribs on the side of said body opposite said bosses and having guiding surfaces thereon extending to said article receiving trough and cooperating with the guiding portion on the supporting plate to provide an opening through which articles carried by said supporting plate may pass one at a time to move along said guiding surfaces to said article receiving trough, passage preventing means cooperating with said guiding surfaces to prevent movement of articles into said article receiving trough, a plunger, a sleeve disposed about said plunger and connected to said passage preventing means, means connecting said sleeve to said plunger to effect withdrawal of said passage preventing means to permit the passage of an article into said article receiving trough upon inward movement of said plunger, said passage preventing means being located about said trough and so spaced therefrom that but one released article remains in said trough when said passage preventing means moves back into passage preventing position subsequent to a withdrawal thereof from that position, and means for moving said plunger outwardly to position said passage preventing means in passage preventing position.

6. In a dispensing device including a body having means therein for directing articles to an article receiving portion, passage preventing means for preventing articles moving to said article receiving portion and including a plunger having one end thereof extended from said body, a sleeve mounted on said plunger and having a slot therein embodying a part extending substantially axially of the plunger and another part extending substantially circumferentially of the plunger, a pin on the plunger disposed in said slot, a spring disposed about said plunger and acting thereon to normally urge said pin into a predetermined part of said slot, and means connecting said sleeve to said passage preventing means whereby when said plunger is moved against the action of said spring said pin moves through said slot and imparts rotative movement to said sleeve to withdraw said passage preventing means from passage preventing position.

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