

Sept. 11, 1951

L. ANSEL

2,567,311

AUTOMATIC CIGARETTE LIGHTER

Filed April 1, 1949

3 Sheets-Sheet 1

FIG. 1.

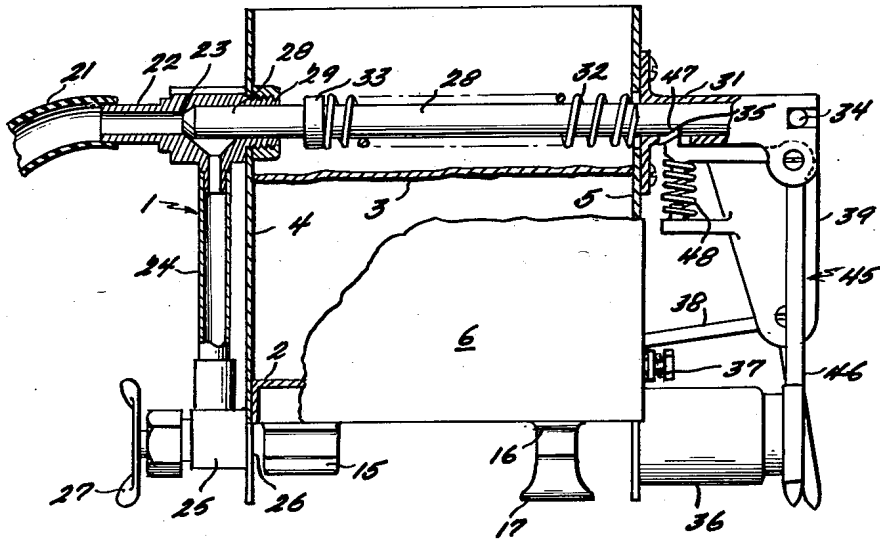
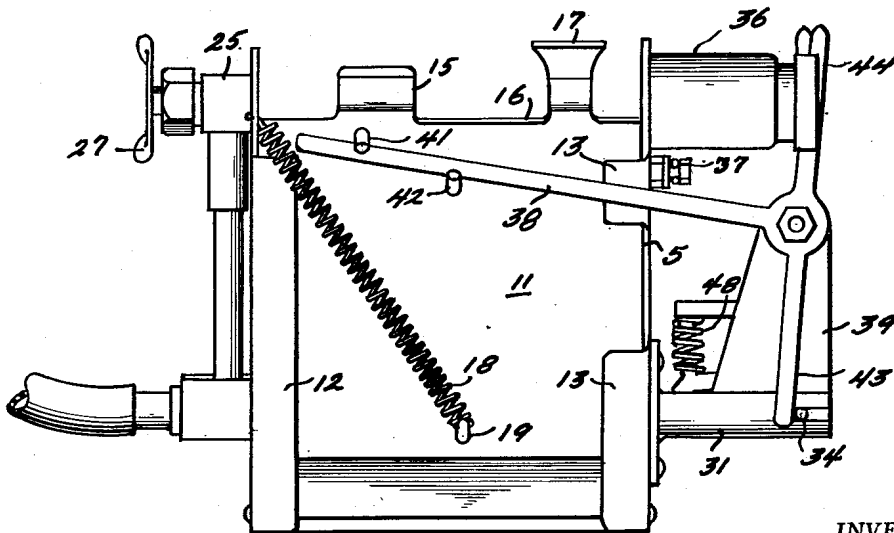


FIG. 2.



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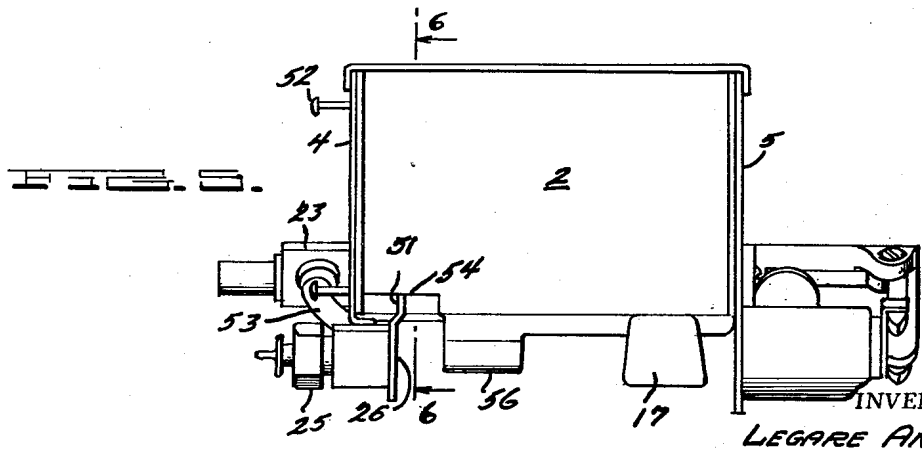
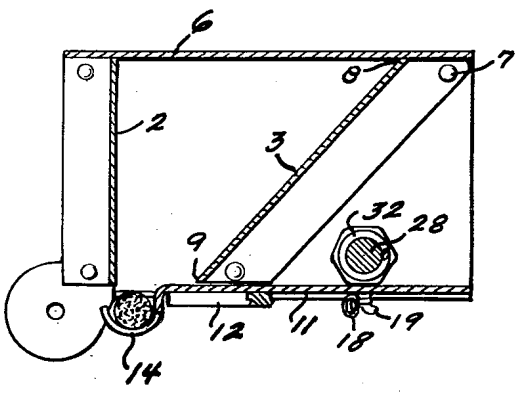
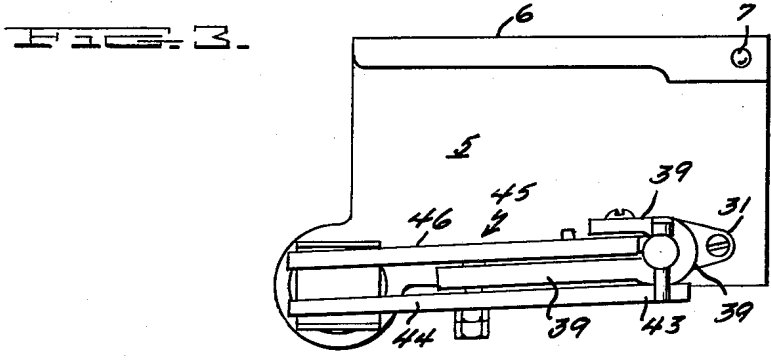
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AUTOMATIC CIGARETTE LIGHTER

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3 Sheets-Sheet 2



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Sept. 11, 1951

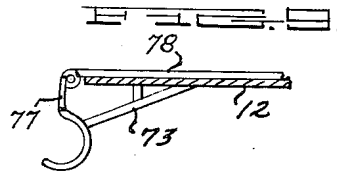
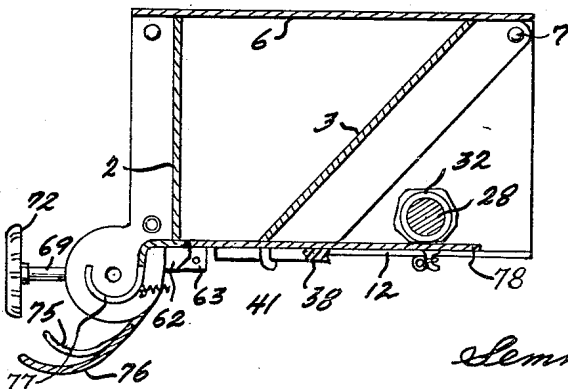
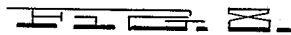
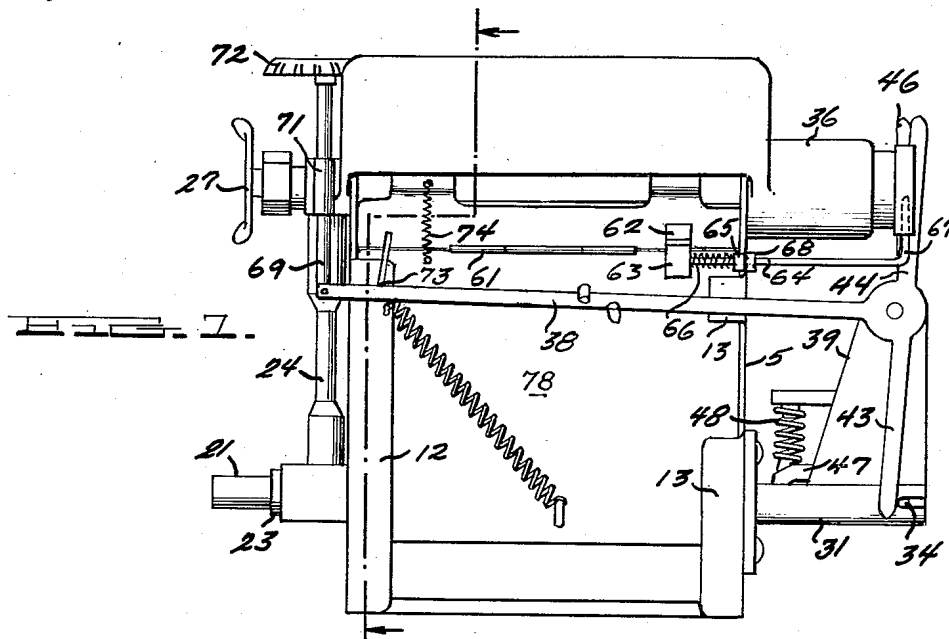
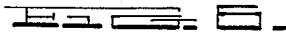
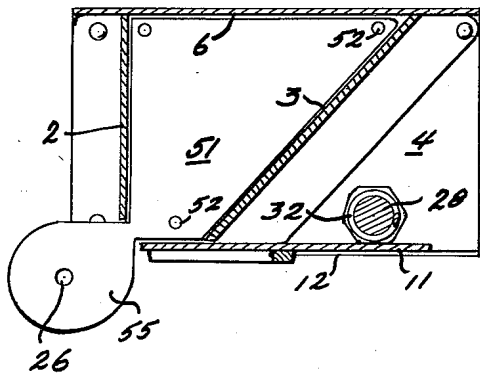
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AUTOMATIC CIGARETTE LIGHTER

Filed April 1, 1949

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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AUTOMATIC CIGARETTE LIGHTER

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Application April 1, 1949, Serial No. 84,957

12 Claims. (Cl. 312-86)

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This invention relates to a cigarette dispenser and more particularly to a dispensing device adapted to light a cigarette after removal from a storage hopper.

Most automobiles at the present time are equipped with a cigarette lighter which may be removed from its receptacle in the dashboard to light a cigarette. It is necessary for the operator of the car to place the lighter carefully against the end of the cigarette during lighting operation. Naturally, this takes the driver's attention, and has been a contributing cause of many accidents.

Some devices have been provided which will light the cigarette and hold it in a place where it may be picked up by the driver. Those heretofore available have generally required a plurality of operations to dispense and light the cigarette. Many lighters compressed the cigarette against the lighter during the lighting operation, which caused some loose ash at the end of the cigarette to drop from the cigarette as it is removed from the dispensing device.

It is an object of this invention to provide a cigarette dispensing and lighting device which may be manufactured at a low cost and installed in an automobile.

A further object of this invention is to provide a cigarette lighter which will provide a lighted cigarette with a minimum of attention from the driver.

It is also an object of this invention to provide a cigarette lighting device in which the cigarettes to be lit are fed from a hopper, and bridging of the cigarettes in the hopper is avoided.

Still another object of this invention is to provide an evenly lit cigarette having no loose ash at the lighted end.

With these and other objects in view, as will become apparent in the following description, this invention resides in a storage hopper for the cigarettes having a sliding bottom adapted to rotate at least two cigarettes in the lower part of the hopper to prevent bridging of the cigarettes. The cigarettes are fed from the hopper into a tray which carries them to a lighting position at which suction is applied to one end of a cigarette and a thermostatic lighter is adjacent the other end. The outward movement of the thermostatic lighter after a cigarette has been lit releases a catch to close a valve in the suction line.

In the drawings:

Figure 1 is a plan view partially in section illustrating a dispensing device constructed according to this invention;

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Figure 2 is a bottom view of the dispenser illustrated in Figure 1, partly illustrating the mechanical linkage connecting the operating parts of the dispenser;

Figure 3 is an end elevation of the device illustrated in Figures 1 and 2;

Figure 4 is a vertical sectional view showing the tray in which the cigarettes are lighted in the position under the hopper for receiving a cigarette;

Figure 5 is a front elevational view showing the adjustable end plate of the hopper in its innermost position;

Figure 6 is a vertical sectional view of the modified form of the invention illustrated in Figure 5;

Figure 7 is a bottom view of another modification of the invention in which the tray drops down to a more accessible position after the cigarette is lit;

Figure 8 is a vertical sectional view of the modified form of the invention illustrated in Figure 7; and,

Figure 9 is a fragmentary schematic view of a structure for raising the tray of the lighter.

The cigarette dispenser of this invention is provided with a hopper, indicated generally by 1, formed by a front wall 2 and a back panel 3, supported between vertical end walls 4 and 5. End walls 4 and 5 in the form of the invention illustrated in Figures 1 and 2 are separated a distance slightly greater than the length of the conventional cigarette and serve to align the cigarettes properly within the hopper 1. In most instances, it will be desirable to provide a cover 6 which is rotatably supported by the end walls 4 and 5 at 7.

The back panel 3 of the hopper slopes downwardly from its upper edge 8 towards the front of the hopper. The lower edge 9 of the back panel 3 is adjacent a sliding bottom plate 11 forming the floor of the hopper. Lower edge 9 of the back plate is preferably spaced from the forward wall 2 of the hopper a distance of about twice the diameter of the usual cigarette. The cigarettes stored in the hopper fall through the space between the front wall 2 and back panel 3 in the operation of the device.

The bottom plate 11 slides under the lower edge of the front wall 2 and back panel 3 on wings 12 and 13 bent inwardly from the lower edge of end walls 4 and 5 toward the back of the dispenser to position a tray 14 at the front of the panel under the hopper 1. Tray 14 is formed by ears 15 and 16 extending from the forward edge of the bottom plate and bent substantially in a semi-circle to support a cigarette with its

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upper surface at approximately the level of the upper surface of bottom plate 11. Ears 15 and 16 are spaced to support cigarettes near the ends and facilitates one's lifting a cigarette from the tray.

A tab 17 is formed by an extension of ear 16 to provide a surface against which one may push to operate the dispensing device. Movement of the plate 11 toward the back may be limited by the rear edge of the plate striking any suitable stop extending from one of the end walls. A spring 18 is secured to a post 19 extending from the bottom of plate 11 and to an end wall of the hopper to return the bottom plate 11 to the forward position after the driver has pushed tab 17.

Referring to Figure 1 of the drawings, a line 21 from a source of suction is connected with the outlet 22 of a vacuum control valve 23 mounted on end wall 4. A conduit 24 extends from the inlet of valve 23 toward the front of the dispensing device and is connected to an adjusting valve 25 mounted on end wall 4. Valve 25 is provided with an opening 26 in alignment with one end of a cigarette supported in the tray 14 when the tray is in its forward position. In some instances, opening 26 may be provided with a screen, not shown, to prevent entrance of tobacco particles into the suction line. Valve 25 may be equipped with any suitable handle 27 for regulation of the amount of suction on the cigarette during the lighting operation.

Control valve 23 is provided with a stem 28 which passes through suitable packing gland 29 and extends across the length of the dispensing device. Stem 28 is slidably supported for longitudinal movement in a sleeve 31 mounted on the outer surface of end wall 5 of the hopper. A compressed helical spring 32 bears against the inner surface of end wall 5 and a collar 33 on valve stem 28 to urge the stem against the seat of the valve 23 to prevent flow through lines 21 and 24. A pin 34 protrudes from the surface of stem 28 near its outer end for opening the valve in the manner hereinafter described. In addition, stem 28 is grooved at 35 for the reception of a catch adapted to hold the valve open. Sleeve 31 is slotted in the region of groove 35 to allow the catch to enter the groove.

In alignment with a cigarette in the tray 14 when the bottom plate 11 is in the forward position at the end opposite the opening 26, a conventional thermostatic lighter 36 is supported from end wall 5. Lighter 36 is of the usual type which is operated by pressing the lighter into a receptacle. When the lighter has reached the desired temperature a thermostatic wire releases the lighter and it pops out of the receptacle. Lighter 36 is connected with a source of electricity, for instance the battery of a car, by means of lead line 37.

Referring to the bottom view of the dispensing device illustrated in Figure 2 of the drawings, a T-shaped lever 38 is pivotally supported on a bracket 39, mounted on end wall 5 of the hopper. The stem of the T-shaped lever 38 extends across the bottom surface of bottom plate 11 and is held in place relative thereto by posts 41 and 42 protruding from the lower surface of plate 11. Post 41 rotates the lever 38 in a counter-clockwise direction as the bottom plate 11 is pushed towards the rear of the dispensing device, and post 42 rotates the lever 38 in the reverse direction as spring 18 pulls bottom plate 11 to the forward position. The upper surface of one arm

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43 of the cross of the T engages the pin 34 protruding from the stem 28 of the suction control valve 23. The lower surface of the other arm 44 of the cross of the T in turn bears against the outer end of the thermostatic lighter 36. It will be noticed that the lever 38 controls the movement of the valve stem 28 and the thermostatic lighter 36 only when the bottom plate 11 is pushed towards the rear of the dispensing device. As the bottom plate returns to the forward position, the arms 43 and 44 move out of contact with pin 34 and the outer end of lighter 36, respectively.

Referring to Figure 1 of the drawings, a detent indicated generally by 45, is pivotally supported from bracket 39. Detent 45 is a substantially L-shaped bell crank having a long arm 46 extending over the outer end of lighter 36 and a catch 47 extending along the surface of the stem 28 adjacent the groove 35. A weakly compressed helical spring 48 continually urges the catch 47 against the stem 28 of valve 23. The engagement of the catch 47 with the valve stem 28 spaces arm 46 from the outer end of lighter 36 when the lighter is in the receptacle.

In operation, the driver of the car pushes against the tab 17 to move the tray 14 under the hopper 1 and a cigarette falls into the tray from the hopper. Upon release of the tab 17, spring 18 returns the bottom plate to the forward position. Forward movement of the plate 11 is limited by lever 38 engaging a section of end wall 5 to place the cigarette in accurate alignment with the lighter 36 and opening 26. Obviously, movement toward both the front and the back of the dispenser may be limited by a projection on the tray engaging a stationary part of the dispenser.

The provision of a sliding plate in the bottom of the hopper combines with the spacing of the back panel 3 from the front wall 2 of the hopper to prevent bridging of the cigarettes in the hopper and insure feeding a cigarette into the tray 14. Friction with the moving plate causes the bottom cigarettes to roll and free themselves from other cigarettes.

When the driver of the car pushes the bottom plate 11, lever 38 is rotated about its pivot and arm 43 of the lever engages pin 34 on the valve stem 28 to open valve 23. The outward movement of the stem allows spring 48 to press catch 47 into engagement with the groove 35 and hold the control valve in the open position. Arm 44 of lever 38 meanwhile engages the outer surface of thermostatic lighter 36 to press the lighter into its receptacle. As the bottom plate 11 returns to the forward position, the lighter 36 is left in the "on" position and catch 47 holds valve 23 in an open position to draw air longitudinally through the cigarette.

Lighter 36 will remain on a predetermined time sufficient to light the cigarette. When the thermostatic lighter pops from its "on" position, its outer end engages arm 46 of detent 45 and rotates the detent to disengage catch 47 and groove 35. The compressed spring 32 then closes the valve 23 by moving stem 28 to the left in Figure 1. The lighted cigarette is supported by ears 15 and 16 in a readily accessible position for use by the driver.

During the lighting operation, the suction from opening 26 tends to draw the cigarette against that opening and away from the lighter 36. The slight spacing between the lighted end of the cigarette and the lighter eliminates any tendency of burning particles to stick to the lighter or be

loosened from the cigarette from which they may drop as the cigarette is removed from the dispensing device.

In the apparatus herein described, the compressed springs 32 and 48 and spring 18 exert no force on the thermostatic lighter 36 when it is in the "on" position. For this reason, there is no tendency for the lighter to remain in the "on" position longer than it should, with the consequent danger of burning out the lighter. Similarly, there is no force tending to move the lighter 36 from its receptacle before it is heated sufficiently to light the cigarette.

The dispensing device may be employed with a cigarette of a brand different from those in the hopper by merely placing the cigarette in tray 14 and pressing tab 17. The cigarette placed in the tray prevents one from the hopper falling into the tray and the operation proceeds with the cigarette of the different brand.

A modified form of this invention suitable for use with either the conventional cigarette or king size cigarette is illustrated in Figures 5 and 6 of the drawings. In the modified form, the hopper is provided with a movable false end wall 51 which is supported from end wall 4 by a plurality of pins 52. End wall 51 is spaced from end wall 5 by a proper distance for reception of king size cigarettes when end wall 51 is adjacent end wall 4. The end wall 51 may however be moved towards end wall 5 for the proper spacing for use with the regular size cigarettes. The adjustable valve 25 having the opening 26 is suspended from the false end wall 51 and is adapted to move integrally therewith. It is thus necessary to provide a flexible conduit 53 between the adjustable valve 25 and control valve 23.

Front wall 2 of the modified form of the invention is slotted at 54 along its lower left hand edge in Figure 5 for the passage of a web 55 joining the false end wall 51 with the section supporting the adjustable valve 25. Similarly, the bottom plate 11 is slotted to allow movement of the end wall 51. In the modified form of the invention, ear 56, corresponding to ear 15 in the form of the invention illustrated in Figures 1 and 2, is positioned adjacent the opening 26 when false end wall 51 is moved to its innermost position.

Referring to Figures 7 and 8 of the drawings, a modified form of the invention particularly adapted for installation near the bottom of a dashboard of an automobile is illustrated. A tray 77 of this form of this invention is connected to the forward edge of bottom plate 78 by a hinge 61, which allows the tray 14 to drop downward from its normal horizontal position to a position well below the dashboard. During the lighting operation, the tray 14 is held in the horizontal position by a block 62 on the lower surface of the tray engaging a retainer 63. A stem 64 extends from the retainer 63 and passes slidably through a bearing 65 mounted on the lower surface of wing 13. A compressed helical spring 66 mounted circumferentially on stem 64 bears against the bearing 65 and retainer 63 to urge the retainer to the left in the drawings to a position where it engages block 62. Stem 64 extends past bearing 65 and is provided with an arm 67 bent substantially at a right angle to the stem extending over the outer end of lighter 36. Any suitable stop 68 may be provided to limit the inward movement of the block and space arm 67 from the end of the lighter when the lighter is in the "on" position.

Referring to Figure 7 of the drawings, the modified form of the invention has a plunger rod 69 attached to the end of lever 38 remote from its pivotal support on bracket 39. Plunger rod 69 is slidably mounted in bearings 71 and has a push-button 72 attached to its front end. Clearly, a similar structure could be employed in the modification illustrated in Figure 1 in place of the tab 17.

It is essential that the tray 14 be in the raised position to receive a cigarette from the hopper when the bottom panel 78 moves to the rear. A bar 73 is supported from the wing 12 in the manner illustrated schematically in Figure 9 to engage the lower surface of tray 77 as it moves to the rear and lift it to the raised position shown in Figure 8.

In the operation of the modified form of the invention, the driver presses against the push-button 72 to move the tray 14 under the hopper 1. As the tray moves toward the back, it engages the bar 73 which raises the tray to the upper position. When the push-button 72 is pressed, arm 44 of lever 38 urges lighter 36 into its receptacle and thereby permits spring 66 to move retainer 63 into engagement with the block 62 to maintain the tray in the raised position.

After the cigarette is lit, the lighter 36 pops out and engages arm 67 to move retainer 63 out of engagement with the block 62 to allow the tray 14 to drop to the lower position. Dropping of tray 77 to the lower position may be insured by a spring 74, under tension, connected to the bottom panel 78 and the tray 77. Immediately below the tray 77, when it is in the forward position, is a receiver 75 formed by a pair of curved fingers which hold the lighted cigarette in a position readily accessible to the driver of the car. A guard 76 may be supported below the receiver 75.

While this invention has been described in detail with respect to a particular modification of the invention, it is to be understood that the concept of this invention is not limited to those details, but is determined by the scope of the appended claims.

I claim:

1. A cigarette dispenser and lighter comprising a hopper for the storage of cigarettes, a sliding bottom panel of the hopper, a back panel of the hopper slopping downwardly towards the front of the hopper and terminating adjacent the bottom panel, the lower edge of the back panel being spaced from the front of the hopper a distance of substantially twice the diameter of cigarettes, a tray on the forward edge of the bottom panel adapted to receive a cigarette from the hopper as the bottom panel slides to the rear and carry the cigarette forward as the panel slides forward, a vacuum line opening at one end of the tray in the forward position, a valve in the vacuum line, a thermostatic lighter at the end of the tray opposite the opening in the vacuum line, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette, a lever arranged to engage the lighter and move it into the energized position and to open the valve as the bottom panel is moved towards the rear and a catch holding the valve open released by outward movement of the thermostatic lighter against the catch to close the valve after the igniting of the cigarette.

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2. A cigarette dispenser and lighter comprising a hopper for the storage of cigarettes, a sliding bottom panel of the hopper, a back panel of the hopper sloping downwardly toward the front of the hopper and terminating adjacent the bottom panel, the lower edge of the back panel being spaced from the front of the hopper a distance of substantially twice the diameter of cigarettes, a tray on the forward edge of the bottom panel adapted to receive a cigarette from the hopper as the bottom panel slides to the rear and carry the cigarette forward as the panel slides forward, said tray being hinged to the bottom panel, a vacuum line opening at one end of the tray in the forward position, a valve in the vacuum line, a thermostatic lighter at the end of the tray opposite the opening in the vacuum line, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette, a lever arranged to engage the lighter and move it into the energized position and to open the valve as the bottom panel is moved towards the rear a catch holding the valve open and released by outward movement of the thermostatic lighter, and retaining means preventing pivoting of the tray on the hinge, said retaining means being moved by outward movement of the thermostatic lighter to a position permitting the tray to drop downward after the cigarette is lit.

3. A cigarette dispenser and lighter comprising a hopper for the storage of cigarettes, a sliding bottom panel of the hopper, a back panel of the hopper sloping downwardly towards the front of the hopper and terminating adjacent the bottom panel, the lower edge of the back panel being spaced from the front of the hopper a distance of substantially twice the diameter of cigarettes, a tray on the forward edge of the bottom panel adapted to receive a cigarette from the hopper as the bottom panel slides to the rear and carry the cigarettes forward as the panel slides forward, said tray being hinged to the bottom panel, a vacuum line opening at one end of the tray in the forward position, a valve in the vacuum line, a thermostatic lighter at the end of the tray opposite the opening in the vacuum line, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette, a lever arranged to engage the lighter and move it into the energized position and to open the valve as the bottom panel is moved towards the rear, a catch holding the valve open released by outward movement of the thermostatic lighter, retaining means preventing pivoting of the tray on the hinge, said retaining means being moved by outward movement of the lighter to a position permitting pivoting of the tray, and an arm mounted in a fixed position to engage and lift the tray as the bottom panel moves to the rear whereby the retaining means engage the tray and hold it in an elevated position until released by the outward movement of the lighter.

4. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, a back panel in the hopper sloping towards the front thereof, a sliding bottom panel in the hopper, the back panel terminating adjacent the bottom panel and spaced at least twice the diameter of cigarettes from the front of the hopper, a tray at the

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forward edge of the bottom panel adapted to receive cigarettes from the hopper as the bottom panel is moved towards the rear of the hopper, a vacuum line having an opening at one end of the tray when the tray is in the forward position, a valve in the vacuum line, a spring urging the valve to a closed position, a thermostatic lighter at the end of the tray opposite the opening, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette, a lever arranged to engage the lighter and move it into the energized position and to open the valve as the bottom panel is moved towards the rear, said lever disengaging the valve and the igniter as the bottom panel moves to the front, and a detent holding the valve open as the bottom panel moves forward, said detent extending over and spaced from the outer surface of the thermostatic lighter during the igniting of the cigarette and adapted to be engaged by the lighter released as the thermostatic lighter moves outward.

5. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, a back panel in the hopper sloping towards the front thereof, a sliding bottom panel in the hopper, the back panel terminating adjacent the bottom panel and spaced at least twice the diameter of a cigarette from the front of the hopper, a tray at the forward edge of the bottom panel adapted to receive cigarettes from the hopper as the bottom panel is moved towards the rear of the hopper, a slidable end wall of the hopper, a vacuum line having an outlet integral with the slidable end wall and at an end of the tray when the tray is in the forward position, a valve in the vacuum line, a spring urging the valve to a closed position, a thermostatic lighter at the end of the tray opposite the opening, a lever actuated by the bottom panel adapted to move and energize the thermostatic lighter and open the valve in the vacuum line as the bottom panel is moved to the rear, said lever arranged to disengage the valve and the lighter as the bottom panel moves to the front, and a detent holding the valve open as the bottom panel moves forward, said detent spaced from the thermostatic lighter during igniting of the cigarette and engaged and released as the thermostatic lighter moves outward.

6. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, a back panel in the hopper sloping towards the front thereof, a sliding bottom panel in the hopper, the back panel terminating adjacent the bottom panel and spaced at least twice the diameter of cigarettes from the front of the hopper, a tray at the forward edge of the bottom panel adapted to receive cigarettes from the hopper as the bottom panel is moved towards the rear of the hopper, resilient means urging the bottom panel to the forward position, a vacuum line having an opening at one end of the tray when the tray is in the forward position, a valve in the vacuum line, a spring urging the valve to a closed position, a thermostatic lighter at the end of the tray opposite the opening, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette a lever actuated by the bottom panel to move the thermostatic lighter to the energized position and open the valve in the vacuum line

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as the bottom panel is moved to the rear, said lever adapted to move free of the valve and the lighter as the bottom panel moves to the front, and a detent holding the valve open as the bottom panel moves forward, said detent extending over and spaced from the outer surface of the thermostatic lighter when the lighter is in the energized position and adapted to be released as the thermostatic lighter moves outward.

7. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, a back panel in the hopper sloping towards the front thereof, a sliding bottom panel in the hopper, the back panel terminating adjacent the bottom panel and spaced at least twice the diameter of cigarettes from the front of the hopper, a tray at the forward edge of the bottom panel adapted to receive cigarettes from the hopper as the bottom panel is moved towards the rear of the hopper, resilient means urging the bottom panel to the forward position, a vacuum line having an opening at one end of the tray when the tray is in the forward position, a valve in the vacuum line, a stem extending from said valve, a spring bearing against the stem to close the valve, a groove in the valve stem, a thermostatic lighter at the end of the tray opposite the opening, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette, a lever arranged to engage the lighter and move it into the energized position and to open the valve as the bottom panel is moved towards the rear, said lever moving free of the valve and the lighter as the bottom panel moves to the front, a pivotally mounted detent engaging the groove in the stem to hold the valve open, and an arm on the detent extending over and spaced from the outer surface of the thermostatic lighter when the lighter is in the energized position and adapted to release the detent as the lighter moves outward.

8. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, a back panel in the hopper, a sliding bottom panel in the hopper, the back panel terminating adjacent the bottom panel and spaced at least twice the diameter of cigarettes from the front of the hopper, a tray at the forward edge of the bottom panel adapted to receive cigarettes from the hopper as the bottom panel is moved towards the rear of the hopper, resilient means urging the bottom panel to the forward position, a vacuum line having an opening at one end of the tray when the tray is in the forward position, a valve in the vacuum line, a spring urging the valve to a closed position, a thermostatic lighter at the end of the tray opposite the opening, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette, a lever arranged to engage the lighter and move it into the energized position and to open the valve as the bottom panel is moved towards the rear said lever arranged to move free of the valve and the lighter as the bottom panel moves to the front, a pivotally mounted detent engaging the groove in the stem to hold the valve open, an arm on the detent extending over the lighter adapted to release the detent as the lighter moves outward, said tray being pivotally attached to the bottom panel to allow the tray to drop from its normal position,

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and retaining means engaging the tray to hold it in a substantially horizontal position, said retaining means disengaging the tray as the thermostatic lighter moves outward whereby the tray pivots and moves the lit cigarette to a more accessible position.

9. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, said hopper having a rear panel sloping downward towards the front of the hopper, a sliding panel forming the bottom of the hopper, a depressed tray at the front edge of the sliding panel into which a cigarette falls from the hopper as the panel is moved towards the rear of the hopper, a vacuum line opening at one end of the dispenser in alignment with the tray when it is at the forward position, a valve in the vacuum line, a thermostatic lighter at the end of the dispenser opposite the vacuum line opening and in alignment with the tray when it is at the forward position, said thermostatic lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette a pivotally supported lever engaging the lighter, said lever operatively connected to the panel and adapted to move the lighter into the operating position as the panel moves to the rear, an operating plunger connected to the lever whereby movement of the plunger moves the lever and panel to operate the lighter, said lever opening the valve in the vacuum line when the sliding panel is moved to the rear, and means actuated by the lighter closing the valve as the lighter disengages the thermostatic latching means.

10. A cigarette lighter and dispenser comprising a hopper for the storage of cigarettes, said hopper having a rear panel sloping downward towards the front of the hopper, a sliding panel forming the bottom of the hopper, a depressed tray at the front edge of the sliding panel into which a cigarette falls from the hopper as the panel is moved towards the rear of the hopper, a vacuum line opening at one end of the dispenser in alignment with the tray when it is at the forward position, a valve in the vacuum line, a thermostatic lighter at the end of the dispenser opposite the vacuum line opening and in alignment with the tray when it is at the forward position, said thermostatic lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the igniting of the cigarette a pivotally supported lever engaging the lighter, said lever operatively connected to the panel and adapted to move the lighter into the operating position as the panel moves to the rear, means operatively connected with the lever for moving the panel to the rear whereby the lighter is moved into the operating position when the tray moves to the rear, said lever opening the valve in the vacuum line when the sliding panel is moved to the rear, and means actuated by the lighter closing the valve as the lighter moves out of its receptacle.

11. In a cigarette dispensing and lighting device, a tray for supporting a cigarette in a lighting position, a vacuum line opening at one end of the tray, a thermostatic lighter at the end of the tray opposite the opening of the vacuum line, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic

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latching means to hold the two elements in engagement during the lighting of the cigarette, a valve in the vacuum line, resilient means urging the valve to a closed position, and a detent holding the valve open against the force of the resilient means during the lighting of the cigarette, said detent extending past the outer surface of the lighter and spaced slightly therefrom whereby outward movement of the lighter releases the detent to close the valve in the vacuum line.

12. In a cigarette dispensing and lighting device, a tray for supporting a cigarette in a lighting position, a vacuum line opening at one end of the tray, a thermostatic lighter at the end of the tray opposite the opening of the vacuum line, said lighter including a heater element, a contact element moved against spring action to energize the heater element and thermostatic latching means to hold the two elements in engagement during the lighting of the cigarette, a valve in the vacuum line, resilient means urging the valve to a closed position, a detent holding the valve open against the force of the resilient

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means during the lighting of the cigarette, said detent extending past the outer surface of the lighter and spaced slightly therefrom whereby outward movement of the lighter releases the detent to close the valve in the vacuum line, said tray being pivotally mounted to allow the tray to drop from its normal cigarette lighting position, and retaining means engaging the tray to hold it in the cigarette lighting position, said retaining means being actuated by outward movement of the lighter to allow the tray to pivot and move the cigarette to a more accessible position.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

20	Number	Name	Date
	2,002,492	Dess -----	May 28, 1935
	2,083,464	Mayer -----	June 8, 1937
	2,182,955	Allen -----	Dec. 2, 1939
	2,277,451	Paseka -----	Mar. 24, 1942