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CIGARETTE DISPENSING AND LIGHTING CASE

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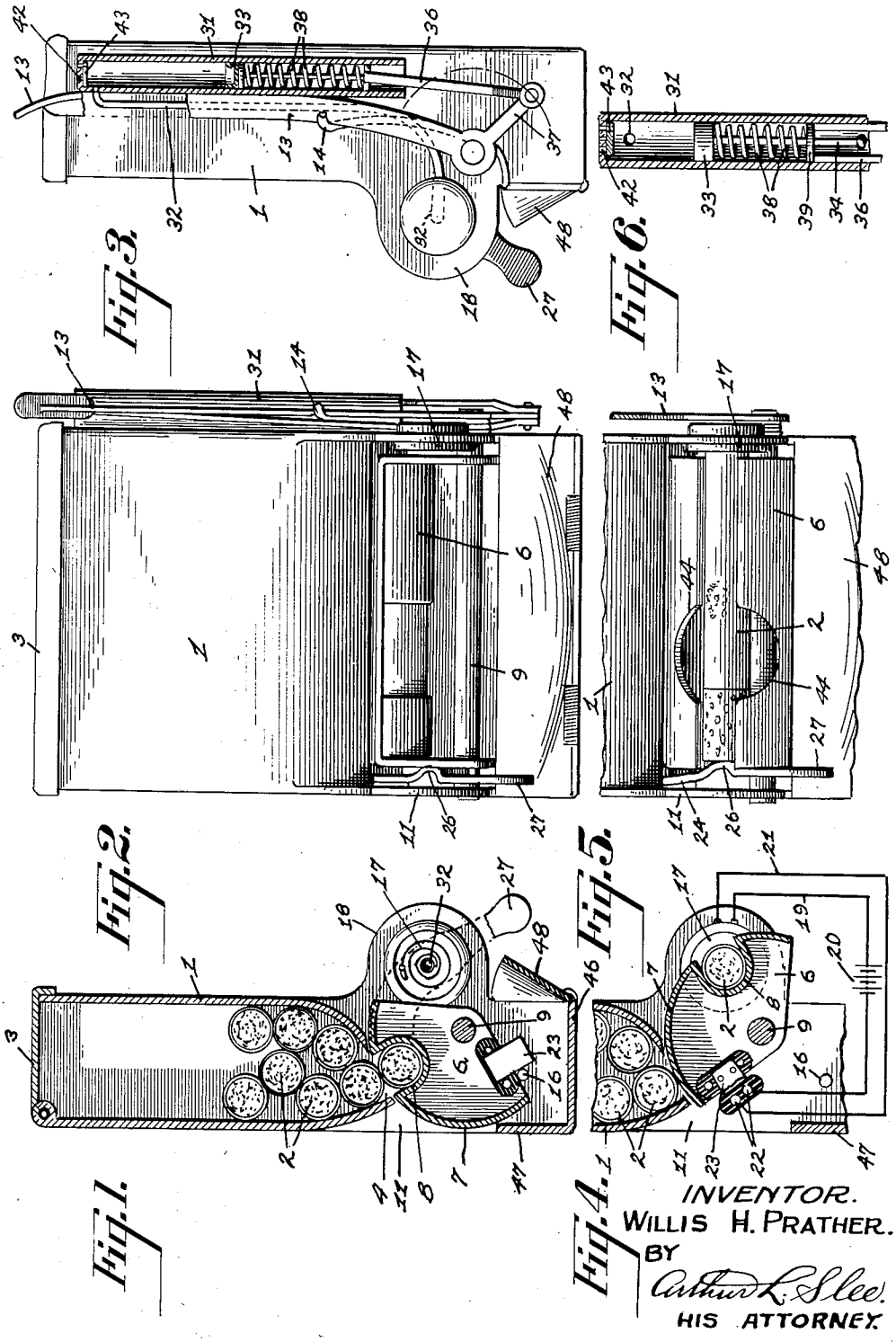


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

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CIGARETTE DISPENSING AND LIGHTING CASE.

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To all whom it may concern:

Be it known that I, WILLIS H. PRATHER, a citizen of the United States, residing in the city of Ukiah, in the county of Mendocino and State of California, have invented a new and useful Improvement in a Cigarette Dispensing and Lighting Case, of which the following is a specification.

My invention relates to improvements in cigarette dispensing devices and the like wherein provision is made for automatically lighting a cigarette when moved to dispensing position.

The primary object of my invention is to provide an improved case for dispensing and lighting cigarettes.

Another object is to provide means for automatically lighting cigarettes when moved to a dispensing position from a container.

A further object is to provide means for producing a current of air to convey heat from an igniting means into the end of a cigarette to facilitate the lighting of said cigarette.

Another object is to provide an improved device of the character described wherein the movement of a dispensing element to dispensing position operates to energize an igniting element and to operate a draft producing means for lighting a cigarette dispensed.

A further object is to provide improved means for holding the end of a dispensed cigarette in engagement with an igniting element to insure the lighting of the cigarette.

A still further object is to provide an improved device of the character described which is particularly adapted for mounting upon automobiles to permit drivers to obtain a lighted cigarette without materially diverting his attention from driving.

A still further object is to provide an improved device of compact arrangement and of neat and attractive appearance and which will afford a convenient and efficient means for dispensing and lighting cigarettes.

I accomplish these and other objects by means of the device disclosed in the drawings forming a part of the present specification wherein like characters of reference are used to designate similar parts throughout said specification and drawings and in which—

Fig. 1 is a vertical cross section of my improved cigarette dispensing and lighting case.

Fig. 2 is a front elevation of the device.

Fig. 3 is a right side elevation of the device.

Fig. 4 is a broken vertical cross section of the lower portion of the case showing the dispensing elements moved to dispensing position.

Fig. 5 is a front elevation of Fig. 4.

Fig. 6 is a vertical section of the draft producing means showing the manner in which the plunger is yieldingly actuated.

Referring to the drawings the numeral 1 is used to designate in general a suitable container adapted to receive a plurality of cigarettes 2, said container being provided with a hinged cover 3 which normally closes the top of the container and which may be opened when desired to admit a fresh supply of cigarettes. The front and back of the container are curved inwardly at the bottom of the container to define the sides of a slot 4 adapted to permit the passage of a single cigarette 2 therethrough.

A dispensing element 6 is pivotally mounted below the slot 4, said dispensing elements having a convex upper surface 7 provided with a longitudinally disposed recess 8 adapted to receive a single cigarette 2 from the container. The element 6 is secured upon a shaft 9 extending between extensions 11 of the sides of the container. One end of the shaft extends outwardly past the side of the container and is provided with an actuating lever 13. A spring 14 is mounted in connection with the lever 13 to normally move the lever to an upright position substantially parallel to the side of the container 1 the dispensing element 6 being moved to a normal cigarette receiving position against a stop 16 with the recess 8 positioned immediately below the slot 4 so that a single cigarette will drop through the slot 4 into the recess 8. The convex surface 7 of the dispensing element closes the slot 4 when the dispensing element is moved away from normal position thereby

holding the remaining cigarettes in the container 1.

An igniting element 17 is secured upon a forwardly disposed extension 18 formed upon the side extension 11 adjacent the lever 13, said element preferably consisting of a spiral resistance adapted to receive electrical connections 19 and 21 connected to opposite terminals of a battery 20 or other suitable source of electrical energy, whereby the igniting element may be heated when an electrical current is caused to flow therethrough. The element 17 is positioned directly opposite the adjacent end of the recess 8 when the dispensing element is moved to dispensing position as shown in Figs. 4 and 5 of the drawings, so that a cigarette held in the recess 8 will be in axial alignment with the igniting element 17. The electrical circuit to the igniting element 17 is normally broken between a pair of contacts 22 mounted in insulated relation upon one of the side extensions 11, said contacts being adapted to be engaged by a contact member 23 mounted in insulated relation upon the dispensing member 6 and arranged to bridge the contacts 22 when the dispensing member is moved to dispensing position thereby completing the circuit through the igniting element.

A spring 24 is mounted adjacent the end of the dispensing element 6 opposite the igniting element 17, said spring being provided with an offset portion 26 adapted to enter the adjacent end of the recess 8 when the dispensing member is moved to the dispensing position. The offset portion 26 enters the adjacent end of the cigarette 2 carried in the recess and moves said cigarette longitudinally within the recess to force the opposite end of the cigarette against the igniting element 17. The offset portion 26 also engages the end of the recess 8 in such a manner as to maintain the dispensing element in dispensing position whereby the cigarette may be held against the igniting element for a desired length of time, an outwardly extending portion 27 being provided upon the outer end of the spring whereby the spring may be manually moved to release the dispensing element and permit its return to normal position when the cigarette has been lighted.

In order to more quickly and more effectively light the end of the cigarette I have provided means for producing a draft adapted to convey heat from the igniting element 17 into the end of the cigarette. This draft producing element consists of a cylinder 31 mounted upon the end of the container 1 adjacent the lever 13, said cylinder being provided with a discharge passage 32 connected into the cylinder and opening at a point immediately adjacent to the igniting element 1 and preferably in axial alignment therewith. A plunger 33 is slidably mounted within the cylinder, said plunger being provided with an elongated stem 34 slidably engaged by an actuating member 36 pivotally connected to an arm 37 formed upon the actuating lever 13. A spring 38 is mounted upon the stem 34 between the plunger 33 and the actuating member 36 whereby a yieldable pressure is applied upon the plunger when the actuating member is advanced into the cylinder. The inner end 39 of the actuating member 36 is adapted to permit a slight pivotal movement of the member within the cylinder, and the member is bifurcated to permit a movement of the stem 34 through said inner end whereby the actuating member may be advanced to compress the spring independently of the movement of the plunger 33. The discharge passage 32 is connected into the upper end of the cylinder 31 to permit the escape of air compressed within the cylinder when the plunger is advanced thereinto. and an aperture 42 is formed in the end of the cylinder and provided with a suitable valve 43 adapted to admit air into the cylinder during the return stroke of the plunger.

In operation a plurality of cigarettes are placed in the container 1. When it is desired to obtain a cigarette the lever 13 is moved to turn the dispensing element 6 from the normal position shown in Fig. 1 to the dispensing position shown in Fig. 2 thereby moving the lowermost cigarette from the container to the dispensing position. As the dispensing member is moved past the spring 24 the offset portion thereof will enter the adjacent end of the recess 8 thereby forcing the cigarette against the igniting element and holding the member in dispensing position. At the same time the contact member 23 is moved into engagement with the contacts 22, thereby completing a circuit therethrough and causing the igniting element to be heated. Simultaneously with the movement of the cigarette to dispensing position and the energizing of the igniting element, the plunger 33 will be advanced to compress air within the cylinder, said air escaping in a jet from the discharge passage 32 past the igniting element and onto the end of the cigarette thereby causing a draft of air which operates to convey heat from the igniting element into the end of the cigarette and thereby greatly facilitate the lighting of the end of the cigarette. The passage 32 is made small so as to insure the relatively slow escape of air. When the actuating member 36 is moved to advance the plunger 33, the pressure imparted will cause the spring to be compressed an amount sufficient to balance to pressure imparted to the air. After the actuating

member has reached the end of its movement the spring will expand to cause a continued movement of the plunger thereby expelling the air from the cylinder and causing a continued jet to be directed upon the igniting element and the cigarette. In this manner the draft produced will be of sufficient duration to insure the lighting of the cigarette.

The cigarette 2 is now removed from the dispensing element in a lighted condition ready for use. To facilitate the removal of the cigarette from the dispensing element 6, recesses 44 are formed adjacent the sides of the recess 8 whereby the fingers may be inserted to grasp the cigarette. The outwardly extending end of the spring 24 is then moved manually to release the dispensing element which is automatically returned to normal position by means of the spring 14, the return movement of the dispensing element causing the electrical connections to the igniting element to be broken between the contacts 22 and the plunger 33 returned to starting position. When the dispensing element reaches the normal position a cigarette 2 will immediately drop into the recess 8 ready for the succeeding operation.

The device above described may be mounted in any convenient position accessible to a user, and is particularly valuable to drivers of automobiles for whose use the case is particularly adapted. In this connection the case is mounted in any convenient manner upon the dash of an automobile and the electrical connections made to the battery of the automobile. When the driver desires a cigarette he has only to depress the lever 13, this single operation causing a single cigarette to be dispensed and lighted without materially diverting the attention of the driver from driving and without the usual inconvenience and delay of procuring and lighting a cigarette or endangering life and property by attempting to light a cigarette while the automobile is in motion.

As a further convenience the lower portion of the case is provided with a tray adapted to receive ashes and the burned stubs of cigarettes. The tray is formed by suitable bottom and back portions 46 and 47 connected between the lower ends of the side extensions 11. A front member 48 is hingedly mounted to normally close the front of the tray and arranged to be swung outwardly whereby refuse may be readily cleaned from the tray when desired.

While I have shown and described the structure which I now deem to be the preferred embodiment of my invention, the invention is not restricted to the particular structure shown and I desire to avail myself of all modifications in either form or arrangement that may fall within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is—

1. A cigarette dispensing and lighting case comprising a normally inactive igniting element; a dispensing element arranged to move a cigarette to a dispensing position adjacent the igniting element; means associated with the dispensing element and the igniting element for energizing the igniting element when the dispensing element is moved to dispensing position; a cylinder mounted adjacent the dispensing element and having a discharge passage opening adjacent the igniting element; and means mounted within the cylinder and actuated in common with the dispensing element for compressing air within the cylinder to force a jet of the compressed air past the igniting element to convey heat from said igniting element into the cigarette for lighting the same when moved to dispensing position.

2. A cigarette dispensing and lighting case comprising a cigarette container adapted to receive a plurality of cigarettes; a normally inactive igniting element; a dispensing element pivotally mounted in connection with the container and adapted to be moved to carry cigarettes singly from the container to a dispensing position with one end of the cigarette in engagement with the igniting element; and means associated with the dispensing element and the igniting element for energizing the igniting element when the dispensing element is moved to the dispensing position; a cylinder mounted adjacent the container and having a discharge passage opening adjacent the igniting element; and means mounted within the cylinder and actuated in common with the dispensing element for compressing air within the cylinder when the dispensing element is moved to dispensing position and directing a jet of said air through the orifice against the igniting element and the adjacent end of the cigarette.

3. A cigarette dispensing and lighting case comprising a cigarette container adapted to receive a plurality of cigarettes; a normally inactive igniting element; a dispensing element pivotally mounted in connection with the container and adapted to be moved to carry cigarettes singly from the container to a dispensing position with one end of the cigarette in engagement with the igniting element; and means associated with the dispensing element and the igniting element for energizing the igniting element when the dispensing element is moved to the dispensing position; a cylinder mounted adjacent the container and having a discharge passage opening adjacent the igniting element; a plunger mounted within the cylinder; and means connecting the plunger with the dispensing element for moving said

plunger to compress air within the cylinder when the dispensing element is moved to dispensing position, a jet of said air being directed through the orifice against the igniting element and the adjacent end of the cigarette.

4. A cigarette dispensing and lighting case comprising a container adapted to receive a plurality of cigarettes; a dispensing element pivotally mounted in connection with the container and provided with a longitudinal recess adapted to receive a single cigarette from the container; a normally inactive igniting element mounted adjacent one end of the dispensing element; a spring mounted adjacent the opposite end of the dispensing element, said spring being adapted to engage the adjacent end of the cigarette and move said cigarette longitudinally within the recess to force the opposite end against the igniting element, said spring moving into engagement with the recess to hold the dispensing element in dispensing position; means controlled by the movement of the dispensing element for energizing the igniting element; and draft producing means actuated by the movement of the dispensing element for directing a draft upon the igniting element and the adjacent end of the cigarette.

5. A cigarette dispensing and lighting case comprising a container; an igniting element mounted adjacent the container; dispensing means for moving cigarettes singly from the container into engagement with the igniting means; and draft producing means for directing a draft upon the igniting element and the adjacent end of a cigarette, said means comprising a cylinder mounted adjacent the container and having a discharge passage opening adjacent the igniting element; a plunger slidably mounted within the cylinder; and means yieldably connected between the plunger and the dispensing element for moving the plunger to compress air within the cylinder and force a jet of said air against the igniting element and the end of the cigarette.

In witness whereof I hereunto set my signature.

WILLIS H. PRATHER.