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COMBINATION, CIGAR, CIGARETTE AND PIPE LIGHTER

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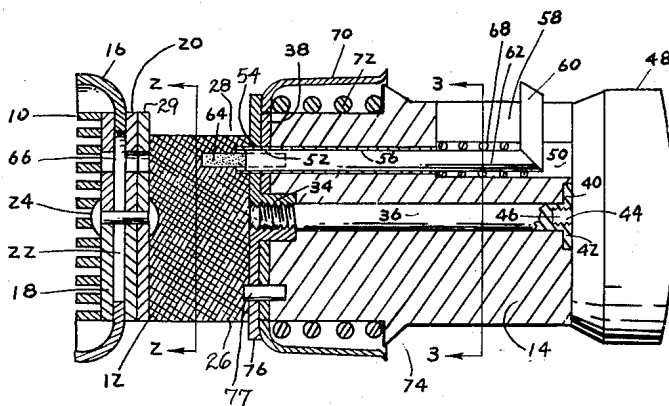
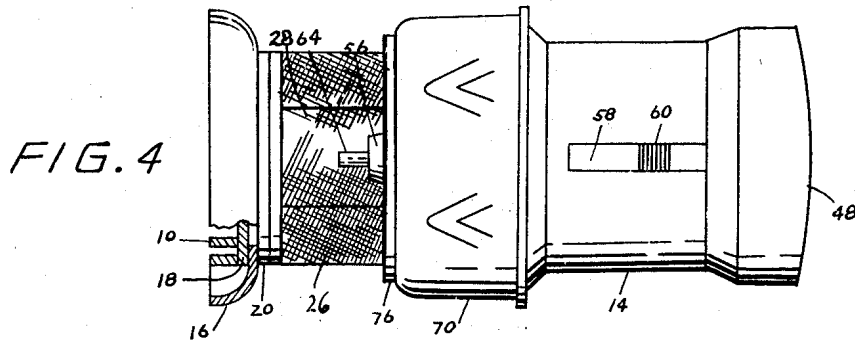


FIG. 1

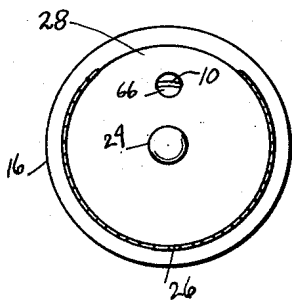


FIG. 2

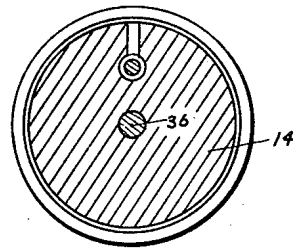


FIG. 3

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**COMBINATION CIGAR, CIGARETTE, AND PIPE LIGHTER**

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This invention comprises a new and improved electric cigar lighter of the type commonly used in automobiles. Lighters of this type generally include an electrically heated wire coil which serves as the igniting unit of the lighter.

Although coils of this type when heated to incandescence are satisfactory for lighting cigarettes and cigars, they are incapable of being used effectively as pipe lighters. The diameters of the coils normally are so great that they cannot be inserted into the pipe bowl. Moreover, the coils are incapable of producing a flame which may be drawn into the tobacco in the bowl when the smoker draws on the pipe.

The primary object of my invention is to incorporate into otherwise rather conventional cigar lighter structure a flame producing assembly particularly suited for use as a pipe lighter. This is accomplished by my invention without a substantial increase in the overall size of the unit.

Another important object of my invention is to provide in conventional cigar lighter structure, a flame-producing assembly without the use of special mechanical igniters and lighter fuel storage compartments.

To accomplish this and other objects, I include as one important feature of my invention, a flame chamber partially enclosed by wire mesh and located between the heating coil and the main body of the lighter. Insulating washers separate the flame chamber from both the heating coil and the main body.

Within the main body I provide a passage which houses an actuating rod carrying an impregnated wick. The passage within the main body communicates with the interior of the flame chamber so that the wick carried by the actuating rod may be moved out of the passage into the chamber. Axially aligned with the passage in the main body is a second passage through the insulating washers between the coil and the chamber. The actuating rod is biased by a spring to a retracted position wherein the wick lies normally within the passage. However a selector connected to the actuating rod and which extends out of the passage through a radial slot affords means for moving the rod against the bias of the spring to an extended position wherein the wick passes through the second passage between the chamber and the heating coil. When the actuating rod is moved to this position, the wick engages a portion of the coil and ignites. Thereafter, it may be withdrawn from the second passage by partially retracting the actuating rod so that the flaming wick lies within the flame chamber. The flame chamber being constructed of a wire mesh with an opening on one side, affords means for drawing the flame into the pipe bowl containing the tobacco. The wire mesh thereby serves as a flame guard and prevents burning embers from being scattered when the smoker exhales while lighting his pipe.

These and other objects and features of my invention along with incident advantages will be better understood and appreciated from the following detailed description

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of one embodiment thereof, selected for purposes of illustration and shown in the accompanying drawing, in which:

Figure 1 is a cross sectional view through a combination cigar and pipe lighter constructed in accordance with my invention.

Figures 2 and 3 are cross sectional views taken on the corresponding section lines in Figure 1, and

Figure 4 is a top plan view of the lighter.

The embodiment of my invention illustrated in the drawing includes in its general organization a heating coil 10, a flame chamber 12 and a main body 14.

The coil 10 contained within a dish-shaped cap 16 is separated from the end wall 29 of the flame chamber 12 by a pair of insulating washers 18 and 20 and an air gap 22. A split head rivet 24 connected to the inner end of the heating coil 10 holds the end wall 29 of the flame chamber 12, the washers 18 and 20, and the heating coil in their assembled positions.

The flame chamber 12, cylindrical in form, is made up of cylindrical rigid wire mesh screen 26 having a longitudinally extending opening 28 in its cylindrical surface with the mesh screen 26 formed of a rigid steel. The ends of the chamber 12 are formed by plates 29 and 76 with plate 76 secured to the end of the screen 26 away from the heating coil. On the plate 76 is an internally threaded axial nipple 34 which engages the threaded end of a stud 36 passing through the cylindrical body 14. An insulating washer 38 lies between that end of the flame chamber 12 and the adjacent side of the main body 14.

The end of the main body 14 away from the flame chamber is countersunk as is suggested at 40 to receive the head 42 of the stud 36. An internally threaded recess 44 formed in the head 42 of the stud receives the threaded lug 46 of a knob 48 which serves as a handle for the assembly.

A passage 50 extends longitudinally through the main body 14 parallel to the stud 36. Openings 52 and 54 in the insulating washer 38 and the adjacent end 76 of the flame chamber 12, respectively, are aligned with the passage 50, so that it communicates with the interior of the flame chamber. A sleeve 56 within the passage 50 passes through the openings 52 and 54 and terminates within the flame chamber. A radial slot 58 extends from the passage 50 to the surface of the main body 14 and contains the selector handle 60 of a rod 62 positioned within the passage 50 and the sleeve 56. The rod 62 is freely movable within the sleeve 56, but its movement is limited by the longitudinal extremes of the slot 58 which lie in the path of the selector 60. The end of the rod 62 nearer the flame chamber carries an impregnated wick 64 which is moved with it. This wick 64 may be formed of any suitable slow burning wick material commonly known, which requires no fuel reservoir such as a solid mixture of nitrate salt, potassium chlorate, adhesive and punk. These particular elements may be mixed in a desired relation and pressed into elongated wick form.

A passage 66 through the insulating washers 18 and 20 and the adjacent end of the screen 26 of the flame chamber 12 is axially aligned with the passage 50 in the path of travel of the wick 64. The rod 62, biased to the right, as viewed in Figure 1 by a coil spring 68, may be moved to an extended position wherein the wick 64 passes through the passage 66 and engages the heating coil 10. When the selector handle 60, connected to the rod is released, the wick 64 will move to the right so that it lies completely within the sleeve 56. Obviously, the operator may position the wick 64, by means of the selector handle 60, intermediate its extreme positions so that its end lies within the flame chamber.

The lighter described in the preceding paragraphs and

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illustrated in the drawing is an improvement of the type commonly found in automobiles. A housing 70 which surrounds a portion of the main body 14, serves to hold the unit in a special socket (not shown) provided in the dashboard for it. A coil spring 72 lies within the housing 70 and surrounds the enclosed portion of the main body 14. The spring 72 extends between the inner periphery of the housing and a flange 74 formed in the cylindrical surface of the main body 14 and urges the main body along with the flame chamber 12 and the heating coil 10 out of the housing 70. A pin or key 77 is positioned off center between the main body 14 and the end 76 of the flame chamber 12.

When the lighter is not in use, it is carried in the socket (not shown) in the dash board of an automobile. The housing 70 serves to hold the assembly in that socket. When a cigarette or cigar is to be lighted, the operator merely presses against the knob 48 moving the unit against the action of the spring 72 further into the socket in the dashboard. When the assembly is moved in this manner, the heating coil 10 is made part of an electrical circuit (not shown) behind the dashboard, and it quickly is heated to incandescence. Thereafter, the assembly may be removed and the heating coil 10 may be employed to light the cigarette or cigar in the conventional manner. However, if the operator wishes to light a pipe, after the coil 10 is heated to incandescence, he merely pushes the selector handle 60 against the bias of the spring 68 away from the knob 48 to the limit of the slot 58. This action moves the wick 64 across the flame chamber and through the passage 66 so that the end of the wick engages the heating coil 10. Contact of the wick with the heating coil causes the wick to flame, whereupon the operator partially releases the selector handle 60 until the flaming wick lies in the flame chamber 12. Thereafter the uncovered opening 28 is placed on top of the bowl of the pipe, and by drawing on the pipe stem, the flame will enter the tobacco and ignite it. Any sparks that may be blown from the pipe bowl into the flame chamber will be trapped by the screen 32 and thus will not scatter about the interior of the automobile. The openings in the mesh screen forming the flame chamber, permits sufficient amounts of oxygen to surround the flame, so that combustion will be supported properly. After the pipe is ignited, the operator merely releases the selector handle 60 and the spring 68 urges the rod and the wick to their retracted position within the sleeve 56 and the passage 50. It is apparent that when the wick enters the sleeve 56, its flame will be smothered and thereafter, the unit may be returned to its normal position in the socket provided in the dashboard.

From the foregoing description, those skilled in the art will appreciate that a number of modifications may be made of the illustrated embodiment without departing from the spirit of my invention. Therefore it is not my intention to limit the scope of this invention to the specific embodiments illustrated and described, but rather its breadth is to be determined by the appended claims and their equivalents.

Having now described my invention, I claim:

1. A combination cigar and pipe lighter comprising a heating coil, a cylindrical flame chamber mounted coaxially with and behind the coil, a cylindrical body member mounted coaxially with and behind the chamber, a longitudinal passage extending through the body, a sleeve mounted in the passage and terminating within the flame chamber, an actuating rod carrying an impregnated wick within the sleeve and movable between one position wherein the wick is enclosed by the sleeve and a second position wherein the wick is in contact with the heating coil.

2. A combination cigar and pipe lighter comprising a cylindrical body, a cylindrical wire mesh flame chamber mounted coaxially with and connected to the body, a

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heating coil mounted on the side of the flame chamber away from the body, a passage in the body communicating with the interior of the flame chamber, a sleeve mounted in the passage and terminating in the flame chamber, a rod mounted in the sleeve and carrying a wick movable to an extended position against the heating coil, and a spring within the passage urging the wick to a retracted position within the sleeve.

3. A combination cigar and pipe lighter comprising a cylindrical flame chamber partially enclosed by wire mesh, a cylindrical body mounted coaxially with and connected to one side of the chamber, a heating coil mounted coaxially with and connected to the other side of the chamber, a passage in the body communicating with the interior of the chamber, and a wick positioned in the passage and movable to an extended position wherein the wick contacts the heating coil and to a retracted position wherein the wick lies within the passage, and to a third position wherein the wick lies within the chamber.

4. A combination cigar and pipe lighter comprising a flame chamber, a body member connected to one end of the chamber, a heating coil connected to the other end of the chamber, and an impregnated wick movable across the chamber between the heating coil and the body member.

5. A combination cigar and pipe lighter comprising a cylindrical flame chamber, openings in the curved wall of the flame chamber, insulating means mounted on each end of the chamber, a heating coil mounted on the insulating means on one end of the chamber, a body mounted on the insulating means on the other end of the chamber, a passage in the body communicating with the interior of the chamber, a rod movably mounted within the passage and extending toward the chamber, an impregnated wick carried on the end of the rod adjacent to the chamber and movable across the chamber, a passage through the insulating means separating the heating coil and the chamber in the path of travel of the wick, permitting the wick to engage the heating coil, and spring means within the passage urging the rod out of the chamber to a position wherein said wick lies within the passage.

6. In combination with a cigar lighter having a heating coil and a main body, a flame chamber connected between the heating coil and the main body, a passage within the main body communicating with the flame chamber, an actuating rod movably mounted within the passage and biased to a position away from the flame chamber, an impregnated wick carried on the end of the actuating rod adjacent the flame chamber, and disposed within the passage when the actuating rod is in its biased position, a slot radiating from the passage in the portion of the main body away from the flame chamber and a selector connected to the actuating rod and extending outwardly through the slot for moving the wick and the rod from its biased position to a second position wherein the wick abuts the heating coil and to a third position wherein the wick lies within the flame chamber.

7. In combination with a cigar lighter having a heating coil, a main body and a spring housing surrounding part of the main body, a flame producing assembly comprising a flame chamber partially defined by wire mesh and connected between the heating coil and the main body, insulating means disposed between the heating coil and the flame chamber and between the flame chamber and the main body, a passage within the main body communicating with the flame chamber, a second passage axially aligned with the passage in the main body and providing communication between the heating coil and the flame chamber, a sleeve disposed within the passage in the main body and terminating in the flame chamber, an actuating rod movably mounted within the sleeve and the last named passage and biased to a position away from the flame chamber, an impregnated wick carried on the end of the actuating rod adjacent the flame chamber and

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disposed within the sleeve when the actuating rod lies in its biased position, and a selector connected to the actuating rod and extending out of the passage providing means for moving the actuating rod against its biased to a position wherein the wick extends through the second passage and engages the heating coil and for moving the actuating rod to a third position wherein the wick lies within the flame chamber.

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