April 17, 1951 J. VAN TOLL 2,549,726

COMBINATION PIPE AND LIGHTER

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Fig. 1.

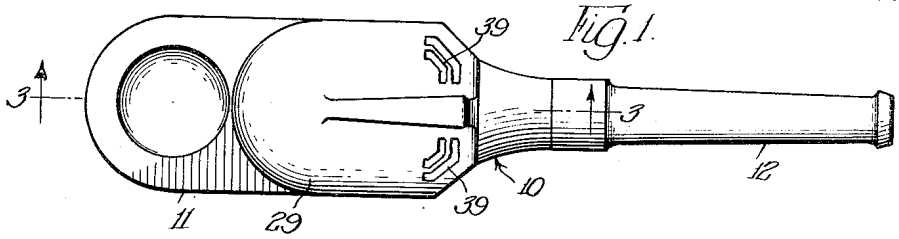


Fig. 2.

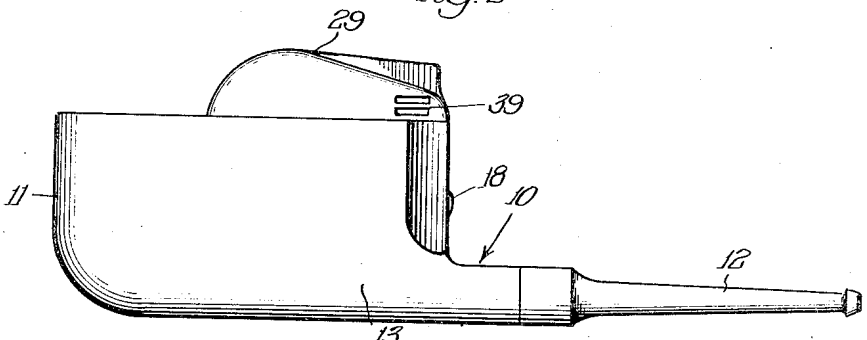


Fig. 3.

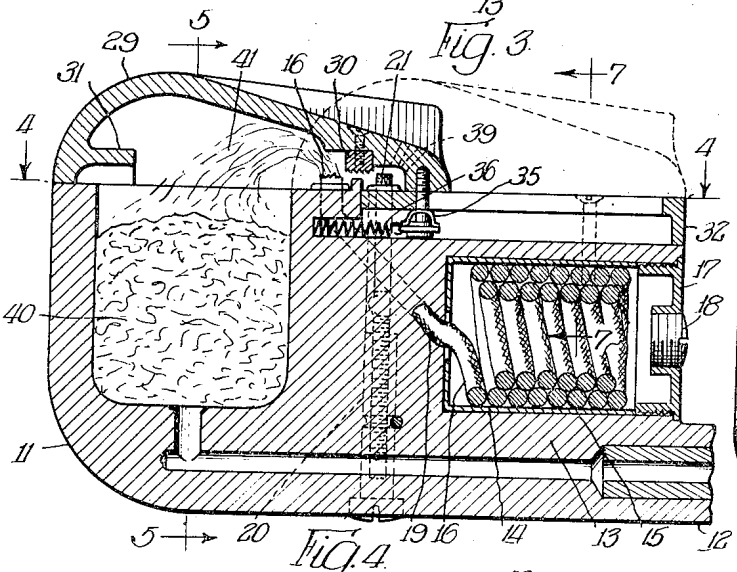


Fig. 4.

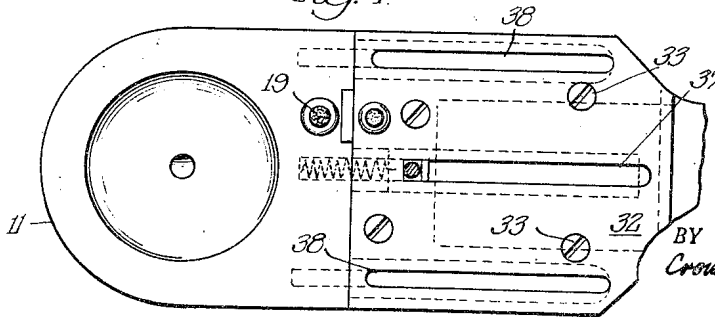
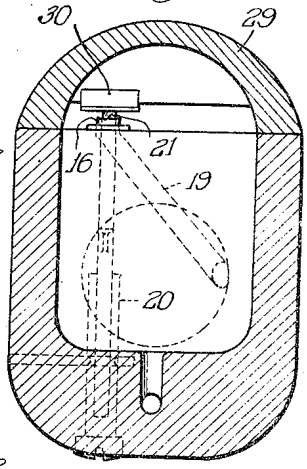


Fig. 5.



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COMBINATION PIPE AND LIGHTER

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Fig. 6

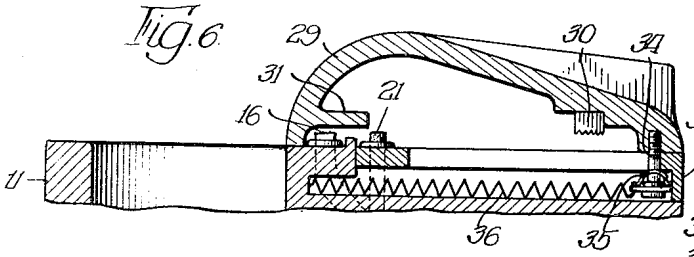


Fig. 7

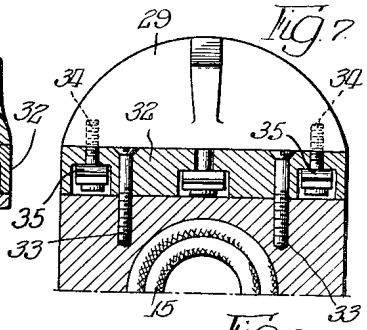


Fig. 10

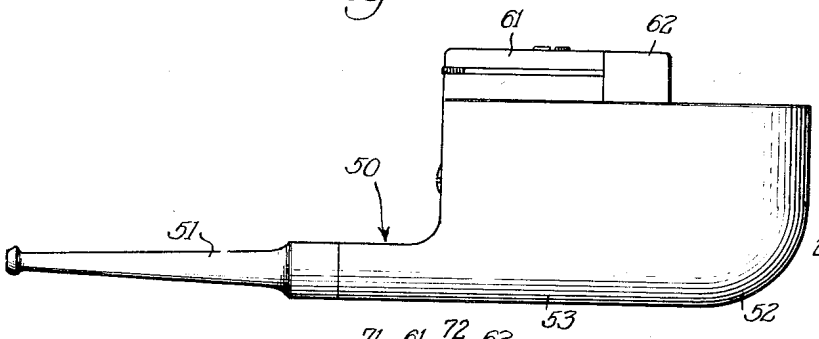


Fig. 8

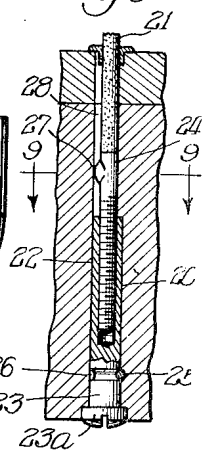


Fig. 12

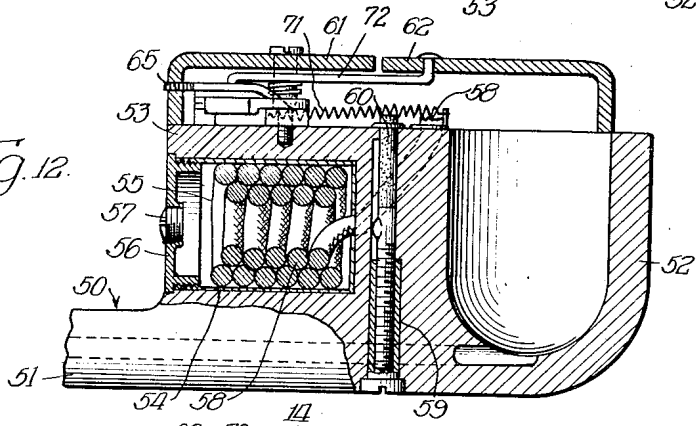


Fig. 9

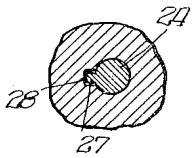
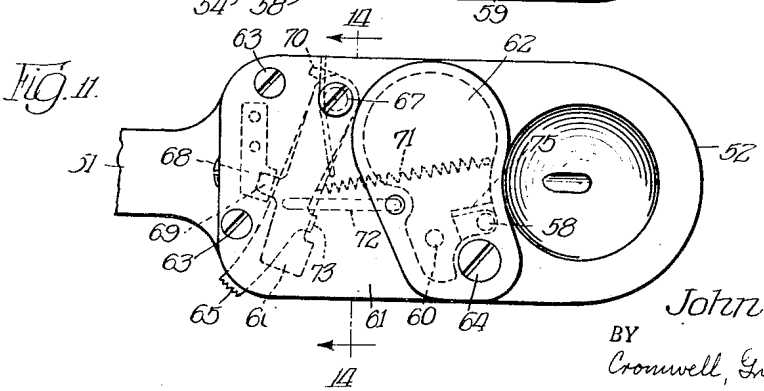


Fig. 11



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COMBINATION PIPE AND LIGHTER

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Fig. 13

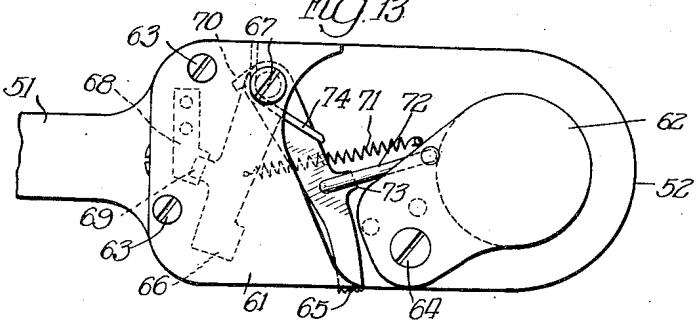


Fig. 14

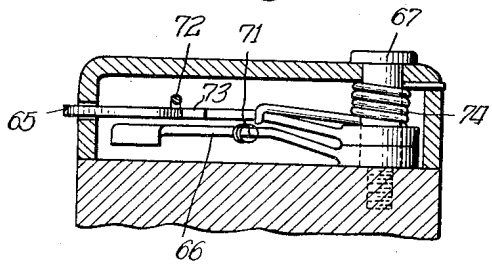


Fig. 15

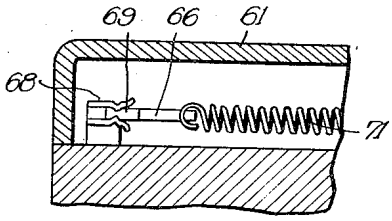


Fig. 16

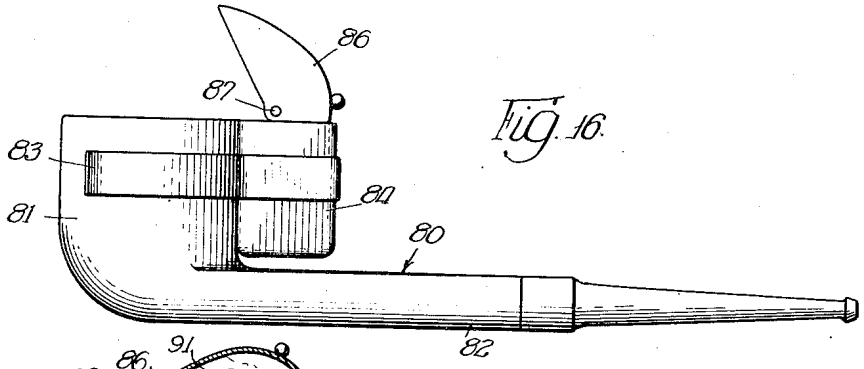
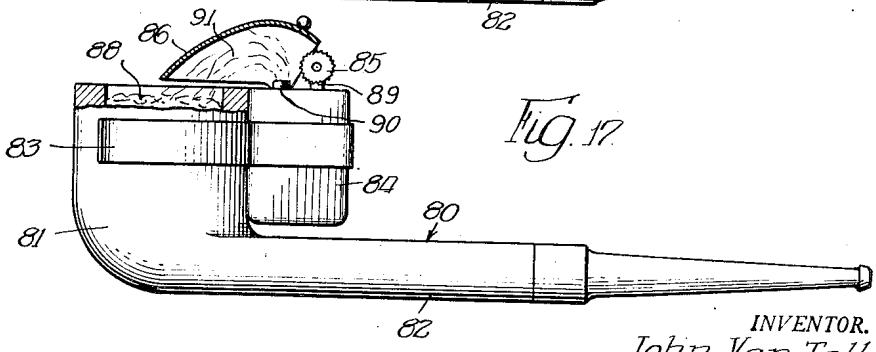


Fig. 17



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UNITED STATES PATENT OFFICE

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COMBINATION PIPE AND LIGHTER

John Van Toll, Chicago, Ill.

Application July 9, 1945, Serial No. 603,787

15 Claims. (Cl. 131—185)

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My invention has to do with improvements in tobacco smoking pipes.

An object of the invention is to combine with a tobacco smoking pipe a mechanical lighting means so that the user of the pipe does not need to resort to matches or separate lighting means in order to light the pipe.

A more specific object of my invention is to provide a lighting mechanism integrally combined with the bowl of a tobacco smoking pipe, the arrangement being such that the lighting mechanism does not interfere with the filling of the pipe or the cleaning of the same.

Another object of the invention is to provide a pipe with a mechanical lighting means arranged adjacent the bowl of the pipe in such a manner that it does not seriously detract from the appearance of the pipe.

A further object of the invention is to provide a pipe with a lighting means attached thereto including a guard for the flame which facilitates the lighting of the pipe when the user is exposed to a wind or draft.

A further object of the invention is to provide in combination with a pipe a mechanical lighting means which is detachable from the pipe.

Other objects will be apparent from the following specification which describes specific embodiments of my invention by way of example as illustrated in the accompanying drawings.

Fig. 1 is a plan view of a preferred embodiment of my tobacco smoking pipe;

Fig. 2 is an elevation of the pipe shown in Fig. 1;

Fig. 3 is a section taken on the line 3—3 of Fig. 1 with the cover member in the forward position;

Fig. 4 is a section taken on line 4—4 of Fig. 3;

Fig. 5 is a section taken on line 5—5 of Fig. 3;

Fig. 6 is a partial section on line 3—3 of Fig. 1 with the cover member in retracted position;

Fig. 7 is a partial section on line 7—7 of Fig. 3;

Fig. 8 is a sectional detail of the flint holding chamber;

Fig. 9 is a section taken on line 9—9 of Fig. 8;

Fig. 10 is an elevation of a modified form of my pipe;

Fig. 11 is a plan view of the pipe shown in Fig. 10 with the stem broken away;

Fig. 12 is a sectional elevation with parts broken away of the pipe shown in Fig. 10;

Fig. 13 is a plan view similar to Fig. 11 with the cover member in the bowl covering position;

Fig. 14 is a partial section on line 14—14 of Fig. 11;

Fig. 15 is a sectional detail showing the spring latch member for holding the striker member in retracted position;

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Fig. 16 is an elevation of another modification of my pipe;

Fig. 17 is a view similar to Fig. 16 but with the flame guard in bowl covering position and with parts in section.

A preferred embodiment of my pipe comprises a pipe body 10 having a pipe bowl 11 and a pipe stem 12. Rearwardly extending from the bowl along the stem there is provided a structure adapted to receive the elements of a lighting mechanism. In the preferred embodiment this rearward extension 13 is integral with the bowl. The rearward extension 13 is provided with a recess 14 adapted to receive a fuel cartridge 15 which is made of a light metal thimble. Fuel cartridge 15 is inserted in the recess and contains a wick or cotton 16 adapted to receive the stored fuel which may be ordinary benzine or commercial lighter fluid. The fuel cartridge 15 includes a cover 17 and a filler screw cap 18. The lighter fluid may be inserted in the cartridge by removal of the screw cap 18. A wick guide bore 19 extends from the fuel cartridge compartment to a point adjacent the top of the pipe bowl to guide the wick 16 to that point and expose the end of the same. A flint holding compartment or bore 20 supports a flint member 21. The flint member 21 is adjustably supported in the bore 20 by means of a jack screw 22 (Fig. 8). The female member 23 of the jack screw 22 is retained in the bore by a locking pin 25 and a cooperative annular groove 26. It is provided with the usual slotted head 23*a* so that it may be rotated by a screw driver in the conventional manner. The male member 24 of the jack screw is retained in position in the bore 20 by means of a small extension 27 which is received in a slot 28 in the bore. The flint 21 is raised or lowered by rotating the female member 23 of the jack screw in the proper direction.

A cover member 29 is slidably mounted on the top of the pipe bowl 11 and the extension 13. Mounted in the rear of the cover member 29 is a striker member 30. Arranged in the front of the cover member is an anti-evaporation cover 31 as shown in Figures 3 and 6.

The cover member 29 is slidably supported on the extension 13 by means of a guide member 32 (Figs. 4, 6 and 7) which is secured to the extension 13 by screws 33. The cover member 29 is slidably secured to the guide member 32 by guide screws 34 the heads of which extend into guide slots 37 and 38. A compression leaf spring 35 mounted, as shown, on the guide screw 34 resiliently holds the cover member 29 against the top of the guide 32. A coiled compression spring 36 in the guide slot 37 serves to return the cover 29 to its normal position over the extension 13. Air vents 39 are provided in the rear of cover member 29.

The operation of the device is as follows: The smoker of the pipe fills the bowl with tobacco 40 in the usual manner. Then in order to light the tobacco the smoker pushes the cover 29 forward rather vigorously until the striker member 30 crosses the flint 21. Contact of the striker 30 with the flint 21 causes sparks to shoot against the wick 16 and ignites the fuel soaked wick. By placing the pipe stem between his lips and drawing on the pipe, air is sucked through the vent holes 39 drawing the flame down to the tobacco 40, thus igniting the tobacco. The cover member 29 functions as a flame guard and is shaped on the inside so that it directs the flame 41 into the bowl 11. When the tobacco has been lighted sufficiently, the smoker releases the cover member 29, allowing it to return to its normal position over the bowl extension 13, and smokes the pipe in the usual manner, the cover 29 being returned by the force of the compression spring 36. As the cover member is returned to its normal position, the anti-evaporation cover 31 cover the wick 16, snuffing out the flame 41. The anti-evaporation cover 31 also retards evaporation of the fuel at the wick end between lights.

A modified construction embodying the principles of my invention is shown in Figures 10 to 15. In this construction the pipe 50 comprises stem 51, bowl 52 and integral extension 53. The elements of the lighter mechanism are mounted in the bowl extension 53 in a manner similar to that shown in the preferred embodiment of my invention. The extension contains a recess 54 which receives a fuel cartridge 55 having a cover 56 and a filler cap 57. A wick 58 extends from the fuel cartridge 55 to a point adjacent the top of the bowl to expose the end of the wick 58. A bore or chamber 59 receives a flint 60 in the same manner as in the preferred embodiment. The striker member and its operating mechanism are arranged on the top of the bowl extension 53. A cover member having a fixed portion 61 and a movable portion 62 is arranged on the top of the bowl extension 53. The fixed portion 61 is secured to the bowl extension 53 by the screws 63. The movable portion 62 which also functions as a flame guard is pivotally mounted on the pin 64. An operating lever 65 and a striker hammer or arm 66 are mounted on the pivot pin 67. The striker arm 66 is retained in retracted position by a spring latch or clasp 68 (Figs. 11, 13 and 15) which engages a cooperating lug 69 on the arm. The operating lever 65 has on the pivoted end thereof a release lobe 70 which is adapted to engage the back of the striker arm 66 to pull it free of the latching spring 68 when the lever 65 is moved forwardly. A coil spring 71 is attached to the striker arm 66 and to a point adjacent the bowl and is tensioned to pull the striker arm 66 forwardly with a snap action when arm 66 is released from spring latch 68. A link 72 connects the movable cover member 62 with the operating lever 65 so that movement of the lever 65 into the forward position moves the cover about the pivot pin 64 and over the pipe bowl 52. A lug 73 on the operating lever 65 provides a forward stop for the striker arm 66. Movement of the lever 65 rearwardly engages the lug 73 with arm 66 and pulls arm 66 back into retracted or cocked position where the lug 69 is engaged by the latch spring 68. A coil spring 74 (Fig. 14) mounted on the pivot pin 67 has one end fixed to the cover member 61 and the other end engaged with the front edge of the operating lever 65 and is tensioned to return the lever arm 65 to its rearward

position when it is released. Cover member 62 carries an anti-evaporation cover 75 corresponding to anti-evaporation cover 31 of Fig. 3.

The operation of this embodiment of my invention is as follows: The smoker fills the bowl 52 with tobacco in the usual manner. To light the tobacco, the operating lever 65 is pushed forward until the striker arm 66 is released from the latching spring 68 by the pressure of the release lobe 70 engaging with it. When the lever 65 is pushed forward the cover member 62 moves forwardly into position over the bowl 52, by reason of its connection, through the link 72, with the lever 65. When the cover is very nearly in position over the bowl the striker arm is released from spring clasp 68 and is forced to revolve around the pivot pin 67 by the spring 71. The striker arm 66 swings across the top of the flint 60 and causes sparks to be thrown onto the fuel soaked wick 58 to ignite the same. The smoker draws on the stem, causing air to flow from the open rear of the cover member 62, drawing the flame from the wick 58 down into the pipe bowl to light the tobacco. When the tobacco has been lighted sufficiently, the smoker releases the operating lever 65 which is returned to its rearward or cocked position by the spring 74 which also carries the striker arm 66 backward into engagement with the latching spring 68. The cover member 62 is retracted to the position shown in Fig 11 and anti-evaporation cover 75 covers the wick 58 snuffing out the flame.

A further modification embodying the principle of my invention is shown in Figures 16 and 17. In this embodiment the pipe 80 comprises the bowl 81 and the stem 82. A spring clip 83 engages the bowl 81 and secures thereto a conventional commercial mechanical lighter 84. The lighter 84 includes a striker 85 and a flame guard 86 which is pivoted to the lighter at 87. The guard is shown in inoperative position in Figure 16 and in operative position in Fig. 17. The lighter member 84 may be either the manually operated type or an automatically operated type.

In using this embodiment of my invention the smoker fills the bowl with tobacco 88 in the usual manner. The flame guard 86 is pivoted about the pivot 87 into position over the bowl. The lighter is operated by rotating the striker 85 which engages flint 89 to ignite the wick 90, and the smoker draws on the stem, causing the flame 91 to be pulled down into the bowl to light the tobacco 88. When the tobacco is sufficiently lighted, the flame guard is returned to the inoperative position.

In all the embodiments of my invention the pipe may be constructed of ordinary briar, and the cover or flame guard may be of briar or a non-combustible plastic. Obviously, any other appropriate non-combustible material may be used.

I claim:

1. In a tobacco smoking pipe having a bowl with a tobacco receiving recess, a lighting mechanism disposed at the side of the bowl, a flame guard, and means mounting said flame guard for movement from a position over the lighting mechanism to a position over the pipe bowl to direct a flame from the lighting mechanism into the bowl, said flame guard having a transverse dimension to cover the major portion of the bowl recess when in position thereover.

2. In a tobacco smoking pipe, a unitary base portion having a bowl portion and a lighter carrying portion, a top cover member, means mounting said cover member for movement from a po-

sition over the lighter carrying portion to a position extending over the bowl portion, said lighter carrying portion comprising a fuel compartment, a wick chamber for a wick leading from the fuel compartment to the top edge of the bowl portion, and a flint magazine for a flint positioned adjacent the wick chamber; and said cover member carrying on the inside an anti-evaporation member, which covers the top end of the wick when said cover member is in position over the lighter carrying portion, and a striker member which engages the top of the flint upon movement of said cover member to its position extending over said bowl portion.

3. In a tobacco smoking pipe, a bowl having a rearward extension, a cover mounted on said rearward extension and slidable to and from a position covering said bowl, a fuel compartment in said extension, a passage from said compartment to a point beneath said cover and adjacent a top edge of the bowl, a wick in said passage, a flint adjustably mounted in said extension rearwardly of said wick, and a striker mounted inside said slidable cover whereby upon movement of the cover to position it over the bowl, the striker will engage the flint.

4. In a tobacco smoking pipe, as recited in claim 3, spring means for returning said cover from its bowl covering position to its extension covering position.

5. In a tobacco smoking pipe as recited in claim 3, an anti-evaporation cover on the inside forward portion of said cover for covering the exposed end of the wick when said cover is in position over the said extension.

6. In a tobacco smoking pipe as recited in claim 3, said cover having air slots in the rearward portion thereof.

7. In a tobacco smoking pipe, an elongated one-piece base having a bowl portion and recesses for lighting elements comprising a fuel compartment, a wick holder and a flint holder; striker mechanism mounted on the top of said base; a flame guard pivotally mounted on said base, and means connecting said flame guard and said striker mechanism whereby operation of the striker mechanism moves the flame guard over the bowl to direct the flame into the bowl.

8. In a tobacco smoking pipe as recited in claim 7, wherein said striker mechanism comprises a pivoted operating arm, a pivoted striker arm, latch means for holding the striker arm in inoperative position, means on the operating arm engaging the striker arm to release it from said latch means, and spring means for swinging the striker arm into operative position.

9. In a tobacco smoking pipe having a bowl and an extension thereto, a fuel compartment in said extension, a wick holder leading from the fuel compartment to a point adjacent the bowl, a wick in the holder extending into the fuel compartment, a flint holder having a flint therein adjacent the wick holder, a striker mechanism on the top of said bowl extension, a cover on said extension comprising a fixed portion and a movable portion, and a link connecting the movable cover portion and the striker mechanism whereby operation of the striker mechanism is adapted to move said movable cover portion over the bowl to direct the flames from the wick into the bowl.

10. In a tobacco smoking pipe, a bowl having a tobacco receiving recess, a lighter mechanism at one side of said bowl adjacent said recess, a combined cover and flame guard member normally positioned over said lighter mechanism, and means mounting said cover and flame guard member for movement relative to the lighter mechanism to a position extending over said tobacco receiving recess to direct a flame from said lighter mechanism into said recess, said cover and flame guard member having a transverse dimension to cover the major portion of the bowl recess when in position thereover.

11. In a tobacco smoking pipe, a bowl having a tobacco receiving recess, lighter elements mounted in said bowl adjacent said recess, a cover member, and means including a slide mounting said cover member for sliding movement from a position over said lighter elements to a position extending over said recess whereby a flame may be directed by said cover into said recess when said cover is in position over said recess.

12. In a tobacco smoking pipe, a bowl having a rearward extension at the side of the bowl, a cover member, means mounting said cover member for movement from a position over said extension to a position over said bowl, lighter elements including a wick mounted in said extension below said cover member, and cooperating lighter elements mounted in said cover member, said lighter elements being constructed and arranged to produce a flame upon movement of said cover member to position said cover member over said bowl whereby said cover member will guide the flame into said bowl.

13. In a tobacco smoking pipe as recited in claim 12 wherein said cover member is provided with flame quenching and anti-evaporation means.

14. In a tobacco smoking pipe, a bowl having a tobacco receiving recess and a rearward extension at the side of the bowl, lighter elements mounted in said rearward extension, a cover member for said lighter elements having a portion adapted to be moved into covering relation over said bowl, said cover member portion having a transverse dimension to cover a major portion of the bowl recess when in position thereover, and means constructed and arranged to operate said lighter elements and produce a flame when said cover member is moved over said bowl.

15. In a tobacco smoking pipe as recited in claim 14, an anti-evaporation and flame quenching means mounted in said cover member.

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