

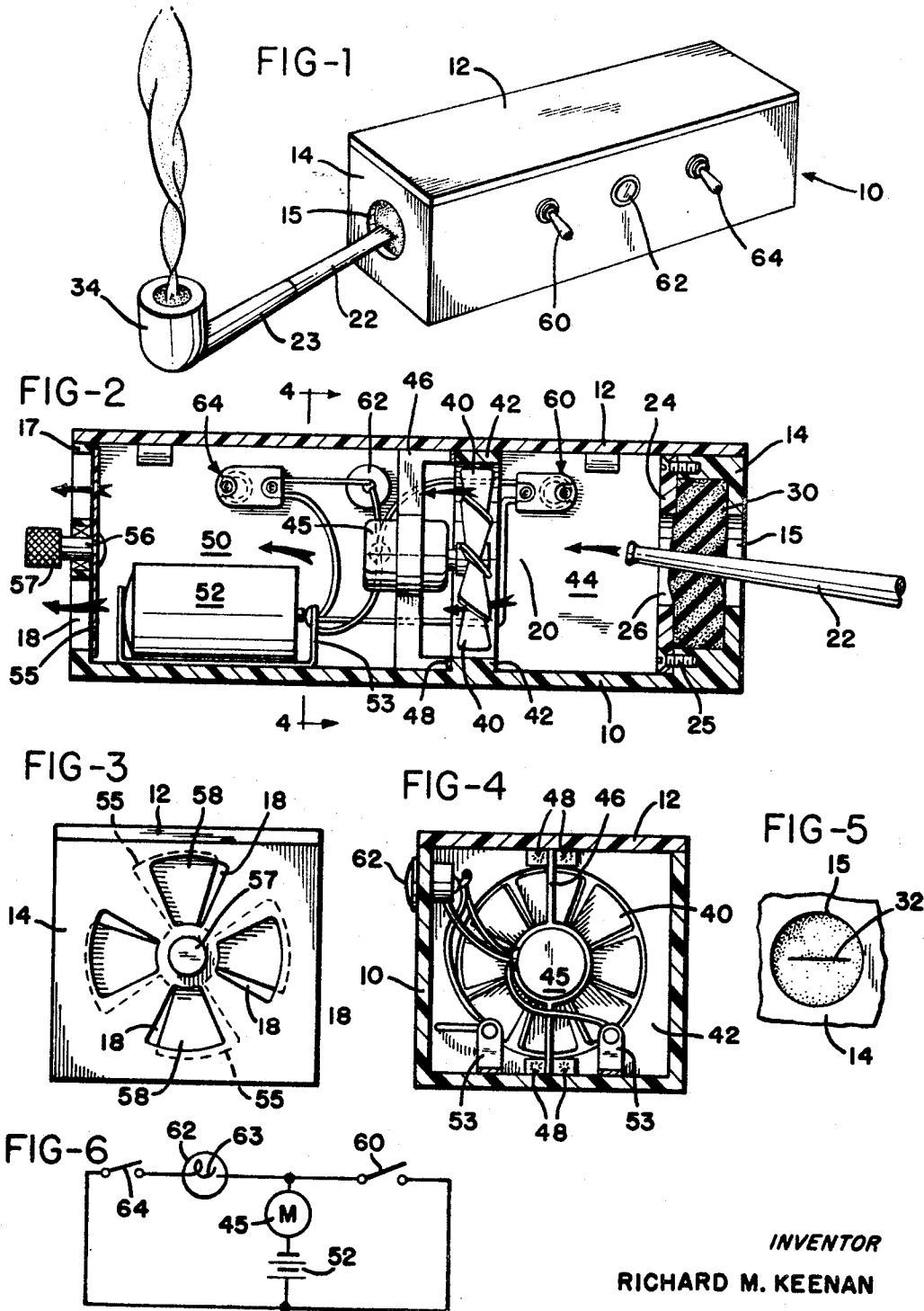
Feb. 10, 1970

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3,494,368

DEVICE FOR BREAKING IN SMOKING PIPES

Filed April 19, 1968



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3,494,368

DEVICE FOR BREAKING IN SMOKING PIPES

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Filed Apr. 19, 1968, Ser. No. 722,762

Int. Cl. A24f 47/00, 13/00

U.S. Cl. 131—172

7 Claims

ABSTRACT OF THE DISCLOSURE

A self-contained battery-operated pipe smoking device which allows the owner to insert the pipe stem in the inlet and which provides either constant or intermittent drawing action within said device for causing the pipe tobacco to burn naturally for breaking in new pipes. The discharge end of the device has a clover-leaf shaped array of openings and a similarly shaped baffle that can be rotated to adjust the effective size of the discharge opening to control the draw and burning rate of the tobacco in a pipe bowl being broken in. Switches are provided so that the motor providing the draw can be operated intermittently through a thermostatic flashing lamp, or continuously.

BACKGROUND OF THE INVENTION

This invention relates to a device for breaking in smoking pipes.

Traditionally, good smoking pipes have been constructed from a hard wooden substance known as briar. Briar is a dome-shaped growth, or burl, which grows at the crown of the roots of a small tree. The briars are harvested, cut into blocks, dried, boiled to remove sap and tannic resins, aged, thoroughly cured, and then formed into the shape of a pipe. The most treasured of such pipes are made of briars 50 to 100 years old.

This elaborate process is designed to open the pores of the briar and give it heat transfer characteristics that will ultimately produce a pipe which, while burning, is always sweet to the taste and cool to the touch. Since new pipes are designed to absorb tars and nicotine, it is important that they be "broken-in" properly, preferably with the smoker's favorite tobacco.

One starts to break in a pipe by filling the bowl approximately one-half full with firmly packed tobacco. After several bowls have been smoked, a carbon deposit begins to build up at the bottom of the bowl. The tobacco level is then gradually increased so that the carbon deposit, or "cake," will creep up uniformly around the inner surface of the bowl. Certain pleasurable advantages occur after the cake has reached a uniform thickness of approximately $\frac{1}{16}$ ". The tobacco will be easier to keep lighted, it will burn more evenly and smoothly, there will be less bite to the taste, and the bowl will be cooler to the touch.

Breaking in a new pipe is often a painstaking and distasteful process. The tobacco in a half-filled pipe will not stay lighted without constant puffing and frequent kindling. The strong puffing required to keep the pipe lit will draw heat from the kindling flame, together with various tobacco tars and nicotine from the tobacco, into the smoker's mouth. An excessively hot and irritating smoke results.

Accordingly, it is one primary object of the present invention to provide a device for breaking in tobacco pipes wherein the draft is controlled by a suction mechanism which is wholly self-contained and operated by small batteries or the like.

As another object, the invention provides a novel electrical-mechanical means for simulating the natural drawing or puffing action of a smoker and for externally in-

dicating that the device is actually drawing smoke intermittently.

It is also an object of the present invention to provide a device which will slowly allow a smooth carbon coating, or "cake," to build up evenly throughout the bowl of a pipe.

Still another object of the invention is to provide means for gripping and sealing a pipe stem of any shape within the device, which will require no further support for the pipe than its natural resting position.

Other objects and advantages of the invention will be apparent from the following description, the accompanying drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a device constructed in accordance with the present invention illustrating the flashing light and switch mechanisms together with a smoking pipe;

FIG. 2 is a partial longitudinal sectional view of the device showing the internal construction thereof;

FIG. 3 is a rear elevation of the device as seen from the left of FIG. 2;

FIG. 4 is a vertical section as taken on line 4—4 in FIG. 2;

FIG. 5 is a partial front elevation of the device as seen from the right of FIG. 2, showing the slit without a pipe inserted therein; and,

FIG. 6 is a schematic diagram of the circuit.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to the figures of the drawings, a wholly self-contained smoking device for breaking in a pipe is illustrated in FIG. 1 as including a housing 10 which may be of generally rectangular construction, and is preferably formed of a premolded plastic material. The housing 10 may be conveniently formed with a removable cover or top 12, a front wall or surface 14 defining an inlet opening 15, and a spaced rear wall or surface 17 defining exit or outlet openings 18. The housing is substantially hollow in construction and defines therethrough an axial flow passage 20 (FIG. 2) leading from the front inlet opening 15 to the rear outlet openings 18.

The device 10 includes means for gripping and sealing the stem 22 of a pipe 23, as shown in FIGS. 1 and 2. For this purpose, the housing is provided with an inner clamping member or plate 24 which is mounted in spaced relation to the front wall 14 on inwardly extending bosses formed in the housing and retained by screws 25. The clamping member 24 is formed with an axially positioned opening 26 which is in substantial alignment with the front opening 15.

A flexible foam rubber insert 30 is tightly received between the front wall 14 and the clamping member 24 in slightly compressed relation. The foam rubber insert 30 is preferably formed with a self-closing slit 32, as shown in FIG. 5, through which the stem 22 of the pipe may be inserted by deforming the material of the insert 30. The insert 30 accordingly provides a self-gripping and self-sealing support for the stem 22 with the result that no additional pipe support is normally required to retain the pipe bowl 34 in an upright smoking position, as illustrated in FIG. 1.

The pipe smoking device further includes impeller means such as the fan 40 positioned within the internal passage 20, and preferably surrounded by annular shroud means 42, to cause the flow of air through the passage-way 20 from the region defined by the front inlet to the rear outlet. In this manner, air is caused to be drawn through the opening in the stem 22 of the pipe for exit through the outlet openings 18. The fan 40 is shown in FIG. 2 as being positioned somewhat rearwardly of the

clamping member 24 to define a substantially unobstructed space 44 within the housing 10 into which pipe stem 22 of varying lengths and varying configurations may project without obstruction and without fear or damage by engaging the blades of the fan 40.

Means for driving the fan preferably includes a small permanent magnet DC motor 45 positioned within a motor support bracket 46 centrally within the housing 10. The bracket 46 may thus extend from a region adjacent the bottom of the housing where it is retained in abutment with the shroud 42 by heat welds, screws or other suitable fasteners 48, as shown in FIG. 4, to a region adjacent the top of the housing where it is retained in abutment with the shroud 42 by additional fasteners 48. In this manner, the fan 40, which is preferably directly mounted to the motor shaft, is centrally positioned within the shroud 42. The motor 45 is preferably of the DC permanent magnet type which is designed to operate with an input voltage of from 1½ to 6 volts, as is commonly available on the market.

The housing 10 is preferably further formed with a battery space 50 located rearwardly of the motor 45 and accessible by removal of the cover 12. Thus, one or more dry cells or batteries 52 are received on suitable battery clips 53 mounted within the housing and adjacent the motor 45.

The automatic and self-contained smoking device further includes means for regulating the draft on the pipe 23 by regulating the rate of air flow through the passage 20.

For this purpose, openings 18 in the rear wall 17 may be four in number and generally segmented and cloverleaf in shape, as perhaps best illustrated in FIG. 3. Selectively positionable damper or baffle means comprises a sheet material baffle 55 mounted on the inside surface of the wall 17 on a shaft 56 extending through the rear wall and terminating in a knob 57. The baffle 55 is similarly formed with a corresponding plurality of segment shaped members 58 which have a dimension slightly greater than that of the openings 18 and which are rotatable by rotation of the knob 57 and shaft 56 selectively to cover and uncover the openings 18. In this manner, the user may compensate for the draw characteristics of each pipe, which will uniquely depend upon its particular construction and the tobacco used therein, in order to obtain a desirable rate of burning which will not overheat the bowl 34. Also, the baffle 55 may be adjusted to compensate somewhat for running down of the dry cells 52, thus increasing the useful life of the cells.

The invention includes means for selecting two modes of operation. First, an electrical switch member 60 may be received within one side wall of the housing 10 to connect the batteries 52 directly to the motor 45, as shown in the diagram in FIG. 6. The motor will operate constantly at full speed in this mode.

Additionally, the invention includes means for operating the motor 45 in an intermittent and cyclic manner to cause it alternately to speed up and then slow down to simulate a puffing action on the pipe 23. For this purpose, the circuit is provided with feather means preferably consisting of a flashing type light bulb or lamp 62 which is of the type incorporating a bimetallic strip 63 which is heated by the energization of the lamp to expand and break the circuit through the lamp. Upon cooling, the bimetallic strip 63 returns to its original position again reestablishing a circuit through the lamp. Such bulbs have found common use in warning lights and in flashing lamps or similar devices.

In the present invention, the lamp 62 is connected in a circuit effectively in series with the motor 45 and is controlled by an additional on-off switch 64. The switch 64 may be mounted in the side of the housing 10 in corresponding relation to the switch 60. Similarly, the lamp 62 may be mounted preferably therebetween so that it is visible to a person using the pipe smoking device. When the switch 64 is closed, the motor 45 will thus be en-

ergized through the flashing lamp 62 and will be caused to operate in a cyclic on-off fashion. The result is that the fan 40 is caused to speed up by the energization of the motor 45 and then to slow down by coasting when the motor 45 is deenergized, providing a natural-like puffing action on the pipe stem 22, and assisting in keeping the tobacco lighted. The on-off cycle of flashing is preferably chosen at one cycle per second so that the fan 40 does not actually stop in operation. At the same time, the flashing lamp 62 will be visible and will give notice that the device is in operation. Also, the flashing lamp 62 will serve to attract attention to the device both as an item of merchandise and as a source of home entertainment.

The operation of the invention is substantially self-evident from the foregoing description. When the user wishes to break in a new pipe, he adds the amount of tobacco desired and inserts the stem 22 by pushing through the slit 32 formed in the sponge insert 30. The stem 22 will thus be gripped in air-tight relation around its outer surface while, at the same time, the bowl 24 will be supported in the upright position as shown in FIG. 1. While a match is held to the pipe, the motor 45 may be turned on to full speed by the operation of the switch 60 to obtain good lighting, and the baffle 55 adjusted as desired.

Thereafter, the switch 60 may be opened and the switch 64 closed to cause cyclic motor action, and the knob 57 adjusted to provide the desired baffling and drawing action. The smoking process may thus continue without particular attention until the tobacco is consumed. Thereafter, the user may prefer to allow the pipe to cool and perhaps repeat the burning operation until a cake is built into the bowl, preferably from the bottom up.

The smoking device thus obviates the somewhat distasteful and time consuming operation of properly breaking in a pipe. It permits the pipe to be broken in using the owner's preferred tobacco in a proper manner, so that the pipe will give pleasure to the owner the first time that he actually smokes it.

While the form of apparatus herein described constitutes a preferred embodiment of the invention, it is to be understood that the invention is not limited to this precise form of apparatus, and that changes may be made therein without departing from the scope of the invention.

What is claimed is:

1. A wholly self-contained device for breaking in a smoker's pipe comprising a housing with an axial flow passage therethrough having a front inlet and a rear outlet, gripping and sealing means at the front inlet of said housing for receiving a pipe stem therethrough and forming an air tight seal thereabout, shroud means located intermediate of said front inlet and said rear outlet of said housing and defining with said front inlet of said housing a substantially unobstructed open space into which pipe stems of varying shapes may project, impeller means within said shroud means operable upon rotation to cause a draft through said axial flow passage of said housing, electric motor means connected in driving relation to said impeller means, batteries in said housing connected to energize said motor, and flow control means associated with the rear outlet of said housing for regulating the flow of draft exiting therethrough.

2. The device of claim 1 further including flasher means in the circuit to said motor for intermittently disengaging said circuit to cause said motor to start and stop at a controlled rate to simulate a puffing action on such pipe.

3. The device of claim 2 wherein said flasher means comprises a thermally operable incandescent flash lamp visible exteriorly of said housing and connected in series with said motor.

4. The apparatus as described in claim 2, wherein said flasher means comprises a flasher bulb containing a bimetallic element which upon cooling engages a circuit to said motor and upon heating disengages said circuit

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at alternate intervals to cause the said impeller means alternately to speed up and slow down and simultaneously to cause the flasher bulb alternately to flash on and off.

5. The apparatus as described in claim 4 further comprising switching means having a portion thereof exteriorly of the housing and connecting said batteries and motor and said lamp and enabling the operator of the device to select the motor speeds of: constant on, intermittent, and off.

6. The apparatus as described in claim 1 wherein the gripping and sealing means at the front inlet of said housing comprises an outer front member formed with an opening therein to receive said pipe stem therethrough, an inner clamping member spaced from said front member and having an axial bore therein in alignment with said front opening, and a flexible foam rubber insert tightly received between said members and having means defining a slit therethrough in alignment with said opening and said bore for gripping the outer surface of such stem and forming a seal therewith.

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7. The apparatus as described in claim 1, wherein the flow control means comprises means at said housing rear outlet defining an external opening in the general shape of a four-leaf clover, an internal baffle in the corresponding shape of a four-leaf clover adjacent to the rear surface opening, and means rotatably mounted on said baffle and accessible for adjusting the position of said baffle in relation to said rear opening for varying the rate of draw through such pipe by said impeller means.

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