Dec. 29, 1942. D. GORDON 2,306,622

SMOKING PIPE CLEANING DEVICE

Filed June 9, 1941

Fig. 1.

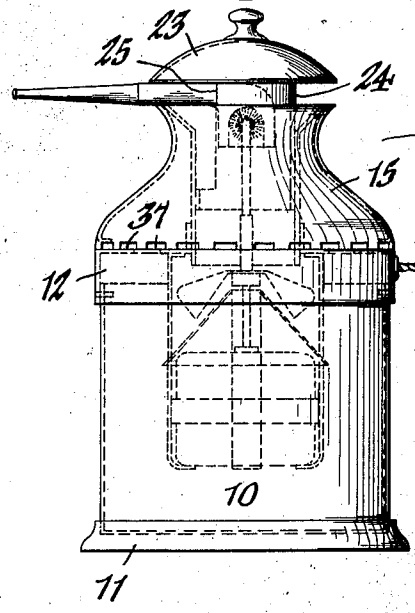


Fig. 2.

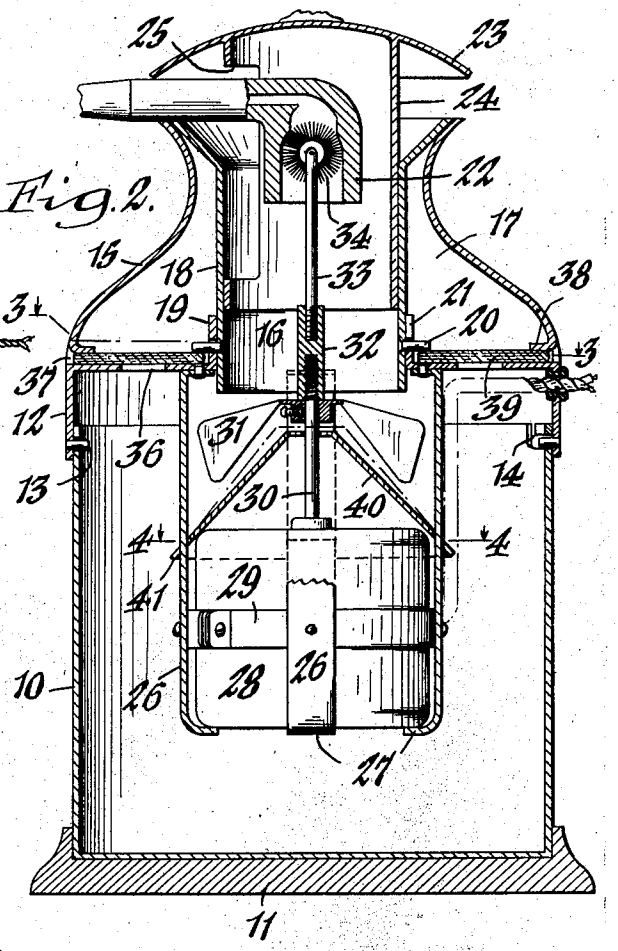


Fig. 5.

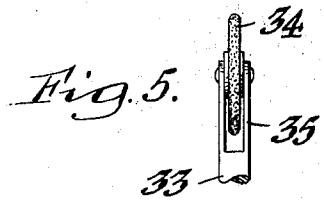


Fig. 3.

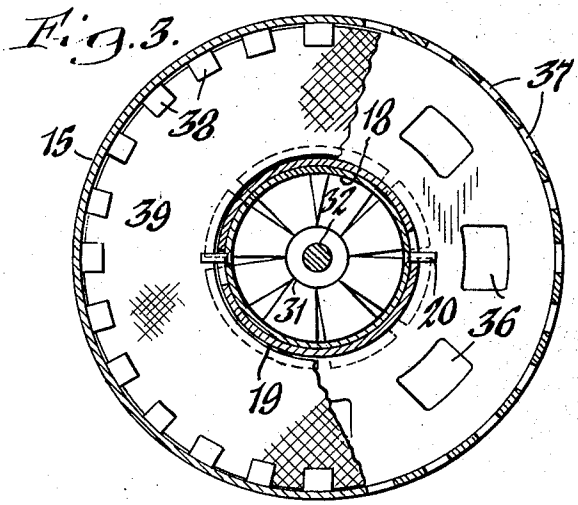
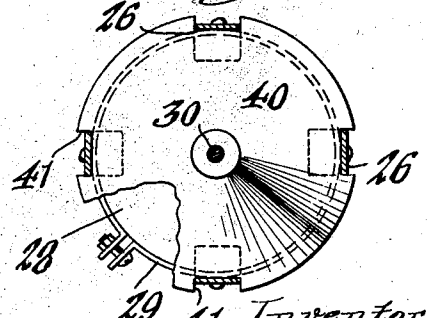


Fig. 4.



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SMOKING PIPE CLEANING DEVICE

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4 Claims. (Cl. 131—246)

This invention relates generally to a smoker's article but more particularly to improvements in an electrically operated device or appliance for cleaning the bowls of smoking pipes.

It has for one of its objects to provide a device of this character for domestic use which is designed to not only effectually clean the cake from the pipe bowl but which will conduct the scrapings by an air draft into a receiver and thereby prevent the dust and scrapings escaping into the atmosphere during the cleaning operation.

Another object of the invention is to provide a pipe cleaning appliance which is simple and compact in construction, which can be readily dismembered for dumping its contents from time to time, which is neat in appearance, and which is reliable and efficient in operation.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawing:

Figure 1 is a side elevation of my improved pipe cleaning device. Figure 2 is an enlarged central vertical section thereof showing a pipe in position for cleaning. Figure 3 is a horizontal section taken on line 3—3, Figure 2. Figure 4 is a similar section taken on line 4—4, Figure 2. Figure 5 is a fragmentary end view of the bowl-cleaning element.

Similar characters of reference indicate corresponding parts throughout the several views.

In the preferred embodiment of the invention shown in the drawing, 10 indicates a body forming an ash receiver for the scrapings removed from the pipe bowl, the same being substantially cylindrical in form and having a supporting base 11 at its bottom and a detachable cover 12 at its top. The connection between the receiver and its cover may be in the form of a bayonet or like joint, such joint including the complementary pin and slot elements 13 and 14, respectively.

Rising from the cover 12 is a hood or enclosure 15 having inner and outer chambers 16 and 17, respectively, such chambers being divided by a tubular member 18 which is detachably connected adjacent its lower end to a central collar 19 formed on the cover and joined thereto by a bayonet or like joint including the pin and slot elements 20, 21. The lower end of this tube forming the inner chamber 16 opens into the ash receiver 10 to conduct the bowl-scrapings thereto, while the pipe bowl 22 is adapted to be inserted into the upper end of this chamber in the manner shown in Figure 2. Telescopically fitted within the chamber-forming tube 18 is an adjustable guard or cover 23 whose skirt 24 has a bowl-receiving opening 25 in the side wall thereof and through which opening the pipe bowl is adapted to be inserted and removed before and after cleaning operations. In Figure 2 the adjustable cover is shown in its elevated pipe-receiving position, and when the device is not in use the cover is lowered against the top edge of the hood 15 to seal the device against the escape of the obnoxious odors emitted from the pipe-scrapings deposited into the receiver 10. As shown in Figure 2, the upper end of the tube 18 is preferably flared so that when introducing the pipe in an inverted position into the device the ashes will be properly deflected downwardly into the receiver.

Depending from the cover 12 about the lower end of the tube 18 and partially into the receiver 10 are a plurality of spaced radially-disposed arms 26 which terminate at their lower ends in inwardly-facing lugs 27 and which are adapted to support an electric motor 28 in the manner shown in Figure 2. Connected to these arms is a clamping band 29 which is adapted to extend around the motor housing to securely retain it in place between the arms. The motor shaft 30 extends upwardly therefrom axially of the receiver and the alining tube 18 and has mounted thereon a down draft or suction-creating means which may be in the form of a fan 31 drawing the bowl-scrapings downwardly into the ash receiver. Disposed in axial alinement with the motor shaft and coupled thereto by a collar 32, is the revolving spindle 33 of a cleaning element 34 which is located in the upper end of the inner chamber 16 of the enclosure 15 and with which the bowl of the pipe is engageable for cleaning the same. This cleaning element is preferably in the form of a circular wire brush mounted on a horizontal axis in the bifurcated upper end 35 of the spindle 33. This brush functions as a reamer in cleaning the bowl of the pipe and it can be adjusted on its axis when desired and thereby affords a fresh surface for cleaning purposes.

The cover 12 is provided in its top and about the collar 19 thereof with an annular row of openings 36 to establish communication between the receiver 10 and the outer enclosure chamber 17 and to thereby provide for the venting of the receiver during the operation of the device. This outer chamber is in turn provided adjacent its lower end with an annular row of vent openings 37 formed by slitting the marginal edge of the enclosure and providing resulting inwardly-bent lugs 38 which are spaced above the top of the

cover 12 in the manner shown in Figure 2. Resting on the cover over its openings 36 and about its collar 19, is a ring-shaped filtering element or screen 39 which is retained in place along its marginal outer edge by the lugs 38 and along its marginal inner edge by the coupling pins 20 of the bayonet joint which detachably connects the tube 16 with the cover-collar. This filtering element may be made of glass wool, cloth, felt or like material and it may be impregnated with a deodorant to eliminate the obnoxious odors escaping from the receiver 10 and vented through the cover 12 and enclosure 15 when the device is in operation.

A deflector 40 of substantially conical shape is disposed about the shaft 30 between the motor 28 and the fan 31 for directing the bowl scrapings downwardly and outwardly into the receiver 10. As shown in Figures 2 and 4, the deflector is notched at 41 to embrace the motor-supporting arms 26 and thereby effectually retain it in position.

In use, the guard 23 is elevated and the pipe bowl inserted through its opening 25 into engagement with the cleaning brush 34, as shown in Figures 1 and 2, and the motor started to operate the brush and the fan 31. The ashes and scrapings removed from the bowl are drawn downwardly through the chamber 16 and into the receiver 10 by the suction of the fan, the receiver being vented through the filtering element 39 and thence into the atmosphere through the vent openings 37.

When it is desired to empty the contents of the receiver 10, the cover 12 and parts borne thereby are removed by disconnecting the joints 13, 14. Should it be desired to renew the filtering element, the hood 15 and parts borne by it are disconnected from the cover-collar 19 by breaking the joint 20, 21.

I claim as my invention:

1. A smoking pipe cleaning device, comprising a body forming an ash receiver, an enclosure member applied to said body having inner and outer chambers therein, the inner chamber opening at its lower end into said receiver and into the upper end of which the bowl of a pipe is adapted to be inserted, the outer chamber having vents therein communicating with the ash receiver, a revolvable cleaning element extending into said inner chamber for engagement with the pipe bowl, and a suction-creating means interposed between the receiver and the adjoining end of the inner chamber of said enclosure member.

2. A smoking pipe cleaning device, comprising a body forming an ash receiver, an enclosure member applied to said body having inner and outer chambers therein, the inner chamber opening at its lower end into said receiver and into the upper end of which the bowl of a pipe is adapted to be inserted, the outer chamber having vents therein communicating with the ash receiver, a filtering element applied to the enclosure-like member about the lower end of its outer chamber and interposed between the vents thereof and said receiver, a revolvable cleaning element extending into said inner chamber for engagement with the pipe bowl, and a suction-creating means interposed between the receiver and the adjoining end of the inner chamber of said enclosure member.

3. A smoking pipe cleaning device, comprising an ash receiver open at its upper end, a cover detachably mounted on said receiver, an enclosure member rising from and detachably mounted on said cover and having inner and outer concentrically-disposed chambers therein each in communicating relation at its lower end and through the cover with said receiver, the bowl of a pipe being adapted to be inserted into the upper end of said inner chamber and the outer chamber having vents therein, a revolvable cleaning element extending into said inner chamber for engagement with the pipe bowl, a suction-creating means interposed between the receiver and the lower end of said inner chamber, and a motor for actuating said cleaning element and said suction-creating means.

4. A smoking pipe cleaning device, comprising an ash receiver open at its upper end, a closure member detachably mounted on said receiver and having an inner chamber in communication therewith and into which the bowl of a pipe is adapted to be inserted, said closure member having an outer chamber including vents communicating with the ash receiver, a cleaning element extending into said inner chamber for engagement with the pipe bowl, means interposed between said receiver and the lower end of the inner chamber for creating a down-draft to direct the bowl-scrapings into the receiver, a filtering element interposed between said receiver and the outer vented chamber of the closure member, and means on said closure member and engageable with said filtering element for detachably retaining it in position

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