Oct. 17, 1939. E. GRABBE 2,176,627

SMOKING DEVICE

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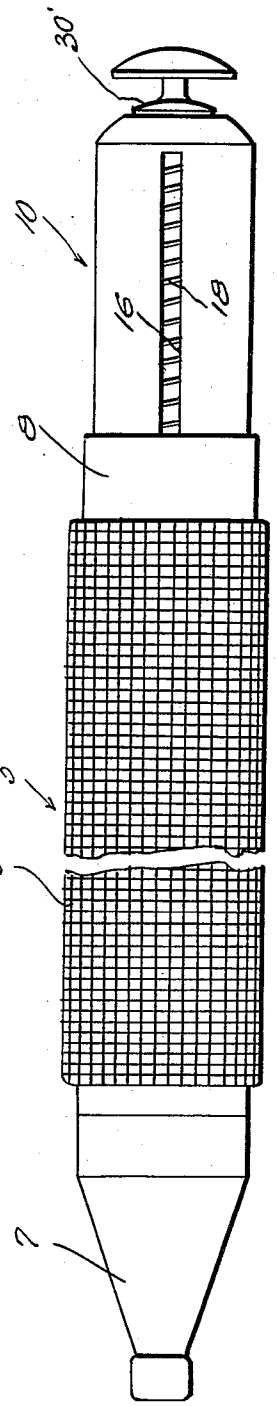


Fig. 1.

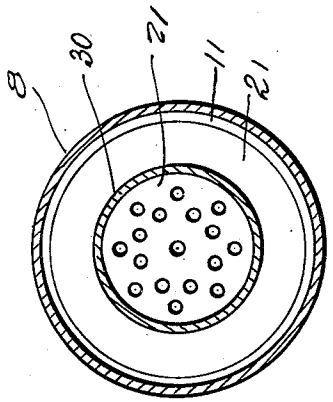


Fig. 7.

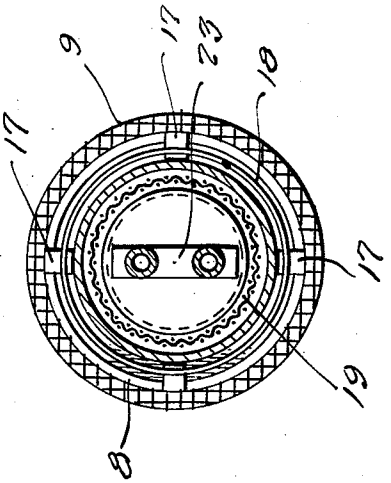


Fig. 5.

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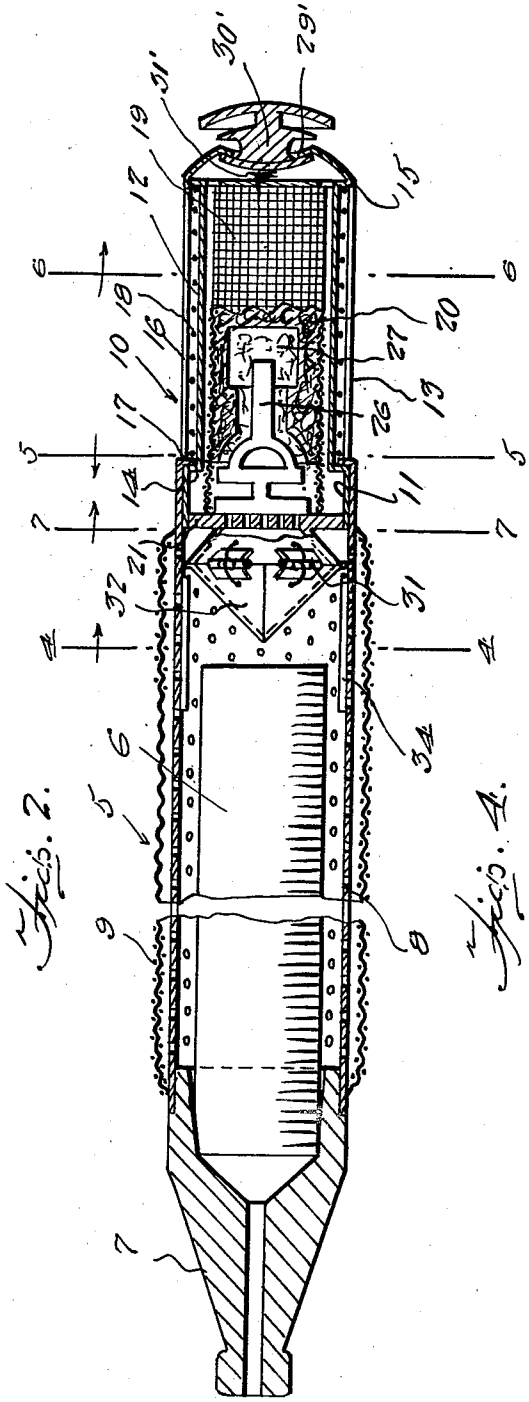


Fig. 2.

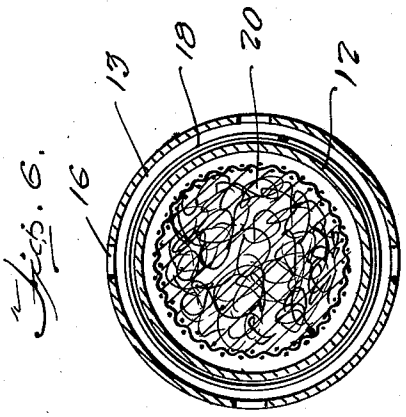


Fig. 6.

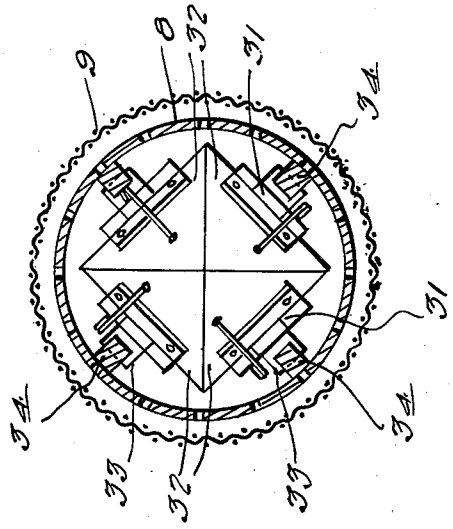


Fig. 4.

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Fig. 7.

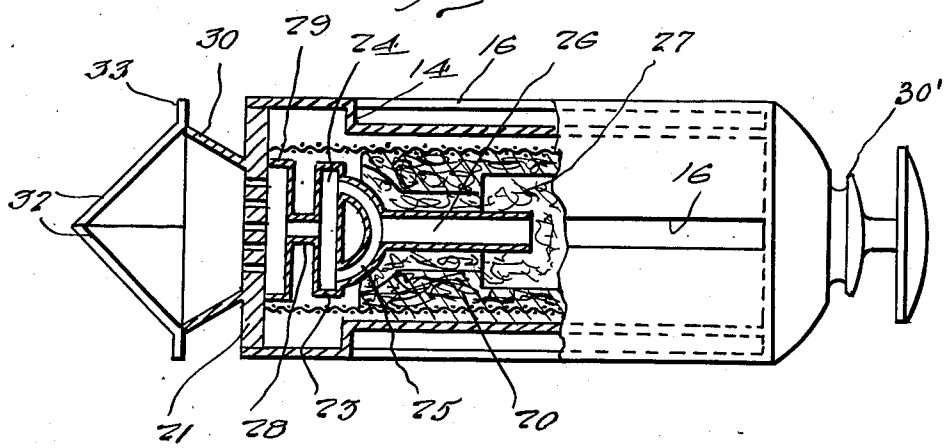


Fig. 8.

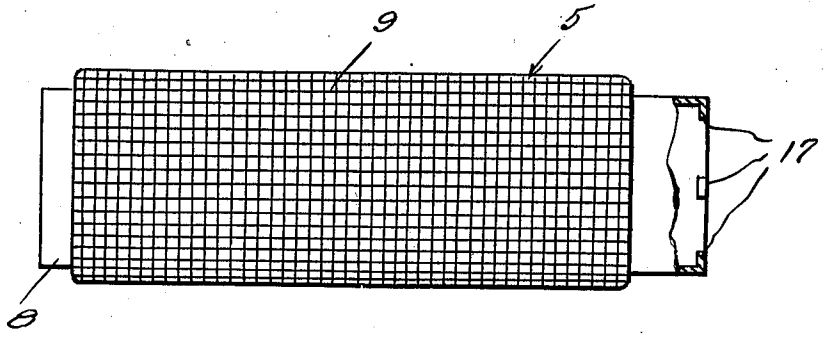
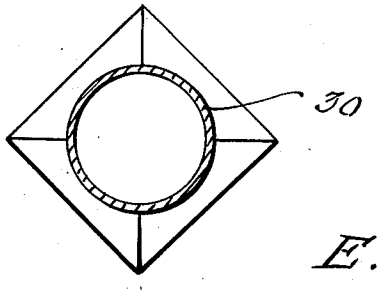


Fig. 9.



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UNITED STATES PATENT OFFICE

2,176,627

SMOKING DEVICE

Edward Grabbe, Hays, Kans.

Application September 30, 1938, Serial No. 232,659

4 Claims. (Cl. 131—185)

This invention relates to smoking devices and more particularly to a combined holder and lighter for cigarettes, cigars and the like.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is an elevational view of the device.

Figure 2 is a longitudinal sectional view therethrough.

Figure 3 is an elevational view of the lighter with parts broken away and shown in section.

Figures 4 to 7 inclusive are transverse sectional views taken substantially on the lines 4—4, 5—5, 6—6, and 7—7, respectively, of Figure 2.

Figure 8 is an elevational view of the cigarette holder with the mouthpiece and lighter removed, and with certain parts broken away and shown in section.

Figure 9 is a section through the flange of a heater plate.

Referring in detail to the drawings it will be seen that in the preferred embodiment thereof there is provided an elongated tubular holder 5 for the cigarette 6. The holder 5 is sleeved on one end of a mouthpiece 7 that is adapted to receive one end of the cigarette 6 in the usual manner as shown in Figure 2.

The holder 5 comprises an elongated perforated cylinder 8 of any suitable material and an outer cylindrical screen 9 of wire mesh material that at its respective opposite ends is diametrically contracted and made fast to the cylinder 8 in any suitable manner.

Associated with the holder 5 at the end thereof remote from the mouthpiece 7 is a lighter indicated generally by the reference numeral 10.

The lighter 10 comprises a substantially cylindrical casing 11 that at one end has a sliding fit within the free end of the cylinder 8. For the major portion of its length the cylindrical casing 11 is provided with an inner cylindrical wall 12 and an outer cylindrical wall 13, forming adjacent one end of the lighter a stop shoulder 14 and at the opposite end of the lighter a stop shoulder 15.

The outer wall 13 of the holder is provided with slots 16 which accommodate inwardly directed lugs 17 on the end of cylinder 8 that serve to hold the lighter against rotative movement relative to the holder 5 and to limit inward and outward sliding movement of the lighter 10 with respect to the cigarette holder 5.

The lighter 10 is normally urged to a projected position with respect to the holder 5 through the medium of a coil spring 18 that is disposed within the space between the walls 12 and 13 and at one end bears against the lugs 17 and at an opposite end against the shoulder 15 as shown in Figure 2.

Arranged within the casing 11 is a cylinder 19 of wire which contains a wick 20 of suitable material saturated with a fluid of a type which when mixed with air will, by a catalytic action cause a perforated heater disk 21 suitably mounted within one end of the heater casing 11 to glow for igniting one end of the cigarette 6. The heater plate 21 is preferably formed of platinum and the fluid used is preferably alcohol though I may use a fluid now on the market and called "Lektrolite".

Also arranged within one end of the screen 19 and disposed against the heater plate 21 is an air and fluid mixing device 23.

The device 23 is formed of any suitable material and as shown in Figure 3 comprises a mixing chamber 24 that is connected through the medium of an arcuate conduit 25 with an intake tube 26 that extends into and longitudinally through the wick 20 to a pocket 27 provided in the wick to prevent overfilling of the mixer when air is permitted to pass through the wick for contact with the solution with which the wick is impregnated.

The mixing chamber 24 is connected through the medium of a conduit 28 with a discharge chamber 29 that has an open side disposed against one side of the heater plate 21 as shown in Figure 3.

For controlling the admission of air into the burner the casing 11 of the burner at the outer or free end thereof is provided with an air inlet port 29' for which a suitable valve 30' is provided. The valve 30' is normally urged to a closed position through the medium of a coil spring 31'. It will thus be seen that by pressing inwardly on the valve 30' against the action of spring 31' air will be permitted to pass into the lighter through the port 29' to mingle with the aforementioned solution, the mixture of air and solution passing through the mixing device to impinge against the heater plate 21 for causing the latter to "heat up".

The heater plate 21 has extending from the outer side thereof a suitably shaped flange 30 to which are hinged as at 31 through the medium of spring hinges, doors 32. The shape of the doors 32 is such as to form a substantial cone when closed.

These doors 32 and flange 30 are accommodated within one end of the holder 5.

At the hinged edges thereof the doors 32 are provided with lugs 33 and fixedly mounted within the tube 8 of the holder 5, and in alignment with the lugs 33 are elongated strips 34 that form abutment strips for the lugs 33 to coact therewith for causing the doors 32 to swing to an open position so as to clear the cigarette 6 and permit direct contact of the plate 21 with the end of the cigarette for igniting the latter.

From the foregoing it will be apparent that when the cigarette 6 is placed within the holder and the mouthpiece placed within the mouth of the user, the user with a finger of one hand presses inwardly on the valve 30' to an extent permitting an inflow of air into the lighter 10. At the same time pressure on the lighter is exerted for moving the lighter bodily inwardly of the holder 5 against the action of the spring 18.

As previously explained upon the opening of the valve 30' and the entering of air into the lighter a mixture of air and igniting fluid will pass through the mixing device 23 to heat the plate 21. Also as the lighter 10 is shifted bodily inwardly of the holder 5 lugs 33 will engage the abutment strips 34 forcing the doors 32 against the action of the springs associated with hinges 31 to swing open and thereby clear the cigarette 6 permitting continued inward movement of the lighter 10 as required to contact the free end of the cigarette with the heater plate 21 for igniting the cigarette.

When the cigarette has been thus ignited the inward push or pressure on the lighter 10 is released so that the lighter 10 moves outwardly with respect to the holder 5 in response to the action of spring 18. Obviously as the lighter 10 moves to this outward position the doors 32 of the lighter move to closed position and with the cigarette lighted the parts assume substantially the position shown in Figure 2.

It is thought that a clear understanding of the construction, utility, advantages and manner of using a device embodying the features of the present invention will be had without a more detailed description.

Having thus described the invention what is claimed as new is:

1. In a smoking device for cigarettes, a holder adapted to contain a cigarette, and a self-contained lighter having a sliding fit with said holder and adapted to be moved inwardly of the holder for igniting the cigarette arranged therein.

2. In a smoking device for cigarettes, a holder provided at one end with a mouthpiece, a lighting device slidably associated with the holder at the end thereof remote from the mouthpiece and movable inwardly of the holder for igniting a cigarette, said lighting including ignition means, a casing for said ignition means having a sliding fit within said holder, said casing being provided on the periphery thereof with longitudinal slots, and said holder at the last-named end thereof having inwardly directed lugs engaging in said slots for constraining the movement of the lighting device in a longitudinal direction relative to said holder and for limiting outward movement of the lighting device with respect to said holder.

3. In a smoking device for cigarettes, a holder provided at one end with a mouthpiece, a lighting device slidably associated with the holder at the end thereof remote from the mouthpiece and movable inwardly of the holder for igniting a cigarette, said lighting including ignition means, a casing for said ignition means having a sliding fit within said holder, said casing being provided on the periphery thereof with longitudinal slots, and said holder at the last-named end thereof having inwardly directed lugs engaging in said slots for constraining the movement of the lighting device in a longitudinal direction relative to said holder and for limiting outward movement of the lighting device with respect to said holder, and a spring device associated with the holder and lighting device and normally urging the lighting device outwardly with respect to said holder.

4. In combination, a cigarette holder and a lighter associated therewith; said lighter embodying a wick accommodating casing, an ignition element in one end of the casing, air-excluding doors on the casing at said one end, and an air inlet control valve for the casing at the opposite end thereof.

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