Dec. 19, 1933. J. B. RINTELS 1,940,463

PIPE AND CIGAR LIGHTER

Filed March 25, 1932 2 Sheets-Sheet 1

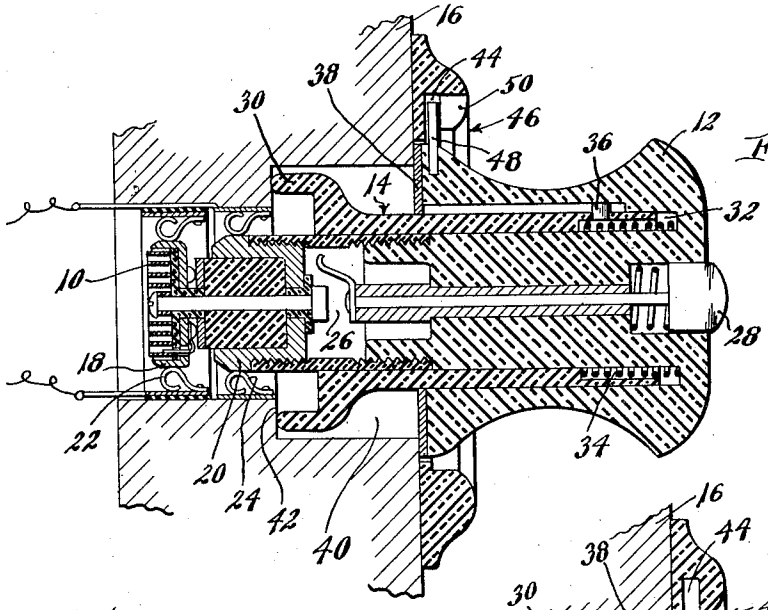


Fig. 1.

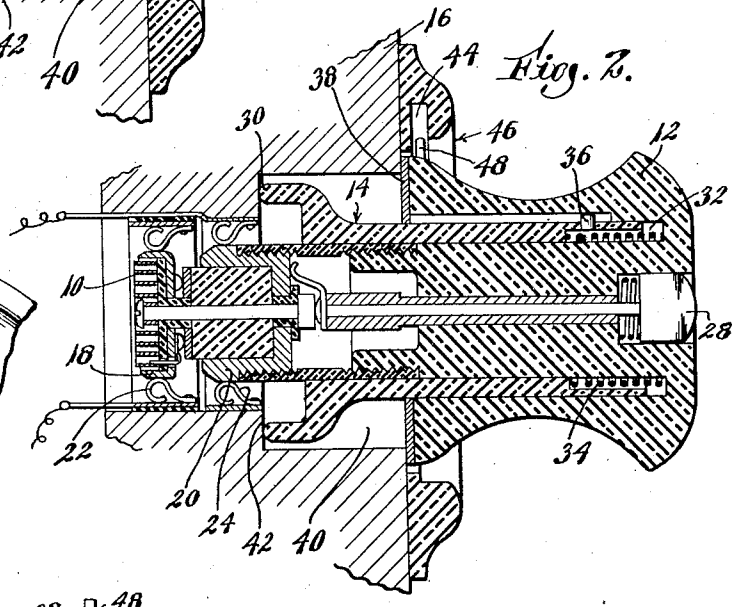
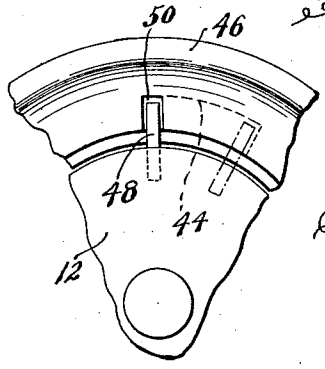


Fig. 2.

Fig. 1a.



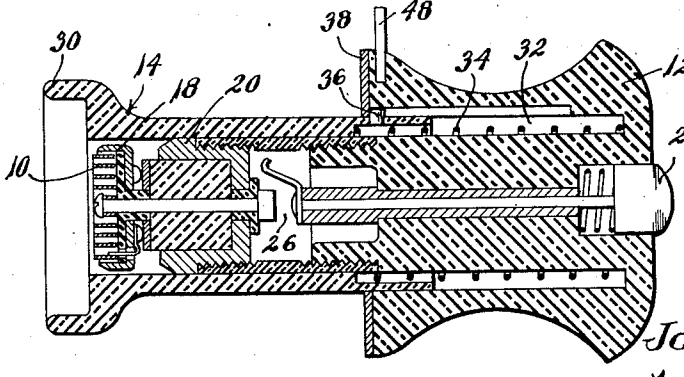


Fig. 3.

Inventor
Jonathan B. Rintels
by Everett & Kent
Attorney

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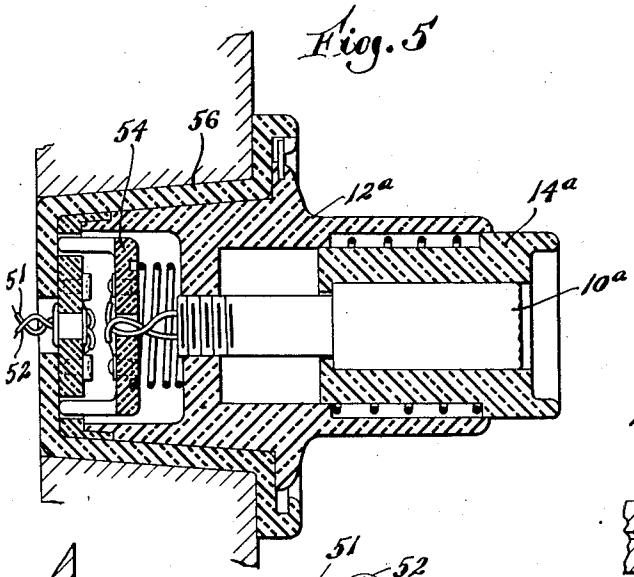
Fig. 5



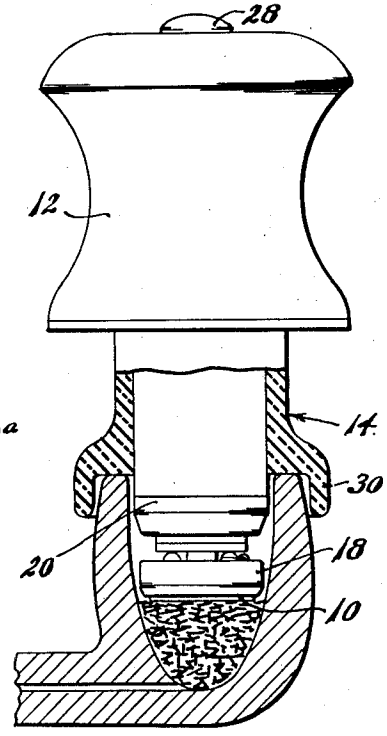


Fig. 4

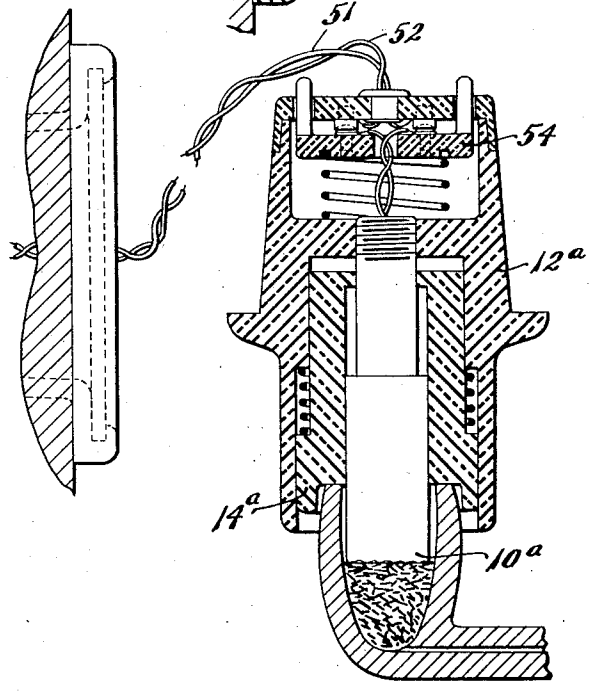


Fig. 6

Inventor
Jonathan B. Rintels
by Everett E. Kent
Attorney

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1,940,463

PIPE AND CIGAR LIGHTER

Jonathan B. Rintels, Boston, Mass.

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2 Claims. (Cl. 219—32)

This invention relates to improvements in pipe and cigar lighters. More especially it relates to electrically heated lighters, and particularly to the sort that may be fitted in automobiles and the like where the electrical energy conveniently may be supplied from an existing source and circuit of electricity, as the battery of the car. The invention, however, has a broader scope in that it may be embodied in an effective and convenient protective device for electric lighters used elsewhere.

Heretofore lighters of the general class to which the invention relates have been usable for lighting cigars and cigarettes, but not for pipes; and pipe smokers have had to continue with the discomforts of using matches, or else a pocket lighter, either of which is quite unsatisfactory in the wind and air drafts incident to motoring. For while it is theoretically possible to use a cigar lighter for a pipe, there is danger of damage to person and property, and indeed, unless the bowl is very full, so far as I am aware, the existing lighters are inadequate, i. e. they are wholly unsuited for lighting the half or quarter filled pipe, so common among pipe smokers.

It therefore is a primary object of the present invention to provide an electric lighter which is particularly adapted for lighting a pipe but which also is conveniently efficient for lighting cigars and cigarettes.

Another object is to provide so that the igniter element may be projected little or far into a pipe bowl to accomplish its purpose as well when the bowl is a quarter full as when it is completely filled.

Still another and important object is to provide a guard for the igniter element which shields and protects against damaging contact at all times, and exposes the igniter only when it is pressed safely against tobacco in the pipe bowl.

Yet the guard permits ready use of the igniter for cigars or cigarettes by their insertion within the guard into lighting contact with the hot coil.

The invention may be embodied in lighters of various designs, and in locations other than automobiles, for effective and safe use as pipe lighters at all times.

In attaining these results any usual or suitable type of igniter element may be mounted at the end of a cylindrical unit of size to fit freely within the bowl of an ordinary smoker's pipe. A tubular or bell-shaped skirt is yieldably urged by a spring means toward a position surrounding the igniter element. This tubular guard has an end diameter a little greater than the external diameter of any pipe bowl with which it is suited to be used; and an interior shoulder constitutes a seat within its end, for the end of the pipe bowl when inserted within the end of the guard.

In use, the igniter element, having been heated to igniting temperature in any usual or suitable way, is in a position of recession within the cylindrical guard as the lighter is carried to the pipe by the hand of the user. But, as the end of the pipe bowl enters within the end of the guard, and engages against the said seat, a little pressure applied by the user causes the guard to recede against the tension of its spring means, and thus its glowing interior igniter element is relatively projected toward the pipe, entering the bowl a distance, little or much, until it encounters tobacco contents of the bowl. When the tobacco is ignited, and the lighter is removed, the cylindrical guard returns to its position shielding the hot element.

Cigars and cigarettes may be lighted without depression of the guard, by merely inserting them within the open end of the guard, into contact with the glowing igniter.

It is intended that the patent shall cover, by suitable expression in the appended claims, whatever features of patentable novelty exist in the invention disclosed.

In the accompanying drawings:

Figure 1 is an elevation, in medial section, showing one form of lighter, embodying features of the invention, mounted in the dashboard of an automobile;

Figure 1*a* is an elevation of a fragment of Figure 1, looking from the right in that figure, showing a means for securing the lighter in the dash;

Figure 2 is a view similar to Figure 1, but with the contact button pressed in, closing the electric circuit through the igniter element to heat it;

Figure 3 is an elevation, in medial section, of the lighter of Figure 1, removed from the dash, and with the guard in operative position surrounding and shielding the igniter element.

Figure 4 shows the lighter in use, with the guard pressed back and the igniter element projected into the bowl of a pipe, into contact with tobacco therein;

Figure 5 is an elevation, in medial section, showing a modified form of lighter, embodying features of the invention, and mounted in the dashboard of an automobile, and

Figure 6 shows the lighter of Figure 5 in use for lighting a pipe.

Referring to the drawings, two forms of elec-

tric lighters for pipes, cigars and cigarettes are represented, wherein the igniter element 10, 10^a is fixed in position relative to its handle 12, 12^a and a guard member 14, 14^a is movable longitudinally relative to both igniter element and handle.

The invention, however, is not limited to any particular form or forms of lighters, the chosen embodiments being merely representative of the general class of electric lighters in which the features of this invention may be embodied.

Figures 1–4 illustrate application of the invention as an improvement in a well-known type of lighter suitable for automobile use. This lighter, which may be drawn out from its support in the dash 16 for use, is of the sort which involves two cylindrical contacts 18, 20, each adapted, when the lighter is in the dash, to contact with one of a pair of fixed terminal contacts 22, 24 in the dash. The electric circuit through the igniter element 10 remains ordinarily broken at 26. As a preliminary to use of this type of lighter, the button 28 is to be pressed in and held there a few seconds, causing the igniter 10 to become heated, after which the lighter as a unit may be withdrawn from its dash support, and will continue hot long enough to be conveyed to the cigar, cigarette or pipe in the user's mouth, and to effect a lighting of the tobacco.

According to the present invention, a guard 14 is made a part of the lighter unit, surrounding and shielding the igniter element thereof at all times when said element is out of the dash 16. To this end the guard is made tubular in form, and has its end portion 30 of diameter interiorly a little greater than the external diameter of the pipe bowl with which it is to be used. Back from this end portion, its interior diameter is enough less, so that it fits nicely but slidably around a stiff body or supporting portion of the igniting element. This smaller end extends into an annular groove 32 in the handle 12, where a spring 34, beyond it in the groove, continually urges the guard outward toward the position seen in Figure 3. The guard preferably will be keyed against rotation in the handle, as at 36; and the key may serve also as a stop, limiting outward movement, by engagement against the annular plate 38, secured on the handle.

The lighter unit, when out of use, conveniently may be supported in the dash 16 as seen in Figures 1 and 2, where it is safe and out of the way. For this purpose the opening 40 is provided in the dash, having an inner portion less in diameter than the outer portion, with an abrupt shoulder 42 at the place of change. The fixed terminal contacts 22, 24 stand in this inner portion of the opening and, as the lighter unit is stuck into the dash, the fixed terminal 22 contacts with the cylindrical contact 18 of the lighter, and fixed terminal 24 contacts with cylindrical contact 20 of the lighter, thereby completing the electric circuit except at the break interiorly of the unit, at 26.

Meanwhile the guard 14 will have engaged the shoulder 42 and will have receded into groove 32 against the resistance of spring 34. In order to hold the lighter unit in its position of Figure 1 any suitable securing means may be provided. I have illustrated a pin and groove bayonet joint wherein the groove 44 is in an annular surrounding ring 46 on the dash, and the pin 48 projects from the handle so as, by partial rotation, to engage in the groove, a suitable slot 50 being provided in the face of the ring to permit entrance of the pin into the groove 44.

When it is desired to use the lighter, the button 28 is to be pressed inward and briefly held there while the unit as a whole remains in its dash support. This completes the electric circuit at 26 and the igniter element 10 quickly becomes hot. The bottom being released, the unit as a whole is to be drawn out of the dash, whereupon the guard 14 immediately springs to its guarding position of Figure 3. As the unit is applied to a pipe, the element 10 continuing to be hot, pressure at the handle 12, with the pipe bowl seated in the ground, drives the igniter element into the pipe bowl, as little or as much as is necessary, for its contact with tobacco in the bowl. Once the tobacco is ignited, upon withdrawal the guard 14 springs forward to its protecting and guarding position. The unit then may be replaced in its dash support as in Figure 1.

In the type of lighter shown in Figures 5 and 6 the electrical conductors 51, 52 are permanently secured to the unit. They are arranged to be drawn out from the dash with the unit, and may have any of the suitable well known means for returning them, such as a spring roller or spool (not shown). In this form the igniter element 10^a stands pointing outward from the dash, when not in use, and the guard 14^a stands normally in its guarding position, as seen in Figure 5. The electric circuit is completed as a result of the removing of the unit from the dash, there being a spring-pressed contact-carrying table 54 which is forced into the unit to break the circuit when the unit is in the dash, but which springs outward to complete the circuit immediately upon leaving the dash housing 56. Therefore, the igniter element 10^a is continually receiving electrical energy so long as the unit is out of the dash; and the guard 14^a stands always, at such times, protecting and shielding against damaging contact of igniter with person or property.

In use this latter form acts like that first described, the igniter advancing into the pipe bowl as the guard 14^a is pressed against the edge of the bowl; and the guard springing back to guarding position as the lighter unit is taken away from the pipe.

The same sort of pin and groove device may secure the unit in its dash support as was described in connection with the first form.

The invention is particularly directed to lighters for tobacco in pipes, for which it is distinctively serviceable and effective, in that it provides an element that is always in guarding service whenever the hot element is being moved about by hand, yet cooperating yieldingly with the pipe bowl, and surrendering its guarding function to the walls of the pipe bowl, in such a manner as to permit the igniter to project beyond its original shield and to operate on a tobacco surface deep in the bowl. Notwithstanding this, the same continuously guarded lighter is suitable and efficient for cigars and cigarettes.

I claim as my invention:

1. A lighter for pipes comprising an igniter element and a handle-holder therefor; a guard member mounted in the handle, encircling and projecting beyond said element; there being an annular opening in the handle along which said guard is movable; and a spring in said opening, back of said guard; whereby the guard, by pressure of a pipe-bowl thereagainst, can move rearward against said spring, uncovering the said element and permitting its entrance into the bowl of the pipe.

2. In a lighter for pipes, the combination, with

an igniter element and a support, of a guard movable along said support between a guarding position and a position whence said element projects beyond it; and a spring urging the guard to its guarding position; said guard having a forward portion adapted to receive the edge portion of a pipe bowl, engaging it endwise and surrounding it laterally, and being movable relative to said element and its support by endwise pressure of the pipe bowl, whereby the pipe bowl may surround the said element.

JONATHAN B. RINTELS.