

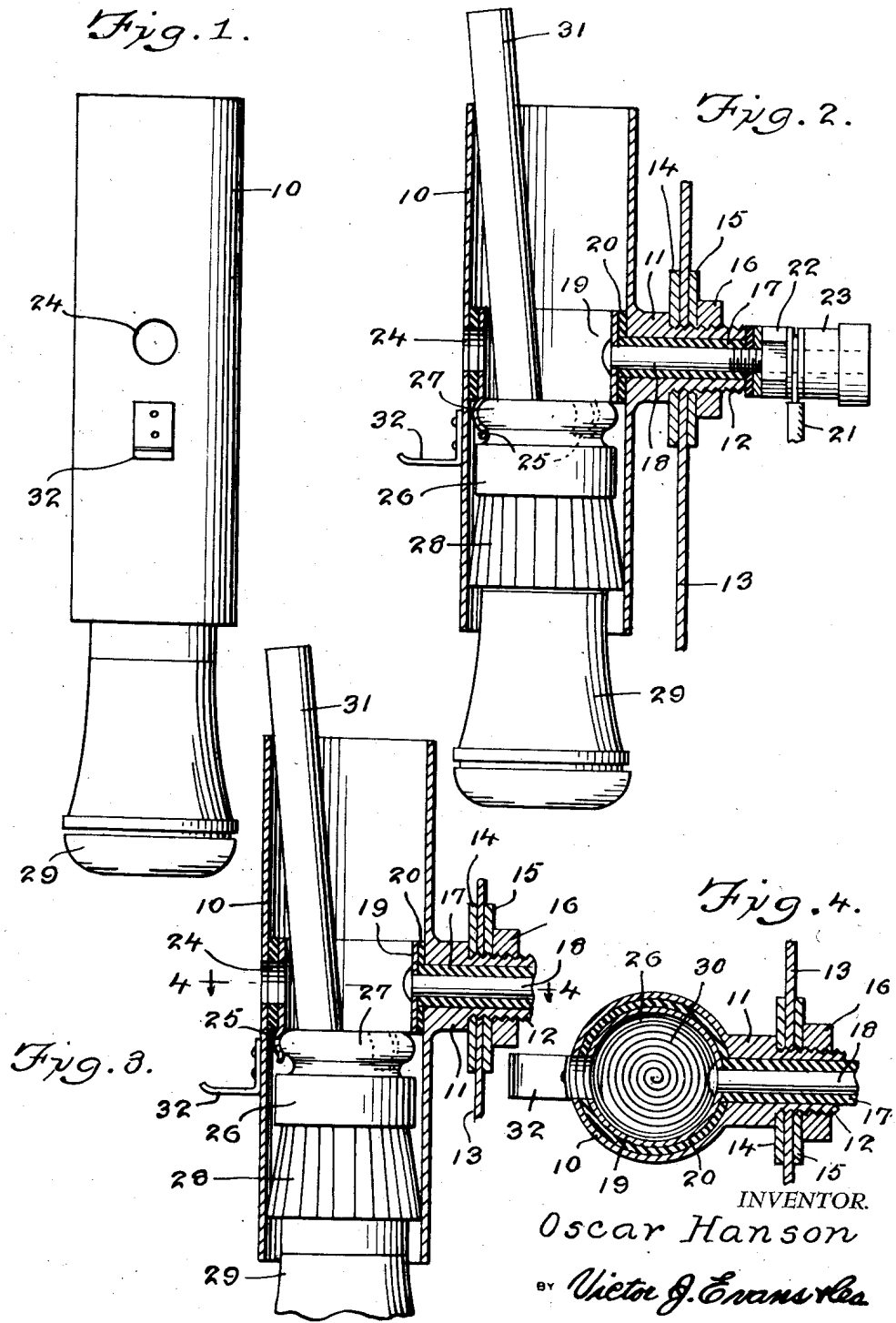
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SAFETY CIGARETTE LIGHTER FOR MOTOR VEHICLES

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## SAFETY CIGARETTE LIGHTER FOR MOTOR VEHICLES

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1 Claim. (Cl. 219—32)

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This invention relates to cigarette lighters of the type used on instrument boards of motor vehicles and in particular an improved cigarette lighter having a vertically disposed tube into which a cigarette is dropped and in which the cigarette is lighted by a heating element in the tube which is energized by snapping a knob extended from the lower end of the tube upwardly in the tube.

The purpose of this invention is to provide an improved cigarette lighter for motor vehicle which eliminates the necessity of an operator holding a lighter element inwardly until heated and then holding the lighter element and cigarette in contact.

Various types of cigarette lighters have been provided for motor vehicles but it is difficult, and substantially impossible for the operator of the vehicle to light a cigarette with the usual type of lighter without taking his eyes from the road. With this thought in mind this invention contemplates a cigarette lighter into which a cigarette may be dropped and lighted, and then removed with one hand and by touch or feel so that an operator of a motor vehicle may light a cigarette without taking his eyes from the road.

The object of this invention is, therefore, to provide means for forming a cigarette lighter that may be positioned on the instrument board of a motor vehicle into which a cigarette may be dropped, lighted, and removed without removing or replacing elements of the lighter.

Another object of the invention is to provide an improved vertically disposed cigarette lighter for motor vehicles in which a conventional lighter element is used.

A further object of the invention is to provide a cigarette lighter for instrument boards of motor vehicles into which a cigarette may be dropped, lighted and then removed with one hand, which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a vertically disposed tubular casing with an inner sleeve insulated from the casing and providing a contact, a supporting tube extended from one side of the casing and having a current carrying bolt positioned therein and insulated therefrom with the bolt connected to the inner contacting sleeve in the casing, and a conventional lighter element frictionally retained in the lower end of the casing and positioned to engage the contacting sleeve and also positioned to contact the lower end of a cigarette dropped into the upper end of the casing.

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Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a front elevational view of the cigarette lighter showing an upright tube with the knob of a lighter element extended from the lower end thereof.

Figure 2 is a vertical section through the cigarette lighter showing a cigarette therein and illustrating the position of the lighter element with the knob snapped upwardly to the heating position.

Figure 3 is a similar section with the knob of the lighter element automatically snapped downwardly to disconnect the heating coil and with the lower end of the knob broken away.

Figure 4 is a sectional plan through the cigarette lighter taken on line 4—4 of Figure 3 with the cigarette removed and with part of the mounting elements broken away.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved cigarette lighter of this invention includes a tubular casing 10 that is illustrated as positioned with the axis extended upwardly although it will be understood that this casing may be turned toward either side with the axis slightly inclined so that it is convenient for the operator of a vehicle to drop a cigarette into the upper end thereof without turning his eyes toward the lighter.

The casing 10 is provided with a laterally disposed supporting tube or shank 11 having a threaded outer end 12 by which the lighter is mounted in an instrument panel 13 of a motor vehicle with washers 14 and 15 on opposite sides of the panel and with the parts held by a lock nut 16. The tube 11 is provided with an insulating bushing 17 through which a bolt or stud 18 extends and a contact sleeve or band 19, which is insulated from the casing 10 by an insulating sleeve 20 is connected to the inner end of the bolt. Current is supplied to the bolt through a wire 21 which is secured to the outer end of the bolt through locking elements 22 and 23. An opening 24 is provided through the casing 10, insulating sleeve 20 and contact sleeve 19 for oxygen intake and so that one may determine whether or not the heating element is operating.

Depending spring clips 25 are provided on the lower edge of the contact sleeve 19 and as a conventional lighter element 26 is pressed upwardly into the lower end of the casing 10 a bead 27 on the upper end thereof snaps into the spring clips to retain the lighter element in the casing. The lighter element is also provided with a ring 28

of slip spring fingers that also frictionally retain the lighter element in the casing. The lighter element is provided with a knob 29 which normally extends downwardly with the heating coil 30 of the lighter element disengaged, and when the knob 29 is pressed upwardly to the position shown in Figure 2 the heating coil 30 is energized and the heat thereof is sufficient to light a cigarette with the lower end resting thereon as shown in Figure 2 in which the cigarette is indicated by the numeral 31. After a predetermined time the actuator of the lighter snaps the knob 29 downwardly thereby breaking the circuit to the element 30 which deenergizes the heating element. The heating element will then remain cool until the knob 29 is again pressed upwardly.

To facilitate pressing the knob 29 upwardly a clip 32 is provided on the side of the casing 10 and with the thumb of the hand of an operator resting on this clip the knob 29 may be forced upwardly by the first two fingers of the hand.

With the parts arranged in this manner and with the cigarette lighter in an upright position on the instrument board of a motor vehicle or in any suitable position in the vehicle an operator of the vehicle may drop a cigarette into the upper end of the casing and press the knob upwardly to complete a circuit through the heating coil of the conventional cigarette lighter, the circuit being completed from the bolt 18 through the clips 25 and the circuit is grounded through spring fingers 28, casing 10, tube 11 and instrument panel 13.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

In a motor vehicle cigarette lighter, the combination which comprises a vertically disposed substantially hollow tube having open ends, a band having spaced spring fingers depending from the lower edge thereof mounted in the tube, insulated therefrom and positioned substantially midway of the length thereof, said hollow tube having a laterally disposed supporting tubular shank with a threaded outer end extended from

one side thereof, a stud extended from the said band through the shank and having a threaded outer end with current supplying wire connecting elements thereon, said stud being insulated from the shank and providing a contact for the band and spring fingers extended therefrom, said hollow tube and band having openings there-through providing an air inlet and also means for observing lighting of a cigarette in the lighter, mounting elements positioned on the threaded end of the said shank, a lock nut threaded on the said shank and positioned to coact with the said mounting elements for securing the said hollow tube to an instrument panel of a motor vehicle, and a lighter element having a heating coil and a bead around the upper end and spring fingers extended from the intermediate part thereof and also having a knob extended from the lower end positioned in the said hollow tube, said lighter element being retained in position by the bead that is held in the said spring fingers on the band and providing means for completing a circuit from the band and stud and through the bead, heating coil and spring fingers of the lighter element to the instrument panel through the said hollow tube.

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