

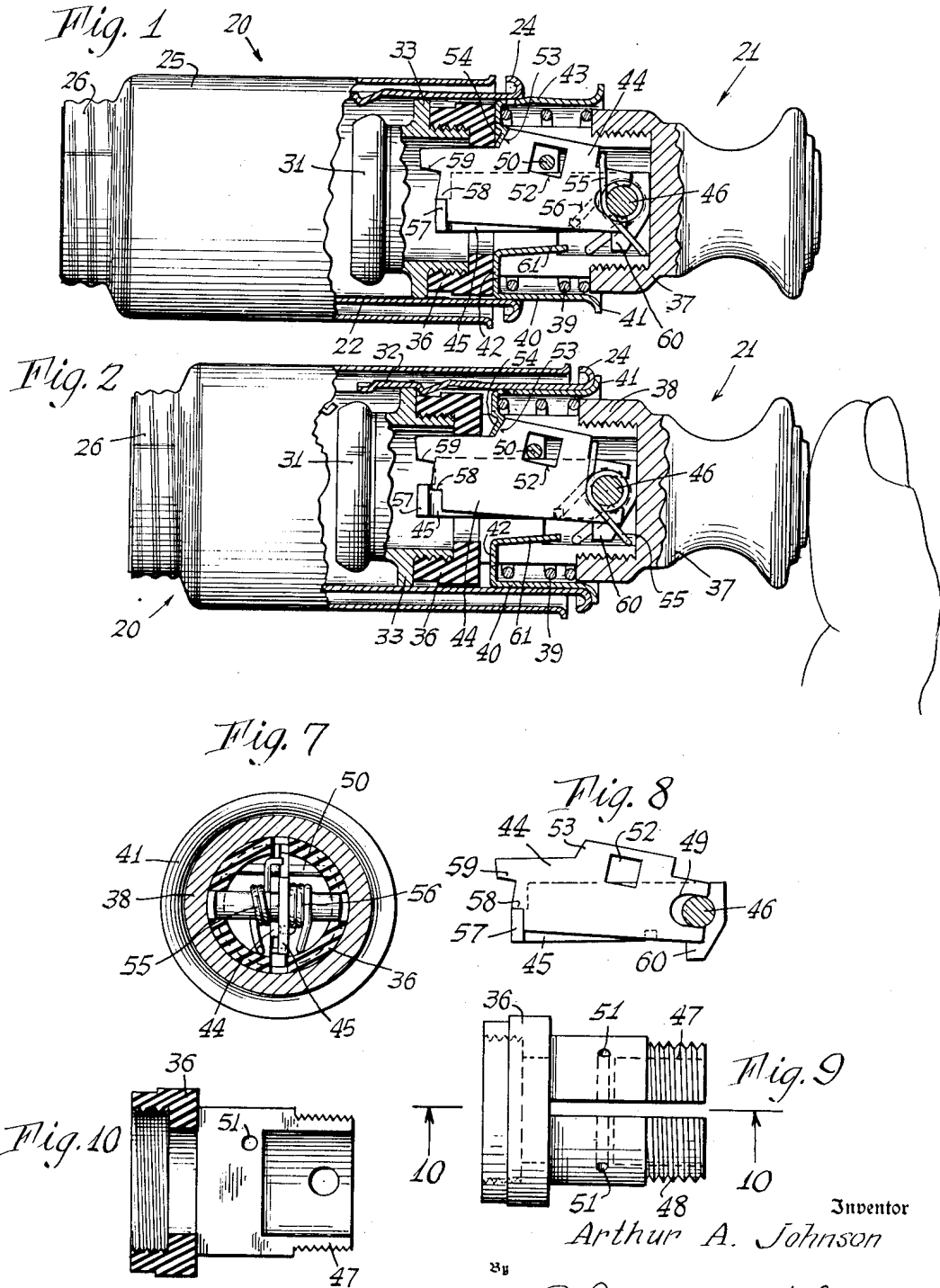
Feb. 14, 1956

A. A. JOHNSON  
ELECTRIC CIGAR LIGHTER

2,734,987

Filed Feb. 16, 1952

3 Sheets-Sheet 1



Inventor

Arthur A. Johnson

Johnson and Kline

Attorneys

Feb. 14, 1956

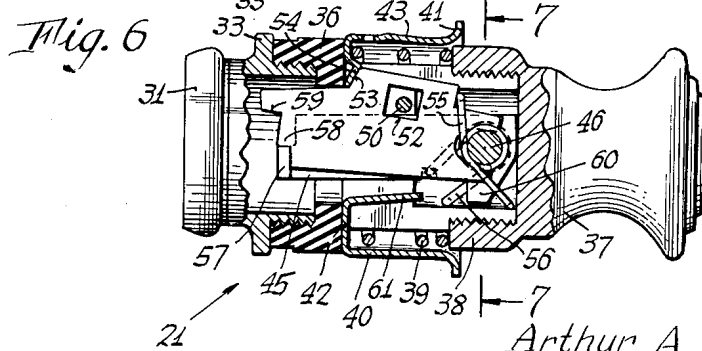
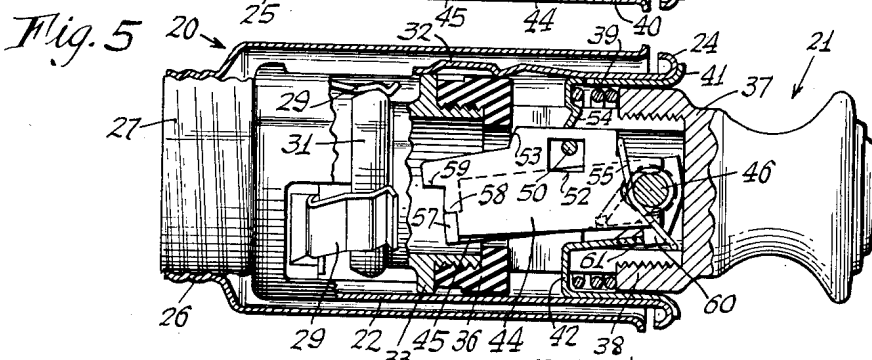
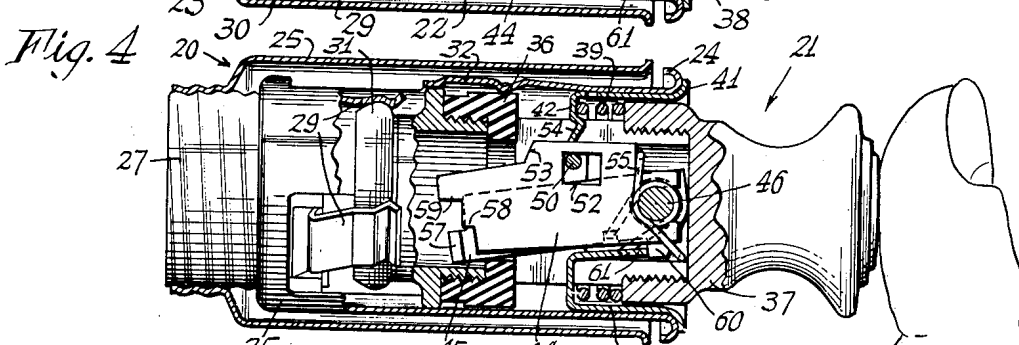
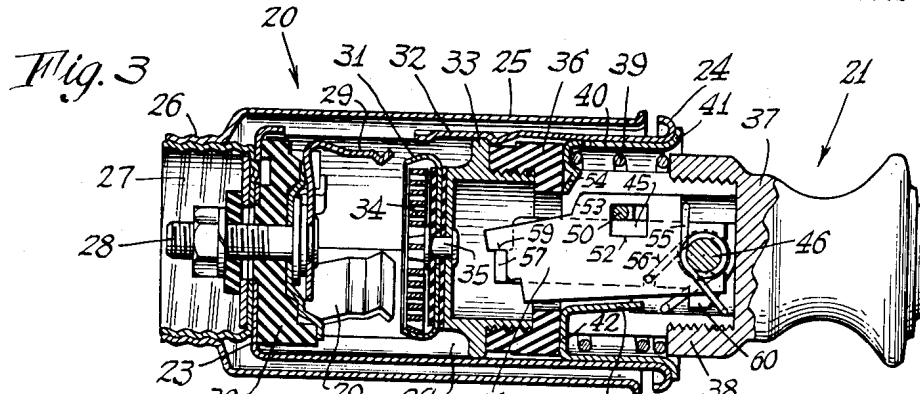
A. A. JOHNSON

2,734,987

ELECTRIC CIGAR LIGHTER

Filed Feb. 16, 1952

3 Sheets-Sheet 2



Inventor

Arthur A. Johnson

By

Johnson and Kline

Attorneys

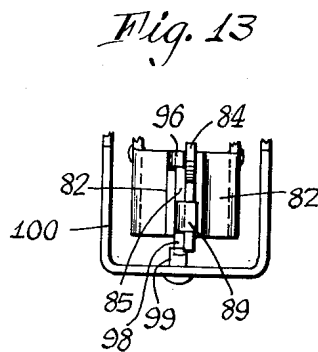
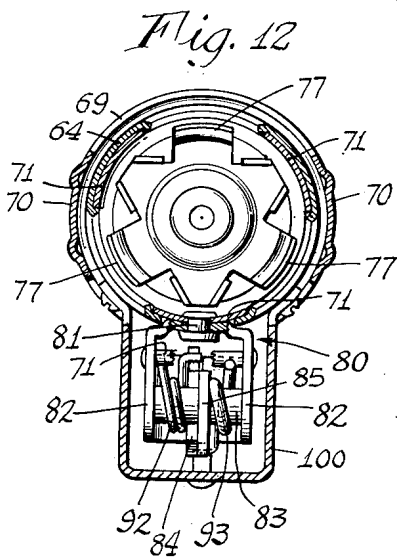
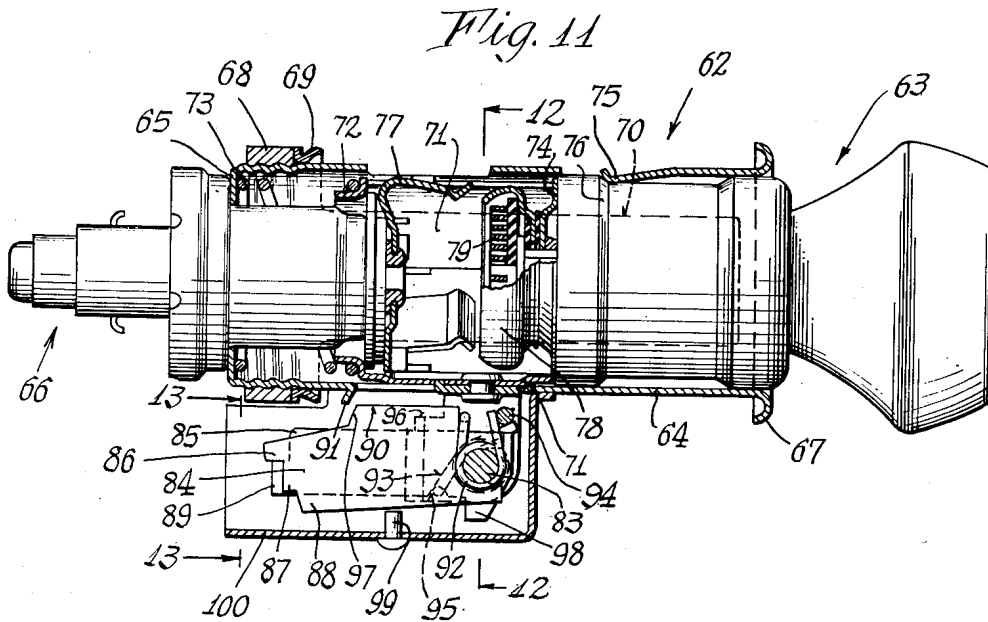
Feb. 14, 1956

A. A. JOHNSON  
ELECTRIC CIGAR LIGHTER

2,734,987

Filed Feb. 16, 1952

3 Sheets-Sheet 3



Inventor  
Arthur A. Johnson  
By  
Johnson and Kline  
Attorneys.

2,734,987

## ELECTRIC CIGAR LIGHTER

Arthur A. Johnson, Bridgeport, Conn., assignor to Automatic Devices Corporation, Bridgeport, Conn., a corporation of Connecticut

Application February 16, 1952, Serial No. 271,879

18 Claims. (Cl. 219—32)

This invention relates to electric cigar lighters of the "wireless" type as used in automobiles and the like.

Cigar lighters of this type as produced at the present time comprise a holding device which is secured to the instrument panel of the car, and a separate igniting unit normally stored in the holding device and removable therefrom after being energized, so that it may be used by the occupants of the car. The holding device is so constituted as to present a recess or well, and the igniting unit is in the form of a plug adapted to be inserted in the well and yieldably held in a shallow, storage, open-circuit position, and to be depressed or moved to an energizing position from which it is automatically returned to the open-circuit position when the heating coil has been properly heated.

In the use of these cigar lighters there is a tendency for the igniting unit when it is being replaced in the holder, to be deeply inserted therein whereupon it will either make momentary contact again or else be fully re-energized and pass through another energizing cycle and subsequent automatic release to storage position. Such undesired action occurs in one particular type of construction, wherein the igniting unit carries a yieldable friction sleeve which does not readily fully enter the holder because of its frictional engagement therewith, unless the igniting unit is moved to a position deeper than its normal storage position. Such deeper movement results in contact again being made to the heating coil.

The above disadvantage is overcome by the present invention, and an object of the invention accordingly is to provide an improved wireless type cigar lighter wherein there is prevented inadvertent re-energization of the igniting unit or inadvertent movement of the unit to a deep position in the holder at the time that it is being replaced thereon for storage.

This is accomplished in the specific embodiments of the invention illustrated herein, by the provision of a novel stop mechanism for preventing movement of the igniting unit to closed-circuit position when it is being returned to the holding device. In the forms of the invention herein disclosed the said stop is so arranged that it is rendered inoperative when the force returning the igniting unit to its storage position is removed. The stop mechanism is so arranged that it provides a positive connection to the circuit-opening means, which connection is broken after completion of the inserting movement of the igniting unit into the holder.

In one embodiment of the invention wherein the circuit-opening means comprises a friction sleeve carried by the igniting unit, the positive connection is established between the said friction sleeve and the knob of the igniting unit. In another embodiment of the invention wherein the circuit-opening means comprises a member yieldably carried by the holding device, the positive connection is established between said member and the holding device. In either case, the stop-means is automatically placed in its releasing position after the igniting unit has been restored to storage position in the holding device and the restoring

force removed. Upon the user again applying an energizing force to the knob of the igniting unit, the released stop will permit the unit to be shifted to deep energizing position, for energization and subsequent use.

Another object of the invention is to provide an improved cigar lighter as above set forth, which is simple and economical in construction, relatively small and compact, and reliable in use.

Other features and advantages will hereinafter appear.

In the accompanying drawings:

Figure 1 is a view partly in side elevation and partly in vertical section, of a cigar lighter constituting one embodiment of the invention, the igniting unit being shown in the process of replacement on the holding device, being only partially seated in said device, and the stop mechanism being operative.

Fig. 2 is a view like Fig. 1, but showing the igniting unit fully seated in storage position in the holding device, with the stop mechanism still operative.

Fig. 3 is an axial sectional view of the cigar lighter of Figs. 1 and 2, showing the position of the parts in the stop mechanism after removal of the force from the knob of the igniting unit, the said mechanism being now inoperative.

Fig. 4 is a view like Fig. 3, but showing the igniting unit in energizing position in response to the application of force to the knob.

Fig. 5 is a view like Figs. 3 and 4, but showing the position of the parts after removal of force from the igniting unit knob.

Fig. 6 is an axial sectional view of the igniting unit per se, after its removal from the holding device subsequent to energization.

Fig. 7 is a transverse section taken on line 7—7 of Fig. 6. Fig. 8 is a detail showing the stop mechanism in elevation.

Fig. 9 is a side elevational view of the igniting unit body.

Fig. 10 is an axial sectional view of the igniting unit body taken on line 10—10 of Fig. 9.

Fig. 11 is an axial sectional view of a cigar lighter embodying another form of the invention, the igniting unit being shown in shallow storage position.

Fig. 12 is a transverse sectional view taken on line 12—12 of Fig. 11.

Fig. 13 is a transverse sectional view taken on line 13—13 of Fig. 11.

Referring to Figs. 1 through 10, the improved cigar lighter shown therein comprises a holding device 20 and a removable igniting unit 21 adapted to be retained normally on the holding device in a shallow unenergizing position as shown in Fig. 3, and adapted to be wholly removed from the holding device for use, as illustrated in Fig. 6.

The holding device 20 may be identical in all respects to those of a particular type now in use. It is shown as comprising a tubular metal shell 22 having a transverse rear wall 23, and having at its front a bead or bezel 24 arranged to engage the front of an instrument panel on which it can be mounted.

To clamp the shell 22 to the instrument panel a sleeve 25 is provided, having threads 26 engaging a threaded collar 27 secured to the rear wall 23 of the shell by a central current-carrying stud 28 which is insulated from said wall and collar.

The stud 28 carries a bimetallic contact clip 29 nested in an insulating block 30 which is clamped against the inside of the transverse wall 27 by the stud 28.

The bimetallic contact clip 29 is adapted to engage and make electrical contact to a metal cup 31 carried on the inner end of the igniting unit 21, and a resilient finger 32 is lanced from the shell 22 to engage and make electrical contact with an annular metal base 33 secured to

the cup 31 and constituting therewith a unit, commonly termed the heating element unit.

As is well understood, a spiral heating coil 34 is carried in the cup 31, having its outer end secured to the cup and its inner end secured to a rivet 35 engaging the base 33 and holding together the parts making up the heating element unit.

The base 33 is screwed into an insulating body 36 which may be formed of molded plastic or the like. The body 36 has threaded on its front end a knob 37, the rear portion 38 of said knob constituting a shoulder for engagement with a helical compression spring 39 carried on the body 36.

Slidably carried by the body 36 is a friction sleeve 40 having at its front end an outturned flange 41 for engagement with the bezel 24 of the holding device 20, and having at its rear end an inturned flange 42 engaging the coil spring 39. The friction sleeve 40 is thus normally held in a retracted or rearmost position on the igniting unit 21, as shown in Fig. 6. The friction sleeve 40 is provided with a plurality of lanced spring fingers 43 arranged to engage the inside of the shell 22 to frictionally retain the igniting unit 21 in the storage position of Fig. 3.

In accordance with the present invention means are provided to prevent inadvertent re-energization of the igniting unit or inadvertent movement of the unit to a deep position in the holder at the time that it is being replaced thereon for storage. This means, in the embodiment of the invention shown in Figs. 1 through 9, is carried by the igniting unit, and comprises a stop mechanism associated with the knob 37 and with the friction sleeve 40. The stop mechanism comprises a locking plate or dog 44 and a reset plate 45, both being pivotally carried on a shaft 46 held in threaded portions 47 and 48 of the body 36 to which the knob 37 is screwed. The locking plate 44 has an open slot 49 which accommodates the shaft 46, and said plate is held captive by a pin 50 mounted on the igniting unit body 36 through bores 51, and passing through a rectangular opening 52 in the plate.

Referring to Figs. 1 and 2, the locking plate 44 has a shoulder portion 53 adapted to engage a lug 54 extended inwardly from the flange 42 of the friction sleeve 40 and preferably made integral therewith.

The plate 44 may be swung to a releasing position wherein the shoulder portion 53 clears the lug 54, as indicated in Figs. 3, 4 and 5, such movement being pivotal about the shaft 46. Normally the locking plate 44 is urged in a counterclockwise direction about the shaft 46 by a coil spring 55 carried on the shaft and engaging the plate as shown.

The reset plate 45 is pivotally movable about the shaft 46 and is normally urged in a clockwise direction about the shaft by a coil spring 56. At its rear end the reset plate 45 has a laterally extended lug 57 adapted to engage either of two shoulders 58 and 59 provided on the rear end of the locking plate 44. By the provision of the slot 49 in the locking plate 44 the latter may be shifted longitudinally to provide for engagement between the lug 57 and one or the other of the shoulders 58 and 59.

The reset plate 45 has a depending lug 60 disposed near the shaft 46 and adapted to engage a forwardly extending finger 61 carried by the flange 42 of the friction sleeve 40, said finger being preferably integral with the flange.

Operation of the improved stop mechanism of this invention is as follows: Normally the parts are in the positions shown in Fig. 6 when the igniting unit is out of the holding device. For this condition a positive driving connection is established between the knob 37 and igniting unit body 36 on the one hand, and the friction sleeve 40 on the other hand. The sleeve 40 cannot be shifted forward or to the right as viewed in Fig. 6 to compress the spring 39 because of engagement of the shoulder portion 53 of the locking plate 44 with the lug 54 on the friction sleeve 40.

When the igniting unit is being replaced in the holding

device, see Fig. 1, engagement of the friction sleeve 40 with the shell 22 of the holding device will not appreciably shift the friction sleeve in the igniting unit body or appreciably compress the spring 39, due to the restraint imposed by engagement between the shoulder 53 and lug 54. Thus as the igniting unit is forced inwardly in the holding device it will be halted in its shallow position by engagement between the flange 41 of the friction sleeve and the bezel 24 of the holding device, see Fig. 2. A slight shifting of the locking plate 44 will take place, said plate being shifted forwardly until halted by its engagement with the pin 50 and shaft 46. This will be accompanied by a slight movement of the friction sleeve 40, and a slight compression of the spring 39. The locking plate 44 in shifting forward will disengage its shoulder portion 53 from the lug 57 of the reset plate 45, and accordingly the restraint imposed on the locking plate, preventing its counterclockwise movement by the reset plate 45, will be terminated. Continued pressure on the igniting unit however will maintain the locking plate 44 in its locking position by virtue of engagement between the shoulder 53 and lug 54, and the igniting unit will be maintained in shallow position. Energization of the heating coil 34 thereof will thus be prevented at this time. When pressure is removed from the knob 37 of the igniting unit, see Fig. 3, the spring 39 will expand slightly, shifting the body 36 and knob 37 of the igniting unit forward. Upon this occurring, the locking plate 44 will be disengaged from the lug 54 under the action of the spring 55 because of cessation of restraint of the plate by separation of the shoulder portion 53 from the lug 54 and by virtue of the disengagement between the shoulder 58 of the locking plate and the lug 57 of the reset plate. The counterclockwise movement of the locking plate 44 will be halted by engagement of the shoulder portion 59 thereof with the lug 57 on the reset plate 45. Thus, as shown in Fig. 3, the parts of the stop mechanism are so positioned as to permit the igniting unit to be fully depressed or inserted in the holder 20, upon any subsequent pressure on the knob 37, to effect energization of the heating coil 34. Such action is depicted in Fig. 4. Upon the igniting unit being so shifted in energizing position, the forwardly extending finger 61 of the friction sleeve 40 will by virtue of its engagement with the shoulder 60 of the reset plate have swung the plate counterclockwise to a lower position wherein the lug 57 thereof is below the shoulder 58 of the plate 44. Upon this occurring the spring 55 engaging the locking plate 44 will shift the latter rearward or to the left as viewed in Figs. 4 and 5, causing the shoulder portion 58 of the locking plate to be again disposed above and in engagement with the lug 57 of the reset plate 45.

Upon the heating coil attaining its proper degree of incandescence the heat imparted to the bimetallic clips 29 will separate them and release the igniting unit for return to shallow storage position shown in Fig. 3 under the action of the coil spring 39. The parts of the stop mechanism however will not be as shown in Fig. 3, but instead will occupy the position shown in Fig. 6, the action of the coil spring 56 being stronger than that of the coil spring 55 and overcoming the latter whereby the reset plate 45 and locking plate 44 will be shifted as a unit in the clockwise direction, bringing into engagement the shoulder 53 on the locking plate and the lug 54 on the friction sleeve 40.

The igniting unit is now ready to be removed from the holding device for use, and when it is replaced in the holding device the procedure outlined above will take place whereby the igniting unit will be prevented from movement deep into the holding device to cause re-energization of the heating coil.

Another embodiment of the invention is shown in Figs. 11 through 13. The cigar lighter shown in these figures comprises a holding device 62 carrying a removable igniting unit 63, said holding device comprising a shell 64

having a transverse rear end wall 65 carrying electrical terminal means 66. The shell 64 at its front end has a bead or bezel 67 for engagement with the front surface of the panel, and on its rear portion carries a nut 68 engaging a member 69 having a pair of oppositely disposed forward extensions 70 for engagement with the rear surface of the panel.

Within the shell 64 an ejector mechanism is provided comprising forwardly extending arms 71 carried by an annular base 72 engageable by a helical compression spring 73 located in the rear portion of the shell 64. The front ends of the arms 71 are adapted to engage a circular plate 74 on the igniting unit 63, to hold the latter in a shallow storage position in the holder, as determined by engagement of a spring finger 75 of the shell 64 with a shoulder 76 of the igniting unit.

The holding device has bimetallic spring clips 77 for engagement with a metal cup 78 in which a heating coil 79 is carried.

In accordance with the invention a stop mechanism is provided on the holding device 62, being associated with one of the arms 71 and with the shell 64 for the purpose of preventing the arm from being depressed at the time that the igniting unit 63 is being inserted in the holder, thereby to prevent inadvertent energization of the igniting unit. This stop mechanism is generally similar to that already described above, with a few minor changes.

As shown in Figs. 12 and 13 the stop mechanism comprises a mounting bracket 80 secured by a rivet 81 to the lowermost arm 71 of the holding device. The bracket 80 has a pair of depending arms 82 carrying a shaft 83 on which there is pivotally mounted a locking plate 84, and also a reset plate 85. The locking plate 84 is provided with an open ended slot similar to the slot 49 shown in Fig. 8 in the locking plate 44. The plate 84 is held captive against movement to the rear or left as viewed in Fig. 11 by engagement of shoulder portions 86, 87 and 88 with a lug 89 on the rear end of the reset plate 85, and also by engagement between the top edge 90 of the locking plate and a depending finger 90 on the shell 64.

The shaft 83 carries a pair of coil springs 92 and 93 engaging a pin 94 passing through the depending arms of the bracket 80. The spring 92 engages the locking plate 84 and tends to swing said plate counterclockwise; the spring 93 rests in a notch 95 in the reset plate 85, and tends to swing the reset plate in a clockwise direction. Clockwise movement of the reset plate is restrained by a lug 96 which is integral with the mounting bracket 80.

Referring to Fig. 11 the locking plate 85 has a shoulder portion 97 adapted to engage the depending finger 95 of the shell 64 to prevent rearward or inward movement of the arms 71 engaging the igniting unit 63.

After disengagement of the shoulder portion 97 from the finger 91, the locking plate and reset plate may be shifted to the rear or to the left as viewed in Fig. 11 together with the forwardly extended arm 71 in consequence of movement of the igniting unit 93 to energizing position. When this position is attained a lug 98 on the reset plate will engage a pin 99 projecting inward from a housing 100, causing a slight counterclockwise movement of the reset plate to bring the lug 89 thereof below the shoulder portion 87 of the locking plate.

The operation of the stop mechanism in Figs. 11, 12 and 13 is essentially similar to that already described above, the coaction between the locking and reset plates being identical to that above explained. The stop action is effected by engagement of the shoulder portion 97 of the locking plate with the finger 91 of the holding device shell 64. Engagement of the lug 98 with the pin 99 effects the same action as the engagement between the lug 60 and finger 61 shown in Fig. 5.

It will be understood that when the igniting unit 63 is being replaced on the holding device the stop mechanism will prevent the igniting unit from being fully inserted

to cause undesirable re-energization of the heating coil. After removal of pressure from the igniting unit it may thereafter be fully depressed or shifted to energizing position as a consequence of the stop mechanism being shifted to its releasing position, as shown in Fig. 11. Upon removal of the igniting unit 63 for use the locking plate 84 and reset plate 85 will assume the positions shown in Figs. 1 and 6.

Another species of the present invention is disclosed and claimed in my copending application Serial No. 273,219 filed February 25, 1952.

Claims generic to the species of my invention illustrated herein are contained in my copending application Serial No. 122,199 filed October 19, 1949, now Patent No. 2,657,297 dated October 27, 1953.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A wireless type cigar lighter comprising a holder having an energizing circuit; an igniting unit removably carried by the holder, said unit having a heating element for energizing from the circuit of the holder; a mechanism including a manually operable carrying knob on the igniting unit for closing said circuit through the heating element when the knob is moved inward on the holder; automatic means normally rendering the said mechanism inoperative to close said circuit when the igniting unit is being replaced on the holder; and means rendering said automatic means inoperative in response to removal of the reinserting force from the said knob whereby subsequent inward movement of the knob will effect a closing of the said circuit.

2. An electric cigar lighter comprising a holder; an igniting unit mounted on the holder and axially insertable therein and removable therefrom for use, said igniting unit having a knob adapted to have force applied to it by which the igniting unit is manually removed from and returned to the holder in normal, open-circuit condition, said knob being manually movable axially inward toward the holder to close a circuit energizing the igniting unit; abutment means operative during the reinsertion of the igniting unit into the holder for positively limiting said inward movement of the knob to prevent the circuit from being inadvertently closed; and means operative upon removal of the reinserting force applied to the knob, for rendering inoperative said abutment means whereby the knob may be shifted inward upon re-application of force to it, to close said circuit.

3. In a cigar lighter of the removable igniting unit type, an igniting unit having resilient means normally positioning the unit in a receptacle in normal, open-circuit position and yielding to permit movement of the igniting unit to closed-circuit position, said resilient means including a sleeve movable on the igniting unit and having abutting relation with the receptacle; means temporarily restricting movement of said sleeve relative to the igniting unit for preventing inadvertent movement of the latter to closed-circuit position when the unit is being manually returned to normal, open-circuit position after being removed from the receptacle; and means, responsive to the subsequent release of the force returning the igniting unit, for rendering said restricting means inoperative and permitting movement of the igniting unit to closed-circuit position upon the reapplication of force thereto.

4. In a cigar lighter of the type described having an igniter and a receptacle therefor, a spring operated member positioning the igniter in open-circuit location on the receptacle and yielding to permit the igniter to move to closed-circuit location thereon; means positively stopping said yielding movement during the manual return of the unit to the receptacle; and means responsive to the removal of the manual returning force for rendering said

stopping means inoperative and permitting movement of the igniter to closed-circuit position.

5. In a cigar lighter of the type described having an igniter and a receptacle therefor, a spring-operated member positioning the igniter in open-circuit location on the receptacle and yielding to permit the igniter to move to closed-circuit location thereon; means positively stopping said yielding movement of the member during the manual return of the igniter to the receptacle; means responsive to the removal of the manual returning force for rendering said stopping means inoperative and permitting movement of the igniter to closed-circuit position; and means operated by said movement of the igniter to closed-circuit position for conditioning the stopping means for operation when the igniter returns to open-circuit position.

6. A wireless type cigar lighter comprising a holder having an energizing circuit; an igniting unit removably carried by the holder, said unit having a heating element for energization from the circuit of the holder, and having mechanism including a manually operable carrying knob for closing said circuit through the heating element when the knob is moved inward on the holder; automatic means normally rendering the said mechanism inoperative to close said circuit when the igniting unit is being replaced on the holder, said knob moving inward on the holder during such replacement; and means rendering said automatic means inoperative in response to removal of pressure from the knob.

7. A wireless type cigar lighter comprising a holder having an energizing circuit; an igniting unit removably carried by the holder, said unit having a heating element for energization from the circuit of the holder, and having mechanism including a manually operable carrying knob for closing said circuit through the heating element when the knob is moved inward on the holder; yieldable means for normally holding the knob in an outward position on the holder; automatic means normally rendering the said mechanism inoperative to close said circuit when the igniting unit is being replaced on the holder, said knob moving inward on the holder during such replacement, against said yieldable means; and means rendering said automatic means inoperative in response to outward movement of the knob by said yielding means after removal of pressure from the knob, whereby subsequent inward movement of the knob will effect a closing of the said circuit.

8. A wireless type cigar lighter comprising a holder; an igniting unit removably carried by the holder, said unit having a heating element movable between shallow storage and deep, energizing positions on the holder, and having mechanism including a manually operable carrying knob for shifting the heating element from storage to energizing positions; switch means for closing a circuit through the heating element when the latter is in energizing position; yieldable means for normally holding the knob in an outward position on the holder; automatic means normally rendering said mechanism inoperative to shift the heating element past storage position when the igniting unit is being replaced on the holder, said knob moving inward on the holder during such replacement, against said yieldable means; and means rendering said automatic means inoperative, when the heating element is in storage position, in response to outward movement of the knob by said yielding means after removal of pressure from the knob, whereby subsequent inward pressure on the knob and inward movement thereof will shift the heating element to energizing position and energize the same.

9. In a wireless cigar lighter of the type having a holder and an igniting unit removably carried by the holder, said unit having a heating element movable between shallow storage and deep, energizing positions on the holder, and having mechanism including a manually operable carrying knob for shifting the heating element from storage to energizing positions, and said cigar lighter

having yieldable means for normally holding the knob in an outward position on the holder, the improvement which comprises: automatic means normally rendering said mechanism inoperative to shift the heating element past storage position when the igniting unit is being replaced on the holder, said knob moving inward on the holder during such replacement, against said yieldable means; and means rendering said automatic means inoperative, when the heating element is in storage position, in response to outward movement of the knob by said yielding means after removal of pressure from the knob, whereby subsequent inward movement of the knob will shift the heating element to energizing position and energize the same.

10. The invention as defined in claim 7, in which the yieldable means for holding the knob in outward position comprises a coil spring and a friction sleeve on the igniting unit, said friction sleeve being actuated by the spring and being frictionally engageable with the holder, and in which the said automatic means is carried by the igniting unit and includes a releasable stop operable on the friction sleeve.

11. The invention as defined in claim 7, in which the yieldable means for holding the knob in outward position comprises a coil spring and a movable member acted on by said spring and carried by the holder, and in which the automatic means comprises a releasable stop movably mounted on the holder and operable on said member.

12. The invention as defined in claim 7, in which the yieldable means comprises a movably mounted member and a spring for actuating said member, in which the automatic means comprises a pivoted releasable stop for restraining movement of said member, and in which the means rendering said automatic means inoperative comprises a pivoted reset member having the same pivotal axis as the stop, and comprises means for swinging said stop to an inoperative position in response to pivotal movement of the reset member.

13. The invention as defined in claim 12, in which the stop is mounted to have limited translational movement as well as pivotal movement, to enable the said movably mounted member to have a limited freedom of movement when restrained, thereby to permit limited inward and outward movement of the knob when the automatic means is operative.

14. The invention as defined in claim 12, in which there are springs associated respectively with the pivoted stop and reset member, in which the stop and member have portions abutable with each other, and in which the springs act in opposite directions, the spring for the reset member being the stronger.

15. A wireless type cigar lighter comprising a holder having a recess at its front, and having an energizing circuit; an igniting unit removably carried in the recess of the holder, having a heating element for energization from the circuit of the holder, and having a knob to enable it to be manipulated, said unit being movable between a shallow storage position and a deep energizing position in the recess; a friction sleeve axially movable on the igniting unit and shaped to be received in the well of the holder to position the unit therein; a spring urging the friction sleeve to a rearward position on the igniting unit; automatic stop mechanism blocking the friction sleeve against forward movement on the igniting unit when the latter is being replaced in the well of the holder whereby said unit cannot go beyond its shallow position; and means rendering said stop mechanism inoperative upon removal of pressure from the knob of the igniting unit after the latter has been placed in shallow position in the holder whereby subsequent operating pressure on the knob will shift the igniting unit to its deep energizing position.

16. The invention as defined in claim 15, in which the stop mechanism comprises locking and reset members pivotally mounted on a common axis, said members and

9

friction sleeve having means including abutting portions to selectively control their movements, and in which the means rendering the stop mechanism inoperative includes a spring acting on the locking member, and includes means providing for limited translational movement of said member.

17. A wireless type cigar lighter comprising a holder having a recess at its front, and having an energizing circuit; an igniting unit removably carried in the recess of the holder, having a heating element for energization from the circuit of the holder, and having a knob to enable it to be manipulated, said unit being movable between a shallow storage position and a deep energizing position in the recess; a spring-urged member on the holder, engageable with the igniting unit to move the latter to or yieldably hold it in its shallow storage position; automatic stop mechanism, blocking the spring-urged member against rearward movement on the holder when the igniting unit is being replaced in the well whereby said unit cannot go beyond its shallow position; and means rendering said stop mechanism inoperative upon removal of pressure from the knob of the igniting unit after the latter has been placed in shallow position in the holder, whereby subsequent operating pressure on the knob will shift the igniting unit to its deep energizing position.

18. The invention as defined in claim 17, in which the

10

stop mechanism comprises locking and reset members pivotally mounted on a common axis carried by the spring-urged member, in which there are means including abutting portions on the holder and the said members to selectively control the movements of the members, and in which the means rendering the stop mechanism inoperative includes a spring acting on the locking member, and includes means providing for limited translational movement of said member with respect to the reset member.

References Cited in the file of this patent

UNITED STATES PATENTS

15	Re. 21,870	Lehmann -----	Aug. 5, 1941
	1,736,544	Mead -----	Nov. 19, 1929
	2,219,548	Johnson -----	Oct. 29, 1940
	2,223,654	Ashton -----	Dec. 3, 1940
	2,224,034	Lehmann -----	Dec. 3, 1940
20	2,243,639	Lehmann -----	May 27, 1941
	2,276,215	Lehmann -----	Mar. 10, 1942
	2,288,005	Lehmann -----	June 30, 1942
	2,319,687	Johnson -----	May 18, 1943
	2,386,168	Pattberg -----	Oct. 2, 1945
25	2,514,171	Waltner, Jr. -----	July 4, 1950
	2,652,477	Johnson -----	Sept. 15, 1953
	2,657,297	Johnson -----	Oct. 27, 1953