Nov. 7, 1950 E. ELLIS 2,528,583

CIGARETTE LIGHTER

Filed Dec. 15, 1947

Fig. 1

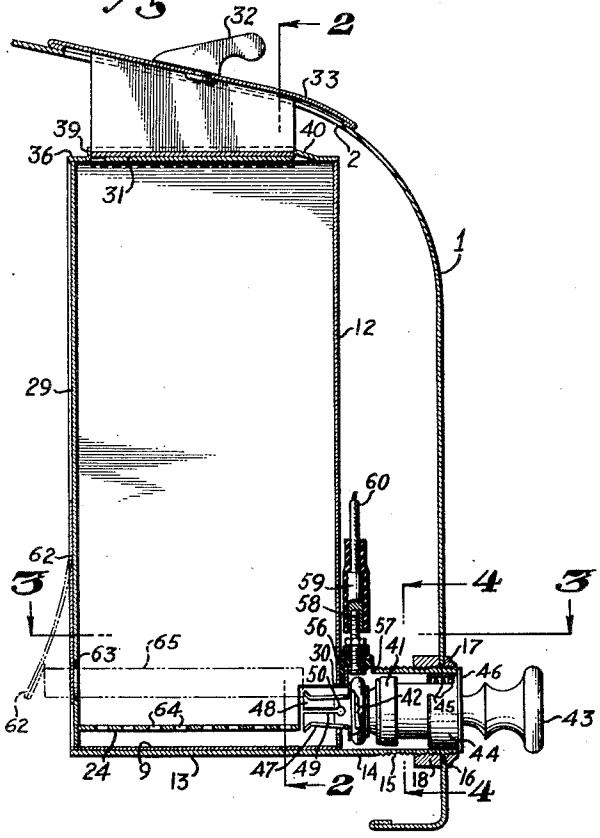


Fig. 2

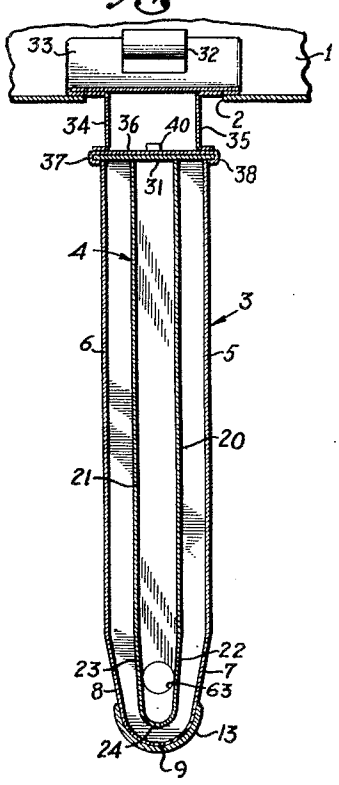


Fig. 3

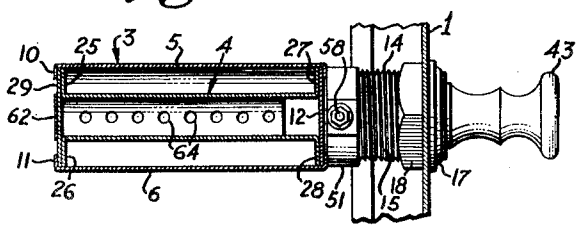
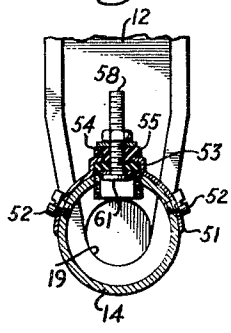


Fig. 4



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CIGARETTE LIGHTER

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2 Claims. (Cl. 312—86)

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The present invention relates to cigarette lighters.

The invention has for an object a device which may be manually actuated to extract a cigarette from a magazine in ignited condition.

A further object is the provision of a cigarette lighter which is easily installed behind the instrument panel of an automobile, which does not mutilate the instrument panel, and which lighter is attractive in appearance, easily operated, and fool-proof.

A further object is the provision of a cigarette lighter which includes a magazine for cigarettes, together with an igniter, wherein the igniter is adapted, when actuated, to select a cigarette from the magazine and remove said cigarette in a lighted condition. The igniter holds the lighted end of the cigarette and all the operator need do is place the opposite end between the lips to release the igniter from cigarette engagement.

Considerable danger is entailed in driving an automobile when the driver reaches into his pocket to remove a package of cigarettes as the driver instinctively looks at the cigarette package instead of watching the road. Furthermore, the driver must light the cigarette and this further diverts attention from driving. With the present invention, the driver may keep his eyes entirely on the road, and by feel, push inwardly upon an igniter, which will perform a service—that of producing a cigarette in a lighted condition. Thus, the driver's attention is not diverted.

The invention has for further objects a device which is inexpensive in cost of manufacture, and attractive in appearance.

With the above mentioned and other objects in view, the invention consists in the novel and useful provision, formation, construction, association, and relative arrangement of parts, members and features, all as shown in one embodiment in the accompanying drawing, described generally, and more particularly pointed out in the claims.

In the drawing:

Figure 1 is a vertical view of the device of the invention shown installed behind an instrument panel in a motor vehicle,

Figure 2 is a fragmentary vertical sectional view on the line 2—2 of Figure 1,

Figure 3 is a sectional view on the line 3—3 of Figure 1, and,

Figure 4 is a sectional view on the line 4—4 of Figure 1.

Referring now to the drawing, I have shown an instrument panel 1. Usually this panel carries various instruments, such as a speedometer, clock, etc., and is provided with a curved or sloping top portion which sometimes is formed to house an ash receiver. The present invention is adapted to be positioned rearwardly of the instrument panel as shown in Figure 1. However, the sloping top of said panel may be slotted, as shown at 2, so as to permit withdrawal of a magazine

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adapted to hold cigarettes, and as hereinafter detailed.

The device of the invention includes a casing 3 formed to receive and house a magazine 4, and in the practice of the present invention, the magazine is adapted to hold a pack of cigarettes, usually twenty cigarettes. In the present embodiment, the casing 3 is provided with two side walls 5 and 6, which are substantially parallel in part and converge at 7 and 8, merging into a curved wall portion 9. The side walls are provided with inturned flanges at 10 and 11, thus leaving therebetween an elongated slot which communicates with the interior of the casing. The casing is provided with a front wall at 12. The rounded portion 9 of the casing is reinforced, at 13, by a split annulus, which annulus merges with a tubular portion 14 functioning as a socket member, as hereinafter detailed. The tubular portion 14 extends beyond the front wall 12, and is screw-threaded in part at 15. It is intended that the screw-threaded part should be passed through a hole 16 in the instrument panel and thereafter this portion is locked between two nuts 17 and 18 positioned on opposite sides of the instrument panel and carried on the screw-threads 15. This, of course, stabilizes the casing, in the well understood manner. The front wall 12 of the casing is provided with a bore 19 lying in the axis of the tubular portion 14 (see Figure 4).

The magazine 4 has two substantially parallel side walls 20 and 21 which converge at 22 and 23 and are joined together by a curved wall 24. The purpose of the convergence is to direct a cigarette which lies between the walls onto the curved portion 24. The sides are provided with end right-angled flanges 25, 26, 27 and 28. A wall 29 is secured between the flanges 25 and 26 and closes one end of the magazine. The opposite end of the magazine is left open. However, the flanges 27 and 28 terminate short of the curved wall 24 as, for instance, illustrated in Figure 1 at 30. A top wall 31 is provided for the magazine and this top wall overlies the side flanges.

A handle 32 is mounted upon a plate 33 adapted to overlie slot 2 and conform to the general curvature of the sloping portion of the instrument panel 1. The plate 33 is provided with two spaced-apart depending members 34 and 35 which are secured to a plate 36 having two substantially parallel, returnedly bent side portions 37 and 38 to provide channel guideways for reception of the top 31 therebetween. The top wall 31 is provided with an upstanding portion 39 and with a depressible tongue 40. Thus, when the top plate 31 is moved within the guideways, movement is toward the stop 39 and when reached, the tongue 40 will spring into the position shown in Figure 1 and the magazine will be locked to the depending members 34 and 35.

The igniter is shown at 41. No particular type of igniter is contemplated, although the arrangement is such as to provide a body adapted to

enclose an igniter head 42 which is generally in the form of a coil of wire adapted to be electrically energized to cause the coil to incandesce. The body is provided with a handle 43. The construction of the present invention is such that when the handle 43 is pushed inwardly, contact is made with a source of electrical supply for the purpose of causing the coil to incandesce and upon release of the handle, the same will spring outwardly, thus breaking the electrical circuit to the coil. Such action is generally accomplished in igniters by providing a sleeve 44 which surrounds the body, and confined between the sleeve and the body is a coil spring shown at 45. The sleeve has an annular flange 46 adapted to engage the end of the socket member 14. As a consequence, an inward push upon the handle 43 compresses the spring 45. The igniter is provided adjacent to and outwardly extending from the coil 42, with a cigarette receiving portion 47. Such portion is in the form of a tapered tube provided with a flared mouth portion 48, with both the flared mouth and the tube provided with inwardly extending slots 49. I may provide four of said slots although the number is not important and each slot terminates in an enlarged bore 50.

The socket member adjacent the front wall 12 is provided with an electrode clamp 51 which is conveniently held to the socket member 14 by screws 52. The clamp has a portion 53, substantially flat and provided with an enlarged bore 54, within which bore and positioned on either side of the portion 53 is insulation 55. The insulation may be in the form of a ferrule. Insulation is provided at 56 between the end wall 12 and a bore 57 in the socket member. A screw 58 extends through the insulation 56, the ferrule 55, and is adapted through a connector 59 to connect with wire 60 which, in turn, leads to a source of current supply. The screw 58 has a head 61 which lies in the path of the body of the igniter. As the socket is grounded to the source of current supply when the igniter body contacts the head 61, an electrical path is completed to the igniter coil 42.

A leaf spring 62 is secured at one end to the wall 29, and the free end normally closes an opening 63 in said wall. This opening is eccentric to the axis of the socket 14. In addition to the foregoing, the curved wall 24 is provided with an aligned series of spaced perforations 64.

The operation, uses and advantages of the invention just described are as follows:

It is intended that the magazine should be removed from its casing by an upward pull upon handle 32 whereupon the magazine may be loaded with cigarettes, the cigarettes being in a stack arranged one upon the other. The converging wall portions 22 and 23 at all times direct a single cigarette onto the curved portion 24 of the magazine. As cigarettes now on the market are substantially uniform in diameter, the cigarette received on the curved portion 24 will lie on the axis of the socket 14 and likewise on the axis of the cigarette engaging part 47. The next ascending cigarette, as indicated in dotted lines at 65, is in axial alignment with the bore or opening 63. Inward movement of the igniter will cause the cigarette lying on the curved portion 24 to enter the cigarette receiving portion 47 and as the coil 42 is energized, incandescence of said coil will ignite the tobacco in the end of said cigarette. The opening 50 forms an air passage to the cigarette to initially maintain combustion of the

tobacco. Movement outwardly of the igniter will carry with it the cigarette whereupon the smoker may place the unlighted end of the cigarette between the lips. The cigarette shown at 65 may engage the upper edge of the bell or flared mouth 48 which will move the same against the leaf spring 62 and flex the same to the end that the cigarette is not crushed. However, upon withdrawal of the igniter with its cigarette, the cigarette at 65 would be moved back into the magazine under leaf spring action to drop upon the curved wall 24.

Tobacco that may accumulate in the magazine will pass through the perforations 64 and be received upon the curved wall portion 9 of the casing. Thus, tobacco that escapes from the cigarette wrapping will not interfere in the least with the movement of cigarettes within the magazine.

I claim:

1. A device of the character as disclosed including a magazine for containing cigarettes, an igniter slidably mounted in axial alignment with the lowermost cigarette in said magazine at one end of said cigarette, a tubular gripping member on the inner end of said igniter, a spring engaging said igniter for normally holding said igniter in its outermost position with its gripping member at the adjacent end of said lowermost cigarette in said magazine, an electric lighting circuit including an igniter coil in said gripping member of sad igniter, and a switch actuated by said igniter to be closed upon pressing said igniter inwardly against the tension of said spring until said tubular gripping member is passed over the adjacent end of said lowermost cigarette and grips said cigarette over said end, with said end adjacent said igniter coil, for igniting said end of said cigarette, and said igniter upon being released being moved outwardly by said spring for withdrawing said cigarette from said magazine with the gripped end of said cigarette lighter by said igniter coil.

2. A device as characterized by claim 1 in which the magazine is provided with an opening in a wall thereof, through which opening the outer end of the next lowest cigarette in the magazine may be projected when the inner end of said cigarette is engaged and forced rearwardly by the inner end of the tubular gripping member, when said member is forced inwardly over the adjacent end of the lowermost cigarette in said magazine, in gripping contact with said cigarette, upon pressing said igniter inwardly, and means for engaging said outer end of said next lowest cigarette in the magazine and forcing said cigarette through said opening back into the magazine, when the igniter is drawn outwardly and the lowermost cigarette in said magazine is withdrawn lighted from the magazine by said igniter.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,917,952	Davidson	July 11, 1933
2,030,011	MacLennan	Feb. 4, 1936
2,123,779	Hite	July 12, 1938
2,177,188	Pengilly	Oct. 24, 1939

FOREIGN PATENTS

Number	Country	Date
246,912	Great Britain	of 1926