

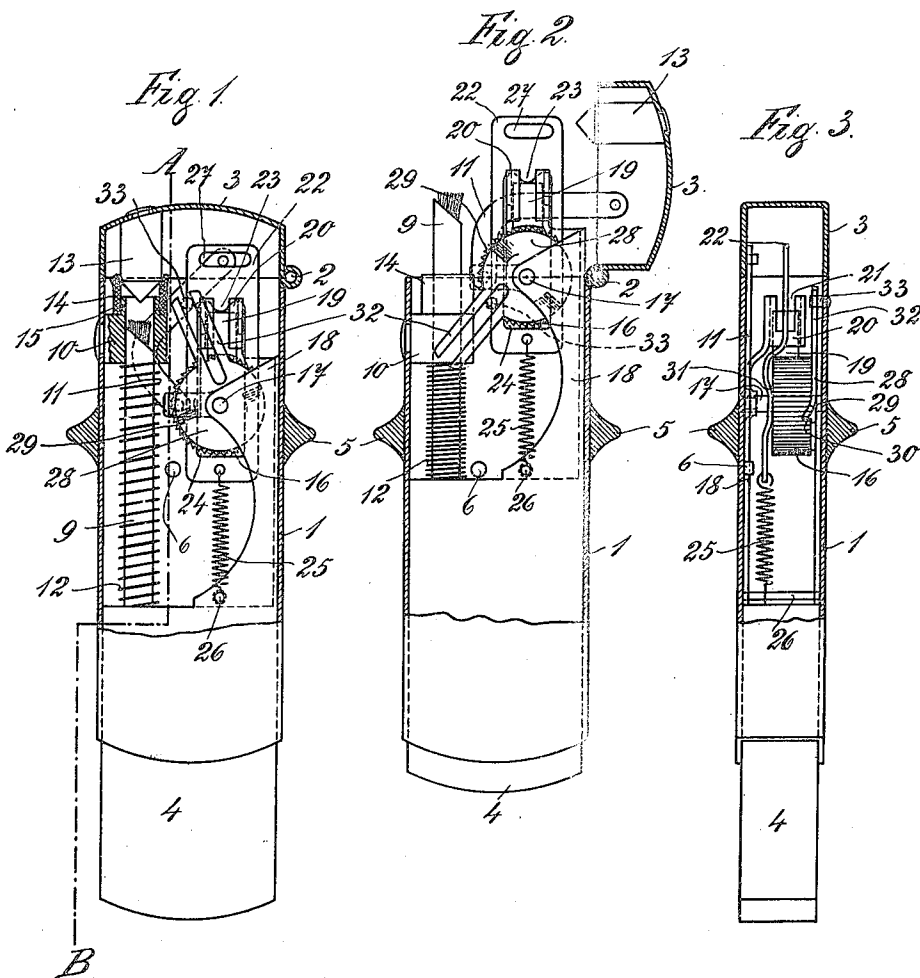
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LIGHTING DEVICE.

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1,045,683.

Patented Nov. 26, 1912.



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WLADIMIR DANIČEK AND CONSTANTIN ČERNOVSKÝ, OF PRAGUE, AUSTRIA-HUNGARY,
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LIGHTING DEVICE.

1,045,683.

Specification of Letters Patent.

Patented Nov. 26, 1912.

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To all whom it may concern:

Be it known that we, WLADIMIR DANIČEK, subject of the Emperor of Austria-Hungary, resident of Prague, Bohemia, Austria-Hungary, CONSTANTIN ČERNOVSKÝ, subject of the Emperor of Austria-Hungary, resident of Prague, Bohemia, Austria-Hungary, and GERHARD KLOTH, subject of the King of Prussia, resident of Treptow, near Berlin, Germany, have jointly invented an Improved Lighting Device, of which the following is a specification.

This invention relates to an improved lighting device particularly intended for lighting cigars, cigarettes and the like, and of the type in which two parts telescope the one within the other and which can be moved relatively to one another so as to open the cover and simultaneously ignite the wick.

The present invention has for its object to provide an improved construction of such lighting devices as will be hereinafter fully described and claimed.

In order that the invention may be clearly understood, reference is made to the accompanying drawings, whereon:

Figure 1 is a vertical section of the lighting device, Fig. 2 is a view similar to Fig. 1 showing the lighting device when the parts are collapsed so as to open the cover and ignite the wick. Fig. 3 is a vertical section at right angles to Fig. 1 and taken on the line A—B of Fig. 1.

Referring to the drawings: The lighting device comprises an outer casing 1, to the upper end of which is pivoted at 2 a cover 3, and a fuel reservoir 4 adapted to slide within the outer casing 1. The outer casing 1 is provided externally with projections 5 or with a corrugated surface or with both, the projections 5 and the corrugations forming a finger grip whereby the lighting device may be readily manipulated. It will of

course be understood that the projections 5 or corrugations may pass entirely around the outer casing 1 or may be arranged only on opposite sides of the same and that, if desired, any suitable form of finger-grip may be provided such as a groove or ledge or the like.

The fuel reservoir 4 may be supplied with benzin or the like fuel by way of an opening which may be closed by means of a plug, the fuel reservoir 4 carrying a wick-tube 9 which is adapted to project through a guide 10 formed integral with or secured to the outer casing 1 and the reservoir 4 being connected to the cover 3 by means of an arm 11 pivoted at both ends, said arm limiting the downward movement of the reservoir 4 and its upward movement being counteracted by means of a spring 12 surrounding the wick tube 9 and bearing at one end against the upper end of the reservoir 4, and at the other end against the guide 10. When the reservoir 4 is pressed into the outer casing 1 against the action of the spring 12, the wick-tube 9 slides within the guide 10 and is projected therefrom and brought into igniting position, at the same time the cover 3 being opened by means of the arm 11. On the reservoir 4 being released, the spring 12 returns the reservoir 4 to its normal position, at the same time closing the cover 3 and withdrawing the wick tube 9, and as the cover 3 closes, means are provided for extinguishing the light. Said means comprises a plug 13 made integral with or secured to the cover 3, the lower end of said plug being conically formed and being adapted to wedge into the open end of a rubber or like packing-ring 14 which surrounds the tubular part 15 of the guide 10 so that when the cover 3 closes, the plug 13 cuts off the supply of air to the wick.

The igniting mechanism comprises a friction wheel 16 rotatably mounted on a spin-

dle 17 carried by an upward extension 18 of the fuel reservoir 4, a piece of pyrophoric material 19 being maintained in frictional contact with the friction wheel 16. The
 5 pyrophoric material which may be of flint or any suitable alloy, such as an alloy of cerium and iron, is arranged in a compartment 20 supported by the upward extension 18 of the reservoir 4, said compartment 20
 10 being slotted at 21 for the reception of the internal edge of a slotted plate 22, the internal edge of said slotted plate 22 having a projection or frog 23 adapted to bear on the pyrophoric material 19.

15 The plate 22 is slotted at 24 so as to slide easily over the spindle 17 and is connected at its lower end by means of a spring 25 with a pin 26 carried by the casing of the reservoir 4, the plate 22 being thus normally
 20 pulled downwardly so as to cause the frog 23 to press the pyrophoric material 19 into constant frictional contact with the wheel 16. The plate 22 is provided with an upper extension slotted or otherwise formed at 27
 25 so as to form a hand grip whereby when the cover 3 of the lighting device is opened, the plate 22 may be drawn upwardly against the action of the spring 25 and the pyrophoric material 19 thereupon released after
 30 which the same may be removed or renewed if required.

A pawl mechanism is provided for rotating the friction wheel 16, said pawl mechanism preferably comprising a toothed disk
 35 28 rotatably mounted on the spindle 17 of the friction wheel 16, the teeth 29 of said disk 28 being adapted to engage crown-ratchet teeth 30 formed on one of the side faces of the friction wheel 16, the teeth of
 40 the disk 28 and friction wheel 16 being held in engagement preferably by arching the plate 22 at 31, said arch under the action of the spring 25 of the plate 22 forcing the friction wheel 16 into contact with the disk
 45 28. The disk 28 is provided with a laterally projecting fork 32 the prongs of which are adapted to embrace a pin 33 projecting inwardly from the outer casing 1. The arrangement is such that when the reservoir
 50 4 is pressed upwardly from the position shown in Fig. 1 to that shown in Fig. 2, the disk 28 and friction wheel 16 are moved upwardly therewith, and the fork 32 of the disk 28 coacting with the pin 33 on the casing 1, the disk 28 is partially rotated into
 55 the position shown in Fig. 2, carrying with it the friction wheel 16 which contacting with the pyrophoric material 19 causes a spark to be generated which ignites the wick projecting from the wick tube 9 which
 60 at this moment has been raised above the packing ring 14, as shown at Fig. 2. When

the benzin reservoir 4 is released, the spring 12 returns the same to its original position together with the friction wheel 16 and disk 28, the teeth of the latter during the return movement of the disk riding over the side face of the friction wheel 16 and engaging in the next tooth of the latter.

It will be noticed that the arm 11 is so
 70 constructed that the latter fully clears the extension 18 of the reservoir 4 when the reservoir is pushed upwardly, so that the cover 3 may be fully opened and thereby any possibility of the latter becoming heated by
 75 the flame, is obviated while at the same time ready access is given to the plate 22 for the purpose of renewal of the pyrophoric material.

It will be readily understood that in ma-
 80 nipulating the lighting device, the thumb is applied beneath the bottom of the fuel reservoir 4, while the index and middle fingers are caused to grip the casing 1, the reservoir 4 being forced into the outer casing 1 by
 85 pressing the thumb against the reservoir while holding the fingers against the projections 5. By this arrangement the lighting device can be readily manipulated and moreover the cover may extend over the whole
 90 width of the casing as the casing is not clasped in the neighborhood of the cover when manipulating the device as was heretofore usual.

It will moreover be seen that by the im-
 95 proved lighting device the wick tube and igniting device are projected above the outer casing and are thus surrounded by free air thereby enabling the wick to be readily ignited.

It will of course be readily understood that the construction hereinbefore shown and described may be readily varied according to requirements without departing from the essence of the invention.

What we claim is:—

1. In combination with a lighting device of the type having an outer casing, a cover hinged thereto, and a fuel reservoir telescoping in said outer casing; a wick tube
 110 projecting from said reservoir, a guide carried by said outer casing and through which said wick tube slides, and means for igniting the wick.

2. In combination with a lighting device
 115 of the type having an outer casing, a cover hinged thereto, and a fuel reservoir telescoping in said outer casing; a wick tube projecting from said reservoir, a guide carried by said outer casing and through which
 120 said wick tube slides, an annular packing ring seated on said guide and adapted to surround the wick tube projecting through said guide, an internal conical plug carried

by said cover and adapted to wedge in said annular ring when the cover is closed, and means for igniting the wick.

3. In combination with a lighting device
5 of the type having an outer casing, a cover hinged thereto, and a fuel reservoir telescoping in said outer casing, a wick tube projecting from said reservoir, a guide carried by said outer casing and through which said
10 wick tube slides and a spring around the wick tube and tending to maintain said reservoir and outer casing apart, and means for igniting the wick.

In witness whereof we have hereunto set
our hands in the presence of witnesses. 15

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CONSTANTIN ČERNOVSKÝ.

GERHARD KLOTH.

Witnesses:

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