Feb. 4, 1936. L. H. BEST 2,029,697

LIGHTER

Filed Aug. 24, 1934

Fig. 1

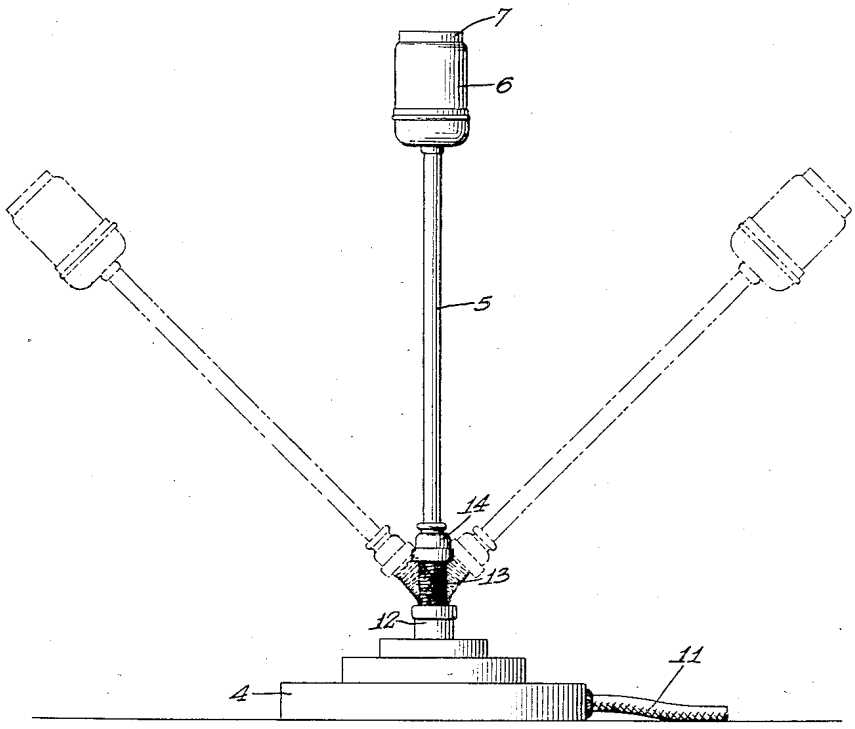


Fig. 2

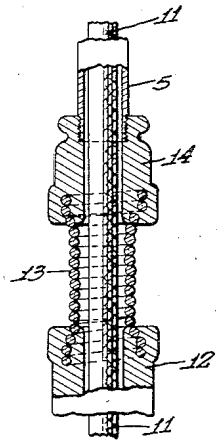
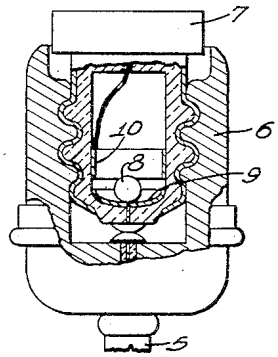


Fig. 3



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UNITED STATES PATENT OFFICE

2,029,697

LIGHTER

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Application August 24, 1934, Serial No. 741,290

3 Claims. (Cl. 219—32)

This invention relates to lighters and particularly that type used by smokers to light cigars, cigarettes and the like.

The principal object of this invention is to support the heating element of a lighter in a normal inoperative position from which it may be manually moved for automatically effecting operation thereof in a readily accessible position, and which when released will automatically return to the normal inoperative position.

Further objects are to provide a flexible part in the mounting for the element which will be arranged to return the element to normal position after manual movement thereof out of normal position; to include a gravity operated switch in the lighter to eliminate a manually operated switch; and to pass the wires leading to the element through the support thereof and the flexible part therein to conceal the wires and prevent binding thereof.

In the selected embodiment of the invention illustrated in the accompanying drawing

Fig. 1 is an elevation;

Fig. 2 is a detail vertical sectional view of the flexible mounting; and

Fig. 3 is a detail view partly in section of a heating unit suitable to be used in conjunction with the flexible mounting.

The lighter illustrated in the accompanying drawing includes a base 4, a tubular casing support 5 and a socket 6. The socket 6 is rigidly mounted upon the upper end of the support 5 and contains a heating unit 7 therein. The heating unit illustrated shows a metallic ball 8 normally resting in the bottom of a cup-shaped contact 9 and a ring contact 10. When the unit is tilted to an agle of approximately forty-five degrees the ball 8 will roll to the edge of the contact 9 and engage the contact 10 to close the circuit therebetween. A heating element is located at the top of the heating unit and is placed in the electrical circuit including the contacts 9 and 10 and the ball 8. Wires 11 leading from a main line enter the base and pass up therethrough and through the tubular casing support 5 to the heating unit.

A block 12 has cast thereinto one end of a coil spring 13 and a block 14 has the other end of the coil spring 13 cast thereinto. I prefer to make the blocks 12 and 14 out of aluminum as the heat required for casting aluminum is low enough not to seriously affect the temper and life of the coil spring 13. However, any other metal may be used which will give the same advantageous result. The coil spring is larger in diameter at its ends where it is cast into the blocks than in its central portion so that the metal can flow inside of the end portion of the spring to surround the end turns thereof for the purpose of better locking the blocks and spring together. The blocks 12 and 14 are provided with a central opening extending lengthwise thereof and in alinement with the opening in the coil spring 13. The wire 11 passes through the block 12 from the base 4 through the opening in the coil spring and through the opening in the block 14 and thence into the tubular casing support 5. The block 12 is rigidly mounted in the base 4 and the tubular casing support 5 is threadedly engaged with the block 14. The blocks 12 and 14 and the spring 13 constitute a flexible mounting for the support 5, socket 6 and heating unit 7 on the base 4.

The flexible mounting of my lighter enables the support, socket and heating unit to be tilted in any direction shown in broken lines in Fig. 1 which will cause the ball 8 to close the electrical circuit for the heating unit. Upon releasing the support, socket and unit when in the position shown in broken lines in Fig. 1 the flexible mounting will cause these parts to return to vertical position shown in full lines in Fig. 1 permitting the ball 8 to roll into the lower part of the cup-shaped contact 9 thereby automatically breaking the circuit for the heating unit. I prefer to make the base 4 out of a metal having considerable weight thereto so that the liability of the base being tilted from the table, counter or the like upon which it is resting will be minimized.

My invention provides a lighter which is positive in action and which will not remain lighted after the operator has used the lighter and walked away therefrom.

I have shown and described my invention in a specific form but I wish it to be understood that changes and alterations might be made therein and I therefore do not wish to be limited to the precise details set forth but desire to avail myself of such changes and alterations as fall within the scope of the following claim.

I claim:

1. In a lighter for igniting cigars, cigarettes and the like and adapted to be mounted on a counter or the like and including a heating element freely movable in any direction from a normal position to facilitate ignition of a cigar, cigarette or the like, a base sufficiently weighted to retain its position on the counter or the like when the heating element is moved from its normal position, a standard for the heating element, and a spring interposed between the lower part of the standard and the top of the base and con-

necting the standard to the base and urging the heating element into its normal position, the opposite ends of said spring being embedded in said base and said standard and encased therein whereby said end portions of said spring are retained against displacement upon flexing of said spring when said heating element is moved from its normal position.

2. In a lighter for igniting cigars, cigarettes and the like and adapted to be mounted on a counter or the like and including a heating element adapted to be inoperative when in a normal position and which is adapted to be rendered operative when moved from normal position, a base sufficiently weighted to retain its position on the counter or the like when the heating element is moved from its normal position, said base having a block on the upper side thereof, a standard for the heating element and having a block at the lower end thereof, and a spring for connecting the standard to the base and having enlarged end portions and adapted to urge the heating element into its normal position, said blocks being cast on the enlarged end portions of said spring to encase the end portions of said spring therein and thereby prevent displacement of said end portions upon flexing of said spring when said heating element is moved from its normal position, said blocks being made of a material having a relatively low melting point whereby the temper of the spring is not impaired when said blocks are cast thereon.

3. In a lighter for igniting cigars, cigarettes and the like and adapted to be mounted on a counter or the like and including an electrically operated heating element adapted to be inoperative when in a normal position and which is adapted to be rendered operative upon movement thereof from normal position, a base sufficiently weighted to retain its position on the counter or the like when the heating element is moved from its normal position, said base having a block on the upper side thereof, said base and block having a passage therein through which conductors for said electrically operated heating element are passed, a hollow standard for said heating element and having a hollow block at the lower end thereof, said conductors being passed through said block and standard to said heating element, and a coiled spring connecting the standard to the base and urging the heating element into its normal position, said spring having enlarged end portions cast in said blocks and encased therein to be retained against displacement upon flexing of said spring when said heating element is moved from its normal position, said conductors passing through said spring between said blocks.

LEON H. BEST.