

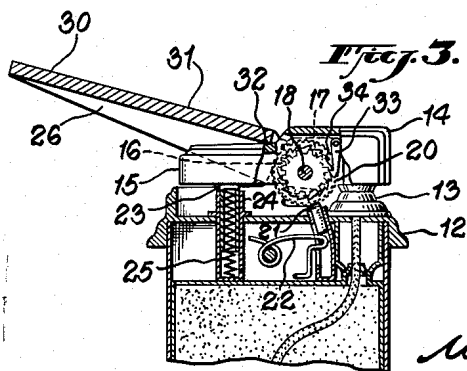
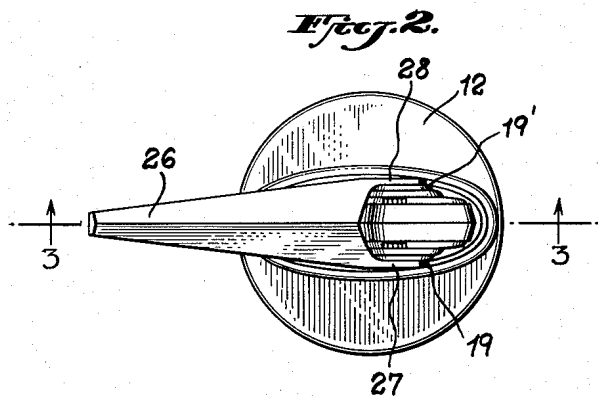
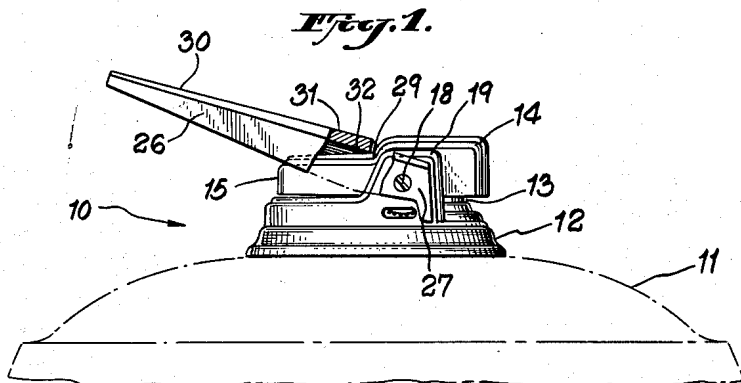
Feb. 7, 1956

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2,733,585

CIGAR LIGHTER ACTUATING MECHANISM

Filed Aug. 10, 1954



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2,733,585

**CIGAR LIGHTER ACTUATING MECHANISM**

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Application August 10, 1954, Serial No. 448,811

2 Claims. (Cl. 67-4.1)

This invention relates to the actuating mechanism of cigar and cigarette lighters of the pyrophoric type, and which are actuated by thumb or finger pressure applied while the user is holding the lighter in his hand. The invention aims primarily to promote the facile and effective actuation of lighters of the above type, and is especially advantageous in connection with lighters having bases or housings so large that it has been awkward and difficult for the user to apply effective manual pressure while holding the lighter in his hand as above mentioned.

In accordance with the invention, I provide in connection with a depressible wheel and closure cap actuating member such as has heretofore served as a finger-piece to which the manual pressure was applied, a manually depressible operating lever which is pivotally mounted at one side of the actuating member, said operating lever having an intermediate portion overlying and engageable with the actuating member and having a free end portion which extends out laterally beyond the actuating member. Even though the lighter base be of large lateral extent, as is frequently desired in table and desk lighters, the laterally extending outer end portion of the operating lever may be readily engaged and depressed by the thumb or finger of the user while holding the lighter in his hand, and the manual pressure thus applied will be multiplied as applied to the actuating member to promote facile, vigorous and effective actuation.

Other and more specific objects, features and advantages of the invention will appear from the detailed description given below, taken in connection with the accompanying drawings which form a part of this specification and illustrate by way of example the present preferred embodiment of the invention.

In the drawings:

Fig. 1 is a side elevation, with certain parts broken away of the cigar lighter having an actuating mechanism constructed to operate in accordance with the invention.

Fig. 2 is a top plan view of the device of Fig. 1.

Fig. 3 is a vertical section taken on the line 3-3 of Fig. 2, looking in the direction of the arrows.

The invention is illustrated in Fig. 1 as applied to a lighter 10 of the pyrophoric type having a relatively large base 11, shown only in dotted line since it may assume any specific form which may be desired for artistic or decorative purposes. This lighter 10 has a fuel receptacle 12 which may be a part of or insertible in the base or housing 11. Upon the receptacle 12 is mounted a burner 13, a closure cap 14, a depressible wheel actuating member 15 having teeth 16, the cap 14 having teeth 17 meshing with teeth 16 and being mounted for angular movement about an axle 18 which extends between ears 19, 19' projecting upwardly from the top of receptacle 12. A sparking wheel 20 is also mounted loosely on said axle 18. A flint 21 is shown as pressed into engagement with the surface of the sparking wheel by a spring 22. The above described specific parts are to be

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understood as merely typical of constructions known in the art, and accordingly are not described in greater detail.

The actuating member 15 is shown as provided with a downwardly projecting vertical pin 23 which is telescopically engaged in sliding relation with a cylindrical sleeve 24 extending upwardly from the receptacle 12, and is normally urged toward its upper idle position by a spring 25 as shown in Fig. 3. The closure cap 14 is also mounted for angular movement about axle 18 from its idle position, as shown, to a raised operative position. This closure cap is shown in Fig. 3 as carrying a pawl 33, which is spring pressed into engagement with ratchet teeth 34, carried by the sparking wheel 20. When the actuating member is depressed, the closure cap tilts upwardly to expose the burner, and hence the sparking wheel is rotated to produce a shower of sparks. When the actuating member is released the closure cap returns to its idle position.

In accordance with the invention a manually depressible operating lever 26 is provided which has at its inner end a pair of spaced ears 27 and 28 having holes through which extends the axle 18, thereby providing a pivotal mounting for said lever on the same side of the depressible wheel actuating member 15 as that on which the sparking wheel and burner are located. As shown, the closure cap 14 is positioned within the space 29 between these ears and is free to move between its idle and operative positions without contacting the lever itself. The outer end 30 of lever 26 is free and extends laterally outward beyond said actuating member, on the opposite side thereof with respect to the burner 13 and sparking wheel 20. The actual distance which this free end of the lever will extend out laterally beyond the actuating member will depend upon the size of base 11, and will be chosen so as to be suitable for convenient actuation by the finger of the user while holding the lighter in his hand. The intermediate portion 31 of lever 26 overlies the actuating member 15 and engages with the upper surface thereof as shown at 32.

In operation the user applies his operating finger at any convenient location along lever 26 and presses downwardly thereon. The lever will pivot around axle 18, thereby applying downward force, increased in magnitude by the amount of leverage involved, to the actuating member 15. Thus the actuating member will be depressed downwardly against the action of spring 25, thereby imparting rotation to the sparking wheel via rack 16, pinion 17, etc. Due to the increase in the magnitude of downward force applied to the actuating member because of the leverage involved, a more vigorous turning of the sparking wheel is promoted, thereby insuring an adequate spark production from small and facile finger pressure.

Although certain particular embodiments of the invention are herein disclosed for purposes of explanation, various further modifications thereof, after study of this specification, will be apparent to those skilled in the art to which the invention pertains. Reference should accordingly be had to the appended claims in determining the scope of the invention.

What is claimed and desired to be secured by Letters Patent, is:

1. A lighter of the character described, having a fuel receptacle, a burner mounted on the top of the receptacle, a depressible actuating member also mounted on the top of this receptacle on one side of the burner, a sparking wheel mounted for rotation on the receptacle and interposed between the burner and the actuating member, a closure cap overlying the burner and pivoted concentrically with the wheel, means interconnecting said actuating member, closure cap and wheel to rotate the latter to project sparks toward the burner and move said cap

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to expose the burner upon depression of the actuating member, and a manually depressible operating lever having one end portion which is pivotally mounted on the receptacle to swing about an axis spaced, in the direction of the burner, from the path of travel of the depressible actuating member and adjacent the wheel, said lever having an intermediate portion overlying and engageable with said actuating member to depress the latter upon depression of the lever and also having a free end portion extending out laterally beyond said actuating member on the opposite side thereof with respect to said burner and wheel.

2. A lighter of the character described, having a fuel receptacle, a burner mounted on the top of the receptacle, a depressible actuating member also mounted on the top of this receptacle on one side of the burner, a sparking wheel mounted for rotation on the receptacle and interposed between the burner and the actuating member, a closure cap overlying the burner and pivoted concentrically with the wheel, means interconnecting said actuating member, closure cap and wheel to rotate the latter

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to project sparks toward the burner and move said cap to expose the burner upon depression of the actuating member, and a manually depressible operating lever pivotally mounted on the receptacle coaxially with the sparking wheel, said lever having spaced inner end portions between which said wheel and closure cap are interposed and which are pivoted concentrically with the wheel and cap, said lever having an intermediate portion overlying and engageable with said actuating member to depress the latter upon depression of the lever and also having a free end portion extending out laterally beyond said actuating member on the opposite side thereof with respect to said burner and wheel.

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