March 30, 1948. B. TROUBH 2,438,727

AUTOMATIC LIGHTER

Filed May 21, 1945

Fig. 2

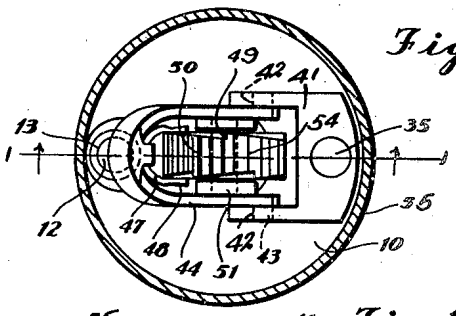

Fig. 4

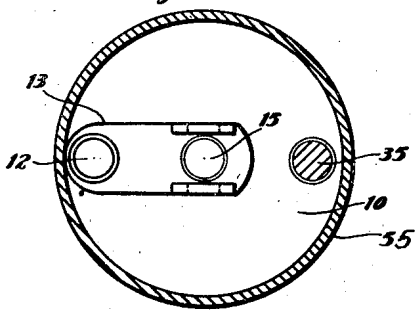

Fig. 1

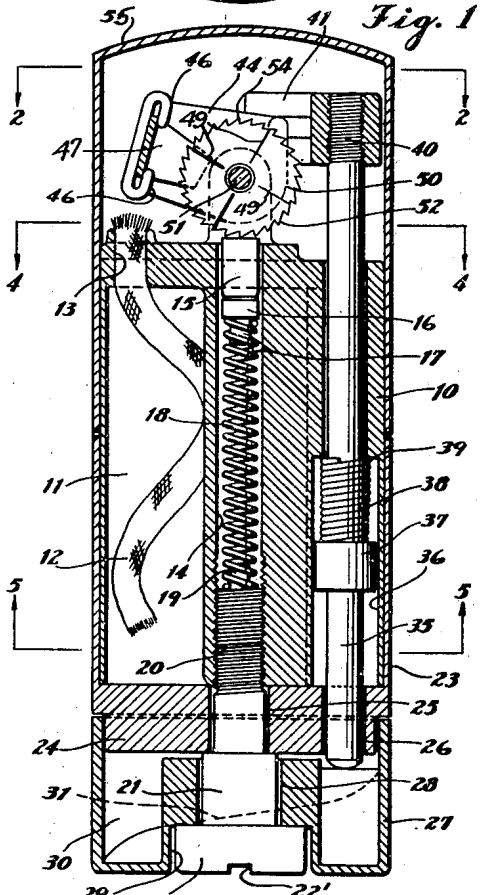

Fig. 5

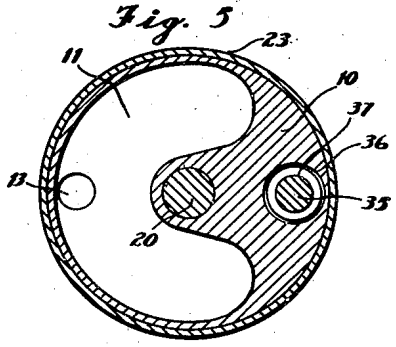

Fig. 6

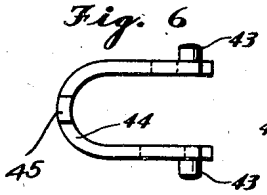

Fig. 8

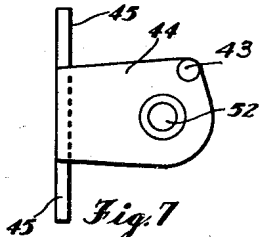

Fig. 7

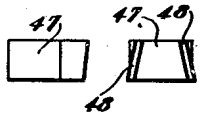

Fig. 9 Fig. 10

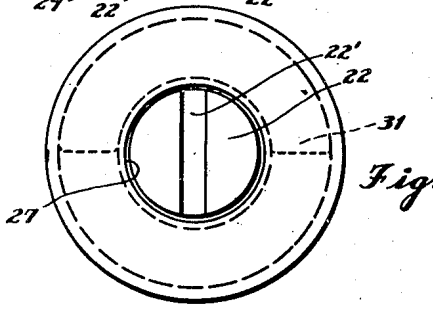

Fig. 3

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AUTOMATIC LIGHTER

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3 Claims. (Cl. 67—7.1)

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This invention relates to an automatic lighter, and more specifically to a lighter particularly adapted for use in lighting pipes, cigars, cigarettes or the like.

A primary object of this invention is the provision of an improved cigarette lighter adapted to be actuated from a point remote from the flint and steel normally used for igniting such a device, whereby soiling of the fingers or gloves on the igniter wheel, the wick, or other moving parts, is precluded.

An additional object of the invention is the provision of such a device particularly adapted to be actuated from a point at the opposite end thereof from the sparking mechanism.

A further object of the invention is the provision of such a device adapted to be operated by a cam-surfaced actuator in such manner as to impart a snap action to the ignition device to insure a relatively strong spark for igniting the wick.

Still another object of the invention is the provision of such a device which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture and assemble.

Other objects reside in the combinations of elements, arrangements of parts and features of construction, all as will be more fully pointed out hereinafter and shown and in the accompanying drawing wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawing:

Figure 1 is a longitudinal sectional view taken substantially through the center line of the device, or along the line 1—1 of Figure 2, as viewed in the direction indicated by the arrows.

Figure 2 is a sectional view taken substantially along the line 2—2 of Figure 1, as viewed in the direction indicated by the arrows.

Figure 3 is a bottom plan view of the device, certain concealed parts thereof being indicated in dotted lines.

Figure 4 is a sectional view taken substantially along the line 4—4 of Figure 1, as viewed in the direction indicated by the arrows.

Figure 5 is a sectional view taken substantially along the line 5—5 of Figure 1, as viewed in the direction indicated by the arrows.

Figure 6 is a top plan view of a constructional detail.

Figure 7 is a side elevational view of the device shown in Figure 6.

Figure 8 is a top plan view of an additional constructional detail.

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Figure 9 is a side elevational view of the device shown in Figure 8.

Figure 10 is an end elevational view of the device shown in Figure 8, as viewed from the right.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawing, the device of the instant invention includes a body portion generally indicated at 10 having a recess 11 therein forming a fuel reservoir in which is positioned a wick 12 extending upwardly through a suitable aperture 13 exteriorly of the body portion. The body is also provided with a bore 14 open at both extremities and adapted to carry at its upper extremity a flint 15 biased upwardly, as by a head 16, having a lug 17 thereon adapted to engage one end of a coil spring 18, the opposite end of which engages on a lug 19 carried by a threaded member 20 adapted to engage in the lower threaded extremity of the bore 14. The member 20 terminates in an enlarged portion 21 and a head 22 having a groove 22' therein for the accommodation of a screw driver or the like.

A thimble 23 having a base portion 24 is adapted to surround the lower portion of the body, closing recess 11 forming the fuel reservoir, and is provided with a pair of apertures 25 and 26. The aperture 25 surrounds an extending portion of the member 20 above the enlarged portion 21, whereby the portion 21, by its abutment with the base 24, serves to hold the thimble and the body in related assembly.

A tripping knob 27 having a centrally disposed aperture 28 therein surrounds the enlarged portion 21 of the member 20 and is provided with a recess 29 adapted to accommodate the head 22. A peripheral channel 30 extends interiorly of the tripping member 27 and is provided with a pair of cam-surfaces 31 oppositely disposed with respect to each other, the high portion of each cam member terminating in a substantially vertical drop adjacent which the low portion of the succeeding cam surface begins. Thus, it will be seen that the tripping member 27 is freely rotatable about the thimble 23, the enlarged portion 21 of the member 20 serving as an axis of rotation therefor, and the head 22 serving to hold the tripping member in related assembly with the body and the thimble.

A pin 35 extending through the aperture 26 extends upwardly into a bore 36 in the body 10 and is provided with a collar 37 adapted to en-

gage in the end of a compression spring 38 the opposite end of which seats against the edge of a reduced portion 39 of the bore. The upper extremity of the pin 35 terminates in a threaded extremity 40 to which is threadedly secured a tripping fork 41. Thus, it will be seen that as the tripping knob 27 is rotated, the tripping pin 35 moves upwardly along the cam surfaces 31, compressing the spring 38, and when the high portion of the cam surface is reached and passed, the pin is forced downwardly with a relatively snap action by the spring 38, which correspondingly moves the tripping fork downwardly with a snap action.

The tripping fork 41 is provided with a pair of transversely extending slots 42 adapted to have slidably positioned therein pins 43 carried by the extremities of a tripping yoke 44. As best shown in Figure 7, the tripping yoke 44 is provided with extending clasp members 45 adapted to be bent inwardly, as indicated at 46 in Figure 1, to engage a tripping yoke spring 47.

As best shown in Figures 8, 9 and 10, the tripping yoke spring 47 is of substantially U-shaped form and the upper extremities of the legs of the U are bent inwardly, as at 48. The inwardly turned portions 48 are adapted to engage ridges 49 cut into the side of a sparking wheel 50 mounted on a suitable axle 51 journaled in suitable journals 52 in flanges on top of body 10. The wheel 50 is serrated, as at 54 to provide a sparking surface adapted to be positioned adjacent the flint 15.

Now, from the foregoing, it will be seen that when the tripping fork is snapped downwardly in the manner previously described, the tripping yoke and its associated spring engage with the ridges 49 to impart relative rotation to the wheel 50 causing a spark to ignite the wick 12. A cap member 55 of any desired type is provided for the device.

It will also be seen that the device may be readily ignited from a remote point merely by twisting the tripping knob 27, and that thus all danger of soiling the fingers or the gloves on the working parts of the apparatus is substantially eliminated. It will further be seen that by removing the member 20, the entire device may be disassembled for filling, replacing the flint, cleaning, or any other desired purpose.

Thus, in the foregoing there is provided a device which accomplishes all the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. A pocket lighter including a body, a fluid reservoir in said body, a flint and steel igniter secured upon one end of said body, a wick associated with said reservoir and extending into proximity to said flint and steel, an axial, internally screw threaded bore in said body, a second bore in said body, a flint and steel actuating rod being reciprocable in said second bore, a sleeve upon the other end of said body, said sleeve constituting a closure for said reservoir and having apertures aligned with said body bores, and a cover rotatably journaled on said sleeve, said cover having a cam groove for reciprocating said rod and having an axial aperture, and a single fastening means extending through said cover, said sleeve and engaging said threaded bore.

2. A pocket lighter including a body, a fluid reservoir in said body, a flint and steel igniter secured upon one end of said body, a wick associated with said reservoir and extending into proximity to said flint and steel, an axial internally screw threaded bore in said body, a second bore in said body, a flint and steel actuating rod being reciprocable in said second bore, a sleeve upon the other end of said body, said sleeve constituting a closure for said reservoir and having apertures aligned with said body bores, and a cover rotatably journaled on said sleeve, said cover having a cam groove for reciprocating said rod and having an axial aperture, and a single fastening means extending through said cover, said sleeve and engaging said threaded bore, said fastening means securing said cover for free rotation thereon and fixedly securing said sleeve to said body.

3. A pocket lighter including a body, a fluid reservoir in said body, a flint and steel igniter secured upon one end of said body, a wick associated with said reservoir and extending into proximity to said flint and steel, an axial, internally screw threaded bore in said body, a second bore in said body, a flint and steel actuating rod being reciprocable in said second bore, a sleeve upon the other end of said body, said sleeve constituting a closure for said reservoir and having apertures aligned with said body bores, and a cover rotatably journaled on said sleeve, said cover having a cam groove for reciprocating said rod and having an axial aperture, and a single fastening means extending through said cover, said sleeve and engaging said threaded bore, said flint and a tensioning means therefor being slidably disposed in said axial bore, said fastening means simultaneously engaging said tensioning means.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,035,886	Holtzman	Mar. 31, 1936
2,262,502	Kaupmann	Nov. 11, 1941
2,332,566	Florman	Oct. 26, 1943