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H. J. BOUCHARD

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CIGAR LIGHTER

Filed Jan. 28, 1929

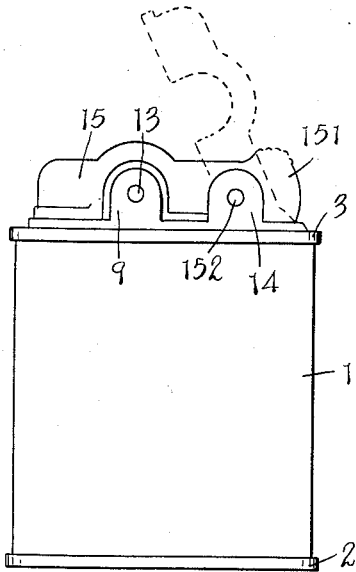


Fig. 1

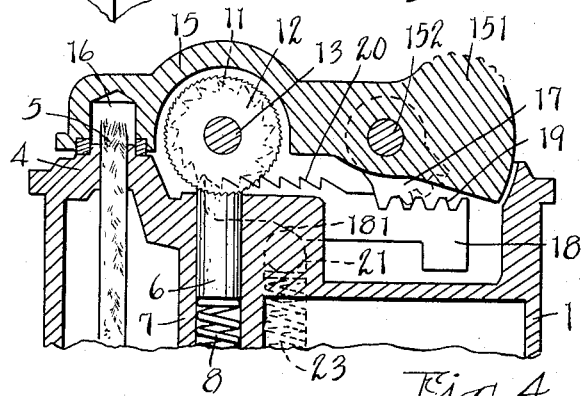
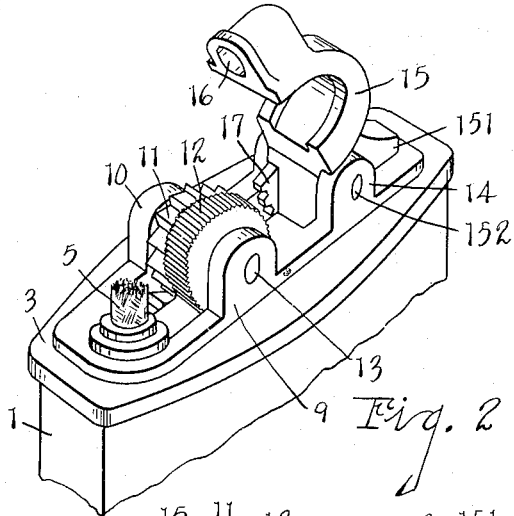


Fig. 4

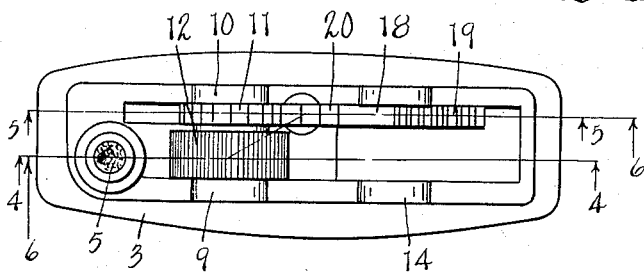


Fig. 3

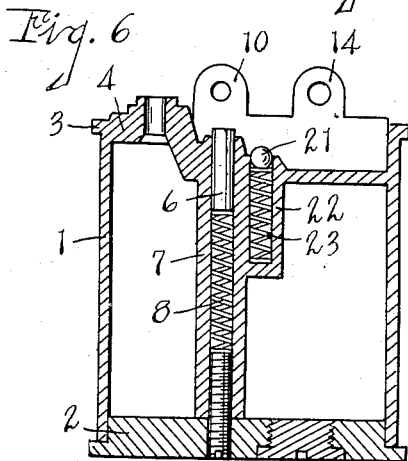


Fig. 6

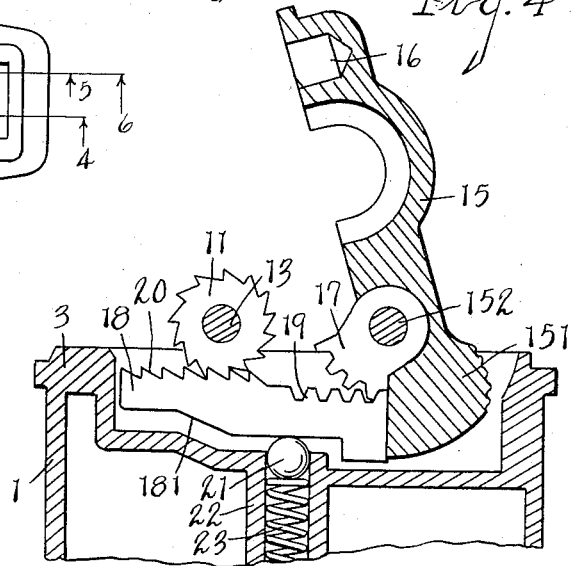


Fig. 5

INVENTOR
Homer J. Bouchard
BY *Chappell & Earl*
ATTORNEYS

UNITED STATES PATENT OFFICE

HOMER J. BOUCHARD, OF CHICAGO, ILLINOIS; ALICE M. BOUCHARD ADMINISTRATRIX OF SAID HOMER J. BOUCHARD, DECEASED

CIGAR LIGHTER

Application filed January 28, 1929. Serial No. 335,535.

This invention relates to improvements in cigar lighters.

The objects of this invention are:

5 First, to provide an improved automatic pocket cigar lighter that is simple in construction, economical to manufacture, and positive and reliable in operation.

Second, to provide an improved construction lending itself to die casting methods.

10 Third, to provide an improved actuating means for the friction wheel.

Fourth, to provide improved means for retaining the snuffer device in closed position.

15 Further objects will appear from the detailed description to follow. A preferred embodiment of the invention is fully illustrated in the accompanying drawing, in which:

20 Fig. 1 is a side elevation view substantially full size with the cover snuffer indicated by dotted lines in elevated position.

Fig. 2 is a detail perspective view of the parts somewhat enlarged.

25 Fig. 3 is a plan view of the parts appearing in Figs. 1 and 2 with the actuating lever omitted but including the rack ratchet means and the friction wheel.

30 Fig. 4 is an enlarged detail sectional view through the entire upper structure taken on a line corresponding to line 4—4 of Fig. 3 showing the lighter in closed position.

Fig. 5 is a similar enlarged detail sectional view on line 5—5 of Fig. 3 showing the actuating lever in open position.

35 Fig. 6 is a detail vertical sectional elevation of the body part on the irregular line 6—6 of Fig. 3 showing the position and arrangement of the burner tip, the flint socket, and the pressure plunger for the actuating
40 rack ratchet.

The parts of the structure will be identified by their numerals of reference which are the same in all the views.

45 1 is the case body, so designed that it can be produced by die castings. 2 is the detach-

able bottom which serves to seal the bottom of the flint socket and is provided with an opening 31 for the introduction of fuel.

4 is the burner tube within which is disposed the wick 5 and which bears the packing ring 41 to receive and seal the snuffer cup. 6
50 is the flint disposed in the socket 7 and urged upwardly into operative position yieldingly by the compression spring 8. 9, 10 are a pair of integral ears on the top of the case between
55 which is disposed the friction wheel 12 and its associated ratchet wheel 11 which are carried and rock upon journal pin 13 which is driven through the supporting ears 9, 10.

14, 14 are the projecting integral ears for
60 carrying the actuating lever 15 which is supported and rocks on pin 152 driven through the ears 14. The lever 15 carries a detachable actuating gear segment 17 in an engaging recess in its side which projects down into a
65 recess in the top 3 of the case.

In suitable guide ways in the top of the case is the ratchet 18 provided with rack teeth 19 on its upper surface in cooperation with the segment 17. It is also provided with a series
70 of angular ratchet teeth 20 to cooperate with the ratchet wheel 11. It is provided on its under side with a cam-like shoulder 181.

A plunger ball 21 is disposed in socket 22 and is urged yieldingly upward by the compression spring 23 in said socket.
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The lever 15 has the snuffer cap 16 formed integral therewith and is suitably recessed intermediate its length to form a cover for the sparking wheel and is provided with a
80 knurled projection 151 for engagement by the thumb of the user.

In the operation of the device the thumb is pressed downward at 151 causing the segment 17 to act upon the rack 18 and carry it
85 forward. It encounters resistance on the plunger ball 21 and when the necessary pressure is reached snaps quickly to place as the cover opens. The ratchet teeth 20 engage the ratchet wheel 11 and operate the friction
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wheel carrying the spark on to the exposed wick in the burner. When the rack slide 18 has passed to the position of the level surface over the plunger 21, it is held frictionally in place and the cover held open while the lighter is being used. After use the cover is simply closed, the rack is carried back to the position indicated in Fig. 4, the plunger ball 21 engages the cam surfaces 181 which tends to press the rack 18 towards the right of Fig. 4, and reacts upon the parts and holds the snuffer yieldingly in closed position, completely sealing the burner tip.

I have illustrated my improvements in an embodiment which I have found very satisfactory. I have not attempted to illustrate or describe other modifications or adaptations which I contemplate as I believe this disclosure will enable those skilled in the art to embody or adapt the same as may be desired.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a cigar lighter, the combination of a casing with a closed recessed top having a burner tube, a spring socket with a flint therein, and a spring socket with a plunger ball therein, a pair of ears with cross journal pin for the friction wheel, and a pair of ears with cross pivot pin for the actuating lever cover, a friction wheel and ratchet wheel connected together journalled on said journal pin, a lever cover with snuffer cap for closing the burner tube and with an inset gear segment on said pivot pin, a ratchet slide disposed in a guide in the recessed top having at one end beveled ratchet teeth to engage said wheel and having rack teeth at its other end meshing with said gear segment, and a cam surface on its under side against which the said plunger ball acts to hold the same yieldingly in operative engagement, to act upon the said rack when the cover is opened or closed, and to hold the same closed under pressure.

2. In a cigar lighter, the combination of a casing with closed recessed top having a burner tube, a spring socket with a flint therein, and a spring socket with plunger therein, a pair of ears with cross journal pin for the friction wheel, and a pair of ears with cross pivot pin for the actuating lever cover, a friction wheel and ratchet wheel connected together journalled on said journal pin, a lever cover with snuffer cap for closing the burner tube and with an inset gear segment on said pivot pin, a ratchet slide disposed in a guide in the recessed top having at one end beveled ratchet teeth to engage said wheel and having rack teeth at its other end meshing with said gear segment, and a cam surface on its under side against which the said plunger acts to hold the same yieldingly in operative engagement to act upon the said rack when

the cover is opened or closed, and to hold the same closed under pressure.

3. In a cigar lighter, the combination of a casing with closed recessed top having a burner tube, a spring socket with a flint therein, a pair of ears with cross journal pin for the friction wheel, and a pair of ears with cross pivot pin for the actuating lever cover, a friction wheel and ratchet wheel connected together journalled on said journal pin, a lever cover with snuffer cap for closing the burner tube and with an inset gear segment on said pivot pin, a ratchet slide disposed in a guide in the recessed top having at one end beveled ratchet teeth to engage said wheel and having rack teeth at its other end meshing with said gear segment.

4. In a cigar lighter, the combination of a casing with closed top having a burner tube, a flint and friction wheel spark means, a ratchet wheel on said friction wheel, a lever cover with snuffer cap for the burner tube, a segment gear carried by said lever, a ratchet tooth slide having rack teeth for engaging said gear segment for actuating said ratchet wheel on the opening of the cover, said ratchet slide having a cam surface on its under side and a yielding plunger in engagement therewith to react to hold the cover open by friction and closed under spring pressure.

5. In a cigar lighter, the combination of a casing with closed top having a burner tube, a flint and a friction wheel spark means, a lever cover with rack and pinion connection to the said spark wheel, said rack having a shouldered cam thereon, a plunger yieldingly engaging the said cam surface when the cover is in closed position.

6. A lighter construction comprising a receptacle, a wick protruding therefrom, pyrophoric sparking wheel lighting means mounted on said receptacle adjacent said wick, a ratchet wheel affixed to said sparking wheel and having teeth protruding from its periphery, a depressible finger piece member on said receptacle at the side of said wheel opposite from said wick, mechanism including a gear segment carried by said lever, a reciprocating rack engaged by said gear segment and beveled teeth on said rack acting on said ratchet wheel for operatively connecting said finger piece member and said ratchet wheel to rotate the sparking wheel when the finger piece is depressed, said rack being disposed in a slideway formed in the top wall of the receptacle, and a snuffer cap integrally formed with said finger piece, a sparking wheel and ratchet guard normally substantially concealing said wheels, and pivotally mounted coaxially with said segment pinion and lever on the receptacle to be operated upon depression of said finger piece to expose the wick to sparks from said sparking wheel lighting means.

7. In a cigar lighter, the combination of a

casing, an integral burner tube on said casing, spark producing means comprising a friction wheel and a flint, a ratchet wheel secured to said friction wheel, an actuating lever carrying a snuffer cap to cover the burner tube, a gear segment carried by said lever, a slidably mounted element having rack teeth for engaging said gear segment, and ratchet teeth for engaging said ratchet wheel, said element having a cam surface and a yielding plunger in engagement therewith adapted to hold the cover open by friction and closed under spring pressure.

In witness whereof I have hereunto set my hand.

HOMER J. BOUCHARD.

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