

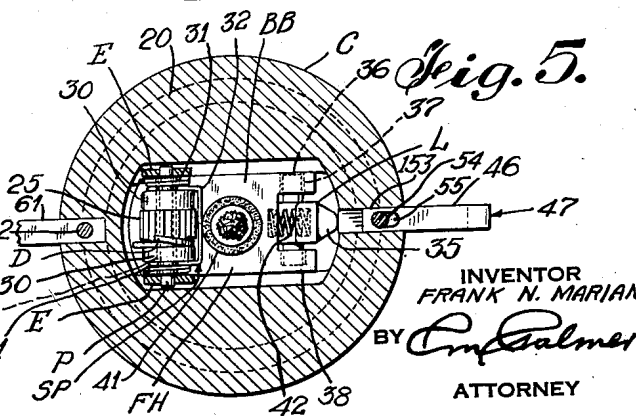
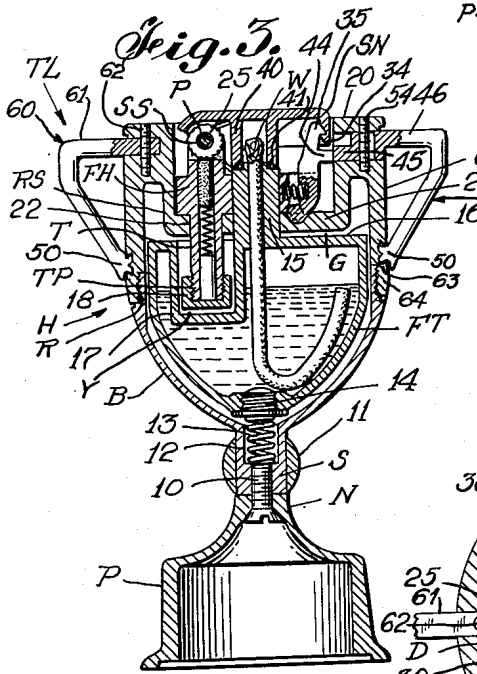
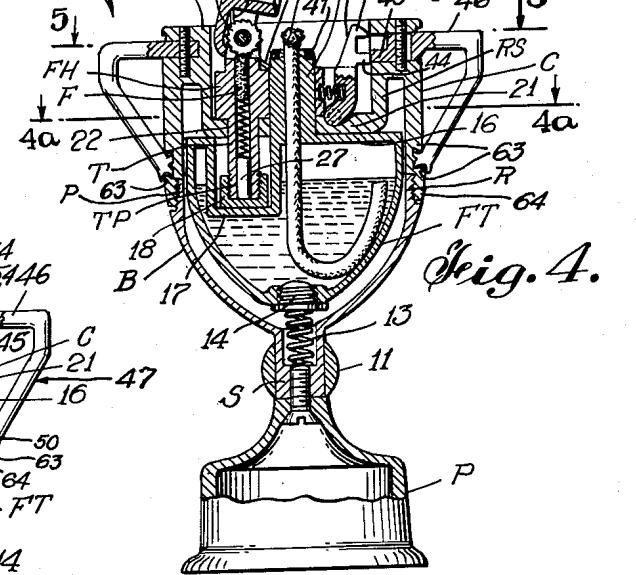
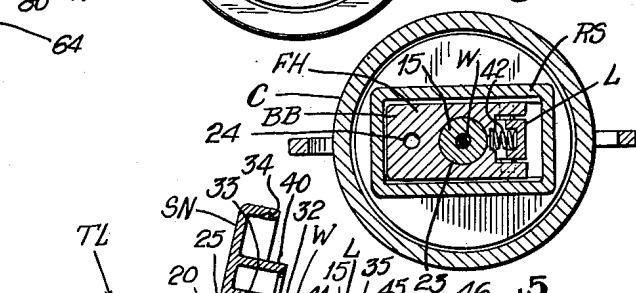
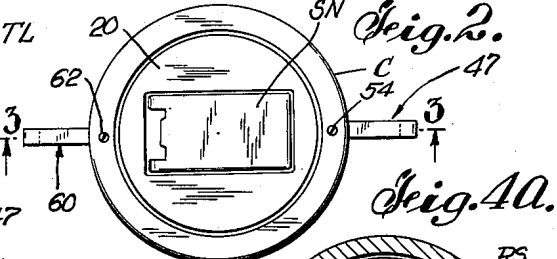
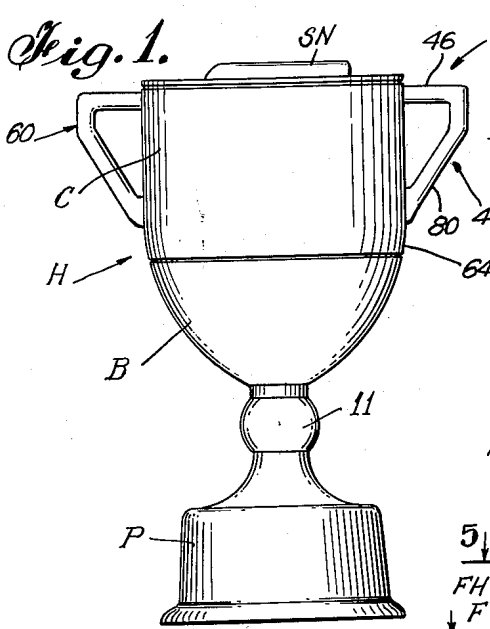
Jan. 6, 1953

F. N. MARIANI  
TABLE LIGHTER

2,624,187

2 SHEETS—SHEET 1

Filed July 20, 1950



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2 SHEETS—SHEET 2

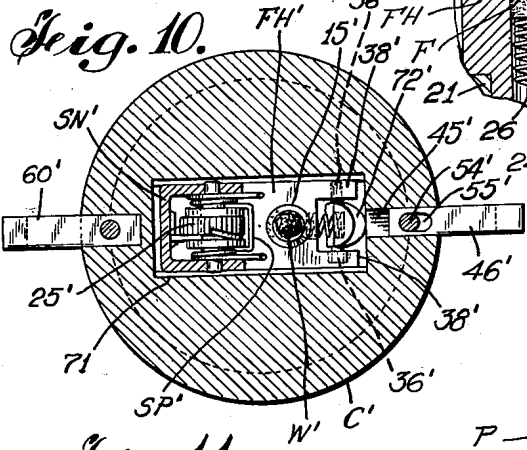
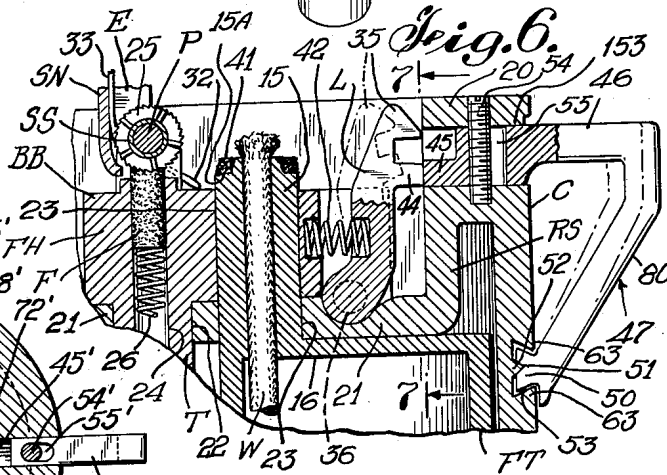
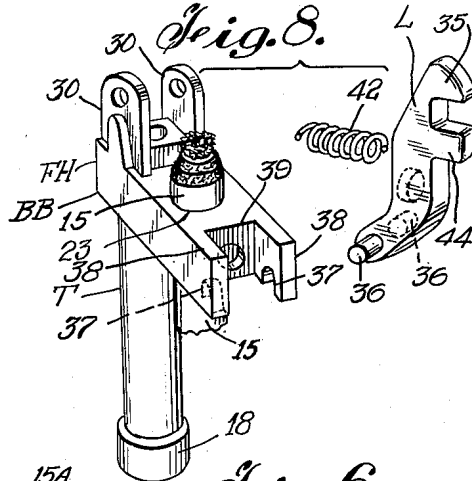
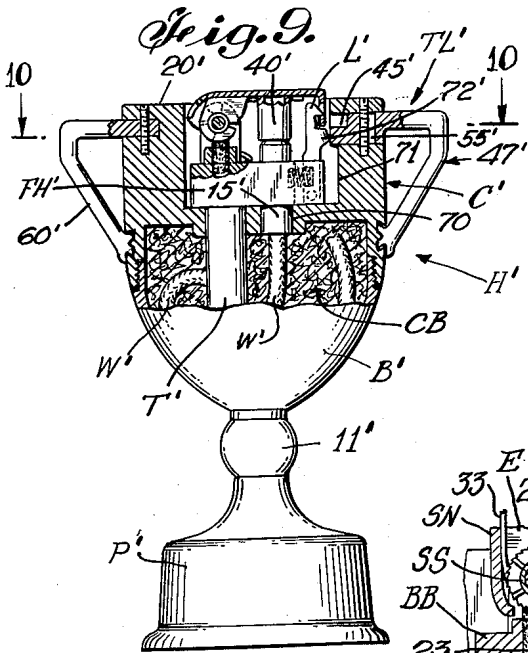
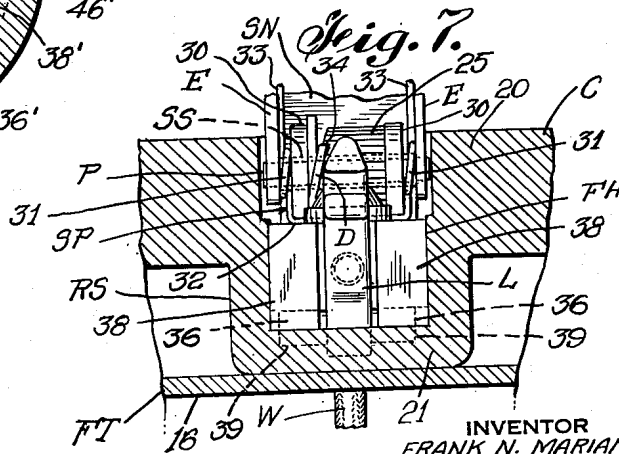
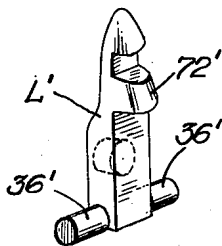


Fig. 11.



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# UNITED STATES PATENT OFFICE

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## TABLE LIGHTER

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9 Claims. (Cl. 67-4.1)

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The present invention is directed to a cigarette lighter and more particularly to a table cigarette and cigar lighter. One object is to provide in a cigarette lighter a slidably guided fuel tank in companion detachable parts of a housing. Another object resides in the provision of actuating means for unlocking a pivoted flame snuffer to automatically elevate the fuel tank and concomitantly raise the cooperating saturated wick ignited automatically on opening of the snuffer. Another object is realized in automatically depressing the fuel tank on closing of the pivoted snuffer. A further object is to provide a housing comprising a bowl in which the lower part of the fuel tank is resiliently seated and a casing detachably associated with the bowl and in part surrounding the fuel tank. A further object contemplates the utilization of a pedestal for supporting the bowl carrying spring means on which the fuel tank is positioned. More specifically another object is to provide a table lighter simulating a trophy but having one handle thereof serving as means to actuate a swingable spring controlled latch to automatically unlock the pivoted snuffer for producing a flame on a wick carried by the resiliently supported and slidably guided fuel tank. Other salient objects and important feature will be apparent from the following detailed description viewed in the light of the accompanying drawings wherein:

Fig. 1 is a front elevational view of the table lighter according to one embodiment of my invention.

Fig. 2 is a plan view of Fig. 1.

Fig. 3 is a vertical sectional view on the line 3-3 of Fig. 2 illustrating the vertically slidably wick and fluid carrier held depressed by the depending collar of the snuffer in the closed and locked relation of the latter.

Fig. 4 is a view similar to Fig. 3 but showing the pivoted snuffer opened at which time the fluid carrier or fuel tank is fully elevated.

Fig. 4a is a sectional view on the line 4a-4a of Fig. 4.

Fig. 5 is a horizontal sectional view approximately on the line 5-5 of Fig. 4.

Fig. 6 is an enlarged fragmentary view of Fig. 4.

Fig. 7 is a sectional view on the line 7-7 of Fig. 6.

Fig. 8 is an exploded view in perspective of the flint holder, its pivoted latch, and the spring for constantly urging the latter to its locking relation. This view also illustrates a portion of the

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slidable wick carrying nipple of the fuel tank extending into the block of the flint holder.

Fig. 9 is a view similar to Fig. 3 but illustrating another embodiment according to my invention.

Fig. 10 is a horizontal sectional view on the line 10-10 of Fig. 9, and

Fig. 11 is a perspective view of the pivoted latch shown in Fig. 9.

The table lighter generally designated TL comprises housing H characterized by the lower bowl B and the upper detachable cylindrical casing C.

Depending from the lower part of bowl B is the cylindrical shank S adapted to be seated on neck N of the hollow and cylindrical pedestal P. Screw 10 detachably holds shank S depending from bowl B on neck N and a sleeve 11 is force fitted on shank S which embodies recess 12 receiving helicoidal spring 13 on which is seated threaded closure or plug 14 effectively sealing the slidably fuel tank FT having cylindrical and hollow nipple 15 threadably receiving wick W.

Nipple 15 is integral with and projects above top wall 16 of the fuel tank FT. Depending from top wall 16 is the hollow boss 17 constituting a relief chamber for receiving the lower part of flint holder FH, namely, tube T having a lower externally threaded portion TP removably interconnected with the internally threaded cap 18.

Cylindrical casing C includes the relatively thick top wall 20 from which integrally depends the rectangular shell or boss RS provided with a lower wall 21 having circular opening 22 for receiving tube T of the flint holder which is also characterized by the rectangular block BB provided with opening 23 for slidably receiving circular nipple 15.

Flint F appropriately confined in holder FH (Fig. 6) and slidably received in bore 24 of tube T is urged to frictionally bear against the toothed wheel 25 by spring 26 coacting also with the slidably and removable tumbler 27 in tube T.

Fulcrum pin P (Fig. 7) is arranged within sleeve SS interposed between spaced ears E of the swingable cap or snuffer SN. This sleeve extends through the spaced perforated ears 30 projecting from block BB of the flint holder FH. Spring generally SP (Figs. 5 and 7) has coils 31 surrounding sleeve SS and embodies the U shaped spring arm 32 bearing against the flint holder FH. This spring also includes the spaced spring arms 33 abutting the inside wall of snuffer SN which by reason of the construction described

is pivoted on pin P but is normally urged in an open or raised position by spring arms 33.

Mounted on sleeve S is a dog or ratchet D cooperating with teeth as 34 on one side of gear wheel 25 to rotate the latter as the snuffer is pivotally opened. This construction is well known in the art.

Associated with the front wall of snuffer SN is hook 34 cooperating to interlock with a companion hook or keeper means 35 of a latch L having a fixed pin 36 overhanging the sides thereof and rotatably confined in the alined notches 37 (Fig. 8) of the arms 38 of block BB. Arms 38 together with wall 39 define a recess bridged by pin 36 also appropriately mounted in the alined recess 39 (Fig. 7) interrupting bottom wall 21 of the depending hollow boss RS.

Depending from the top wall of the pivoted snuffer SN is the collar or tubular member 40 cooperating with ring shaped rubber washer 41 seated about the upper contracted part of nipple 15 and on shoulder 15A to effectively seal the upper end of the wick to extinguish its flame.

Lock L is normally urged away from nipple 15 by the normally expandible spring 42 having ends appropriately retained in alined recesses in the flint holder FH and latch L as illustrated.

With the pivoted snuffer SN locked as shown in Fig. 3, hooks 34 and 35 are interlocked, thus holding the snuffer closed. In such relation lug or abutment 44 of latch L is bearing against the reduced part or lip 45 of the horizontal reach 46 of the pivoted handle broadly denoted 47, having its lower and inclined limb 39 provided with a flared and bifurcated part 50 having the tapered recess 51 receiving fulcrum tooth 52 of casing C projecting into outwardly contracted tapered opening 53 defining tapered sides straddling and interlocking with the sides of the flared part 50. By this arrangement, handle 47 may be slightly pivoted or rocked relative to the casing C which is characterized by the horizontal slot 53 for slidably guiding reach 46 which is limited in its horizontal displacement by the vertical stop pin 54 threaded into casing C. Pin 54 is arranged in slot 55 in reach 46. This slot is longer than the diameter of pin 54, thereby permitting limited movement of reach 46. When the snuffer is locked by latch L, lug 44 acts on the reduced portion 45 to hold handle 47 normally retracted.

On closing of the snuffer, collar 40 acts on washer 41 on shoulder 15A to depress or bodily shift nipple 15 downwardly relative to flint holder FH seated in boss RS. By such action fuel tank FT is bodily shifted downwardly against the resistance of spring 13 thus defining gap G (Fig. 3). During such action boss 17 also moves away from cap 18 of the flint holding tube T, thus producing gap Y. In other words, when the snuffer is moving to its closed position, the fuel tank is bodily and slidably displaced relative to the casing and flint holder FH effectively retained therein.

By pressing handle 47 towards the casing, reach 46 slides inwardly. By such action, reduced portion 45 urges lug 44 inwardly, thus disengaging latch L from the snuffer which due to the action of spring arms 33, automatically lifts consequently causing wheel 25 to rotate and issue sparks from flint F. These sparks are directed towards the upper part of wick W to produce a flame as is well understood. The pivoted handle 47 may be considered as an actuator for operating the spring controlled latch L.

However on opening of the snuffer SN, fuel 75

tank FT, automatically elevates or retracts due to the action of spring 13, until the top wall 16 strikes the bottom wall 21 of boss RS which in this instance acts as a stop. It is thus apparent that the fuel tank is bodily responsive to the opening and closing actions of the snuffer.

Companion handle 60 is along the lines of handle 47 except that its reach 61 is fixed against displacement by pin 62 threaded into the casing. Both handles 47 and 60 are retained in the casing by spaced lips as 63 loosely interlocking with and straddling flared portions 51, however as previously stated, handle 47 is pivoted while handle 60 is anchored against displacement.

Annular rim R of bowl B is threaded to cooperate with the internally threaded lower portion 64 of the cylindrical casing C. Hence, bowl B may be quickly attached or detached from casing C. If detached fuel tank FT can be readily removed from the bowl and supplied with additional fuel upon removal of the closure 14. This fuel may be gasoline for adequately saturating wick W.

In the embodiment according to Figs. 9 to 11, no slidably guided fuel tank is provided. However, the snuffer SN' has its collar 40' cooperating to extinguish the flame of wick W' in tube or nipple 15' fixedly carried by and projecting above and below flint holder FH'. The lower portion of nipple 15' also extends into opening 70 of the bottom wall of recess 71 in which the flint holder FH' is appropriately positioned.

Wick W' is embedded in cotton CB placed in bowl B'. This cotton is saturated with gasoline. Pin 36' carried by latch L' is rotatably journaled in the spaced lugs 38'. This latch is provided with a cam shaped lug 72' adapted to be actuated by companion lug 45' of the pivoted handle 47'. In other aspects, the form shown in Figs. 9-11 is substantially along the lines of the embodiment according to Figs. 1-8.

Various changes may be made in details of construction and arrangement of parts without departing from the spirit of the invention or sacrificing any of the advantages thereof inherent therein.

I claim:

1. In a lighter, a housing having a bowl, a casing above said bowl, means detachably securing said casing to said bowl, spring means carried by said bowl, a fuel tank movably disposed within said bowl and casing and seated on said spring means, a flint holder within said casing, said tank having wick carrying means slidably guided by said holder, and a spring controlled snuffer pivoted to said holder and having means cooperating with said carrying means to bodily depress said fuel tank against the resistance of said spring means on closing of said snuffer.

2. In a lighter, a housing having a bowl, a casing, means detachably securing said casing to said bowl, spring means carried by said bowl, a fuel tank movably disposed within said bowl and casing and seated on said spring means, a flint holder within said casing, said tank having wick carrying means slidably guided by said holder, a spring controlled snuffer pivoted to said holder and having means cooperating with said carrying means to bodily depress said fuel tank against the resistance of said spring means on closing of said snuffer, keeper means on said snuffer, latch means pivoted relative to said holder and having means for interlocking with said keeper means, a spring for maintaining said latch interlocked with said keeper means, and means movably

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carried by said casing for actuating said latch against the resistance of said spring to open said snuffer for automatically elevating said fuel tank.

3. In a lighter, a housing having a bowl, a casing, means detachably securing said casing to said bowl, spring means carried by said bowl, a fuel tank movably disposed within said bowl and casing and seated on said spring means, a flint holder within said casing, said tank having wick carrying means slidably guided by said holder, a spring controlled snuffer pivoted to said holder and having means cooperating with said carrying means to bodily depress said fuel tank against the resistance of said spring means on closing of said snuffer, keeper means on said snuffer, latch means pivoted relative to said holder and having means for interlocking with said keeper means, a spring for maintaining said latch interlocked with said keeper means, and a handle having its lower portion pivotally retained and having an upper reach including means for operating said latch against the resistance of said spring to open said snuffer for automatically elevating said fuel tank.

4. In a lighter, a housing having a bowl, a casing having guide means, means detachably securing said casing to said bowl, spring means carried by said bowl, a fuel tank movably disposed within said bowl and casing and seated on said spring means, a flint holder within said casing, said tank having wick carrying means slidably guided by said holder, a spring controlled snuffer pivoted to said holder and having means cooperating with said carrying means to bodily depress said fuel tank against the resistance of said spring means on closing of said snuffer, keeper means on said snuffer, latch means pivoted relative to said holder and having means for interlocking with said keeper means, a spring for maintaining said latch interlocked with said keeper means, a handle at one side of said casing and having a reach slidably disposed in said guide means and having a limb depending from said reach, means pivotally retaining said limb to said side, means to limit displacement of said reach, abutment means on said latch, and resilient means for normally urging said abutment means against said limb.

5. In a lighter, a housing having a bowl, a casing, means detachably securing said casing to said bowl, spring means carried by said bowl, a fuel tank movably disposed within said bowl and casing and having at its lower portion a removable plug seated on said spring means, a flint holder within said casing and having an opening, said tank having wick carrying means slidably guided within said opening, a spring controlled snuffer pivoted to said holder and having means cooperating with said carrying means to bodily depress said fuel tank against the resistance of said spring means on closing of said snuffer, keeper means on said snuffer, latch means pivoted relative to said holder and having means for interlocking with said keeper means, a spring for maintaining said latch interlocked with said keeper means, and means movably carried by said casing for actuating said latch against the resistance of said spring to open said snuffer for automatically elevating said fuel tank.

6. In a lighter, a housing having a bowl, a casing, means detachably securing said casing to said bowl, spring means carried by said bowl, a fuel tank movably disposed within said bowl and casing and seated on said spring means, a flint

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holder retained within said casing and having an opening, said tank having wick carrying means projecting from the upper wall thereof and slidably guided within said opening, a resilient washer about the upper end of said carrying means, a spring controlled snuffer pivoted to said holder and having tubular means cooperating with said washer to bodily depress said fuel tank against the resistance of said spring means on closing of said snuffer, keeper means on said snuffer, latch means pivoted relative to said holder and having means for interlocking with said keeper means, a spring for maintaining said latch interlocked with said keeper means, and means movably carried by said casing for actuating said latch against the resistance of said spring to open said snuffer for automatically elevating said fuel tank.

7. In a lighter, a housing having a bowl, a casing having a boss depending from the upper wall thereof, means detachably securing said casing to said bowl, a fuel tank movably disposed within said bowl and casing, spring means for normally holding said fuel tank against said boss, a flint holder within said casing, said tank having wick carrying means slidably guided by said holder, a washer seated on said carrying means, a spring controlled snuffer pivoted to said holder and having depending tubular means cooperating with said carrying means to bodily depress said fuel tank away from said boss and against the resistance of said spring means on closing of said snuffer, keeper means on said snuffer, latch means pivoted relative to said holder and having means for interlocking with said keeper means, abutment means on said latch means, a spring for maintaining said latch interlocked with said keeper means, and means movably carried by said casing for actuating said abutment means against the resistance of said spring to open said snuffer for automatically elevating said fuel tank towards said boss.

8. In a lighter, a casing having guide means, a flint holder within said casing and having an opening, wick carrying means in part received in said opening, a spring controlled snuffer pivoted to said holder and having means for closing said carrying means, keeper means on said snuffer, latch means pivoted relative to said holder and having means for removably interlocking with said keeper means, a spring for maintaining said latch interlock with said keeper means, a manipulatable handle at one side of and in part overhanging said casing and having a reach in part slidably disposed in said guide means, a limb depending from and inclined relative to said reach and casing, means pivotally retaining said limb to said side, means to limit displacement of said reach, abutment means on said latch, and said spring also normally urging said abutment means against said limb.

9. In a lighter, a housing having a bowl for receiving cotton, a casing adapted to receive a part of said cotton, means detachably securing said casing to said bowl, a flint holder within said casing, wick carrying means within said casing, a spring controlled snuffer pivoted to said holder and having means for closing said carrying means, keeper means on said snuffer, latch means pivoted relative to said holder and having means for detachably interlocking with said keeper means, a spring for maintaining said latch interlocked with said keeper means, a handle disposed at one side of said casing having a downwardly and inwardly inclined limb having its lower end

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pivoted to said side and having a horizontal reach for actuating said latch and slidably guided by said casing, said latch having abutment means cooperating with said reach to urge said limb in a direction away from said casing.

FRANK N. MARIANI.

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