July 16, 1957 H. L. RINK ET AL 2,799,810

ELECTRIC LIGHTER

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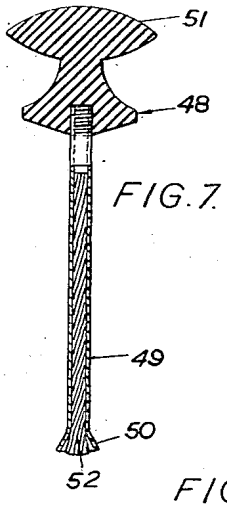

FIG. 7.

FIG. 1.

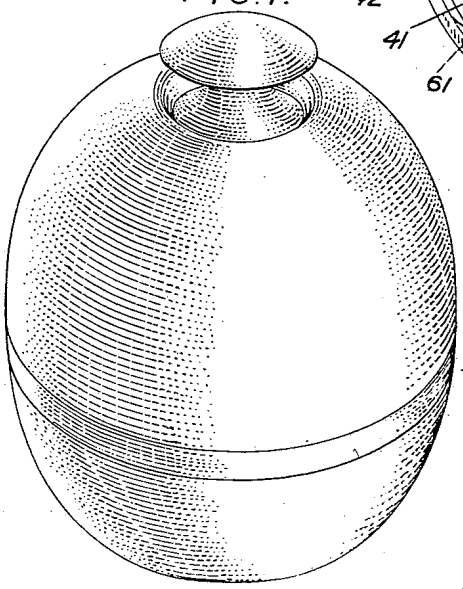

FIG. 4.

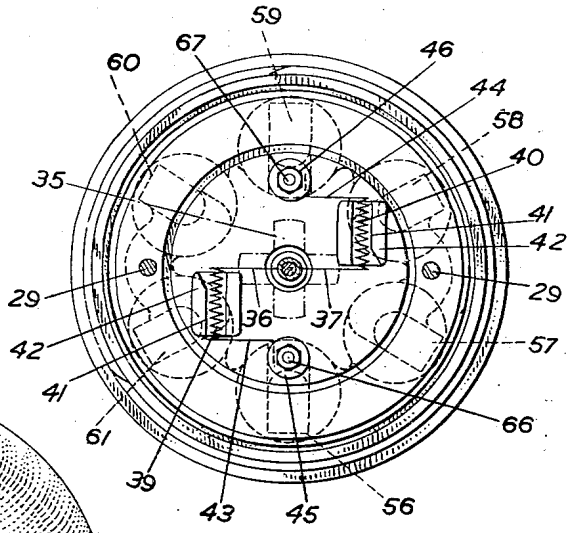

FIG. 5.

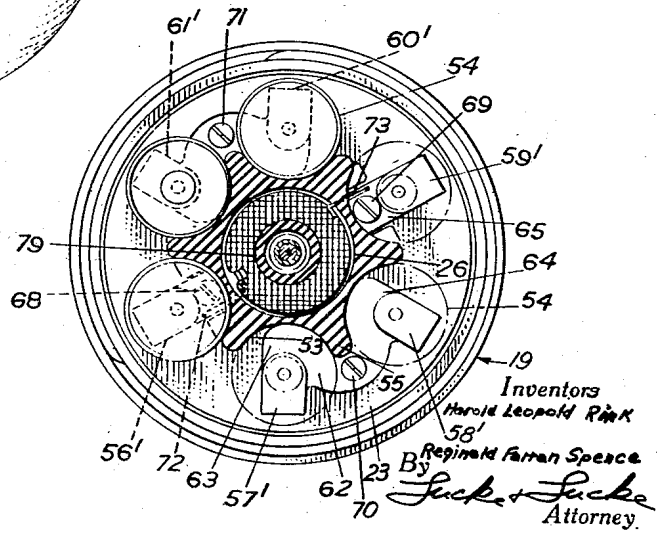

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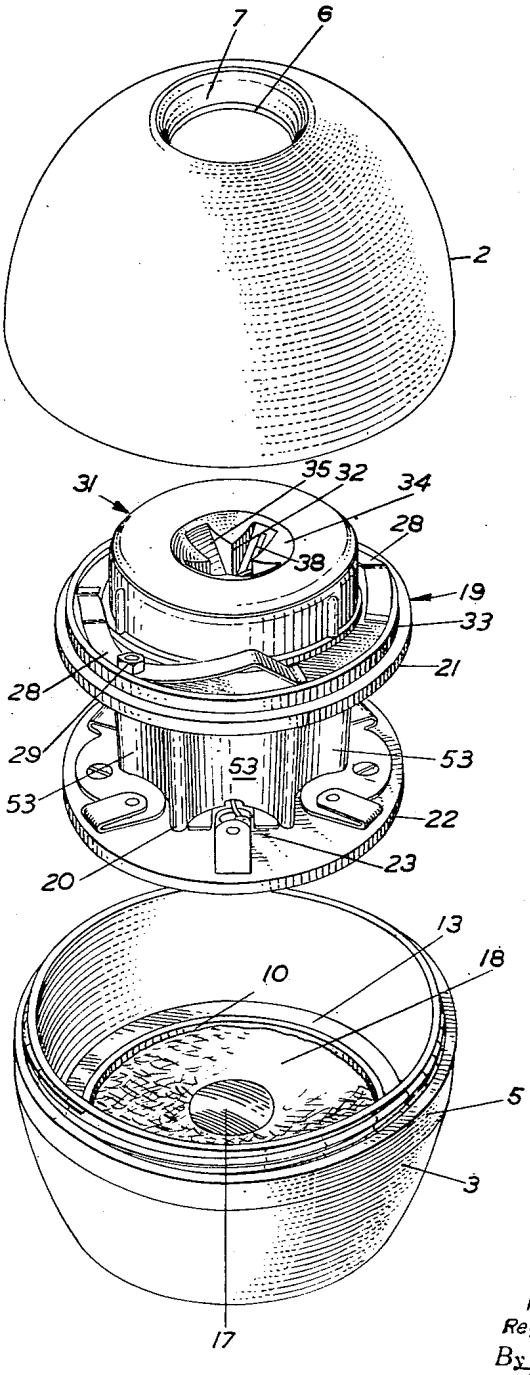
FIG. 2.



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ELECTRIC LIGHTER

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FIG. 3.

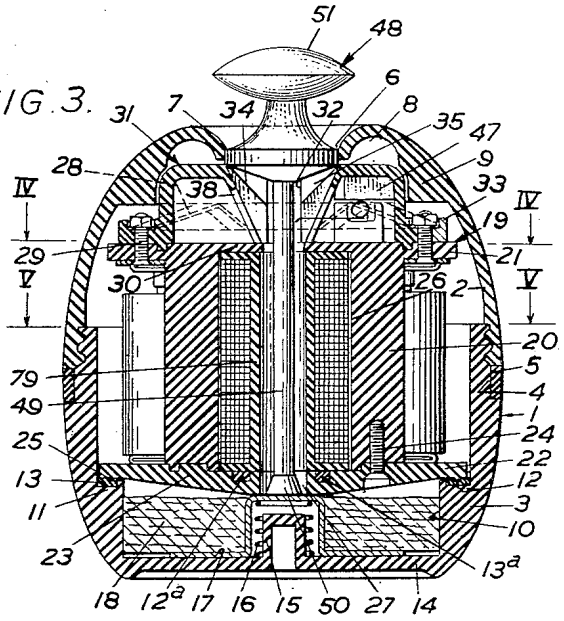


FIG. 8.

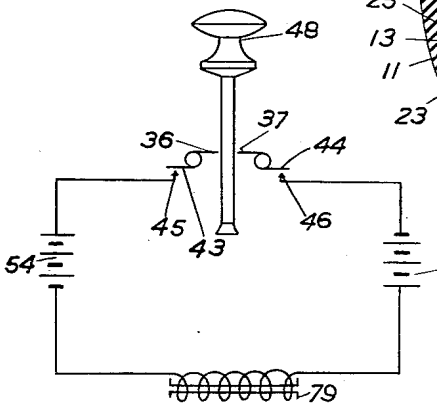
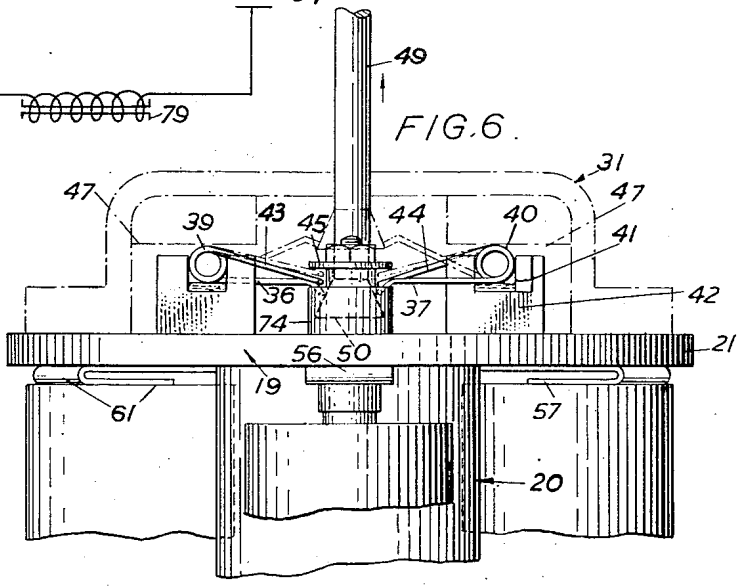


FIG. 6.



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2,799,810

ELECTRIC LIGHTER

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Application August 3, 1953, Serial No. 371,752

Claims priority, application Great Britain November 24, 1952

12 Claims. (Cl. 317—89)

This invention concerns a new or improved electric lighter (for lighting, for example cigars, pipes, cigarettes, fires, gas burners and the like) of the kind comprising a housing adapted to contain an electric battery or batteries, an inductor, a torch normally located in said housing and having a wick or the like for taking up a volatile ignitable fuel from a reservoir in said housing, and ignition contacts for connection to the said inductor and batteries and adapted to be operated, on the withdrawal of the said torch from the said housing, to create a spark to ignite the said wick. More particularly this invention concerns improvements in or modifications of the electric lighter forming the subject of our patent application Serial No. 214,911, now Patent Number 2,657,340, issued October 27, 1953.

The object of this invention is to provide an improved electric lighter of the kind referred to.

It is an object of the present invention to provide a readily assembled and disassembled electric lighter comprising a carrier unit and surrounding shell and wherein the igniting means is positioned on the carrier unit, the fuel compartment being disposed in said shell, whereby the carrier unit is entirely separable from the shell upon refueling of the fuel compartment thereby minimizing the risk of an explosion and accidental ignition of the fuel during refueling.

It is another object of the present invention to afford a compact electric lighter of great fuel capacity and wherein the fuel compartment is sealed from the remainder of the lighter, whereby evaporation of the fuel is avoided both within the interior of the lighter and externally from the latter.

It is a further object of the present invention to afford an electric lighter wherein the ignition contact means comprises spring means and mounting means connected to said spring means and affording lost motion prior to stressing of the latter whereby said ignition contact means remains permanently adjusted to thereby insure proper sparking of the lighter at all times.

It is still an object of the present invention to provide an electric lighter wherein the electric igniting means is mounted on a separable carrier unit enclosed within the body of the lighter and insulated from the latter whereby the lighter is devoid of current leakage and the path of the current is regulated.

It is yet an object of the present invention to provide a compact electric lighter comprising an electric igniting means carrier unit whereon the inductor coil is substantially axially disposed and the current supply means is radially disposed whereby the packaging of the current supply means and of the inductor coil within the lighter is improved and simplified thereby reducing manufacturing costs and simplifying the substitution and assembly of the inductor coil and of the current supply means.

It is still a further object of the present invention to afford an electric lighter wherein sparking and ignition of the torch occur solely during withdrawal of the torch from the lighter, the electric circuit remaining open at all other times, whereby accidental ignition of the torch is prevented.

Further features of the invention will become apparent from the following description of one embodiment of the invention and the appended claims.

In order that the invention may be more readily understood, one embodiment of the same will now be described with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a complete electric lighter constructed in accordance with this invention;

Figure 2 is a perspective view of the lighter shown in Figure 1 with the torch removed and the parts of the outer shell of the lighter separated from one another and from the inductor and battery carrier of the lighter to expose the latter and part of the interior of the said shell;

Figure 3 is a vertical central section through the lighter shown in Figure 1;

Figure 4 is a section on line IV—IV, Figure 3;

Figure 5 is a section on line V—V, Figure 3;

Figure 6 is an enlarged view of the upper end of the inductor and battery carrier and shows the ignition contact arrangement;

Figure 7 is a vertical sectional view showing the torch of the lighter; and

Figure 8 is a diagrammatic view showing the electric circuit of the lighter illustrated in Figures 1 to 7.

In the embodiment of the invention shown in the drawings the lighter comprises a hollow outer shell or housing 1 which is externally of approximately flat ended elipsoidal form, the shell being formed in two parts (marked respectively 2 and 3) meeting in a plane transverse to its axis, this plane being disposed rather nearer to one end (hereinafter referred to as the lower end) of the shell than to the other end thereof. The two parts 2 and 3 (hereinafter referred to as the upper and under parts of the shell) are complementary and substantially cup-shaped and they are respectively screw threaded at their meeting ends so that they can be screwed together. The under part 3 is annularly externally recessed at its upper end and externally screw threaded whilst the upper part 2 of the shell is internally screw threaded to receive the screw threaded portion of the under part of the shell.

The under part 3 of the shell 1 may also have a peripheral recess 4 at a short distance from its upper end to receive an annular band or ring 5 adapted to be trapped between the upper and under parts of the shell to provide a decorative finish to the shell, this band preferably being of a colour different to that of the upper and under parts of the shell.

The upper part 2 of the shell has a central circular hole 6 and the wall 7 of this part of the shell curves inwardly and downwardly around the hole 6 to provide in the shell a flared inlet to the hole 6. The shell also has, on the inside thereof and around the hole 6 an annular inverted U-shaped channel or air space 8 whose outer periphery is defined by the inner wall of an internal annular shoulder 9 provided around the upper inside part of the upper part 2 of the shell 1.

The lower portion of the under part 3 of the shell 1 is internally of cylindrical dish-like form and constitutes a shallow fuel reservoir 10 for the lighter. This reservoir terminates at its upper end in an annular shoulder 11 provided around the interior of the under part 3 of the shell and located less than half way up this part of the shell. This shoulder has in its upper surface an annular groove 12 in which is located a resilient, e. g. rubber, sealing washer 13 for a purpose hereinafter described.

On its upper surface the base 14 of the under part 3 of the shell 1 is furnished centrally with an upstanding projection 15 less in height than the depth of the reservoir 10 and around which is located a helically coiled com-

pression spring 16 over the upper end of which is laid the central portion of a length of tape-form wick 17. The end portions of this wick are folded down the sides of said spring 16 and laid along the bottom of the reservoir 10 as is clearly shown in Figure 3 of the drawings. The reservoir 10 is filled, to slightly below the level of the top of the internal annular shoulder 11, with an absorbent material such as cotton wool, felt or other porous fibrous material which lies all around the spring 16 in contact with the wick 17 and is intended to absorb a volatile liquid lighter fuel such as petrol, for example. Preferably the said absorbent filling comprises a felt ring 18.

A dry battery and inductor carrier 19 is also provided and is located, when the lighter is assembled, coaxially within the shell 1. This carrier comprises a tubular central part or body 20 which is provided at its upper and lower ends respectively with outwardly directed peripheral flanges 21 and 22. The flange 21 is formed integrally with the body 20 whilst the flange 22 is defined by the peripheral part of a separate end plate or disc 23 which is detachably secured to the lower end of the tubular body 20 by screws 24 or the like, the central portion of the underside of this detachable end plate preferably being of somewhat downwardly conical or convex form.

The underside of the outer edge portion of the flange 22 of the carrier 19 is furnished with an annular downwardly projecting V-shaped rib 25 which is adapted, when the carrier is mounted in the shell 1, to engage the upper surface of the sealing ring 13 carried in the annular groove 12 in the internal annular shoulder 11 of the under part 3 of the shell so as thereby peripherally to seal the reservoir 10, the said carrier being pressed (by means hereinafter described) downwardly towards the shoulder 11.

With the carrier 19 engaged with the shoulder 11 as above described, the axial bore 26 of the carrier is co-axial with the shell 1 and at the lower end this bore is co-axial with the projection 15 on the base 14 of the under part 3 of the shell. The lower extremity of bore 26 is partially closed by an annular part of the plate 23 (fixed to the lower end of the tubular body 20) and communicates with a central hole in this plate. The annular part of the plate 23 bears adjacent hole 27 upon the portion of the wick 17 located over the top of the compression spring 16 so that this wick substantially closes the hole 27 and thereby also the lower end of the bore 26.

The inductor and battery carrier 19 is held in position in the shell 1 and is pressed downwardly to thereby seal the reservoir 10. The pressure is exerted on the upper end of the carrier by the upper part of the shell 2 (when the latter is screwed downwardly on to the under part 3 of the shell) by resilient means 28 located between the underside of the previously described internal shoulder 9 on the upper shell part 2 and the peripheral flange 33 of the socket 31, described infra. The said resilient means comprise, in the example illustrated, two arcuate strip metal springs 28 (see Figure 2) and arranged on and around the upper end of the carrier 19 (although they could be arranged on and around the internal shoulder 9) so that when the upper part 2 of the shell 1 is screwed downwardly on to the under part 3, the inductor and battery carrier is resiliently pressed downwardly on to the shoulder 11 at the lower portion of the under part 3 of the shell. The said strip metal springs 28 are secured substantially intermediate the ends thereof by screws 29 upon the upper surface of the top flange 21 of the carrier 19 and peripheral flange 33 of socket 31. Springs 28 have their free end portions bent or bowed upwardly for contact with the internal annular shoulder 9 of the upper part 2 of the shell.

The carrier 19 affords a mounting for a tubular inductor coil which comprises a wire winding on a tubular spool 79 inserted coaxially in the bore 26 of the tubular body 20 of the carrier. The spool 79 is retained in said tubular body 20 by the engagement of the upper end of the spool

with an internal annular shoulder 30 in the bore 26 of the tubular body 20 and by the engagement of the other end of the spool with a resilient e. g. rubber sealing washer 13a located in an annular groove 12a in the detachable lower end plate 23 of the carrier. The electrical connections of the inductor coil will be described subsequently herein.

The upper end of the carrier 19 is provided with an ignition unit which comprises a tubular socket 31 formed on or secured to the upper end of the carrier 19 and having a bore 32 coaxial with those of the said tubular body 20 of the carrier and of the inductor coil 79. The said tubular socket is preferably formed separately (as shown in the drawings) of the carrier 19 and is of hollow inverted cup form. Tubular socket 31 has an external peripheral flange 33 at its lower end for securing the tubular socket 31 to the top flange 21 of the carrier 19 by the screws 29, described supra.

When the lighter is assembled, the bore 32 of the socket 31 registers with the central hole 6 in the upper end of the upper part 2 of the shell 1 of the lighter. The upper end 34 of the bore 32 of the socket 31 is upwardly and outwardly flared and has a maximum diameter at its upper end approximately equal to the internal diameter of the hole 6 of the shell part 2. The bore 32 is also furnished with a series (e. g. four) of equi-angularly spaced longitudinal ventilation grooves 35 which decrease in depth or converge downwardly from the upper end of the socket 31 towards the lower end of the latter, the grooves extending substantially from end to end of the bore of the socket. Thus the bore of the socket is of cruciform cross-sectional form as is clearly seen from Figures 2 and 4 of the drawings.

A pair of spring metal wire ignition contacts 36, 37 (see particularly Figures 4 and 6) are arranged in diametrically opposite positions in the socket 31 approximately midway between the upper and lower ends thereof. These contacts project radially into the bore 32 through a pair of diametrically opposite ventilation grooves 35 of the socket, the longitudinal outer walls or bases of these grooves being longitudinally slotted at 38 (Figures 2 and 3) for the free passage of the ignition contacts from the interior of the socket 31 to the bore 32 thereof.

The ignition contacts 36 and 37 have slightly downturned free ends and respectively form a transverse extension of an end coil of a helically wound metal spring 39, 40. Each of said springs is freely positioned, with its axis horizontal, in a recess 41 (see Figures 4 and 6) in a bearing block 42 provided at the upper end of the carrier 19 and projecting within the said hollow socket 31.

The end coil of each of the springs 39 and 40 opposite to that at which the corresponding ignition contact 36 or 37 is provided, has a transverse extension 43, 44 intended respectively for co-operation with fixed metal electric terminals 45 and 46 (Figures 4 and 6) arranged at diametrically opposite positions on the top of the carrier 19 and in series with the batteries and inductor of the lighter, as hereinafter explained.

The springs 39 and 40 are retained in their bearing blocks 42 by radial blocks or webs 47 (Figures 3 and 6) provided on the inside surface of the top of the tubular socket 31.

The lighter also includes a torch 48 which comprises a narrow metal tube 49 having a slightly flared lower end 50; an ornamental heat insulating knob or handle 51 at the upper end of tube 49 and a wick 52 extending within tube 49 and protruding slightly from the flared end of the torch. This torch is of such a length that, when inserted through the bores of the socket 31 and carrier 19, the wick at the flared end of the torch will rest upon the reservoir wick 17 at the top of the fuel reservoir 10 and absorb fuel therefrom, assuming that the reservoir 10 has been charged with a volatile liquid fuel. Also, with the torch in this position in the lighter, the lower end of knob

or handle 51 will rest in and seal the flared upper end of the bore 32 of the socket unit 31 as a result of the engagement thereof with the walls of opening 6 and of upper end of bore 32 since the under part of the said knob or handle is suitably shaped for this purpose.

It will be appreciated from the foregoing description of this embodiment of the lighter, that the reservoir 10 is peripherally sealed by the engagement of carrier 19 with shoulder 11 while the central bore 26 of the carrier, the central bore of the inductor spool 79, and the central bore of the socket 31 all communicate with the reservoir. The bores of the tubular socket 31 and of spool 79 are only slightly larger in diameter than the external diameter of the flared end 50 of the torch. The bore of the tubular socket 31 is, as previously explained coaxial with the bore of the carrier 19 and of spool 79 and with the central hole 6 in the upper end of the upper part 2 of the shell 1 of the lighter. Thus the central composite bore of the lighter as a whole is substantially continuous from its upper to its lower end, thereby ensuring that air will, on withdrawal of the torch 48, be drawn by the torch (the flared end 50 of which acts rather like a piston) into the said composite bore via the ventilation grooves 35 in the socket 31 to produce a combustible mixture for ignition by a spark produced by the said ignition contacts. As there is no communication between the central composite bore of the lighter and the space within the shell 1 around the tubular body 20, the escape of fuel vapours into this space with possible risk of explosion is minimised.

Externally the tubular body 20 of the inductor and battery carrier 19 is furnished with longitudinal flutes 53 (see Figures 2 and 5 in particular) to provide six equiangularly spaced pockets for receiving and locating cylindrical batteries 54, the ribs 55 formed between these flutes separating and positioning the batteries.

Contacts are provided at the upper and lower ends of the said flutes or pockets for engagement with the positive and negative poles of the said batteries 54 and to connect these batteries in series with the inductor coil. These contacts are all conveniently formed from springy sheet copper alloy. Thus, assuming that there are six pockets and therefore six batteries as shown, there will be six contacts at each end of the battery carrier. These spring metal contacts are secured on the inner surfaces of the upper and lower end flanges 21 and 22 of the said carrier 19 and in each case comprise two pairs of connected contacts and two single contacts. The upper set of contacts is shown in Figure 4 and the lower set in Figure 5. The upper and lower sets of contacts are identical in form and arrangement, with the exception that the upper set is arranged rotationally one flute or pocket 53 in advance of the lower set. The upper contacts are marked 56, 57, 58, 59, 60 and 61, in Figure 4 and the lower contacts are similarly marked 56', 57', 58', 59', 60', and 61' in Figure 5. The upper contacts 56 and 59 and the lower contacts 56' and 59' are single contacts whilst the upper contacts 57, 58 and 60, 61 are formed as pairs as are the lower contacts 57', 58' and 60', 61'.

Each of the said pairs of contacts is formed from a single blank 62 (see lower part of Figure 5) of sheet metal stamped to an approximately W-shape, the outer arms 63 and 64 of this blank being doubled upon themselves to form the two resilient contacts (in this case 57' and 58'). The two single contacts of each set are each formed from (see top right hand part of Figure 5) a strip 65 of metal doubled upon itself, the turned over part of the strip forming the actual resilient contact (e. g. 59').

The single contacts 56 and 59 of the upper set of contacts are secured to the underside of the top flange 21 of the carrier 19 (as shown in Figure 4) respectively by metal bolts 66 and 67 carrying at their upper ends the fixed terminals 45 and 46. The upper pairs of contacts 57, 58 and 61, 60 are respectively secured to the underside of the flange 21 by the screws 29 used to secure the strip metal springs 28 in position as previously described.

The single contacts 56' and 59' of the lower set are secured (as shown in Figure 5) to the upper side of the removable end plate 23 of the carrier 19 respectively by screws 68 and 69, whilst the double sets of contacts 57', 58' and 60', 61' are secured to the plate 23 respectively by screws 70 and 71.

It will be seen that the arrangement of the upper and lower sets of resilient contacts is such that the batteries 54 can each be slid, in an upright position, radially into place between, or be removed from between, a lower contact and the upper contact lying directly thereabove, the operation of the mounting or removing the batteries for replacement thus being extremely simple and the batteries, after having been inserted radially into the carrier 19, being firmly located between their spring contacts and in the flutes 53. Each alternate battery is arranged so as to be inverted with respect to the preceding battery.

The two opposite ends 72 and 73 of the inductor coil of the lighter are respectively connected to the lower single contacts 56' and 59' and, as the upper single contacts 56 and 59 are respectively connected to the fixed terminals 45 and 46, it will be appreciated that, when the batteries 54 are placed in position in the carrier 19 as above described, there will be provided between the said two fixed terminals 45 and 46 a continuous series electrical connection through the batteries and inductor coil, this electric circuit normally being open between the terminals 45 and 46.

However, on withdrawing the torch 48 from its normal position shown in Figure 3 and from the lighter, the flared end 50 of the torch will (as clearly indicated in Figure 6) eventually engage and bridge the two ignition contacts 36 and 37 so that these are raised as the torch continues to be withdrawn.

Normally the second transverse arms 43 and 44 of the ignition contact springs 39, 40 will be clear (as shown in full lines in Figure 6) of the fixed terminals 45 and 46 so that the ignition contacts 36 and 37 are not in electric connection with the batteries and inductor of the lighter, but during the withdrawal of the torch from the lighter the ignition contacts 36 and 37 are raised and rotate the helical springs 39 and 40 a little in their bearing blocks 41 and 42 and thereby bring the arms 43 and 44 of these springs respectively into electrical contact with the fixed terminals 45 and 46.

When the flared end of the torch 48 brought the arms 43 and 44 of the contact spring coils into contact with the terminals 45 and 46, continued upward movement of the torch causes the springs 39 and 40 to be wound or torsionally deformed and thereby to be stressed or tensioned.

On the engagement of the arms 43 and 44 with the fixed terminals 45 and 46, the electric circuit through the batteries 54, the inductor coil, the ignition contacts, and torch is completed whereafter continued withdrawal of the torch will further raise and then release the ignition contacts 36 and 37 and so break the electric circuit thereof to create a spark or sparks which will ignite the volatile fuel carried by the wick 52 of the torch, combustion being secured by air supplied to the vicinity of the ignition contacts 36, 37 via the ventilation grooves 35 of the socket 31.

When the ignition contacts 36 and 37 are released by the torch 48, the torsional stress in the coils of the springs 39 and 40 will be released and the transverse arms 43 and 44 of these springs will move downwards away from the fixed terminals 45 and 46, the downward movement of these arms 43 and 44 being limited by insulating collars 74 (Figure 6) on the bolts 66 and 67 carrying the said terminals. When the torch 48 is replaced in the lighter it will push the ignition contacts 36 and 37 downwardly and thus ensure that the second arms 43 and 44 of the ignition contact springs 39 and 40 move away from the fixed terminals 45 and 46, should they not already have sprung away from these terminals.

In the embodiment of the invention illustrated in the drawings, the six dry batteries employed are each 1½ volt batteries, whilst the inductor winding on the inductor spool comprises a plurality of turns of 27 S. W. G. electrically insulated copper wire, the external diameter of the central tubular part of the spool being 13/32" and the length of the spool between its flanges being 1 9/16". The electrical connections are shown diagrammatically in Figure 8.

It will, of course, be understood that all the above mentioned contacts and other electricity conducting parts of the lighter must be suitably mounted to ensure that the current from the electric batteries **54** will follow the required path and this is conveniently achieved by making the carrier **19**, the socket **31** and the shell **1** of electrically insulating material. Preferably these parts are all moulded from plastic material such as one of the synthetic resin plastics, and preferably at least the shell and the knob **51** of the torch, are made in attractive and, if desired, contrasting colours.

In electric lighters of the kind to which this invention relates, an important defect was that, after a period of time, the ignition contacts were likely to become maladjusted (primarily due to the acquisition thereby of an enduring set) with consequent bad sparking. This defect is overcome or greatly reduced in a lighter according to this invention by constructing the contacts as above described, i. e. by making each ignition contact as one arm of a helical spring which is free to rotate within its mounting in the tubular socket **31** and which spring will, on operation of the contact by the said torch, rotate until its second arm contacts one of the said fixed terminals **45**, **46**, the spring thereafter being subject to "winding up" torsional deformation. As is known deformation of this type does not easily impart an enduring set to a spring and, in consequence, the ignition contacts will not easily get out of adjustment under any conditions of normal use.

We claim:

1. An electric lighter including in combination an outer shell having upper and under parts, said under part forming a fuel reservoir, said upper part provided with a central opening therein and detachably fitting said under part, a tubular induction coil, a series of batteries, a tubular inset for carrying said inductor coil and said batteries, said carrier having a central bore registering with said opening, said under part cooperating with said carrier to close and peripherally seal said reservoir around said central bore, said inductor coil coaxially mounted within said bore, cooperating means on said upper part and on said carrier for maintaining a pressure seal between said carrier and said under part, electrical conductor means between said coil and said batteries disposed on said carrier, separate terminals disposed in said upper part in open circuit relationship with said coil and said batteries, movable ignition contacts extending over the upper end of said bore disposed adjacent said terminals and normally disconnected therefrom, a torch normally coaxially housed in said bore having a wick exposed at one end thereof in fuel assimilating relationship with said reservoir and an electrical conducting member disposed adjacent said exposed wick, whereby upon withdrawing said torch from said shell, said member engages said ignition contacts bringing them into engagement with said terminals thus closing the circuit through said inductor to said batteries, and creating a spark for igniting said wick by breaking the circuit when said contacts are released.

2. An electric lighter according to claim 1 wherein said ignition contacts comprise a coiled metal spring having transversely extending ends disposed at one side of said bore and rotatable about an axis perpendicular thereto, whereby the withdrawing torch member engaging one end of said spring effects engagement of said other spring end with said terminal and a torsional deformation to said spring.

3. An electric lighter according to claim 2, wherein the said coiled springs are each mounted in a recess in a mounting block provided at the upper end of the said tubular carrier.

4. An electric lighter according to claim 3, wherein a hollow socket is provided at the upper end of said tubular carrier and the said ignition contacts are located in said socket having an axial bore provided with an upwardly and outwardly flared upper end portion and a plurality of equi-angularly spaced internal longitudinal ventilation grooves decreasing in radial depth progressively merging with said bore towards their lower ends, said ventilation grooves extending above and below the torch-engaging ends of said ignition contacts.

5. An electric lighter according to claim 4, wherein the said annular means for peripherally sealing the upper end of the said fuel reservoir comprises an annular shoulder provided internally of the said under part of the shell and extending therearound at the upper end of the reservoir, an annular outwardly directed peripheral flange on the lower end of said tubular carrier, a resilient sealing ring located between said annular shoulder and said flange when the said tubular carrier is in position in said under-part of the said shell, and means for pressing said tubular carrier towards said shoulder.

6. An electric lighter according to claim 5, wherein the said means for pressing the said tubular carrier towards the said shoulder comprise resilient means located between the upper part of said shell and the upper part of the said tubular carrier and adapted to press the said carrier downwardly on to the said annular shoulder when the upper part of the shell is applied to the under part of the latter.

7. An electric lighter according to claim 6, wherein the said tubular carrier is externally longitudinally fluted to provide vertical pockets for vertical reception of said batteries, and wherein metallic electrical contacts are provided at the upper and lower ends of said pockets for connecting said batteries in series with one another and with the said inductor coil.

8. An electric lighter according to claim 7, wherein said pockets are open on their outer sides to permit the radial insertion or withdrawal of the said batteries into, or from, the said pockets after removal of the tubular carrier from said shell, said contacts being so formed and arranged as to permit the said batteries being slid into and out of contact therewith.

9. An electric lighter having a manually operable torch, a sparking contact, an inductor coil unit, and a current supply source all electrically connected whereby upon withdrawal of said torch from the lighter the former is ignited by said sparking contact; and including in combination, an outer shell comprising a pair of complementary cup shaped parts adapted to be positioned with their mouths in abutting relation, one of said parts being provided with an opening sealed by the handle portion of said torch when the latter is in one position within said lighter whereby evaporation of fuel without the lighter is avoided, a tubular carrier extending within said mouths of said cup shaped parts, said tubular carrier being provided with flanged end portions cooperating with the surface of said mouths of said cup shaped parts to define a first chamber adapted to receive the lighter fuel, a second chamber adapted to receive said sparking contact, and a third chamber intermediate said first and second chambers and adapted to receive said current supply source, the bore of said tubular carrier being adapted to receive said inductor coil unit and communicating with said first and second chambers whereby said torch is adapted to receive the lighter fuel from said first chamber when said torch is in said one position, and means for sealing said third chamber from communication with sad first chamber whereby evaporation of the lighter fuel within said outer shell is avoided.

10. An electric lighter constructed according to claim 9, comprising second means positioned within said bore of said tubular carrier for sealing said inductor coil unit

from communication with said first chamber whereby evaporation of the lighter fuel within said inductor coil unit is avoided.

11. An electric lighter constructed according to claim 9, comprising absorbent material within said first chamber, and wick means in engagement with said absorbent material, said wick means being resiliently urged against the end of said torch adapted to be ignited in said one position thereof.

12. An electric lighter constructed according to claim 9, and wherein said sparking contact includes a pair of spring contacts secured for initial rotational movement and subsequent winding movement for tensioning said springs on said cylindrical carrier to thereby afford a lost motion connection when said torch is displaced from said

one position thereof whereby said sparking contact remains permanently adjusted, and ignition of said torch occurs solely during withdrawal of said torch from said lighter to thereby prevent accidental ignition thereof.

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