

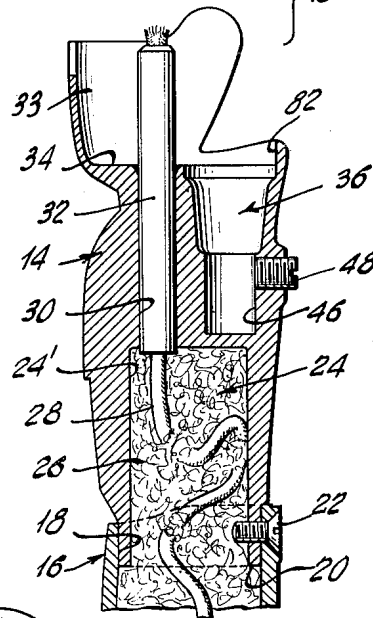
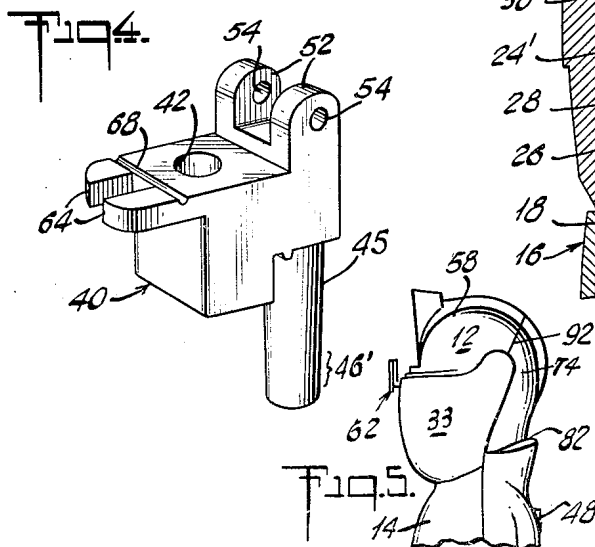
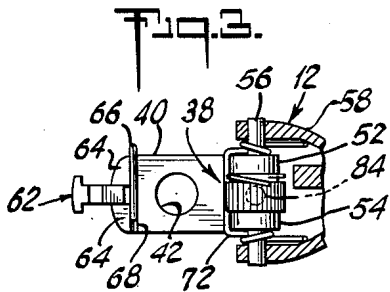
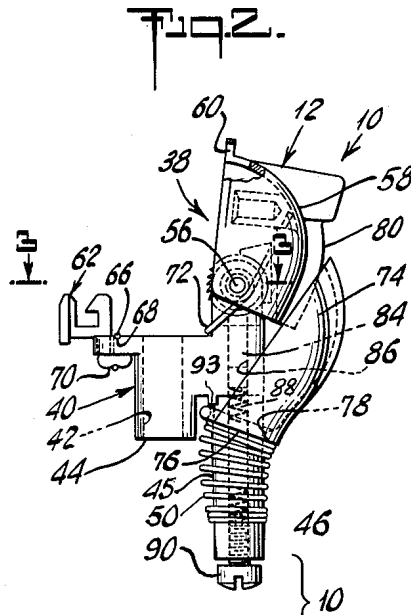
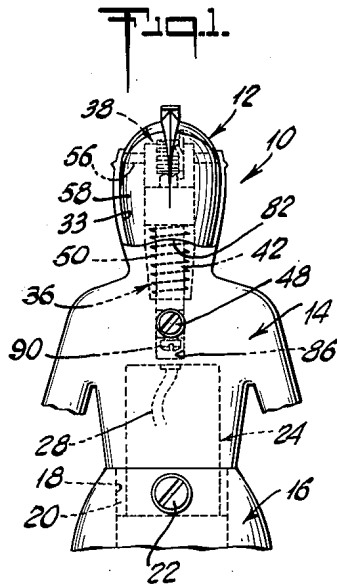
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2,592,837

PYROPHORIC LIGHTER

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PYROPHORIC LIGHTER

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The present invention relates to improvements in pyrophoric table lighters or the like, having as an object the ease of disassembly for purposes of repair of broken or damaged parts, access to the fuel reservoir, replacement of liquid absorption material, and replacement of the wick or pyrophoric elements as they wear out from constant usage.

It is quite common to have lighters in sections. However, the structures of this type of lighter heretofore have not provided the desired ease of assembly and in other ways have failed to meet the requirements of the art.

An object of the present invention is to provide a lighter assembly made of pre-fabricated sections arranged for ready assembly without requiring any great amount of skill.

A further object of my invention is the provision of an assembly of the type referred to above which will permit the removal of one or more sections from any part thereof without requiring the disassembly of the entire lighter.

Further objects of my invention will become apparent as the following description proceeds and are shown in the drawings, wherein:

Fig. 1 is a fragmental rear elevation of the upper portion of a lighter embodying the present invention;

Fig. 2 shows a side elevation of Fig. 1 enlarged and in exploded form, partly in side elevation and partly in cross-section;

Fig. 3 illustrates a fragmental plan section taken on its line 3-3 of Fig. 2;

Fig. 4 is a perspective view of the main mounting casting shown in the upper portion of Fig. 2;

Fig. 5 shows a fragmental side elevation on a smaller scale.

Referring now more particularly to the drawings, in which like parts have like reference characters, the device 10 comprises three main sections: a head or top portion 12 forming the lighter unit proper, a hollow intermediate or body portion 14, and a hollow base or leg portion 16, said base portion 16 being apertured at its upper end as indicated at 18 to receive the fitted end 20 of the body portion 14 snugly and provide an air-tight seal against evaporation of the lighter fluid, said portions 14 and 16 being held in fixed relation by a countersunk screw 22 serving as a closure plug for the cavities in members 14 and 16.

Referring more specifically to Fig. 2, it will be seen that the hollow base portion 16 and the hollow body portion 14 cooperate to form a common reservoir 24 which is filled with the usual absorbent cotton 26 and wick 28, and in which the screw

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22, when removed, provides an aligned aperture by which the reservoir is replenished.

As shown, the body portion 14 is hollow at its lower end as at 24' and has at its closed upper end an aperture 30 extending upwardly through the body portion 14, into which a wick holder 32 is firmly secured as by soldering, said holder 32 extending above the surface 34 of body portion 14. Body member 14 is provided at its surface 34 with a cavity or recess 36 to receive the tapered stem of the head portion 12.

Head portion 12 comprises a compact unit assembly which carries the conventional lighter mechanism generally indicated at 38, which mechanism, per se, forms no part of this invention. A support or bracket member 40, apertured at 42 and having a base portion 44, is adapted to slide easily over the upper part of the wick holder 32 in receptacle 33 and have its base 44 contact the surface 34, aforesaid recess 36 thus acting as a pilot hole for the tapered stem portion 45 of bracket 40. The lower portion 46' of the stem 45 fits into the lower part 46 of said recess 36 and is held therein by a set screw 48 in body portion 14, the upper part of said recess 36 being of a greater diameter to receive the conical coil spring 50 to be hereinafter described.

Bracket 40, referring more particularly to Fig. 4, is provided with a pair of lugs 52 having aligned openings 54 to receive horizontal pin 56, the ends of which fit into a snuffer cap member 58. Member 58 has an opening 60 in its front adapted to snap over and be held by a catch member 62 held between the bifurcated ends 64 of bracket 40. Catch member 62 is fulcrumed and resiliently braced by a U-shaped spring 66, one leg of which is fitted in groove 68 of bracket 40 and the other leg in groove 70 of catch member 62; a second U-shaped spring 72 braced on bracket member 40 and coiled about pin 56 serves at its free ends to keep member 58 in open position while the lighter is in use.

A half-shell-like member 74 co-acting with member 58 has a flange or ring portion 76 at its lower end, having an over-sized aperture 78 which loosely encircles the upper part of stem 45, enabling said shell member 74 to rock rearwardly against the action of the spring 50 when so urged by contact with an arcuate flange 80 on snuffer member 58, when said closure is released from its fully closed position as seen in Fig. 5 to its open position as seen in Fig. 2. Member 74 is retarded from further rearward motion by an abutment 82 on body portion 14. Spring 50 is conical, its larger convolutions bearing on flange

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or annular portion 76 and its smaller and closely spaced convolutions being in tight frictional engagement with the shank portion 45.

As shown, the lighter mechanism 30 has the usual abradant wheel mounted to turn freely on the horizontal pin 56 which is supported by ears 52 and supports a flat spring pawl designed to disengage the stepped side surface of the abradant wheel when member 58 on which the pawl abuts is rotated counter-clockwise to its closed position. Upon release, snuffer member 58 rotates clockwise, carrying with it the spring pawl and abradant wheel, said wheel producing sparks from the pyrophoric element 84 which is carried in a vertical bore 86 which extends through the tapered shank 45. The pyrophoric element 84 is pressed upward into operative contact with the periphery of the abradant wheel by means of a compression spring 88, its tension being adjustable by a screw 90 threaded into bore 86 at its lower end.

Fig. 5 shows the complete closure composed of snuffer cap 58 and shell member 74 in closed and inoperative position, wherein the rear edge of member 58 abuts the forward edge of member 74 in a plane 92. The abutting edges of both members have the same arcuate configuration and the case or housing formed by both members has a continuous surface. Abutment is retained by spring 59 until catch 62 is released by pressing thereon. Upward movement of member 74 is limited by contact of the forward portion of its flange 76 with an abutment 93 provided on bracket member 40.

It will be understood that the details described above need not be strictly adhered to and that various changes and modifications, all falling within the scope of the subjoined claims, may suggest themselves to anyone skilled in the art.

I claim:

1. A pyrophoric lighter comprising a body member having a hollow lower portion for receiving fuel, a cavity in said body member above said hollow portion, a slidably removable lighter unit comprising a bracket member having a vertical bore and a flint magazine in the form of a stem portion, the latter extending into said cavity, a tubular wick holder permanently connected with and extending upward from said body member and extending slidably through said bore and defining the horizontal position of said bracket member on said body member, catch means swingably connected with said bracket member, said lighter unit comprising closure means including two shell-like parts: a first part loosely rockably mounted on said stem portion and having an arcuate edge portion, a second part pivotally connected with said bracket member and comprising a snuffer cap and means

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adapted to be engaged by said catch means for holding said second part in closed position, said second part having an arcuate edge portion conforming with the arcuate edge portion of the first part, said edge portions abutting each other and said two parts forming a lid when said second part is engaged by said catch means, said second part pushing said first part out of its way and rocking it until overlapped thereby upon release of said catch means and opening of the lid.

2. A pyrophoric lighter as defined in claim 1, said bracket member having a horizontal portion, said stem portion extending downward from said horizontal portion and said bore being in said horizontal portion between said stem portion and said catch means, said first part having an annular lower end portion extending around said stem portion, and a spring interposed between said stem portion and said annular portion for urging the latter upward against said horizontal portion of said bracket member and said first part upward and against said second part.

3. A pyrophoric lighter according to claim 2, said bracket member having an abutment projecting downwardly between said stem portion and said bore, said spring being coiled around and having a lower end connected with said stem portion and an upper end abutting said annular end portion from below and urging it against said abutment which forms a fulcrum for said first part.

4. A pyrophoric lighter as defined in claim 1, comprising a fixing screw extending from the outside of said body member into said cavity for fixing said stem portion therein.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,762,079	Rubsamen	June 3, 1930
1,844,481	Rogers	Feb. 9, 1932
1,903,203	Stevenson	Mar. 28, 1933
2,071,601	Whittaker	Feb. 23, 1937
2,210,322	Korner	Aug. 6, 1940
2,267,076	Burchett	Dec. 23, 1941
2,459,238	Negbaur	Jan. 18, 1949
2,481,982	Deadwyler	Sept. 13, 1949
2,493,081	Negbaur	Jan. 3, 1950

FOREIGN PATENTS

Number	Country	Date
250,151	Switzerland	Aug. 15, 1947
685,317	France	Mar. 31, 1930