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PATENT



SPECIFICATION

Application Date, June 12, 1916. No. 8285/16.

Complete Accepted, Sept. 7, 1916.

COMPLETE SPECIFICATION.

Improvements in and relating to Portable Electric Lighters
for Gas.

I, RICHARD WILLIAM SANDERS, Electrical Engineer, of Queen Street, Boston, Lines, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to portable self-contained electric lighters for gas of the type in which the gas is lit by flashes or sparks given off by an induction coil upon the making and breaking of contact between its discharging rod and its terminal.

Hitherto such igniters have consisted of a metal casing in which is located
10 an induction coil and a battery, one pole of which is in electrical connection with the casing and the other pole connected to the induction coil. A long neck attached to the casing is provided at its upper end with a brush adapted to be engaged with by a spring insulated from said neck but electrically connected with the induction coil, the casing, the neck and brush making the
15 one conductor. The other conductor, viz:—the spring, is connected by a cord to one end of an angle lever pivoted to the casing and inside thereof, said lever at its other end being provided with a push piece exterior of said casing, so that by operating said push piece the spring is caused to pass across the brush, producing sparks which ignite the gas.

20 The present invention has for its object the improved construction and arrangement of such an igniter, combined, if desired, with a glow lamp which may be brought into use as required by the person using the igniter, as hereinafter described and pointed out in the claims and illustrated by the accompanying sheets of drawings which show two methods of carrying out the
25 invention. Of the drawings:—

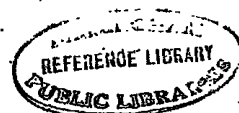
Figure 1 shows the invention as for ignition only.

Figures 2 and 3 show the invention as for combined ignition and illumination.

Like letters of reference indicate corresponding parts in the several figures.

Referring first to Figure 1, *a* is a case, of wood or other non-conductor of
30 electricity, in which is located a battery *b* and coil *c* connected up to said battery. *d* is the discharge rod rotatably mounted in standard *d**, and *e* the terminal post, said rod *d* and terminal *e* being connected to the coil *c*, and *d¹*, *e¹*, are the respective contacting parts, said part *d¹*, which is arranged at right angles to the discharge rod *d*, being rigid and fixed to or forming
35 part of said discharge rod *d*, whilst the end *e¹* is connected to the terminal post *e* and consists of a spirally coiled wire. *f* is a push rod controlled by spring *g*, said rod *f* having a slit *f¹* therein for the reception of the right angle portion *d²* of the lower end *d²* of the rod *d*.

[Price 6d.]



From the above description and inspection of said Figure 1 it will be seen that on the rod *f* being pushed in, against the spring *g*, the rod *d* will be partly rotated and in so doing by its upper end *d*¹ engages with the flexible terminal end *e*¹, deflecting the same, till said end *d*¹ slips said end *e*¹, which at once, owing to its springiness, returns to the normal, ready to be engaged with by the end *d*¹ on the rod *d* on the return movement of the same, that is to say, the push rod *f* is allowed, under the action of the spring *g*, to fly back, the making and breaking of contact between the ends *d*¹ and *e*¹ producing flashes which ignite the gas. 5

In the arrangement shown in Figures 2 and 3, the discharge rod *d* is rotatably mounted in and insulated from the terminal *e*, the closed circuit being through push rod *f*, boss *g*¹, lead *g*², coil *c*, lead *g*³, battery *b* and lead *e*^{*} to terminal *e*. *h* is the glow lamp, *h*¹ a blade spring connected by lead *h*² to battery. *h*³ is a push pin and *h*⁴ the switch handle, the movement of which in the direction of the arrow shown in Figure 3 presses inwards the pin *h*³ and spring *h*¹ against which it bears, causing the upper end of said spring *h*¹ to contact with the socket *h*⁵ of the glow lamp. 10 15

It is known that walking sticks, umbrella sticks, riding whips and other similar articles have been provided with a battery, a glow lamp and also a platinum coil, which coil when rendered incandescent by the battery serves as an igniter to light a cigar, and no claim is made to such an arrangement. 20

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In portable self-contained gas igniters of the type set forth and in combination, a case which is a non-conductor of electricity, a terminal post with contact end of spirally coiled wire, a discharge rod rotatably mounted on said case, a cranked upper and rigid contact end to said discharge rod, a spring-controlled push rod horizontally and slidably mounted in said case, a slot in said push rod and a lower cranked end to the discharge rod, said lower end engaging said slot, both discharge rod and terminal post being connected to the induction coil, as herein described with reference to Figure 1 of the accompanying sheets of drawings. 25 30

2. In portable self-contained gas igniters of the type set forth and in combination, a case which is a non-conductor of electricity, a terminal post with contact end of spirally coiled wire, a discharge rod rotatably mounted in but insulated from said terminal post, a spring-controlled push rod horizontally and slidably mounted in the case, a cranked upper and rigid contact end to the discharge rod, a slot in the push rod, a lower cranked end to said discharge rod, said lower end engaging in the slot in the push rod, the terminal post being connected to battery, whilst the discharge rod is connected by way of its lower cranked end, spring-controlled push rod and conductor to the induction coil, as herein described and in accordance with Figures 2 and 3 of the accompanying drawings. 35 40

3. In portable self-contained gas igniters as claimed by the preceding claim, the combination therewith of a glow lamp and switch means as herein described. 45

Dated the 9th day of June, 1916.

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SHEET 1

SHEET 2

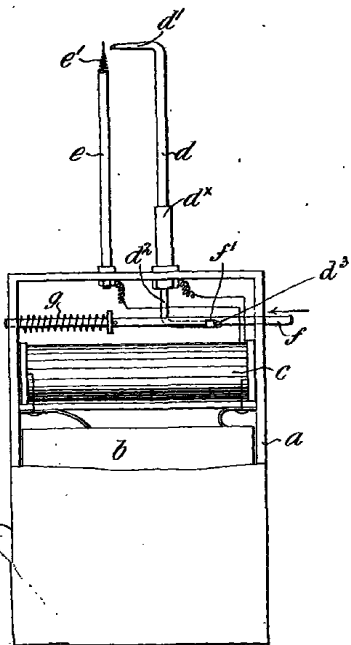


Fig. 1.

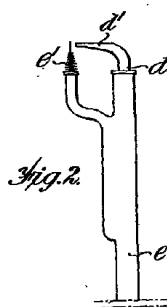


Fig. 2.

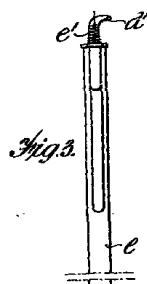
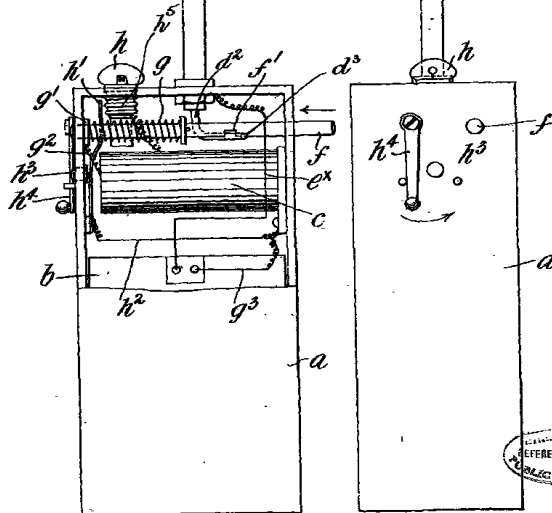


Fig. 3.



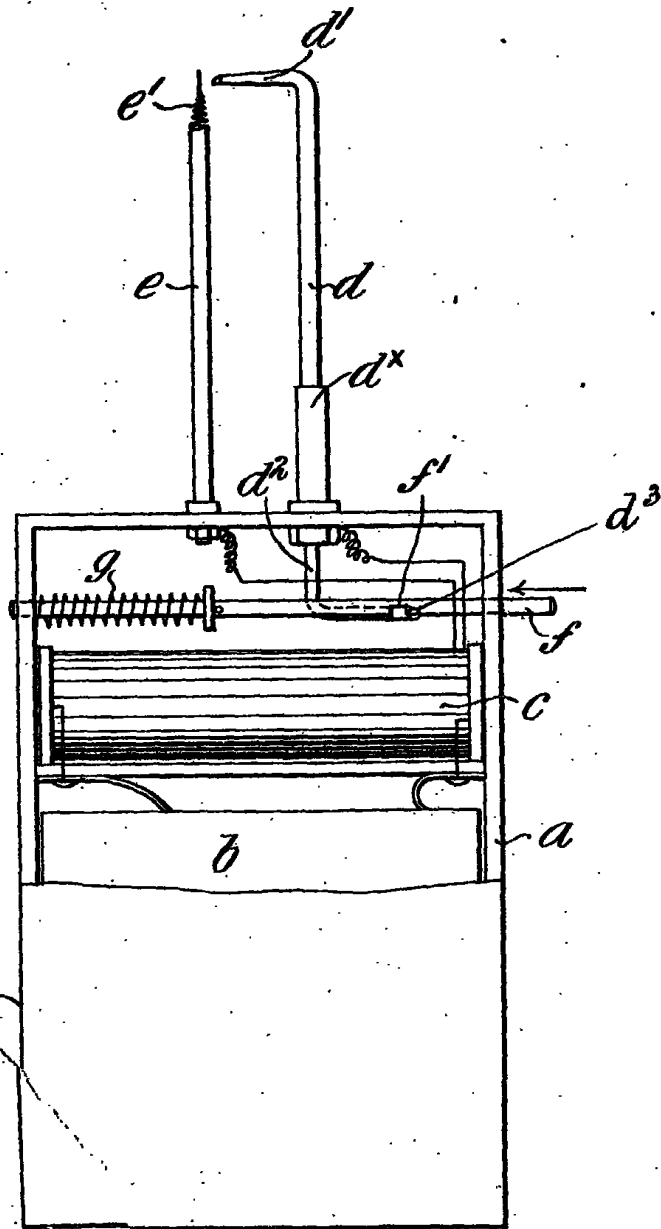
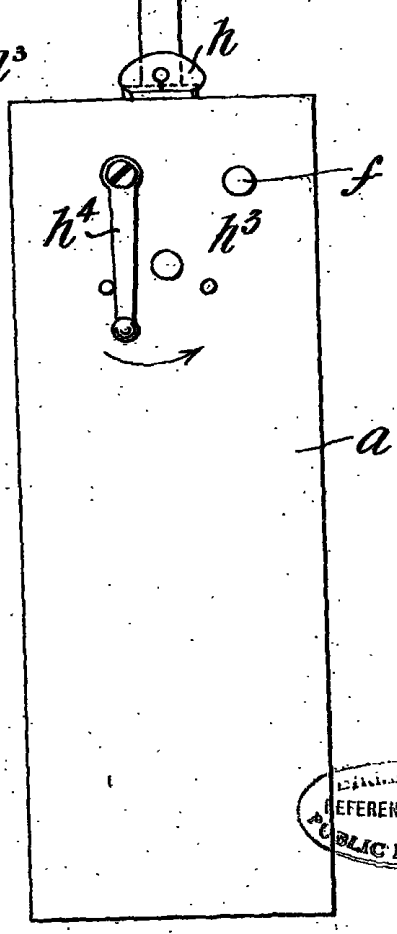
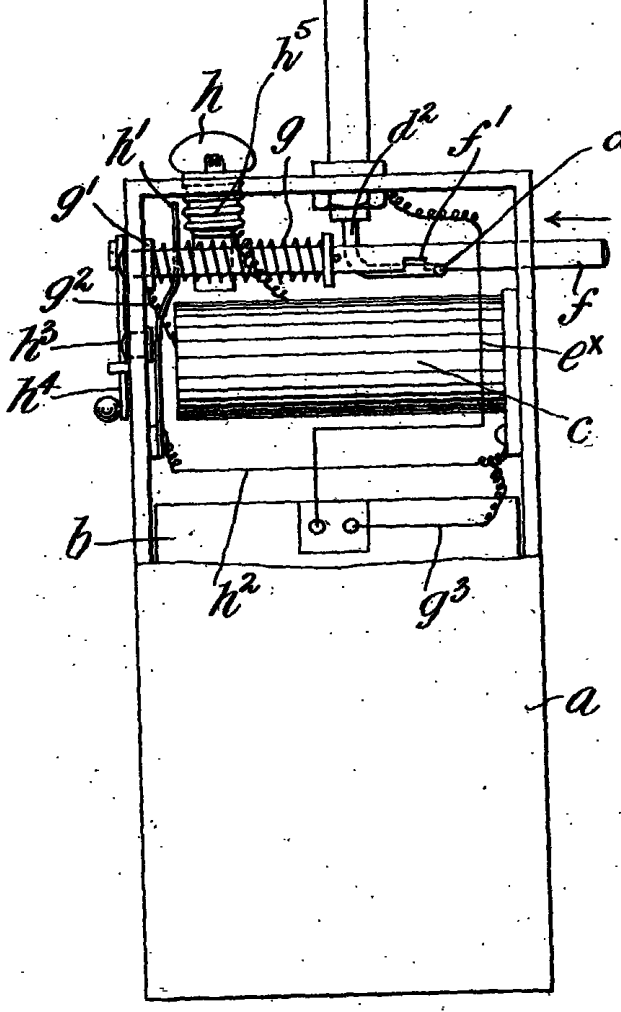
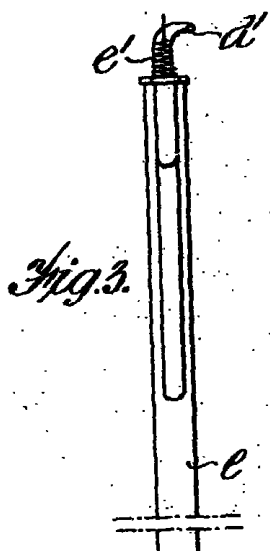
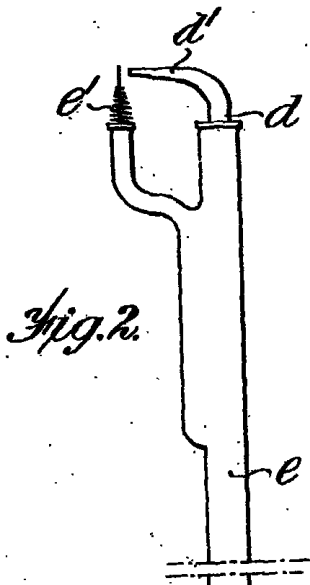


Fig. 1.

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