

No. 706,923.

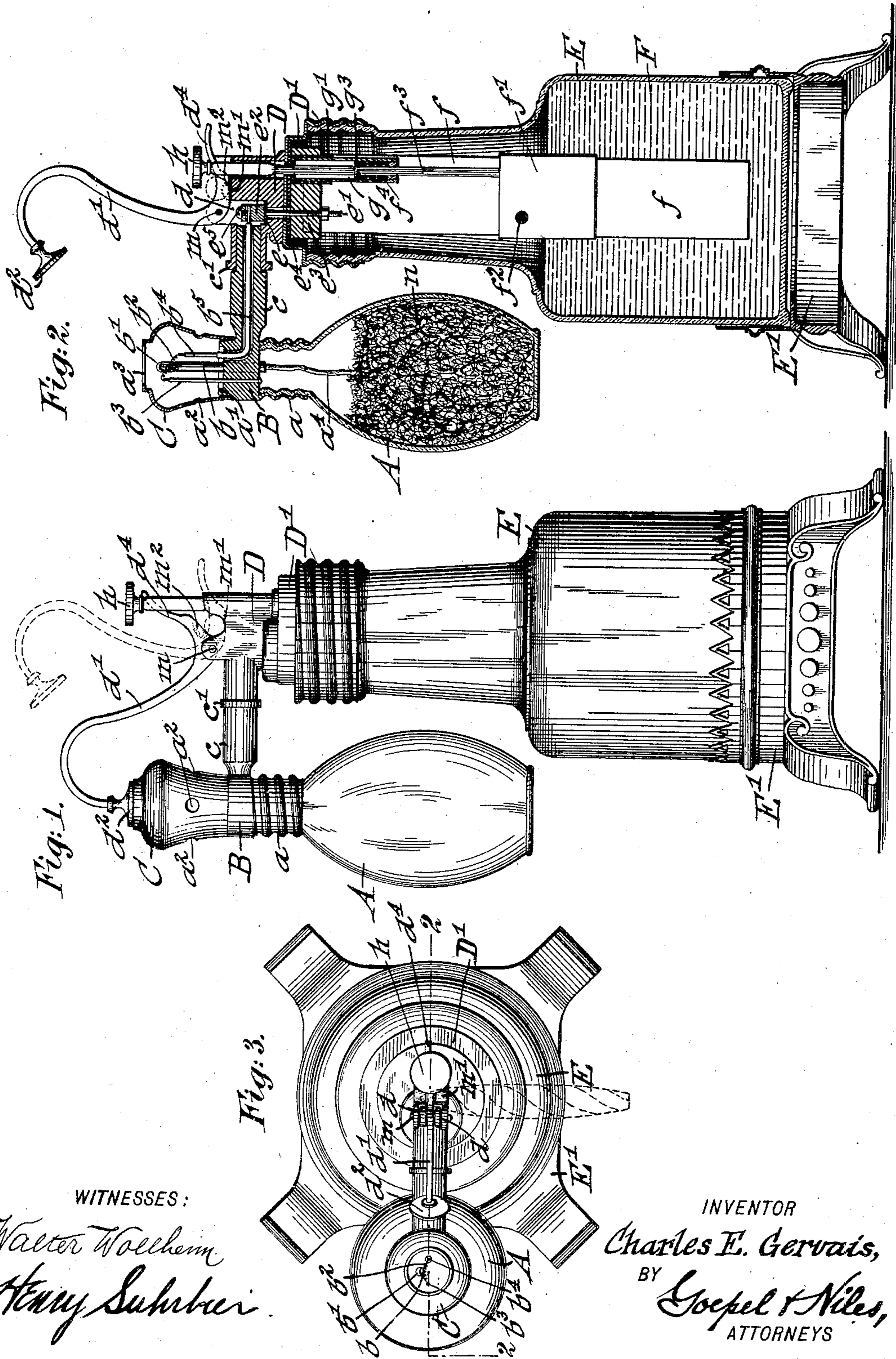
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C. E. GERVAIS.

LAMP.

(Application filed Apr. 17, 1902.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## LAMP.

SPECIFICATION forming part of Letters Patent No. 706,923, dated August 12, 1902.

Application filed April 17, 1902. Serial No. 103,363. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. GERVAIS, a citizen of the United States, residing in New York, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

In United States Letters Patent No. 678,655, granted to me July 16, 1901, I have described a lamp having two wicks, means for lighting one of said wicks by a resistance coil or wire, and an extinguishing device for said wick connected with means controlling the electric current for said resistance-coil, so that the current is discontinued and the flame extinguished by the extinguishing device simultaneously or approximately so. The lamp referred to has two wicks, the second wick becoming ignited from the flame of the first after the first has been ignited by the resistance-coil. The flame from the second wick remains lighted after the extinguishment of the first wick until blown out or extinguished by other means. This lamp when used as a cigar-lighter, for which it is in many respects adapted, was found to have some objections. Frequently the user while holding his cigar with one hand would with the other hand retain the extinguishing device for the first wick in raised position and press the cigar closely to both wicks, thereby displacing the resistance-coil from its proper position for lighting the primary wick or to such an extent removed from the wick as to prevent it lighting the same at all or even breaking the coil. The coil and wick also by this operation became covered with cigar-ash, which interfered with the reliable lighting of the wick in subsequent use of the lamp.

The object of this invention is to provide means for overcoming these evils, so as to render the lamp reliable in operation when used as a cigar-lighter. For this purpose the invention consists in the combination, with a lamp-body, of a head applied to the same and provided with a shoulder at its upper portion, a hollow guard-cap fitting at its lower end on said shoulder and extending upwardly from the head and provided with openings in its side wall and an opening at the top, a wick-

tube extending from said lamp-body through the head and terminating in the upper part of the guard-cap near the top opening of the same, a wick in said tube and extending from the upper end of the same within the guard-cap, a resistance-wire within the guard-cap adjacent the upper end of said wick for lighting the same, a swinging arm, and an extinguishing-cap carried by said arm and adapted to close said upper opening in the top of the guard-cap.

The object is, further, to provide means for cutting off the cigar-tip simultaneously with the raising of the cap from the guard-cap and with the igniting of the wick, so that the cigar is prepared for lighting at the same time and by the same operation that the flame is produced. This I accomplish by providing the head of the battery-receptacle, to which the swinging arm is attached, with a curved seat adapted to receive the cigar, and providing the rear portion of the arm with a knife-edge, so that when the arm is operated by a rod, to which one element of the battery is attached for being plunged into the battery fluid, the knife-edge descends to the seat and cuts off the cigar-tip.

The invention consists, further, in certain other combinations of parts, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2, a vertical central section on line 2 2, Fig. 3; and Fig. 3, a top view of a lamp embodying my invention.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates a lamp-body, and B the head of the lamp, which is secured to the body A by a screw-threaded lower portion or neck  $a$  or any other suitable means. The upper portion of said head is provided with a shoulder  $a'$ , and on said shoulder is frictionally secured a guard-cap C, of metal or other suitable material, which extends upwardly from the head and which is provided with openings  $a^2$  in its side wall and an opening  $a^3$  in its top. Through the head extends a wick-tube  $b$ , which terminates in the upper part of the guard-cap adjacent

the top opening  $a^3$ . The wick-tube extends vertically, and for protecting the wick against cigar-ash the upper end of the tube is preferably hooded over by a suitable guard  $b'$ . Also the tube is not located directly in the center of the head and guard-cap, but at one side of the same, in such position that the flame as directed by said guard  $b'$  will pass out of the opening  $a^3$  approximately at the center of the same and burn steadily. A wick  $a^4$  extends from the lamp-body through the wick-tube, and a resistance coil or wire  $b^2$ , of platinum or other suitable material, is arranged in contact with or adjacent the upper exposed end of the wick. Said coil is supported on the one hand by a post  $b^3$ , of suitable conducting material, rising from the head, and on the other hand by a post  $b^4$ , which may be a continuation of a conducting-wire  $b^5$ , insulated from the head.

The head B is provided with a tubular-lateral extension  $c$ , which engages an extension  $c'$  of the head D of a suitable receptacle E of non-conducting material, upon which the entire lamp is supported, and which receptacle E forms the jar for an electric battery by which current is generated for the resistance-coil  $b^2$ . The receptacle E is supported on a suitable base  $E'$  of any desired form. Between suitable upwardly-projecting lugs  $d$  of the head D is pivoted a swinging arm  $d'$ , provided at its outer end with a cap  $d^2$  of such size as to close the upper opening  $a^3$  of the guard-cap C. The head D is attached to a suitable screw-cap  $D'$ , adapted to screw upon the jar or receptacle E, and said head is provided with a recess in which is located the head  $e^2$  of a bolt  $e'$ , which is insulated by a suitable washer  $e$  from the head. The bolt passes through the head and cap and a plug  $e^3$ , said plug being located below the cap and insulated from the same by an insulating-washer  $e^4$ . The bolt thereby secures the plug, head, and cap securely together. The head  $e^2$  of the bolt is provided with a bore adapted to receive the end of the insulated conducting-wire  $b^5$ , and a set-screw  $e^5$  screws into the head and secures said wire thereto. To the plug  $e^3$  are attached by any suitable means two carbon plates, of which one only,  $f$ , is shown in the drawings, said plates being arranged parallel with each other. Between the carbon plates, which form the negative elements of the battery, is located a smaller plate of zinc  $f'$ , forming the positive element of the battery and separated from the carbon elements by a pin  $f^2$  of insulating material, this construction being substantially the same as indicated in my previous patent referred to. The zinc plate is attached to and supported by a rod  $f^3$ , which is spring-actuated in upward direction, so as to lift the plate  $f'$  out of the battery fluid by a suitable coil-spring  $f^4$ , located in a tube  $g$ , insulated by a layer of suitable insulating material from the plug, the making and breaking of the current being controlled by said rod and connected parts. The rod  $f^3$  is

guided by a plug  $g^2$  at the lower end of the tube  $g$  and by a washer  $g^3$ , secured to the rod  $f^3$  within the tube. The spring  $f^4$  is located between said plug and washer. The rod  $f^3$  passes in upward direction through the cap  $D'$  and head D and is provided at its upper end with a knob  $h$ . The arm  $d'$  extends rearwardly from its pivot  $m$  in the lugs  $d$ , and said rear portion  $d^4$  is curved and extends adjacent the rod  $f^3$  and knob  $h$ , so that upon depressing the rod  $f^3$  the knob  $h$  engages said rear portion  $d^4$ , and thereby operates the arm  $d'$ , raising the extinguishing-cap  $d^2$  from the guard-cap C. The head D is provided between the pivot  $m$  and rod  $f^3$  with a seat  $m'$ , preferably curved, as indicated in Figs. 1 and 3, so as to receive the end of a cigar. The rear portion  $d^4$  of the arm  $d'$  is made sharp at its lower side opposite said seat, so as to form a knife-edge  $m^2$ , adapted to cooperate with the seat for cutting off the cigar-tip. The circuit of the battery is from the zinc  $f'$ , through the rod  $f^3$ , head D, extension  $c$  of the lamp-head, head B, post  $b^3$ , resistance-wire  $b^2$ , post  $b^4$ , wire  $b^5$ , bolt  $e'$ , plug  $e^3$ , and carbon  $f$ , and the battery fluid F.

When it is desired to light a cigar, the cigar is placed with its tip on the seat  $m'$ , as indicated in dotted lines in the figures, and the rod  $f^3$  is pushed in downward direction by means of the knob  $h$ , thereby cutting off the tip of the cigar and plunging the zinc into the battery fluid. The current is generated by the battery in the receptacle E and flows through the course stated, thereby heating the resistance-coil sufficiently to ignite the wick, the flame from the same passing through the opening  $a^3$ , as indicated. The user may now light his cigar by inserting the same in this flame, meanwhile retaining the rod in depressed position. On account of the guard-cap C it is impossible for the cigar to be brought into contact with the resistance-coil, and all displacement of the same or covering with cigar-ash is avoided. The guard  $b'$  largely protects the wick against cigar-ash falling into the guard-cap during the act of lighting. When the cigar is lighted, the rod  $f^3$  is released and rises and the cap  $d^2$  and arm  $d'$  return by gravity into their original position, the cap  $d^2$  closing the opening  $a^3$ , and thereby extinguishing the flame. When it is again desired to light a cigar, the rod is depressed as before, whereby the cap  $d^2$  is again raised and the wick again ignited.

The lamp-body A may be filled with cotton or other suitable absorbent substance  $n$ , saturated with a combustible fluid, or may be filled with the combustible fluid itself.

It is found that after use for some time there may be an accumulation of ashes in the guard-cap C, and for the purpose of conveniently removing these or for inspecting or repairing the parts or trimming the wick when necessary the cap C is made removable, the same being merely frictionally retained upon the shoulder  $a'$ . For facilitating removal and replace-

ment this shoulder is preferably made slightly tapering, as indicated. When it is desired to remove the guard-cap for cleaning or inspecting the parts, it is not necessary that the rod  $f^3$  be depressed. The cap C is removed by simply first swinging the arm  $d'$  in upward or backward direction, as indicated in dotted lines in Fig. 1. This operation is permitted by reason of the fact that the rear portion  $d^1$  of the arm is freely movable downwardly at the side of the rod and is not connected directly with said rod. When the arm  $d'$  is in this position, the guard-cap C is readily removed, the necessary cleaning or repairs made, the cap then replaced, and the arm and cap  $d^2$  allowed to descend into normal position. This operation was not possible with the extinguishing mechanism shown in my previous patent referred to, as the same was connected with the battery-rod and was not movable independently of the same.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a lamp, the combination, with the lamp-body, of a head applied to the same and provided at its upper portion with a shoulder, a hollow guard-cap fitting at its lower end on said shoulder and extending upwardly from said head and provided with openings in its side walls and an opening at the top, a wick-tube extending from said lamp-body through the head and terminating in the upper part of the guard-cap near the top opening of the same, a wick in said tube and exposed at the upper end of the same within the guard-cap, a resistance-wire within the cap adjacent the upper end of said wick for lighting the same, a swinging arm, and an extinguishing-cap carried by said arm and adapted to close the upper opening of said hollow cap, substantially as set forth.

2. In a lamp, the combination, with a lamp-body, of a head applied to the same and provided at its upper portion with a shoulder, a hollow guard-cap fitting at its lower end on said shoulder and extending upwardly from said head and provided with openings in its side wall and an opening at the top, a vertical wick-tube extending from said lamp-body through the head at one side of the center of the same and provided at its upper end, near the top opening, with an overhanging guard,

a wick in said tube and exposed at the upper end of the same within the guard-cap, beneath said guard, a resistance-wire within the cap adjacent the upper end of said wick for lighting the same, a swinging arm, and an extinguishing-cap carried by said arm and adapted to close the upper opening of said guard-cap, substantially as set forth.

3. In a lamp, the combination, with a lamp-body, of a head applied to the same and arranged at its upper portion with a shoulder, a removable hollow guard-cap fitting frictionally at its lower end on said shoulder and extending upwardly from said head, a battery-receptacle, a cap on the same, a head on said cap, a vertically-movable spring-actuated rod passing through said receptacle cap and head, a battery element secured to the lower end of said rod, a knob at the upper end of said rod, above said head, lateral extensions connecting the receptacle-head with the lamp-head, an arm pivoted to the receptacle-head and extending over said guard-cap, an extinguishing-cap secured to said arm and adapted to close the opening in the top of said guard-cap, and a rear portion extending from said arm beneath the knob of said rod, said rear portion and arm being movable independently of said rod, substantially as set forth.

4. In a lamp, the combination, with a lamp body and wick, of a battery-receptacle, a cap and head on the same connected with the lamp-body, a vertically-movable arm pivoted to said head and provided with an extinguishing-cap for said wick, a resistance-wire connected with the elements of the battery in said receptacle and located adjacent the wick, a rear portion projecting from said arm at the rear of said pivot, a battery-rod passing vertically through said cap and head adjacent said rear portion of the arm, a concave seat on the head between said rod and the pivot of said arm, and a knife-edge on said rear portion of the arm opposite said seat, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CHARLES E. GERVAIS.

Witnesses:

JOSEPH H. NILES,  
HENRY SUHRBIER.