D. C. LAMB.

TROUBLE HUNTER.

APPLICATION FILED JAN. 7, 1920.

1,374,455.

Patented Apr. 12, 1921.

2 SHEETS—SHEET 1.

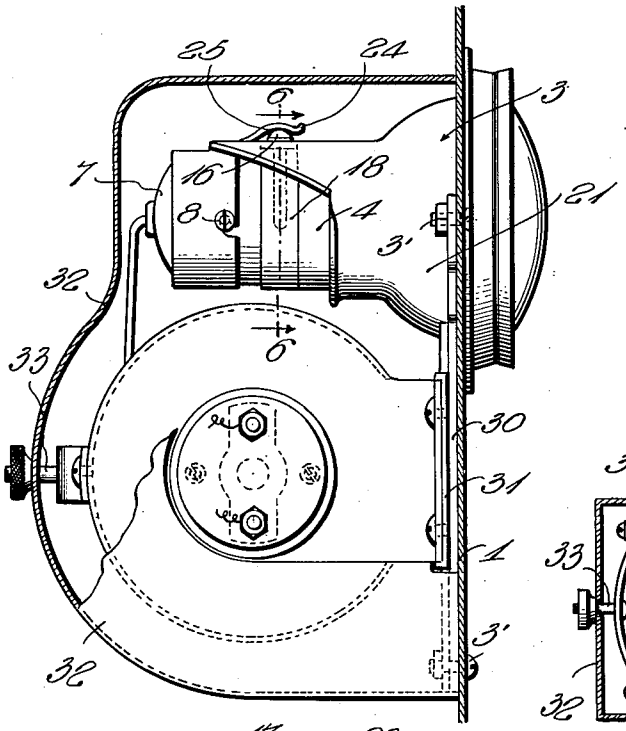


FIG. 1

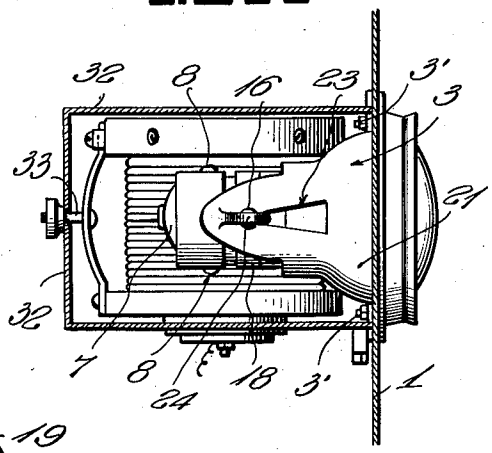


FIG. 3

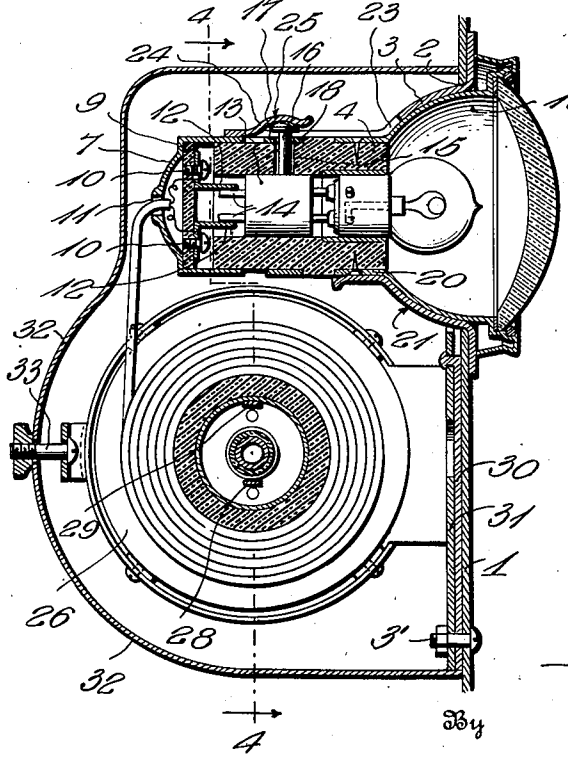


FIG. 2

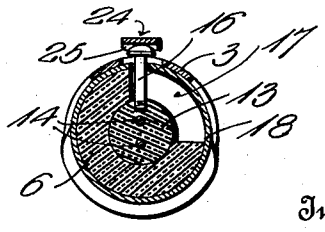


FIG. 6

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2 SHEETS—SHEET 2.

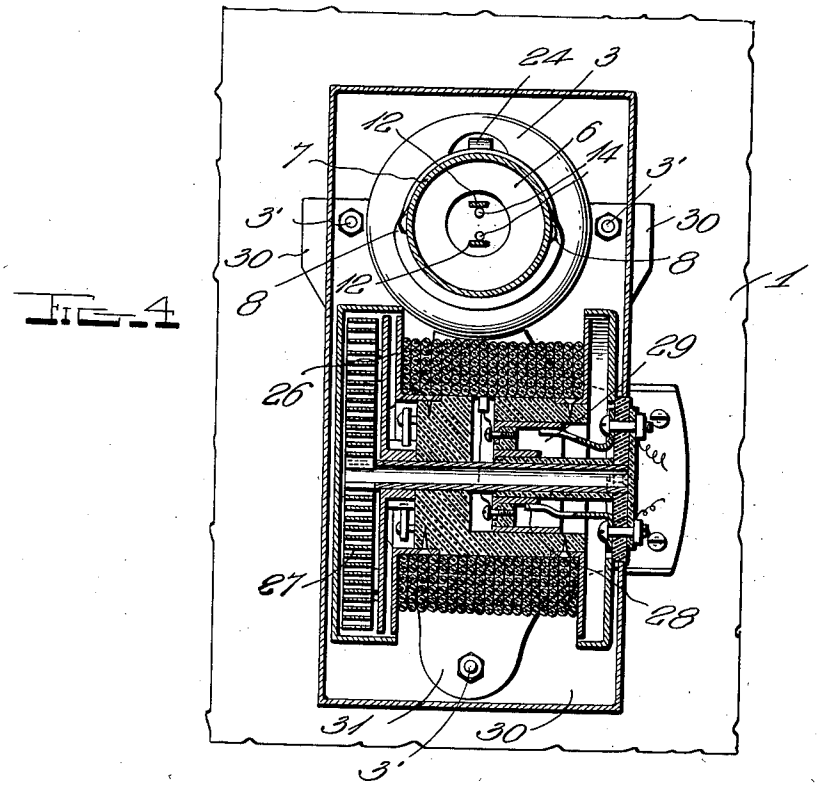


Fig. 4

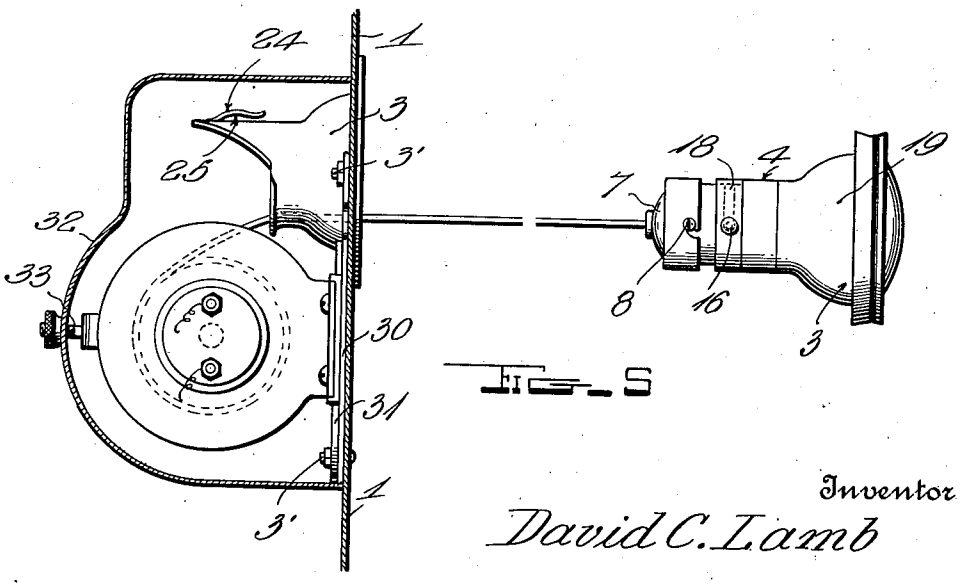


Fig. 5

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UNITED STATES PATENT OFFICE.

DAVID C. LAMB, OF DETROIT, MICHIGAN.

TROUBLE-HUNTER.

1,374,455. Specification of Letters Patent. Patented Apr. 12, 1921.

Application filed January 7, 1920. Serial No. 349,923.

To all whom it may concern:

Be it known that I, DAVID C. LAMB, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Trouble-Hunters, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to portable lights of the kind that are fastened at the end of a cord and can be moved from place to place. When connected to the generator of an automobile, they are called trouble hunters or trouble finders, and my invention relates more particularly to this kind of a device.

As in my previous Patent No. 1,319,012, October 14, 1919, the wires from the battery or other source of power or generator are led to a spring driven take-up from which a wire may be led to a lamp holder and lamp.

In my present invention the lamp holder is mounted in a socket piece from which it may be plucked or drawn and the light turned on in one swift motion. While I am describing this, in general, as a dash light, to be used on any car, with the light placed on the engine side, under the hood, and the coil, or take-up placed on back of dash between instrument board and dash, it may be placed in any other suitable location. One of the important uses for this device is in a tonneau to serve as an inspection or trouble light for touring cars and limousines, the light being placed in the back of the front seat, and the coil or take-up placed at any convenient place under the seat, or in back of the front seat; same can be used either with or without the cover, as shown on the drawing, especially where there is a pocket provided for coil.

The lamp thus located serves the double purpose of an emergency light or trouble hunter. Usually such a light is needed, if needed at all, at once and should be convenient to the hand of the driver, should be instantly accessible and portable to any part of the car or its immediate vicinity. I have secured all of these advantages by my novel construction and arrangement herein presented and claimed.

In the drawing:—

Figure 1 is a side view of my device in place with the protecting hood partly cut away;

Fig. 2 is a vertical sectional view showing the interior of my socket piece and lamp holder;

Fig. 3 is a top view, the protecting hood being cut away;

Fig. 4 is a section on the line 4—4 of Fig. 2;

Fig. 5 is a perspective on a similar scale showing how my lamp holder may be withdrawn from the socket, and

Fig. 6 is a section on the line 6—6 of Fig. 1.

In the drawing the numeral 1 represents any section of the dash of an automobile of the usual type though it is obvious that I may place my device at any desired spot in an automobile, or, for that matter, at any desired spot anywhere. In this dash I provide a socket opening 2 in which I mount a flanged socket piece 3 provided with a rearward extension and generally of a shape and dimension suitable to hold my lamp. In this socket piece 3 I place a lamp mount or holder 4. This mount or holder 4 consists of a hollow shaft or spool 6 of insulating material adapted to turn in the socket piece, and provided at its rear end with a perforated cap 7 secured thereto by screws 8. Seated in this cap is a disk 9 adapted to move with the cap and shaft or spool and preferably clamped between them. This disk is provided with terminals 10 for the wires which are led in through the perforation 11 in the cap. The ends of said terminals 10 are bent outward at 12 to form parts or members of contact switches.

Mounted to move freely in the said spool is a core or rod 13 of insulating material. I provide a pair of conducting parts 14 at the rear to contact with the parts 12. Since the core and spool are free to turn with reference to each other, the switch may be readily opened or closed by turning one part 13 or 16, on the other. I lead the switch member 12 through the core to connect at the forward end with contact points for the lamp 15, so that when the circuit is closed through the switch 12, 14 current may be sent through the lamp.

I provide on the core a pin 16 which extends through a slot 17 in the spool or hollow shaft and is conducted through the ring 18, adapted to turn in a groove in the

outer face of the spool 6. The ring thus turns with the pin and core and at the same time closes or conceals the slot 17. At the forward end of the spool I mount a reflector 19 of which the part 20, which engages the spool, is fitted into a rabbet on the end of the spool so as to come flush with the surface of the spool. I thus make the spool of uniform size from end to end save for the pin 16. The spool is of the exact size adapting it to fit snugly in the socket piece 3. The socket piece 3 has a bowl-shaped forward part 21 adapting it to the shape of the reflector. The rearward extension 22 is provided with a slot 23 extending forward into the bowl-shaped part. This slot is wide enough to accommodate the pin 16 and extends back as far as the pin, when the core and spool are in proper conjunction.

I provide a spring tongue 24 preferably cut out of the material of the socket piece when the slot is made, and in said spring tongue I provide a depression 25 adapting the tongue to engage the pin and resist withdrawal of the spool from the socket piece. The forward end of the tongue is outturned a little to permit the pin to slip under the tongue. The socket piece is suitably secured in position by screws 3′ or equivalent means. The spool may be turned in the socket piece by taking hold of the outer edge of the reflector. The pin 17 is kept from turning by engagement with the sides of the slot and keeps the core piece from turning. The relation of the switch parts 12, 14 will be affected to open or close the circuit through the lamp. The spring tongue 24 permits the ready insertion of the lamp holder into the socket and its easy withdrawal at the same time it keeps it from rattle and accidental displacement.

The wires are led back through the cap to a winding drum 26, provided with spring 27 and contacts 28, 29 after the manner of the drum described and claimed in my former Patent 1,319,012 aforesaid. Conductors lead from the latter to a generator or cell not shown. The winding drum is mounted on a base plate 30 to which the base 31 of the spring drum may be attached. Said base plate has suitable bolt holes for attaching bolts or screws 3′ to secure it in position.

In setting up my device, say in the dash board 1, of an automobile, I make an opening suitable to receive the bowl-shaped part 21 of the flanged socket piece 3. Through holes in the flange I pass bolts 3′ as shown in Fig. 1. On the other or hood side of the dash, I mount my base plate 28 passing bolts 30 through suitable holes cut in the dash and secure the parts in place, and may, if I wish, put on the cover 32 which fits over the parts and is held in position by a bolt 33 secured to the drum casing. I now remove the cap from my lamp holder, and leading the wires from the drum through the perforation in the cap and through the socket I attach them to the switch parts 12 and secure the cap back in position on the lamp holder. The drum in the meantime has been connected up to the generator placed perhaps under the hood. If now the lamp holder be thrust into the socket in the socket piece and the rim of the reflector turned to make a circuit closed through the lamp, the latter will glow, illuminating the front of the car. If desired the lamp holder may be plucked from the socket and carried anywhere within the length of the cord for examining any part of the engine or car, looking at road signs, searching for lost articles, or doing any of the things for which light may be needed in dark places. While the holder is out of the socket, the light may be turned off or on at any time by turning pin 16 by the thumb or finger, and after insertion in the socket piece, light may be turned off or on at will by simply grasping and turning the rim of the reflector or the part to which the reflector is fastened.

It will be seen that I have thus devised a lamp which may be used as the usual tonneau light to enable persons readily to enter and leave the vehicle, to examine the speedometer, see the clock or inspect any of the gages usually formed on a dashboard. A touch of the fingers turns it off. If trouble arises anywhere, I pluck the lamp from its socket and carry it wherever I please, turning it on or off at will. My lamp, therefore, is capable of being used as a car light and also as a trouble hunter. The lamp, in case of accident, or other sudden need, may be plucked from the socket and turned on, if not already, by a single swift movement of the hand and thumb. Being normally in one place, the driver knows instantly where to find it, light or dark, and his movement is sure.

Within the scope of my invention I reserve the right to all equivalents, within the purpose and meaning of the law.

Having thus described my invention, what I claim as new and desire to secure protection for by Letters Patent of the United States, is:

1. In a trouble hunter, in combination, a lamp, a holder for said lamp, a slotted socket piece adapted to be fixed in position and having a socket adapted to said holder, a core within said holder, a switch, a part of said switch being on said core and a part on said holder, said core being rotatable in said holder, and a pin extending from said core, through said socket piece and engaging the slot thereof whereby it is held from rotating.

2. In a trouble hunter, in combination, a lamp, a holder for said lamp, a slotted

socket adapted to be secured to a fixed part and adapted to receive said holder by endwise thrust, a pin on said holder and a spring tongue on said socket piece over said slot, said pin engaging said slot and tongue whereby the lamp holder is held from rattle and accidental displacement but may easily be plucked loose.

3. In a trouble hunter in combination, a rearwardly extending socket piece for mounting in a dash, a lamp holder adapted to be thrust into said socket piece, means for releasably retaining said lamp holder in position, a lamp in said holder, means in said holder for switching on and off the light at will, a wire leading to said holder, a spring drum for said wire and means connecting said drum with a generator.

4. In a combined dash light and trouble hunter in combination, a dash socket piece adapted to be inserted in the front of a dash and to extend to the rear thereof, a lamp holder adapted to be thrust into the socket of said socket piece, a lamp for said holder, wires connected with said holder leading to a generator and means connected with the holder and socket piece, whereby the holder may be releasably held in said socket and the lamp turned on or off at will.

5. In a trouble hunter and dash lamp in combination, a flanged socket piece adapted to be inserted in the dash and to extend beyond the rear thereof, a lamp holder adapted to be thrust into the socket piece, a lamp, a switch for said lamp in said holder, a switch actuating means extending from the switch to the socket piece and means on said socket piece whereby said switch may be actuated to turn the light on and off.

6. In a trouble hunter and dash lamp in combination, a flanged socket piece adapted to be inserted in the dash, a lamp holder adapted to be thrust into the socket piece, a lamp, a central core for said holder said lamp being mounted on said core, contacting means on said holder and core for turning on and off the lamp and means extending from said core to said socket piece whereby said core may be held from turning while the holder is turned.

7. In a trouble hunter and dash lamp in combination, a flanged socket piece adapted to be inserted in the dash, a lamp holder adapted to fit the socket piece, a lamp, a lamp carrying part in said holder said lamp being mounted on said part, said part and said holder being movable with relation to each other and means connected with said socket piece and one of said relatively movable parts whereby it may be held while the other of said movable parts is moved with relation thereto.

8. In a device capable of double function as a fixed light and a trouble hunter, in combination, a socket piece having a yielding detaining device, and a lamp holder having means engaging said detaining device, said means also functioning to operate a lamp switch to turn the said lamp on or off.

9. In a device capable of double function as a fixed light and a trouble hunter, in combination, a socket piece having a yielding detaining device, a lamp holder having means engaging said detaining device, said means also functioning to operate a lamp switch, and means connected with said socket piece and switch whereby the socket piece may be made to coöperate in the actuation of the switch.

10. In a device capable of being used as a dash light and as an automobile trouble hunter, in combination, a dash socket piece, a lamp holder adapted to be thrust into said socket piece, a lamp-holding plug or core rotatable in said holder, switch parts on said core and holder, there being a longitudinally extending slot in said holder, a pin extending through said slot from said core, whereby said core may be turned or held and means connected with said socket piece and engaging said pin whereby the core and lamp may be held by the socket piece and the holder may be turned to turn the lamp on or off at will.

11. In a trouble finding automobile lamp in combination, with a source of electric power, wires leading therefrom, a spring drum for said wires, a socket piece to which said wires lead, a lamp holder, adapted to be thrust into and held in said socket piece, a lamp in said holder connected up to said wires, and means on said lamp holder and socket piece whereby said lamp may be turned on or off by moving the lamp holder in the socket piece.

In testimony whereof, I affix my signature.

DAVID C. LAMB.