D. C. LAMB.

TROUBLE HUNTER.

APPLICATION FILED JUNE 25, 1918.

1,319,012.

Patented Oct. 14, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

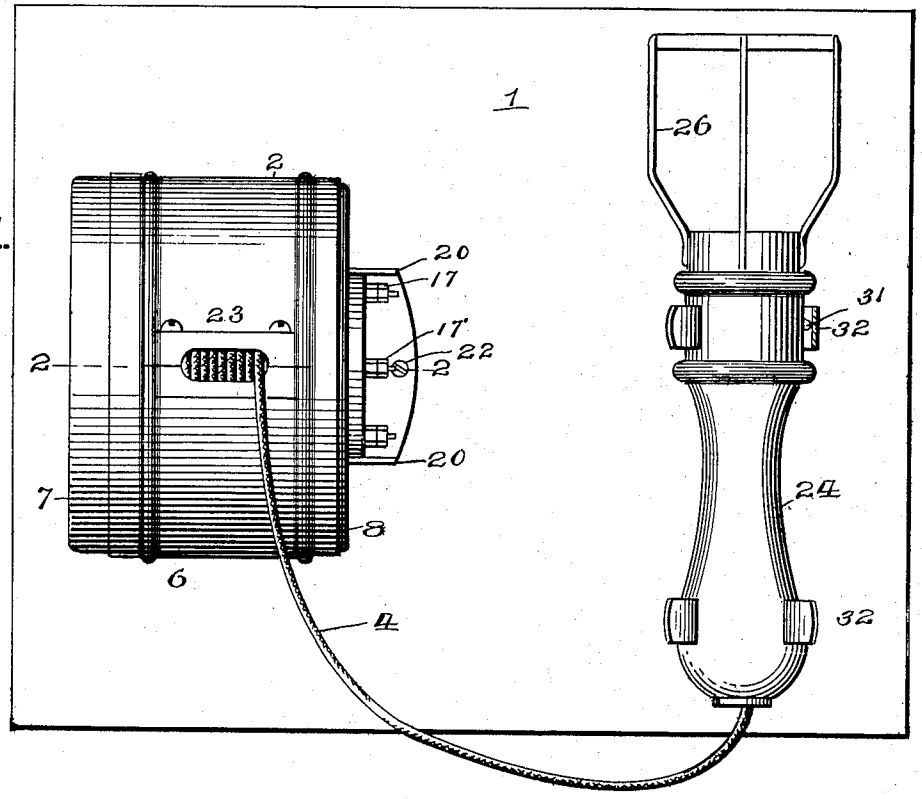


Fig. 2.

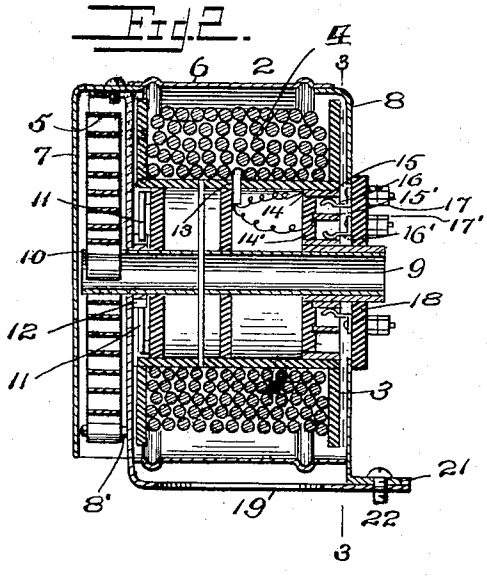
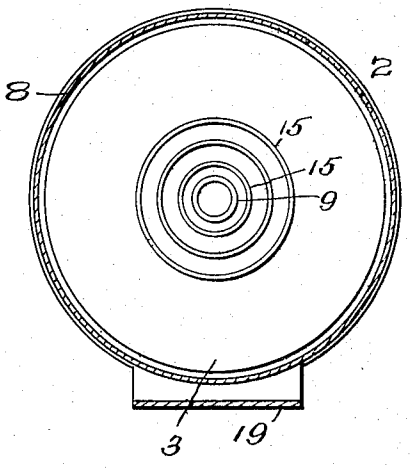


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

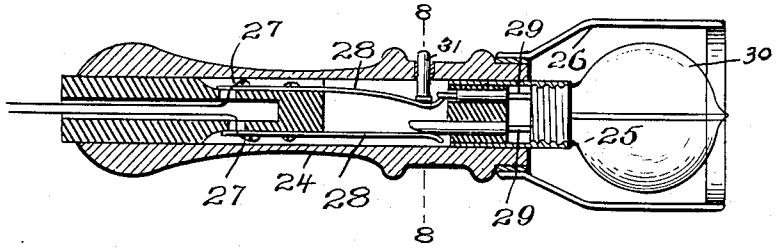


Fig. 5.

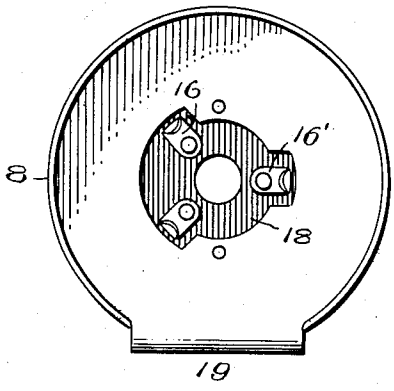


Fig. 6.

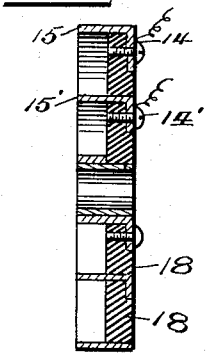


Fig. 7.

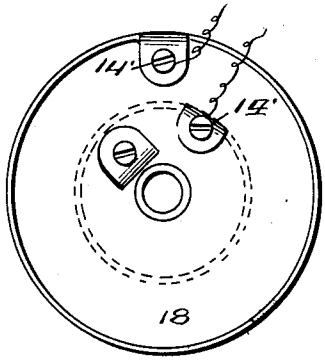
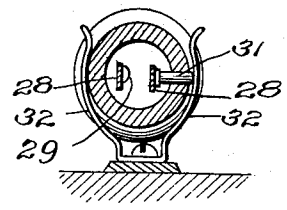


Fig. 8.



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UNITED STATES PATENT OFFICE.

DAVID C. LAMB, OF CHICAGO, ILLINOIS.

TROUBLE-HUNTER.

1,319,012. Specification of Letters Patent. Patented Oct. 14, 1919.

Application filed June 25, 1918. Serial No. 241,734.

To all whom it may concern:

Be it known that I, DAVID C. LAMB, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, (whose post-office address is #433 South Wabash avenue, Chicago, Illinois,) have invented certain new and useful Improvements in Trouble-Hunters, devices particularly intended for use in the discovery of trouble in an automobile, particularly when the latter is *en tour*, of which the following is a specification.

My invention relates to a device of this kind in which the wires from the battery or other source of energy are led to a spring driven take-up, from which a wire may be led to a lamp holder and lamp. As a part of my combination I have a clamping spring seat into which the lamp holder and lamp carried thereby may be thrust and which serves to break the circuit through the lamp or to extinguish it. My device is mounted on a base or platform readily portable and attachable anywhere. While my device is intended for the use above indicated, yet one of the uses is in connection with a stand and receiver of a telephone. The take-up device will coil up the wire from the telephone stand and keep it out of the way.

In the drawings hereunto attached,

Figure 1 shows my device more or less in general arrangement;

Fig. 2 is a section on the line 2—2 through the center of my device longitudinally;

Fig. 3 is a section transversely on the line 3—3;

Fig. 4 is a section somewhat in detail showing my lamp holder;

Fig. 5 is a detail showing the binding posts;

Fig. 6 is a section vertically through Fig. 5;

Fig. 7 is a detail showing contact springs; and

Fig. 8 is a cross section through the line 8—8 of Fig. 4, showing spring and pin for breaking connection.

In my Patent No. 1,106,821, dated August 11, 1914, I secured protection for a take-up for electric conductors to be used in connection with lamps and similar devices. My present invention is in some respects an improvement upon the device shown in said patent,—but one in which the idea now sought to be patented is carried to a further and different embodiment.

I provide a base or platform 1 made of any suitable piece of material, preferably of an insulating character, and upon said base or platform I mount a casing 2 in which casing I inclose a spring 5 coiled for retracting purposes, and provide a drum 3 upon which may be coiled a wire 4 by means of the spring 5 referred to above. The casing consists of a central barrel 6 and two end caps 7 and 8 which are removable. Connected to the end cap or head 7 is the spring 5 by means of a bolt 8′. The spindle or shaft (in this instance and as shown the head is stationary) of the spool 9 is provided with a slit at 10 whereby it may be made to straddle and engage the inner end of retractor spring 5. If the shaft be rotated in the proper direction the spring will be put under tension to wind up the wire when the latter is unwound. To hold the spring in its wound up position, that is, under tension, I provide on the drum the pawls 11 which engage a ratchet 12 shown on the cap 7, this being the usual construction and establishing a permanent tension upon the spring, whereby the drum will be rotated sufficiently to wind up all the wire thereon. The wire 4 is led through an opening 13 in the barrel of the spool and connected at 14, 14′ by suitable binding posts to the two ring or crown conductors 15 and 15′. The term "wire" is here used as referring to the ordinary double lamp wire in which there are two parallel conducting wires. These conductors consist of rings insulated from each other, and on the second head of the drum I provide contact springs 16, 16′ which, when the head of the drum is in place, are pressed into constant contact with the conductors 15, 15′ in a manner similar to that in my former patent and one which is obvious.

If, at proper points on the outside face of this drum I attach binding posts 17, 17′, I may attach conductors from a source of energy and thus lead current through the device to the wires and, if properly connected to said wires, to and through the lamp. The binding posts and contact springs are mounted upon a suitable piece of insulating material 18 of ebonite or similar material.

The head 7 is provided with a foot 19 made integral therewith and stamped from the same piece of metal. This foot extends forward under the drum and is provided with upturned lips 20. The other head 8 is provided with a corresponding foot 21

shorter but registering with the foot 19, and the two may be secured together by a bolt 22, which bolt may pass through to the base 1.

Suitable perforations and ears, not shown, indicate the manner in which the foot may be secured to the base 1 or elsewhere.

The wire 4 is brought through a suitable opening 23 in the case and led to the holder 24, which holder is provided with a socket 25 for a lamp and a guard 26 for the protection of the lamp. It will be noted that the conductors from the wire 4 contacts at 27 or are secured to springs 28 which, in turn, contact with the lamp conductors 29, 29. As long as this circuit is complete, a lamp 30 in the socket will be in the circuit and will glow. I provide a sliding pin 31 by which I am enabled to break the circuit and extinguish the lamp. This can easily be done by pressing upon said pin with the thumb or forefinger. The lamp normally will be alight unless pressure be applied on this pin. When, however, the lamp is not in use, it is thrust into the spring sockets 32 of which I provide two, all stamped from the same piece of metal, and of substantially the shape and dimension of the exterior of the lamp holder. These sockets are elastic and yieldingly clamp the lamp holder. When the latter is thrust into them, however, one of them should contact with the pin 31 above referred to, as shown in Fig. 8, and push the spring away from the lamp wire and thus open the circuit. It will be seen, therefore, that as soon as the lamp holder is jerked from this clamp, the lamp is turned up and it begins to glow, and as soon as the lamp is thrust into its place of rest again, it is extinguished by the clamping socket pushing against the pin 31 and breaking the circuit. Should it so happen that the said pin 31 is exposed, a mere slight turn of the cylindrical holder will effect this extinguishment.

I have shown my device provided with three conductors whereby it may be attached to carry the three-ply wire of an ordinary telephone, for instance, a desk telephone, whereby the telephone may be pulled toward the user against the tension of a spring and retracted at once when the instrument is set back farther on the desk. This is particularly important in those cases where a desk is apt to be littered with papers and other matters.

It will thus be observed that I have invented a device which has many uses and which is particularly useful in connection with and upon an automobile. The base 1 may be secured in place in almost any position, for instance, on the floor or under a seat or be entirely out of the way and hidden. In case of trouble, for instance, failure of the engine to explode properly or bursting of a tire, all the driver has to do is to jerk the lamp holder from its clamp and pull the wire out as he goes, enough wire being supplied to carry the lamp to the farthermost point of the machine and apply the light directly at the trouble. Frequently, and this is particularly true in cold weather, the driver of an automobile is more or less stiff and his hands are stiff with holding the steering wheel and with the cold and are clumsy, particularly with gloves on. The present device enables him to get hold of a lamp at once which automatically comes into light and which he can carry with the least skill and effort. When the trouble is remedied he simply thrusts the lamp holder back into the clamp and the light goes out. The spring keeps the lamp wire wound up on the drum save when it is extended against the tension of the spring. The wire leading to the device should be connected either to a battery or to a generator on the machine.

While my device is primarily intended for the purpose indicated, I do not wish to be restricted in the use thereof, but wish to have my claims cover all substantial equivalents.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

1. In a trouble hunter for automobile use, an electric conductor take-up, comprising a spring rewinder drum, a lamp wire thereon and secured thereto at one end, and, in combination therewith, a lamp holder at the other end of said wire, said holder being provided with a lamp switch adapted to keep the current passing through the lamp, and a rest or support for said lamp holder, said rest or support being adapted to engage with said lamp switch to hold said switch normally open when the lamp holder rests therein.

2. In a trouble hunter for automobiles, an electric conductor take-up, comprising a spring re-winder drum, a lamp wire thereon and secured thereto at one end, and, in combination therewith, a lamp holder and lamp at the other end of said wire, a spring lamp switch, for switching on or off said lamp and forming part of a circuit to keep said lamp in circuit, a sliding pin in the said lamp holder for contacting with said spring, whereby when said pin is pushed the circuit is opened, a support for said lamp holder, and a seat in said support against which said pin may be placed so as to support the holder and lamp with the circuit open.

3. In a trouble hunter for automobiles, an electric conductor take-up, comprising a spring re-winder drum, a lamp wire thereon and secured thereto at one end, and, in combination therewith, a circular handle, a lamp socket in said handle, a spring in said handle, normally closing the circuit through

a lamp, a pin extending to the outside of the handle and normally contacting with said spring whereby, when said pin is pushed, the springs is pushed aside and the lamp circuit broken, and a support for said handle and lamp, said support consisting of a pair of nearly circular spring clamps or seats so that the holder may be held in said seats with the pin pushed in by the clamping action of either of the nearly circular spring seats.

4. In a trouble hunter, in combination, a lamp, a holder for said lamp, a lamp switch in said holder, a spring clamping support for said holder, said support being adapted to hold said switch open when the holder is in said support, a wire leading to said holder and lamp, a drum on which said wire may be wound, a winding-up spring for said drum, a casing for said drum, and ratchet and pawl connections between said casing and said drum whereby the tension of the winding-up spring may be adjusted.

5. In a device of the character described, in combination, a cylindrical casing, heads therefor, a coiled spring attached to one head, a ratchet on said head, a spool for holding a coiled wire, means on the said spool for engaging the said spring, pawls on said spool for engaging said ratchet, a series of cylindrical crown conductors on the end of the spool axis opposite the spring and, on the other head, a series of contact springs bearing one on each crown conductor, binding posts leading one to each of said contact springs, a foot or support for the device attached to and made a part of said first-named head and provided at its forward part with upturned lips, and a foot on said second named head adapted to slip between the said lips.

6. In a device of the character described, in combination, a base plate, a spring controlled wire take-up thereon, a wire from said take-up, a lamp holder on the other end of the wire, a lamp, means on said holder for normally keeping the circuit through the lamp closed, and a clamping support on said base plate adapted to clamp and hold said holder with the lamp circuit open, substantially as described.

7. In a trouble hunter, in combination, a base plate, a spring controlled wire take-up, a wire, a lamp, a socket, a handle for said socket through which the wire is made to pass, a spring switch on said handle for closing the circuit through the lamp, a holder for said lamp socket handle, and means on said holder adapted to move the switch to open circuit position, whereby when the lamp is in the holder, the circuit may be open and the lamp dark.

In testimony whereof I have hereunto set my hand.

DAVID C. LAMB.