J. C. MORGAN.

ELECTRIC GENERATOR.

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1,229,308.

Patented June 12, 1917.

Fig. 1.

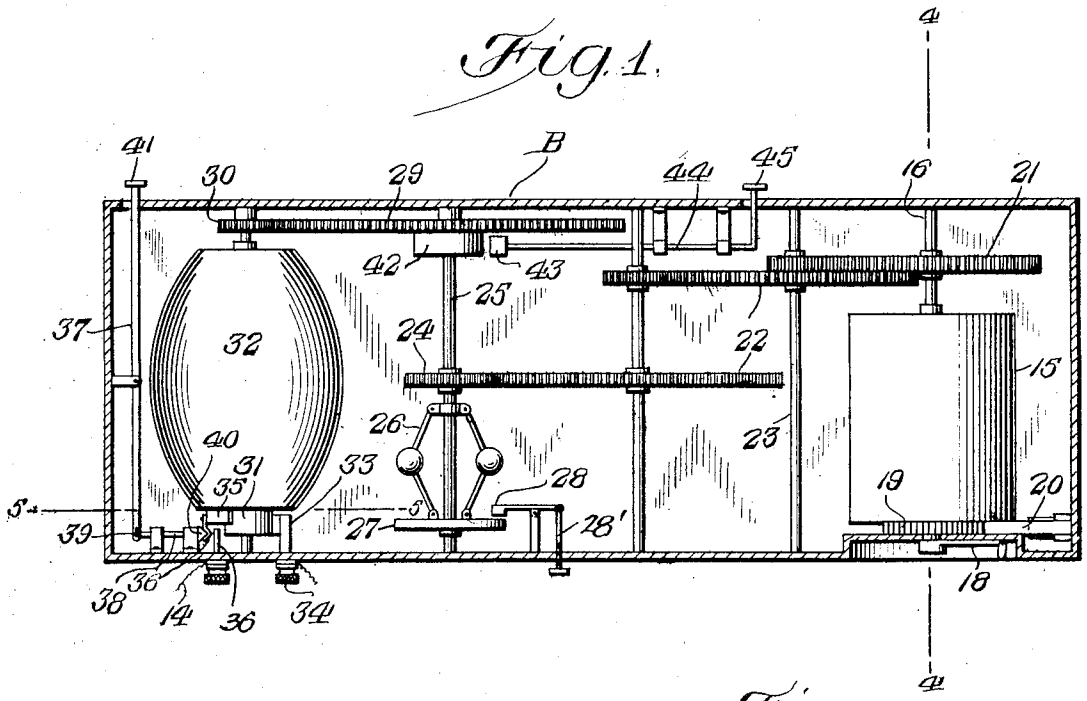


Fig. 3.

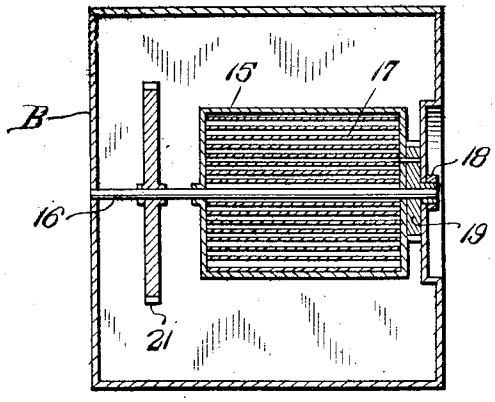
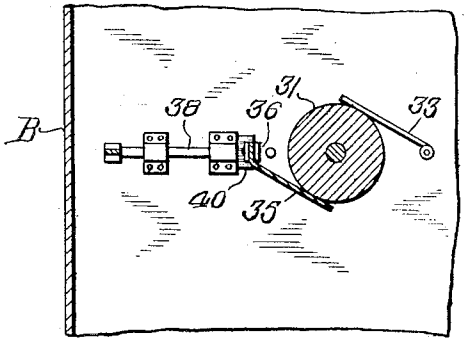


Fig. 2.



Inventor

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UNITED STATES PATENT OFFICE.

JOHN C. MORGAN, OF LOS ANGELES, CALIFORNIA.

ELECTRIC GENERATOR.

1,229,308. Specification of Letters Patent. Patented June 12, 1917.

Application filed April 25, 1916. Serial No. 93,530.

To all whom it may concern:

Be it known that I, JOHN C. MORGAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Electric Generators, of which the following is a specification.

The invention relates to electric flash lamps, and more particularly to the class of portable electric flash lamps.

The primary object of the invention is the provision of a lamp of this character wherein it can be carried upon the person and the use of dry batteries eliminated, the lamp being under perfect control of the operator and adaptable for use by firemen, miners, oil inspectors or any person.

Another object of the invention is the provision of a lamp of this character wherein the construction thereof is novel in form to assure the perfect working of the same and is convenient for use.

A further object of the invention is the provision of a lamp of this character wherein the electric generator for the current is actuated by a spring adapted to be wound by hand, the speed of rotation of the armature of the generator being controlled automatically, and the current to the lamp can be opened or closed at two distinct points with despatch.

A still further object of the invention is the provision of a lamp structure of this character which is simple in construction, readily and easily applied to and removed from the person, strong, durable, economical, reliable and efficient in operation and inexpensive in manufacture.

Other objects will be in part obvious and in part hereinafter set forth.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter described, and the scope of the application of which will be indicated in the appended claims.

In the accompanying drawings:

Figure 1 is a plan view of the box, with the cover section removed, showing therein the spring, gearing and generator;

Fig. 2 is a sectional view on the line 4—4 of Fig. 3;

Fig. 3 is a sectional view on the line 5—5 of Fig. 3.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

B designates a box or case in which is arranged a spring actuated motor 15 having a drive shaft 16, the spring 17 of the motor 15 being wound through the medium of a handle 18 which is connected to the drum of the motor 15, the handle at the point of connection with the drum being fitted with a ratchet 19 which is engaged by means of a spring-held ratchet pawl 20 suitably pivoted in the box or case B, and upon the shaft 16 is mounted a driven gear 21 which meshes with one of a train of gears 22, the shaft 23 of which is suitably journaled in the side walls of the box or case. Another gear of the train of gearing 22 meshes with a pinion 24 fixed to a governor shaft 25 which is also journaled in the side walls of the box or case, and this governor shaft has mounted thereon a centrifugal governor 26, the brake disk 27 of which is acted upon by means of a shoe 28 so that the speed of rotation of the governor shaft 25 can be varied. The shoe 28 has loosely connected thereto a feed screw 28′ which is threaded in the wall of the case or box.

Fixed to the governor shaft 25 is a driven gear 29 which meshes with a pinion 30 fixed to the shaft of the armature 31 of an electric generator 32, the brush 33 of which is pivotally mounted, and this brush has a binding post 34 to which is connected one of the leads 14 of the circuit, while the other brush 35 is in the form of a resilient movable member and forms part of a normally open switch 36 to which is connected the other lead 14 of the circuit.

Suitably mounted within the case is the rocking operating lever 37 to which is loosely connected a switch closing arm 38, the same being pivoted at 39 and is formed with a head 40 which is adapted to act upon the movable member 35 of the switch 36 for the closing thereof on actuating the lever 37 which extends without the case and carries a button terminal 41 so that it can be readily manipulated.

Formed on the gear 29 is a brake rim 42 with which is adapted to be engaged a brake shoe 43 mounted upon an operating lever 44

which is located interiorly of the box or casing A and mounted in any suitable manner, the lever 44 being depended without the case or box B and has the terminal button 45 for its convenient operation.

The spring 17 of the motor 15 is wound by hand and on the releasing of the brake 43 the generator 32 will be actuated for the source of electric current through the leads 14 to the lamp, the governor 26 being designed to control the speed of rotation of the generator.

From the foregoing description, taken in connection with the accompanying drawings the construction and operation of the herein described flash lamp will be readily apparent and, therefore, a more extended explanation has been omitted.

Having thus described my invention, I claim:

1. The combination with a case, a motor arranged interiorly of the case and having a drive shaft, an electric generator within the case and having an armature, a pivotal brush working against the armature, a binding post supporting said pivotal brush and adapted to be connected with one wire of an electric circuit, a resilient brush working against the armature, a normally open switch having one part carried by the case and the other part carried by the resilient brush, a binding post on the part of the switch carried by the case and adapted to be connected with the other wire of the electric circuit, a lever pivoted within the case and projected exteriorly thereof for operation upon the part of the switch carried by the resilient brush to bring said part into engagement with the other part of the switch on the case for closing the electric circuit, and connections between the motor and generator.

2. The combination with a case, a motor arranged interiorly of the case and having a drive shaft, an electric generator within the case and having an armature, a pivotal brush working against the armature, a binding post supporting said pivotal brush and adapted to be connected with one wire of an electric circuit, a resilient brush working against the armature, a normally open switch having one part carried by the case and the other part carried by the resilient brush, a binding post on the part of the switch carried by the case and adapted to be connected with the other wire of the electric circuit, a lever pivoted within the case and projected exteriorly thereof for operation upon the part of the switch carried by the resilient armature to bring said part into engagement with the other part of the switch on the case for closing the electric circuit, connections between the motor and generator, a governor shaft included in the connection, a centrifugal governor on said governor shaft and having a brake disk. a shoe pivoted within the case and engageable with the disk, an operating screw connected with the shoe and adjustably threaded in the case from without the same.

In testimony whereof I affix my signature.

JOHN C. MORGAN.

Witnesses:
WILLIAM E. FAGAN,
JOSEPH S. FAGAN.