June 26, 1923.

1,460,002

A. URAN

FLASH LIGHT

Filed Feb. 9, 1922

2 Sheets-Sheet 1

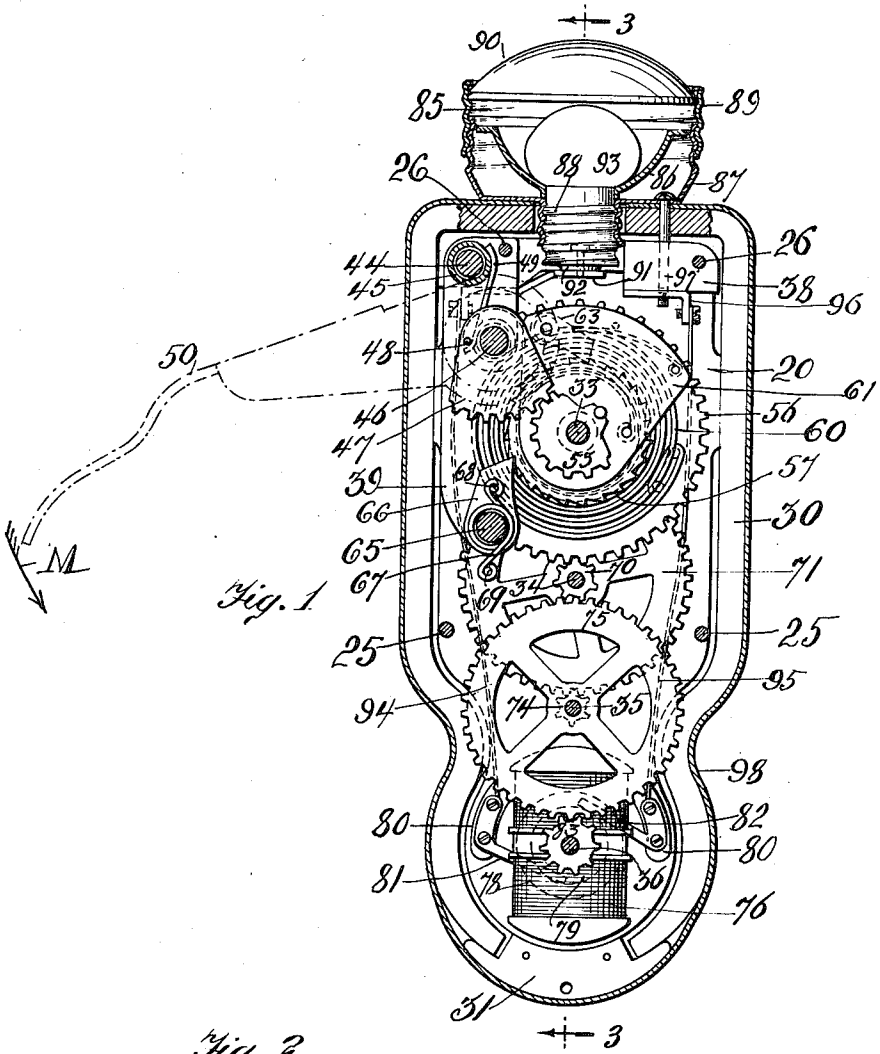
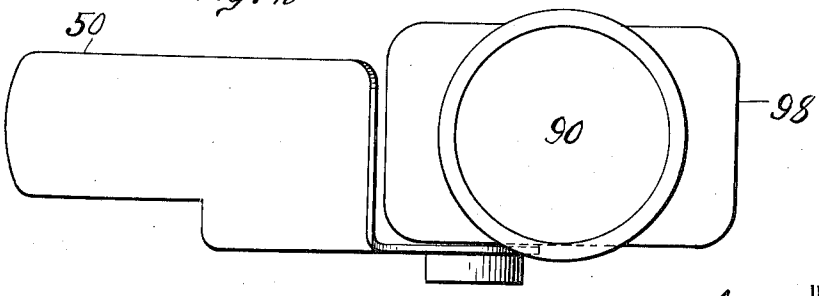


Fig. 1

Fig. 2



INVENTOR

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BY

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ATTORNEY

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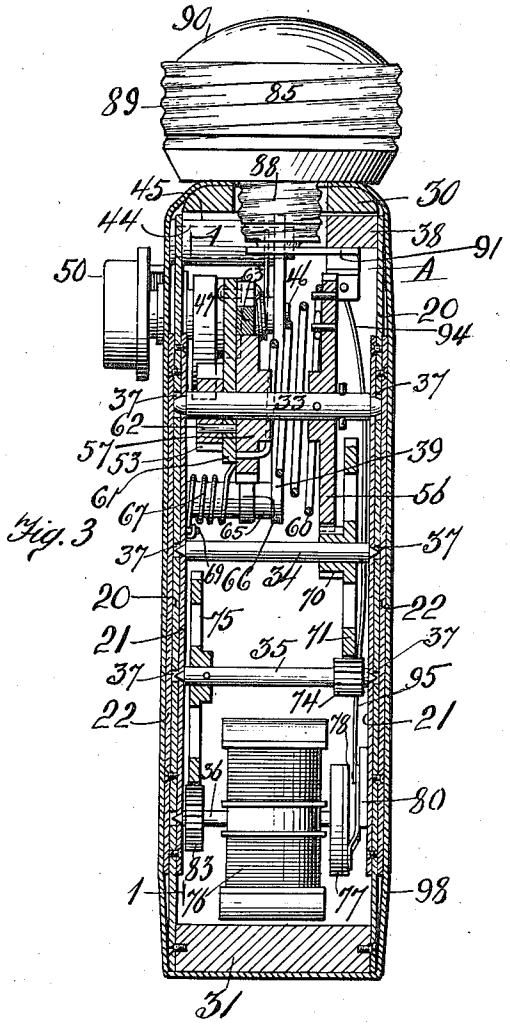


Fig. 3

INVENTOR

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Patented June 26, 1923. 1,460,002

UNITED STATES PATENT OFFICE.

ANDREW URAN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JULIUS WEISS, OF NEW YORK, N. Y.

FLASH LIGHT.

Application filed February 9, 1922. Serial No. 535,343.

To all whom it may concern:

Be it known that I, ANDREW URAN, a subject of the King of Rumania, and resident of the borough of Manhattan, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in a Flash Light, of which the following is a specification.

This invention relates to a portable flashlight. Its object is the production of such a light that can be energized by means of an electric generator. A second object is the production of such a light, in which the electric generator thereof can be manually operated. A third object of the invention is the production of a flashlight, that comprises manual means to energize the same without jars or tremors, and which is electrically insulated on its outer surface. Other objects of the invention will be evident from the following description thereof.

In the accompanying drawings, which exemplify one form of the invention, Fig. 1 represents a section of the flashlight about on the line 1, 1 of Fig. 3; Fig. 2 shows a top plan view of Fig. 1 and Fig. 3 is a section of Fig. 1 on the line 3, 3.

The flashlight is indicated with a casing having the side members 20 of non-magnetic material, which are each reinforced on their inner sides by the strips 21, and on their outer sides have detachably connected thereto the removable covers 22. Separator bolts 25 and 26 connect the side members 20. A U-shaped frame 30 constituting a permanent magnet forms with the side members 20 a compartment A for the appurtenances of the flash light. A detachable cap 31 of non-magnetic material engages the open ends of the frame 30. Pivots 33, 34, 35 and 36 are journaled in the strips 21. Openings 37 coaxial with said pivots are formed in said side members 20, and are closed by the covers 22. The openings 37 constitute oil cups for said pivots. A piece of insulating material 38 is supported on the separator bolts 26, and bears against the members 20. A journal plate 39 extends downwardly from one of the bolts 26. A separator pin 44 with the sleeve 45 connects the plate 39 and one of the side members 20. An operating pivot 46 is journaled in the plate 39, and in one of the side members 20 through which latter it extends. A toothed segment 47 is fastened to the pivot 46. A pin 48 extends from the segments 47, and a spring 49 at one end is fastened to the sleeve 45 and its other end bears between the pivot 46 and the pin 48. An operating arm 50 has one end thereof fastened to pivot 46. The pivot 33 has journaled thereto the gear segment 53 the teeth of which mesh with the teeth of the segment 47. A spur gear 56 is fastened to the pivot 33 and a ratchet wheel 57 is journaled thereon. A spiral spring 60 has one end fastened to the ratchet wheel 57 and its other end is fastened to the spur gear 56. A segment 61 is pivoted on the pivot 33 and is fastened to the segment 53 by means of the pin 62. A driving pawl 63 is pivoted to the segment 61 and engages the teeth of the ratchet wheel 57. A pin 65 connects the plate 39 and its adjacent member 20. A pawl 66 is pivoted on the pin 65. A spring 67 is wound around the pin 65 and one of its ends is fastened to the pin 68 extending from the pawl 66, and its other end is fastened to the adjacent member 20 by means of the pin 69.

A pinion 70 and spur gear 71 are fastened to the pivot 34. The pinion 70 meshes with the spur gear 56. A pinion 74 and the spur gear 75 are fastened to the pivot 35. The pinion 74 meshes with the spur gear 71. An electric generator is indicated with the armature 76, and of which the pivot 36 constitutes the armature shaft. A disc 77 is fastened to the pivot 36 and the collector rings 78 and 79 are fastened to said disc. The members of the frame 30 constitute the field magnet of the armature 76. Pieces of insulating material 80 extend from one of the members 20, and have extending therefrom the brushes 81 and 82 for the collector rings 78 and 79. A pinion 83 is fastened to the pivot 36 and meshes with the spur gear 75.

An electric light lamp is designated in its entirety by the numeral 85 and comprises the inner shell 86, and the outer shell 87 having the threaded portion 88. A threaded cover 89 for the lens 90 engages the shell 87. A contact plate 91 is fastened to the piece of material 38, and bears against the contact projection 92 of the electric light bulb 93. A wire 94 for electric current connects the brush 81 and the plate 91 and a wire 95 connects the brush 82 and the bar 96, that bears up against the piece of insulating material 38. A screw 97 connects the shell 87 and

the bar 96. A cover 98 of pliable insulating material is provided for the casing of the flash light.

To energize the electric bulb 93 the operating arm 50 is swung in the direction of the arrow M, and thereby the segment 47 turns the segment 53. The segment 53 swings the segment 61 and thereby the driving pawl 63 engages the teeth of the ratchet wheel 57 to turn the same. The rotations of the ratchet wheel 57 are transmitted to the spur gear 56, through the intervention of the spring 60 to avoid jars. The rotations of the spur gear 56 are transmitted to the pinion 70 and thereby the spur gear 71 is turned. The spur gear 71 turns the pinion 74 and the pivot 35 turns with the latter. The spur gear 75 turns with the pivot 35, and the latter turns the pinion 83, and the armature 76 is turned. The electric generator through its appurtenances and the wires 94 and 95 with their appurtenances energize the electric light bulb 83.

It is to be understood that various modifications may be made in the invention and that the present exemplification is to be taken as illustrative and not limitative thereof.

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

1. In a flashlight the combination of a casing comprising a pair of side members having openings formed therein, a strip having journal bearings formed therein fastened to the inner face of each of said side members, said journal bearings coaxial with the openings in said side members, removable covers on the outer face of said side members covering the openings therein, a pivot journaled in each coaxial pair of journal bearings in said side strips, a U-shaped frame constituting a permanent magnet forming with said side members a compartment for the appurtenances of the flashlight, an electric lamp connected to one end of the casing, an electric generator in the casing in electric circuit with said lamp, an operating pivot journaled in the casing and extending through one of said side members, an operating arm on the outside of the casing connected to the operating pivot, a plurality of elements interposed between said operating pivot and said electric generator and a flexible element coacting with said plurality of elements.

2. In a flashlight the combination of a casing comprising a pair of side members having openings formed therein, a strip having journal bearings formed therein fastened to the inner face of each of said side members, said journal bearings coaxial with the openings in said side members, removable covers on the outer face of said side members covering the openings therein, a frame constituting a permanent magnet forming with the said side members a com- electric generator in the casing in electric lamp connected to one end of the casing, an electric generator in the casing in eelctric circuit with said lamp, means to operate the electric generator in said compartment and supported in the journal bearings of said strips, an operating arm on the outside of the casing and a connection between said arm and the said means to operate the electric generator.

Signed at the borough of Manhattan, city of New York, in the county of New York and State of New York, this 2nd day of February, A. D. 1922.

ANDREW URAN.