

Aug. 19, 1924.

1,505,702

A. L. CURTIS

PORTABLE LIGHTING PLANT

Original Filed Feb. 5, 1921

*Fig. 1.*

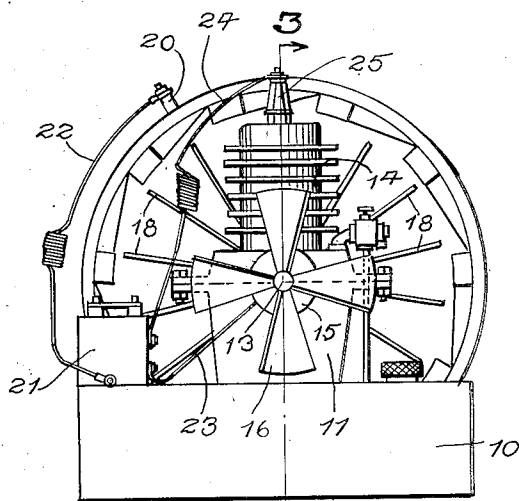


*Fig. 2.*

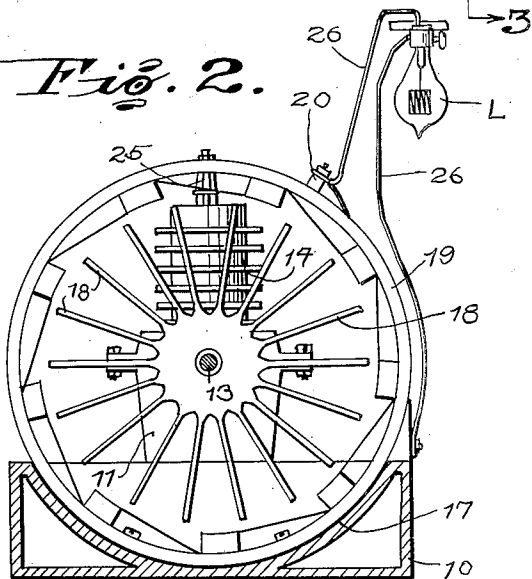
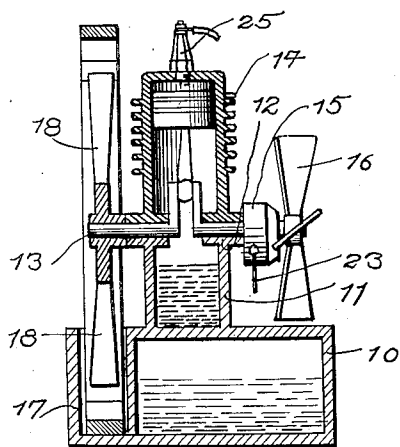


*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

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## PORTABLE LIGHTING PLANT.

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*To all whom it may concern:*

Be it known that I, ALVIN L. CURTIS, a citizen of the United States, residing at Wauneta, in the county of Chase and State of Nebraska, have invented certain new and useful Improvements in Portable Lighting Plants, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in portable lighting plants and has for a particular object the provision of a lighting unit which may be conveniently transported from place to place upon the running board  
15 of an automobile or similar conveyance.

The invention consists in compacting of the arrangement of a lighting set consisting in a generator and an internal combustion drive therefor in such a manner that a complete set shall not be cumbersome or hard to clean and repair.

Other objects and advantages of the invention will become apparent throughout the course of the following description.

25 In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention,

Figure 1, the front end elevation of the lighting set constructed in accordance with my invention,

Figure 2, is a rear end elevation thereof, parts being broken away, and

Figure 3, is a section on a line 3—3 of Figure 1.

35 Referring now more particularly to the drawings, the numeral 10 indicates a base which is preferably made of hollow construction as shown in Figures 2 and 3, in order that it may afford a receptacle for a liquid fuel for the internal combustion engine forming a source of power of the set. This base in the smaller sizes of the sets can be made as small as fifteen inches square and has formed upon the upper surface thereof  
40 and extending upwardly therefrom the crank case 11 of an engine. This crank case, as usual, embodies the lower half of the bearings 12 of the crank shaft 13 of the engine, the upper half of these bearings being carried by the cylinder block 14.

45 The ends of the crank shaft 13 project beyond the bearings 12 at both sides of the base 11, and one end thereof is provided with the timer 15 for the control of the engine and a fan 16 for cooling the engine,  
55 which is preferably of the air cooled type.

Beneath the opposite end of the crank shaft the base 10 is provided with a segmental recess 17, having the center of the crank shaft as a radius, and into this recess project the ends of magnets 18 secured to the crank shaft. The segmental recess 17 likewise forms a set for a coil ring 19 provided with the usual spaced coils connected in series with one another and with a terminal 20. The ring is so secured in the recess that it surrounds the magnets 18 of the shaft 13.

Secured upon the upper surface of the base is a coil box 21, which has one terminal connected with the terminal 20 of the coil ring 19 by a wire 22. The opposite terminal of the coil box 21 is connected to the timer by wire 23, and the secondary of the coil is connected with the spark plug 25 of the engine by wire 24.

When it is desired to employ the lighting set, the lamps L will be connected in series with the wire 26, one end of which is connected to the terminal 20 of the coil ring 19 and the other end of which is grounded on the base 10, completing the circuit through the base 11, crank shaft 13 and magnets 18 to the coil.

From the foregoing it will be obvious that I have constructed a lighting set which is particularly well adapted for use where a lighting set is desired which may be readily transported from place to place as in camping parties, rooms which are to be temporarily lighted, etc., by reason of the fact that the simplicity and compactness of the structure employed affords an extremely light, complete unit. It will likewise be obvious that the structure of the same, as hereinabove set forth, is capable of some change without materially departing from the spirit of my invention, and I accordingly do not limit myself to such specific structure except as hereinafter claimed.

What I claim is:

1. In a device of the type described, a hollow base, an engine base extending upwardly from and formed integrally with the hollow base, an engine supported upon said engine base and embodying a crank shaft, the ends of the crank shaft projecting beyond the bearings of the engine base, a segmental recess formed in said hollow base beneath one end of said crank shaft, a coil ring secured within said recess and radially extending magnets secured to said shaft and rotating within said coil ring.

2. In a device of the type described, a hollow base forming a fuel receptacle, an engine base extending upwardly from and formed integrally with the hollow base, an internal combustion engine supported upon said engine base and embodying a crank shaft, the ends of the crank shaft projecting beyond the bearings of the engine base, a segmental recess formed in said hollow base beneath one end of said crank shaft, a coil ring secured within said recess, and radially extending magnets secured and electrically connected to said shaft and rotating within said coil ring.

In testimony whereof I hereunto affix my signature.

ALVIN L. CURTIS.