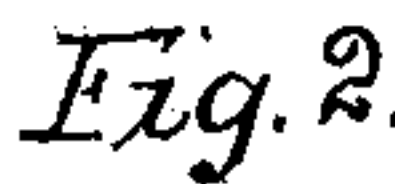


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UNITED STATES PATENT OFFICE.

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BEACON OR ANCHOR LANTERN.

No. 925,563.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK P. COULTER, a citizen of the United States, residing at Clatskanie, in the county of Columbia, State of Oregon, have invented a new and useful Improvement in Beacon or Anchor Lanterns, of which the following is a specification, reference being had to the accompanying drawings as a part thereof.

This invention relates to lanterns of the type commonly called range, beacon, or anchor lights, and it has for its object to obtain a simply constructed lantern, burning a hydro-carbon oil, and which will be reliable: that is to say, continue to burn in good order, without attention, as long as the oil in the lantern holds out, and which, besides, will be economical in the consumption of oil, relative to the light given.

To this end, my invention comprises the combination and arrangement of devices as hereafter fully described and claimed.

In the drawing Figure 1 is a side elevation partly in section, the glass of the lantern being shown without shading; Fig. 2 is a perspective of the reservoir attachment for the lantern; and Figs. 3 and 4 are details of construction, fully explained in the body of the specification.

The letters designate the parts referred to.

My invention is so contrived that it is convenient to apply to the frame of a lantern of the type referred to.

The lantern frame *a* is of the common type, the lower part, *b*, thereof being connected with the upper part by frame-rods or member *c*, and the glass *d* being secured in place in the frame, as usual.

The lamp which is usually furnished with the lantern of the type mentioned, is removed, so as to provide for the attachment of my reservoir and burner. The reservoir comprises a conical central chamber *f*, a concentric rim-chamber *g*, and a hollow bottom *h*, which connects the central chamber *f*, with the rim-chamber *g*, so as to feed oil from the latter to the former by gravity. The top of the rim-chamber is provided with an aperture *i'*, controlled by a perforated stopper *i*, adjustable to admit air, as required. The top of the reservoir, is provided with perforated ears *j*, to receive the lower threaded ends of rods *k*, the upper ends of which rods, as shown in Fig. 1, are fastened to the frame rods *c*, of the lantern; and nuts *l*, are provided on the lower threaded extremities of

the rods *k*, to secure the lantern frame firmly in place. The top of the central reservoir chamber *f*, is apertured and provided with a rim flange, encompassing said aperture: and seated in said rim-flange *m*, is a tubular burner *n*. The details of construction of said burner are disclosed in Figs. 3 and 4. The lower part of said burner consists of tube *n*³, a wide base *n'*, adapted to be inserted in said rim-flange *m*, and it has a flaring flange *n*², arranged to be seated on, and partly covering the top of the rim-flange *m*. The tube piece *n*³, is open at its upper end. The upper part of the burner, as shown in Fig. 3, consists of a tube piece *n*⁵, made with a socket piece *n*⁴, adapted to be fixed on the upper open end of the tube *n*⁴, of the lower burner part. The upper end of the upper part *n*⁵, has a dome-like closure *n*⁶. At the top of the upper burner part *n*⁵, are provided flaring disks *o*, *o'*, arranged parallel one above the other and spaced apart, and said burner part is perforated between said disks. The dome-like closure *n*⁶, extends above the upper disk *o*. The wick *p*, is so arranged in the lower part of the burner that the top of the wick will come flush with the top of the tube-piece *n*³, and thus when the upper part of the burner is mounted on the lower part, the upper end of the former, will constitute a vaporizing or gas-chamber.

In lighting the burner, a lighted match is held between the disks *o*, *o'*, so as to heat the same and cause a volatilization of oil contained in the top of the wick, thus producing gas, which will issue through said perforations and be ignited. Thereupon the burner will continue to burn as long as there is any oil left in the reservoir.

A highly volatile oil, as for example, "gasolene" is used by me. The space provided in the oil reservoir *e*, intermediate the central chamber *f*, and the rim-chamber *g*, is arranged to receive the base of the lantern frame, as illustrated in Fig. 1.

The conical form of the central chamber *f*, facilitates the placing of the bottom of the lantern frame in an intermediate space.

My tests with my invention have demonstrated that a lantern with a 4½ gallon reservoir-capacity, and filled with gasolene will burn with a flame giving a 16 candle-power light, for 30 days and nights continuously, without attention.

I claim:

1. The combination in a lantern of the

character described, of a frame, a reservoir
consisting of a central chamber having an
apertured top, a concentric rim-chamber
having a valve-controlled air aperture, a hol-
5 low bottom connecting said central and rim-
chambers of the reservoir leaving an inter-
mediate space, the lantern frame being
seated in said intermediate space, means re-
movably holding said lantern frame in place,
10 and a burner removably mounted over said
aperture of the central chamber of the reser-
voir.

2. The combination in a lantern of the
character described, of a frame, a reservoir
15 consisting of a central chamber having an
apertured top, a concentric rim-chamber hav-
ing a valve controlled air aperture, a hollow
bottom connecting said central and rim-cham-
bers of the reservoir leaving an intermediate
20 space, the lantern-frame being seated in said
intermediate space, means removably hold-
ing said lantern frame in place, a burner re-
movably mounted over said aperture of the
central chamber of the reservoir, a wick in-
25 serted in the burner, the top thereof arranged
below the top of the burner, flaring flange-
disks arranged parallel one above the other,
spaced apart, at the upper end of said
burner, the latter being perforated between

said flange-disks, the upper end of the burner 30
being closed and constituting a vaporizing
chamber.

3. The combination in a lantern of the
character described of a frame, a reservoir
consisting of a central chamber having an 35
apertured top, a concentric rim-chamber
having a valve controlled air aperture, a hol-
low bottom connecting said central and rim-
chambers of the reservoir, leaving an inter-
mediate space, the lantern-frame being 40
seated in said intermediate space, ears on the
reservoir, rods removably connecting the
lantern-frame with said ears, a burner re-
movably mounted over said aperture of the
central chamber of the reservoir, a wick in- 45
serted in the burner, the top thereof arranged
below the top of the burner, flaring flange-
disks arranged parallel one above the other,
spaced apart at the upper end of said burner,
the latter being perforated between said 50
flange-disks, the upper end of the burner
being closed and constituting a vaporizing
chamber.

FRANK P. COULTER.

Witnesses:

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