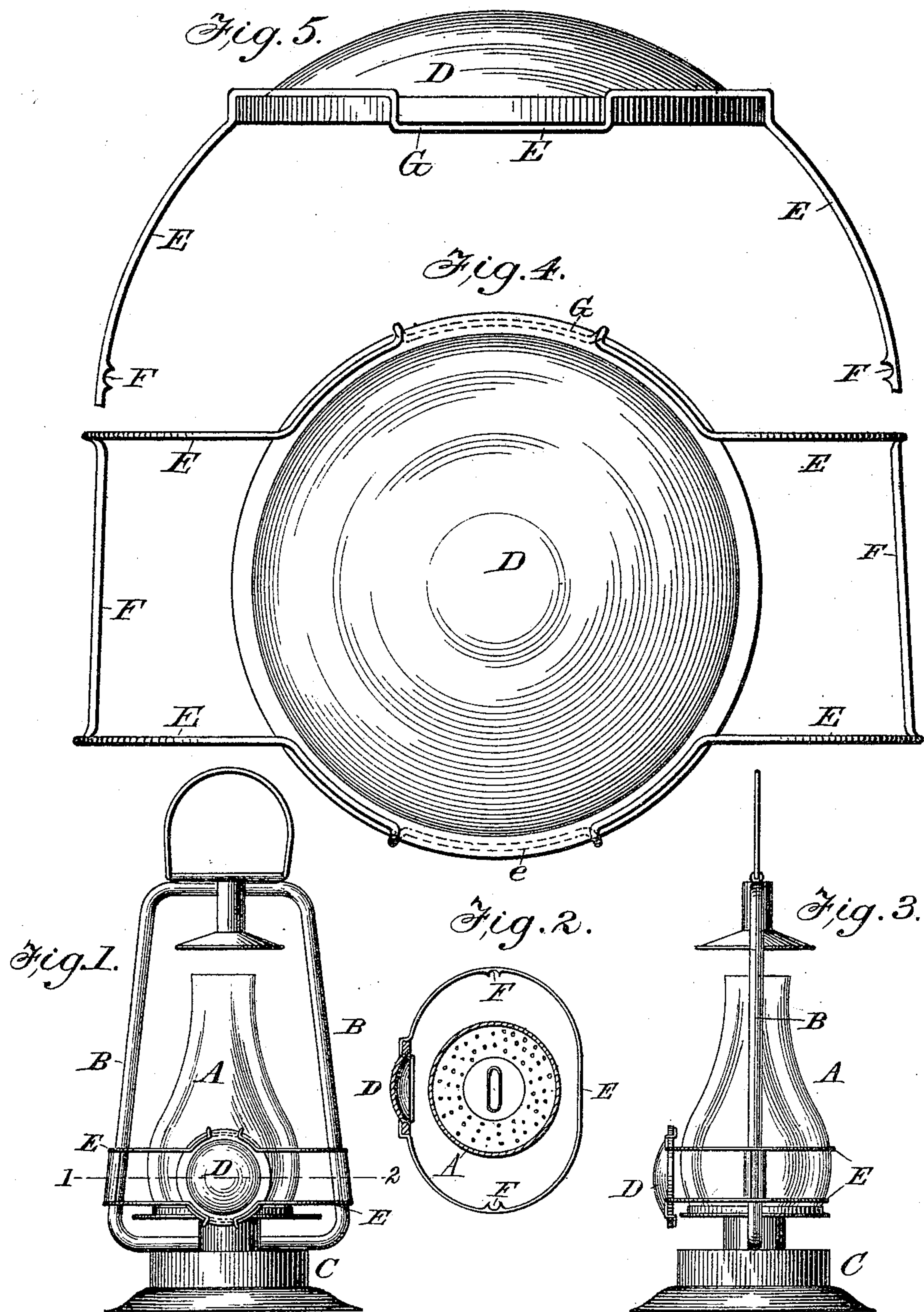


(No Model.)

A. L. FRANCE.
LENS ATTACHMENT FOR LANTERNS.

No. 457,988.

Patented Aug. 18, 1891.



Witnesses:

M. L. Griffith
R. H. Rouse

Inventor.

Albert L. France
By M. Griffith
att

UNITED STATES PATENT OFFICE.

ALBERT L. FRANCE, OF MILDDALE, ASSIGNOR TO THE KENTON CAN COMPANY, OF COVINGTON, KENTUCKY.

LENS ATTACHMENT FOR LANTERNS.

SPECIFICATION forming part of Letters Patent No. 457,988, dated August 18, 1891.

Application filed September 3, 1890. Serial No. 363,869. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. FRANCE, of Milldale, Kenton county, and State of Kentucky, have invented certain new and useful
5 Improvements in Lens Attachments for Lant-
terns, of which the following is a full, clear,
and exact description, reference being had to
the accompanying drawings, and to the letters
of reference marked thereon.

10 My improvements have relation to appli-
ances for use in connection with a tubular
lantern; and the object of the invention is
to provide a simple, cheap, compact, durable,
and convenient lens and guard that may be
15 readily adjusted, attached, and detached
upon a tubular lantern and securely connect-
ed therewith, and when used will powerfully
increase or intensify the light evolved from
said lantern.

20 In the accompanying drawings, Figure 1
represents a front elevation of the lantern
with my improved detachable guard and its
lens attachment. Fig. 2 represents a hori-
zontal section of the same on line 1 2 of Fig.
25 1. Fig. 3 represents a side elevation, also
showing guard and lens. Fig. 4 is a full-sized
front view of the guard and lens. Fig. 5 is a
full-sized top edge view of the lens and a part
of the guard-wire.

30 Similar letters of reference indicate similar
parts in all the figures.

A represents the glass globe of the lantern;
B, the side tubes; C, the oil-pot; and D the
lens, which may be concavo-convex or plano-
35 convex, as shown, or it may have any other
form or construction.

E represents the wire forming an elliptical
guard.

To attach the lens to the wire, the wire is
first made to form a shoulder G against the 40
edge or periphery of the lens, which shoulder
extends along the face and edge of the lens
for a short distance. The wire is then bent
over the edge of the lens to the other side,
forming a loop, clasping the lens and holding 45
it secure and rigid in the guard.

F represents strips of concaved tin-plate
to hold the top and bottom wires together and
fit snugly around the side tubes at both ends
of the transverse axis of the ellipse. 50

G, Fig. 4, represents in dotted lines the
clasp or loop made around the inside edge of
the lens by the wires E.

It is evident that many slight changes
which might suggest themselves to skilled 55
mechanics could be resorted to without de-
parting from the spirit and scope of my in-
vention. Hence I do not limit myself to the
precise construction herein shown.

What I claim is— 60

The detachable combined guard and lens
for tubular lanterns, consisting of top and
bottom wires E E E E, elliptical in horizon-
tal section and joined together by vertical
concave tin-plate clasps F F on its transverse 65
ends to fit snugly about the tubes B B of the
lantern, and the top and bottom wires of the
guard constructed to clasp the lens rigidly in
its embrace, substantially as shown and de-
scribed.

ALBERT L. FRANCE.

Witnesses:

B. P. HOLLEN,
MARTIN SCHOPP.