

(No Model.)

W. McARTHUR.
TUBULAR LANTERN.

No. 412,287.

Patented Oct. 8, 1889.

Fig. 1.

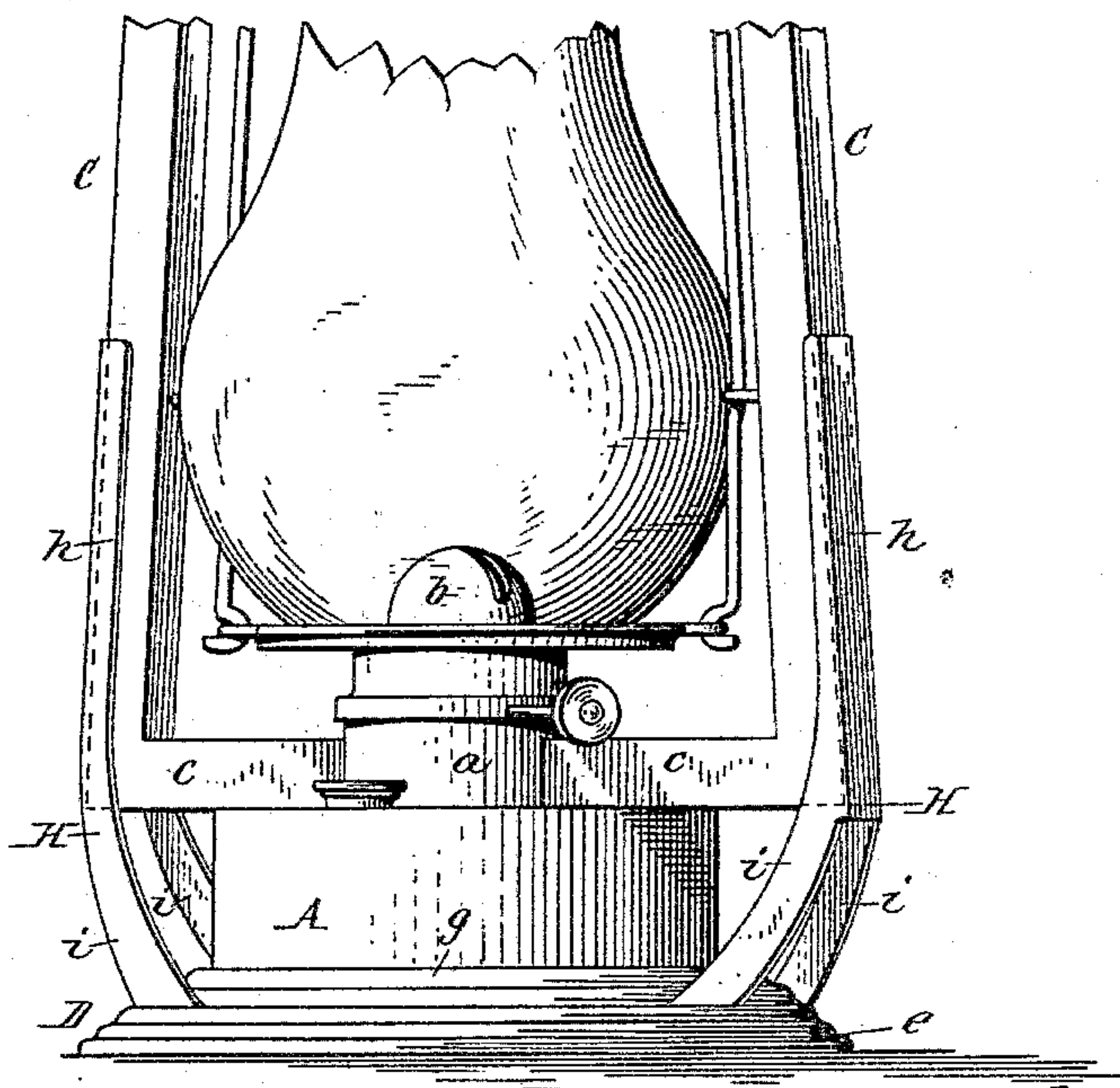


Fig. 2.

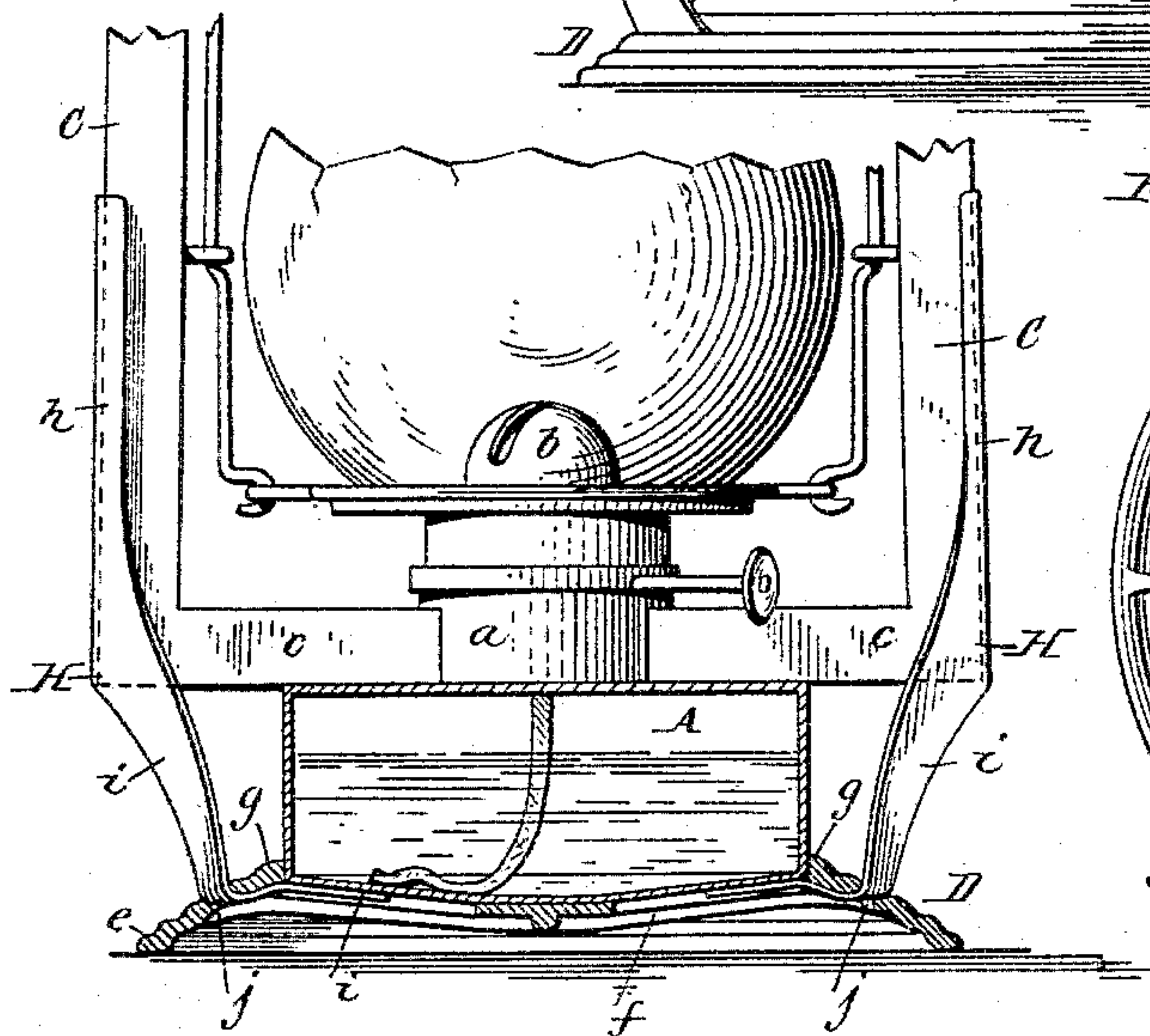
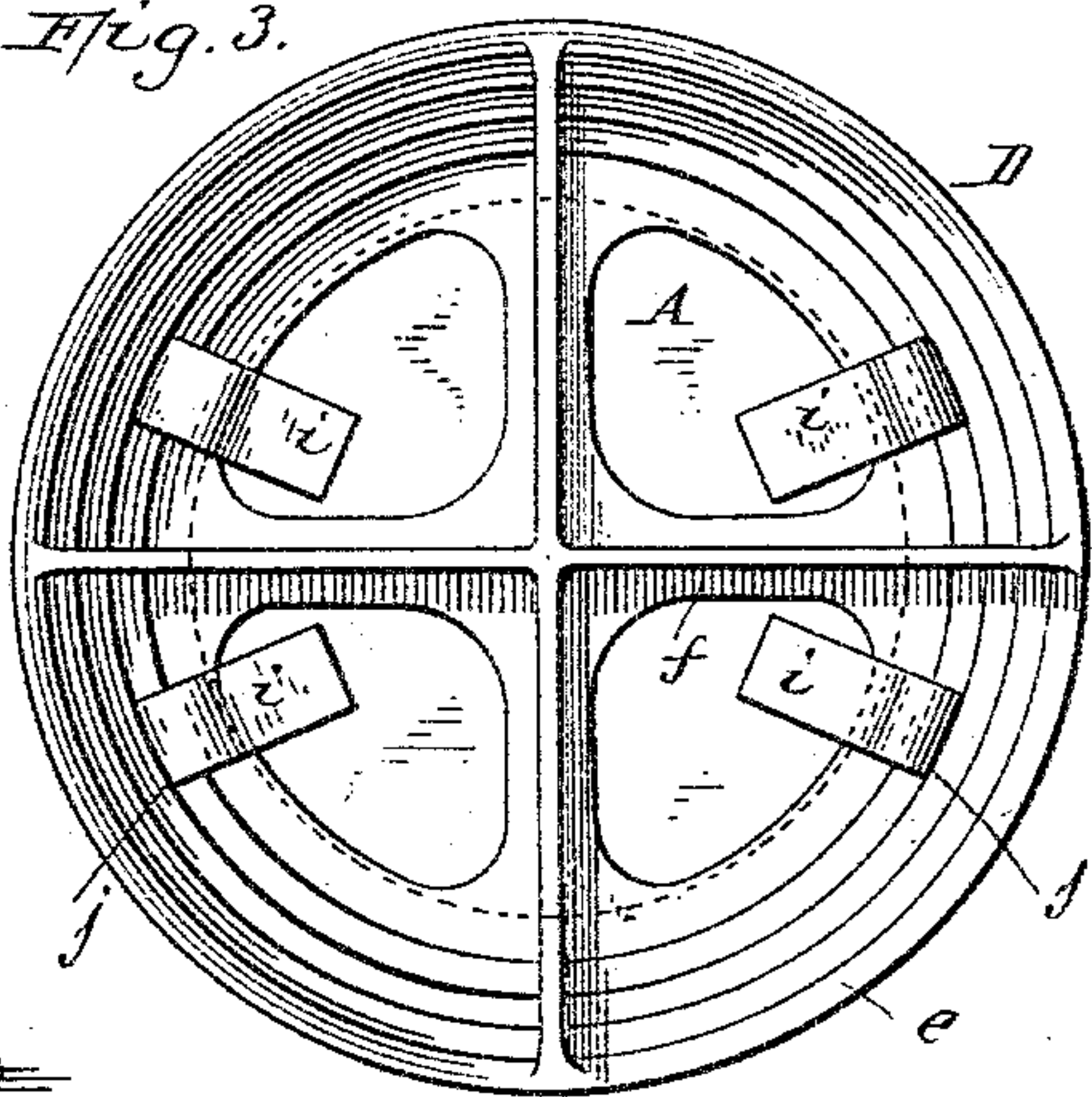


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

WARREN MCARTHUR, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE STEAM GAUGE AND LANTERN COMPANY, OF SYRACUSE, AND THE R. E. DIETZ COMPANY, OF NEW YORK, N. Y.

TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 412,287, dated October 8, 1889.

Application filed August 2, 1889. Serial No. 319,531. (No model.)

To all whom it may concern:

Be it known that I, WARREN MCARTHUR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Tubular Lanterns, of which the following is a specification.

This invention relates to a tubular lantern in which the side tubes are connected with the base of the lantern by braces for the purpose of establishing a firm and durable connection between the upper part of the lantern, consisting principally of the tubular frame and the lower part containing the oil-pot. A lantern of this kind is described and claimed in an application for patent filed by me May 8, 1889, Serial No. 309,965.

The object of my present invention is to simplify the construction of this lantern, so that the parts, especially those constituting the base, can be readily secured together and form, when completed, a durable and reliable lantern structure.

In the accompanying drawings, Figure 1 is an elevation of the lower part of a tubular lantern provided with my improvement. Fig. 2 is a similar elevation, partly in section. Fig. 3 is a bottom plan view.

Like letters of reference refer to like parts in the several figures.

A represents the oil-pot; *a*, the air-chamber, secured to the top thereof; *b*, the burner; *c*, the lower branches of the air-tubes, secured to the top of the oil-pot by soldering in the usual manner, and *C* the upright portions of the air-tubes. The top portion of the lantern is constructed in a suitable or well-known manner.

D represents a rigid base-frame, constructed preferably of cast or malleable iron and composed of a marginal base-flange *e*, which projects beyond the outer wall of the oil-pot and an open frame *f*, upon which the bottom of the oil-pot rests. This bottom is preferably made convex or deepest in the center, and the open frame *f*, which consists of connected ribbed bars, is made correspondingly concave on its upper side to fit snugly against the bottom of the oil-pot. The upper portion of the base-flange *e* projects upwardly

on the outer side of the oil-pot above the bottom thereof, and forms a raised rim *g*, which confines the oil-pot on the base-frame and prevents lateral displacement of these parts.

H represents braces, which are secured with their upper portions *h* to the backs of the upright portions *C* of the air-tubes above the lower branches of the tubes and with their bifurcated lower portions *i* to the base-flange *e*. The latter is provided with slots *j*, through which the ends of the bifurcated lower portions *i* are passed and then secured to the bottom of the oil-pot by soldering. The open spaces between the bars of the base-frame permit the lower ends of the braces to be brought in contact with the bottom of the oil-pot. The braces, therefore, not only serve to stiffen the lantern structure, but they also serve to secure the rigid base-frame to the oil-pot.

The rigid base-frame, being separate from the oil-pot, protects the latter against blows and prevents the formation of leaks in the oil-pot, which are liable to occur when the base-flange is made integral with the bottom of the oil-pot. As the oil-pot in this construction of a lantern is unprovided with a projecting bottom flange, the bottom and side wall of the oil-pot can be stamped out of a single blank of tin, thereby doing away with a solder joint at the bottom and guarding still further against leaks.

The base-frame, being constructed of heavy metal, steadies the lantern and renders the same less liable to be upset.

I claim as my invention—

1. The combination, with the oil-pot and the air-tubes connected therewith, of a separate base-frame upon which the oil-pot rests and braces connecting the air-tubes with the base-frame, substantially as set forth.

2. The combination, with the oil-pot and the air-tubes connected therewith, of a base-frame upon which the oil-pot rests, and which is provided with openings, and braces secured with their upper ends to the air-tubes and having their lower portions inserted through the openings in the base-frame and secured to the bottom of the oil-pot, substantially as set forth.

3. The combination, with the oil-pot and
the air-tubes connected therewith, of a base-
frame upon which the oil-pot rests, and which
is provided with a raised rim in which the
5 oil-pot is held against lateral displacement,
and braces connecting the air-tubes with the
base-frame, substantially as set forth.

Witness my hand this 19th day of July,
1889.

WARREN McARTHUR.

Witnesses:

F. L. BELL,
J. CRAWFORD.