

C. H. CUSHING.

Apparatus for Burning Hydrocarbons.

No. 144,660.

Patented Nov. 18, 1873.

Fig. 1

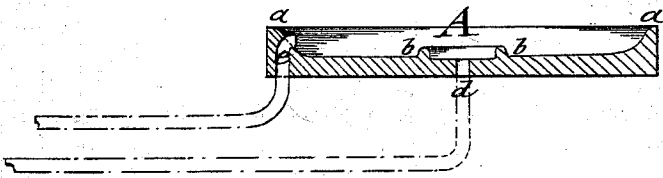
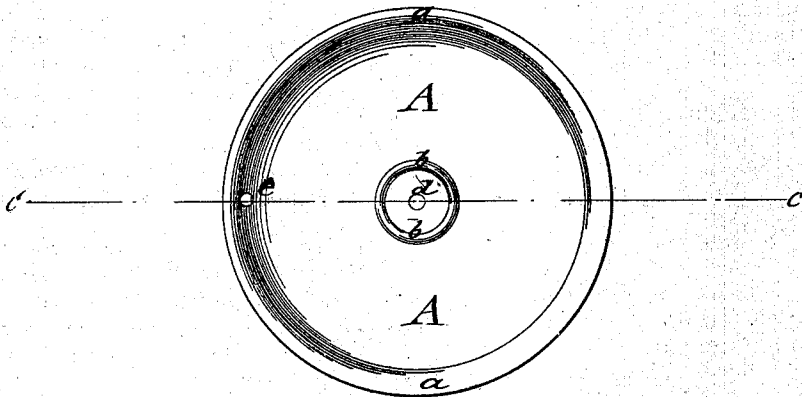


Fig. 2



Witnesses:

A. W. Almqvist
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C. H. Cushing
Per *[Signature]*

Attorneys,

UNITED STATES PATENT OFFICE.

CHARLES H. CUSHING, OF TIDIOUTE, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR BURNING HYDROCARBONS.

Specification forming part of Letters Patent No. **144,660**, dated November 18, 1873; application filed September 20, 1873.

To all whom it may concern:

Be it known that I, CHARLES H. CUSHING, of Tidioute, in the county of Warren and State of Pennsylvania, have invented a new and Improved Apparatus for the Combustion of Liquid Fuel, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved apparatus for the combustion of liquid fuel on the line *c c*, Fig. 2; and Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claim.

A in the drawing represents a heavy circular iron pan, which has a raised outer rim, *a*, and a less raised inner rim, *b*, around a small central orifice, *d*, through which the steam or air blast is admitted from a suitable conduit-pipe. The oil or other fluid is admitted through an orifice, *e*, in the outer rim *a*, and its supply regulated by means of a stop-cock of the oil-conducting pipe.

The oil will flow from the orifice *e* over the pan A, and fill the same to the height of the inner rim *b*, over which the surplus will flow, to be thence carried up by the steam or air blast coming through the orifice *d*. The fluid is thereby divided into fine particles and thrown intermixed with steam or air against the top or bottom of the boiler ready for almost instantaneous combustion.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The vessel A having outer and inner vertical flanges *a b*, the former higher than the latter, and each inclosing separate spaces, through which are respectively forced the liquid fuel and the air or steam, as and for the purpose described.

CHAS. H. CUSHING.

Witnesses:

GEO. N. MACDONALD,
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