(No Model.)

C. TRENCH.

OIL BURNER.

No. 498,198. Patented May 23, 1893.

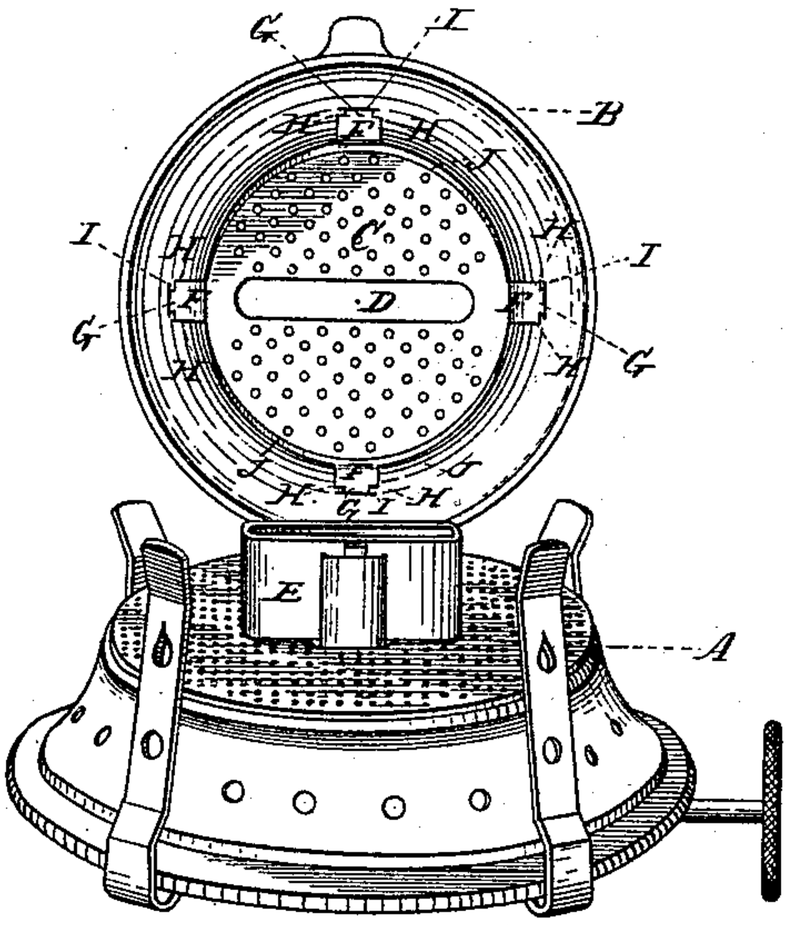

Fig. 1.

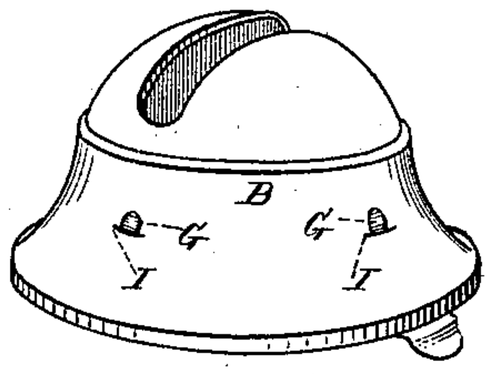

Fig. 4.

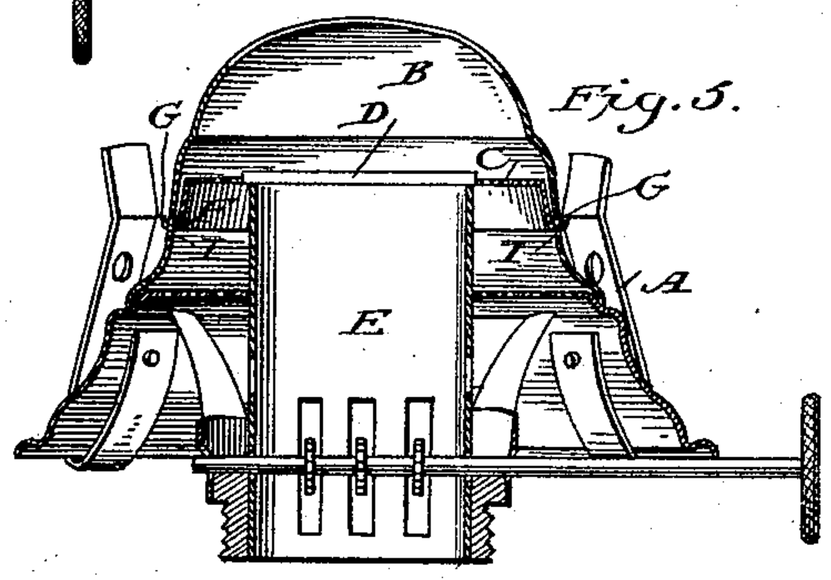

Fig. 5.

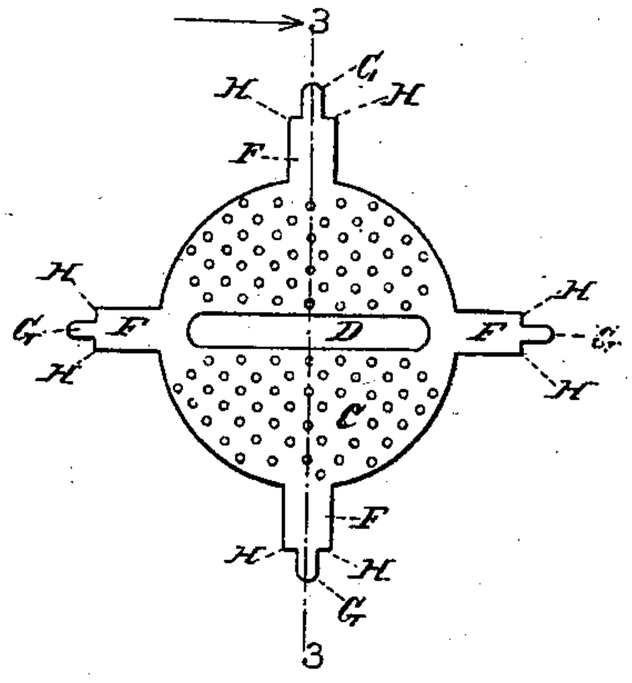

Fig. 2.

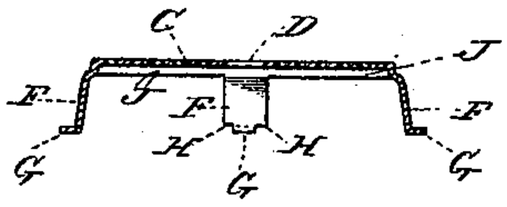

Fig. 3.

Witnesses:
R. H. Sabourthan
James P. Ogden

Inventor:
Charles Trench

UNITED STATES PATENT OFFICE.

CHARLES TRENCH, OF BOSTON, MASSACHUSETTS.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 498,198, dated May 23, 1893.

Application filed June 29, 1892. Serial No. 438,404. (No model.)

To all whom it may concern:

Be it known that I, CHARLES TRENCH, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Oil-Burners, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to improvements in oil burners, and particularly appertains to Letters Patent of the United States, No. 418,427, granted to me December 31, 1889.

The object of my present invention is to obviate radical defects of construction existing in said patent. Therein I employ a perforated metallic platform technically known as an insulator, elevated a prescribed distance above the wick-tube top, and adapted to intervene between said tube and the flame. Its method of attachment is inoperative and conducive to unstability of the insulator. My purpose herein is to strengthen said part and provide means for its firm adjustment within the cone or deflector in the manner hereinafter described and illustrated in the annexed drawings forming a part of this specification, wherein—

Figure 1 represents a perspective view of my improved invention as applied to the ordinary kerosene burner. Fig. 2 indicates a plan of the blank comprising the insulator before being struck up. Fig. 3 is a transverse section thereof on line 3—3 of Fig. 2 struck up and ready for attachment to the cone, Fig. 4 being a perspective of said cone to exhibit the tongue slots. Fig. 5, designates in transverse section, the assemblage of the parts ready for operation.

Similar characters denote corresponding features throughout the several views, referring to which—

A designates the burner, and B the cone to which particularly my improved insulator applies. In my patent hereinbefore alluded to, this feature of my invention is secured to the cone by attaching to the periphery of the insulator at opposite points two arms, which in combination with horizontal projections on the cone were intended to center and steady the former against and within the latter. This methed, however, is inoperative, two arms not affording sufficient support, while the aforesaid projections are ineffective as they merely rest against said cone instead of being securely fastened thereto as in my present invention; wherein C is the foraminous insulator having its central aperture D as usual above the wick-tube E when the parts are adjusted for illuminating.

F designates the supporting arms four in number, equi-distant and projecting from the raised periphery of the insulator forming an integral part thereof, as also are the clinch tongues G springing from said supporters or arms. These tongues are of diminished width to form shoulders as at H, which abut against the inside of the cone B, through the wall of which they are securely clinched as at *h*, Fig. 4, being as will be observed, pointed, to facilitate their admission through the tongue slots I in said cone.

A further defect in my former patent construction to which I desire to call attention, is the lack of rigidity in said insulator which is necessarily struck from thin metal and therefore becomes distorted by pressure when adjusting, or assembling the several parts forming collectively the burner, or warped through the action of heat. To obviate this defect I provide the annular projecting rim J, from which the supporting arms F and their coacting tongues G arise, in the process of striking up the metal, so that a reinforcing rim at an angle from the plane of the foraminous surface or floor C, is formed, imparting greater strength and stiffness to the structure.

A valuable desideratum embodied in my improved insulator is manifest in the rapidity of its adjustment within the cone or deflector, the shoulders H limiting exactly the protrusion of the clinching tongues through said cone, while the rigidity imparted by the annular rim enhances the strength and perpetuity of the hereinbefore most assailable portion of a burner.

Having thus described the construction and ascertained the nature of my invention, I desire to secure by Letters Patent of the United States, and I claim—

1. In a burner for hydrocarbons, the combination therewith of a foraminous insulator having the hereinbefore described radial arms and tongues adapted to its support within its coacting cone or deflector, and further pro-

vided with an annular reinforcing rim integral with, and projecting beyond its perforated floor substantially as set forth.

2. In a burner for hydrocarbon oils, the foraminous, apertured insulator C provided with radial arms F, terminating in clinch tongues G in a manner to form the abutting shoulders H, adjacent to the base of said tongues, and the reinforcing rim J, all arranged, combined and adapted to operate in conjunction with the cone or deflector B, provided with tongue slots I for the reception of said tongues G, so as to unite said devices and impart additional strength thereto, substantially as specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 24th day of June, A. D. 1892.

CHARLES TRENCH.

Witnesses:
R. M. SALTONSTALL,
JAMES R. OGDEN.