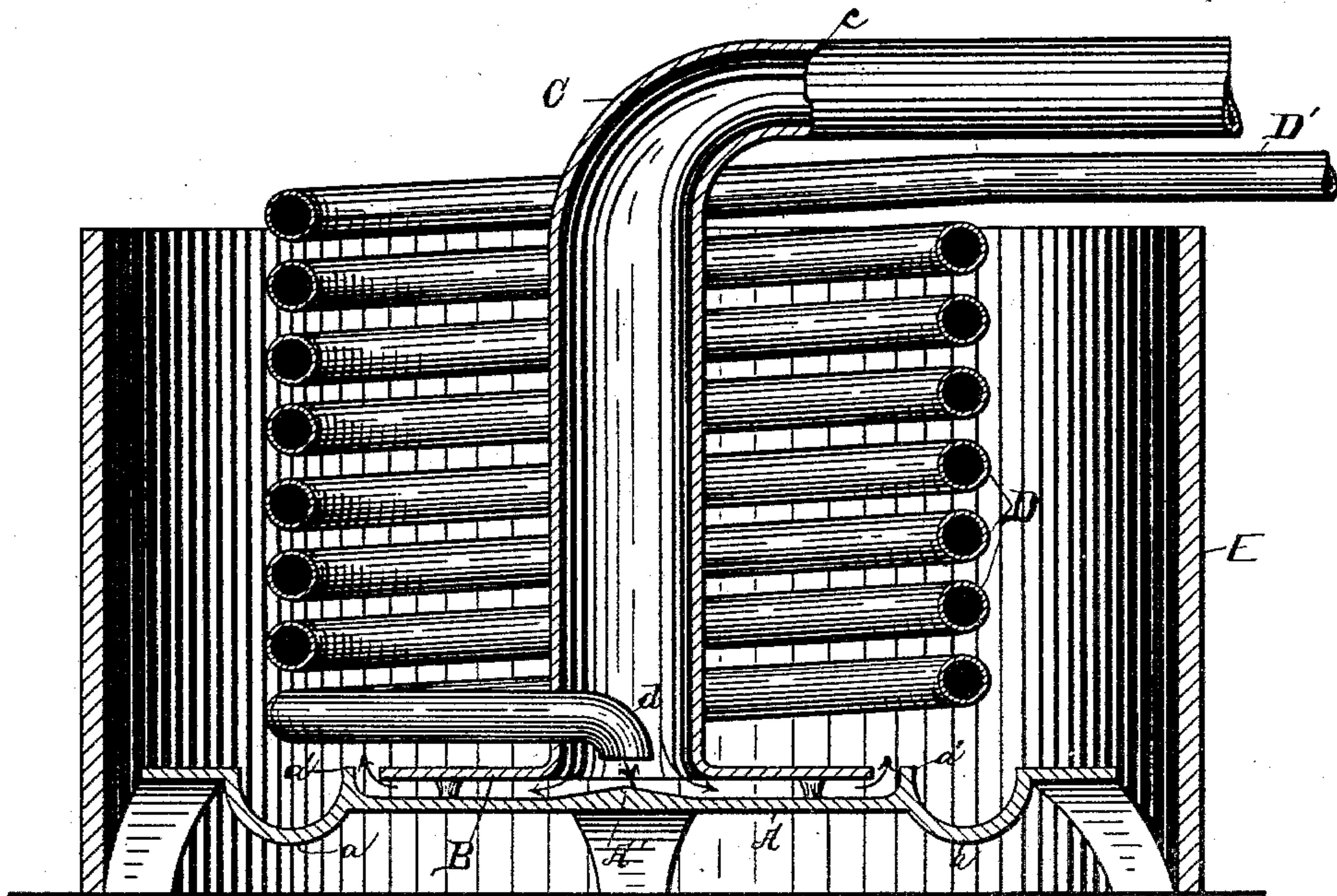


(No Model.)

E. H. WACKERMAN.
VAPOR BURNER.

No. 411,844.

Patented Oct. 1, 1889.



Witnesses

B. J. Lowrie

W. R. Edelen.

Inventor

Edward H. Wackerman

By Leggett & Leggett
Attorneys.

UNITED STATES PATENT OFFICE.

EDWARD H. WACKERMAN, OF CLEVELAND, OHIO.

VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 411,844, dated October 1, 1889.

Application filed June 27, 1889. Serial No. 315,698. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. WACKERMAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Vapor-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in vapor-burners; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawing the figure is an elevation in section taken through the center of the device.

A represents the base of the burner, consisting of a horizontal disk, the upper surface of which is flat except that the central part thereof is slightly crowning or conical, as shown at A'. At the periphery of the disk and integral therewith is a shallow annular trough *a*, that serves as a lighting-cup, the inner edge of this trough extending a short distance above the face of disk A, and thereby constituting an upwardly-projecting annular rim *a'*. Just above base A is located a horizontal disk B, the latter serving as a spreader or deflector. The periphery of disk B comes close to rim *a*. Disk B has a comparatively large central opening for receiving the lower end of air-supply pipe C, the upper or induction end of this pipe being preferably reduced in size, as shown at *c*.

The generator proper consists of a spiral coil of pipe D, located directly above the lighting-cup and connecting at the upper end with oil-supply pipe D', the latter leading to an oil-tank. (Not shown.) The lower end of the coil of pipe leads into the center of the air-pipe and from thence turns downward, as shown at *d*, so that its discharge is directly onto the central portion of base A.

A housing or casing E is usually provided just outside the coil of pipe for concentrating the heat about the generator. This casing also prevents currents of air from disturbing the flame.

In lighting the burner, oil is admitted

through the coil of pipe, and this oil covers the base to the depth of rim *a'* and then overflows into the lighting-cup *a*, where it is ignited to supply the initial heat. The oil remaining on base A as it burns out heats disk B and the air-pipe. The initial heat thus supplied heats the coil of pipe to such a high degree that when oil is again admitted such oil is vaporized in its passage through the coil and the oil-vapor is discharged with considerable force onto the central portion of base A. The suction produced by such gas-jet draws in a large quantity of air through tube C that of course commingles with such oil-vapor. The commingled air and gas passes out in a thin sheet between base A and disk B, and by engaging rim *a'* is deflected upward toward the coil of pipe, the gas being ignited as it escapes from between the disks.

What I claim is—

1. An oil-burner comprising two slightly-separated horizontal disks, the upper disk having a central opening for receiving an air-pipe from above, the lower disk having a crowning center and having an annular trough or lighting-cup at the periphery thereof, an upwardly-projecting rim extending athwart the opening between the disks, and a vapor-generator comprising a coil of pipe located above the trough, the lower end of the coil leading into the air-pipe and discharging from thence downward, substantially as and for the purpose set forth.

2. In a vapor-burner, in combination, two slightly-separated horizontal disks, an air or commingling tube leading from above and discharging through a central orifice in the upper disk, a vapor-generator consisting of a coil of pipe surrounding the air-commingling tube and discharging downward inside the latter, and an annular rim projecting up from the lower disk for deflecting the flame against the generating-coil, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 16th day of April, 1889.

EDWARD H. WACKERMAN.

Witnesses:

CHAS. H. DORER,
WILL B. SAGE.