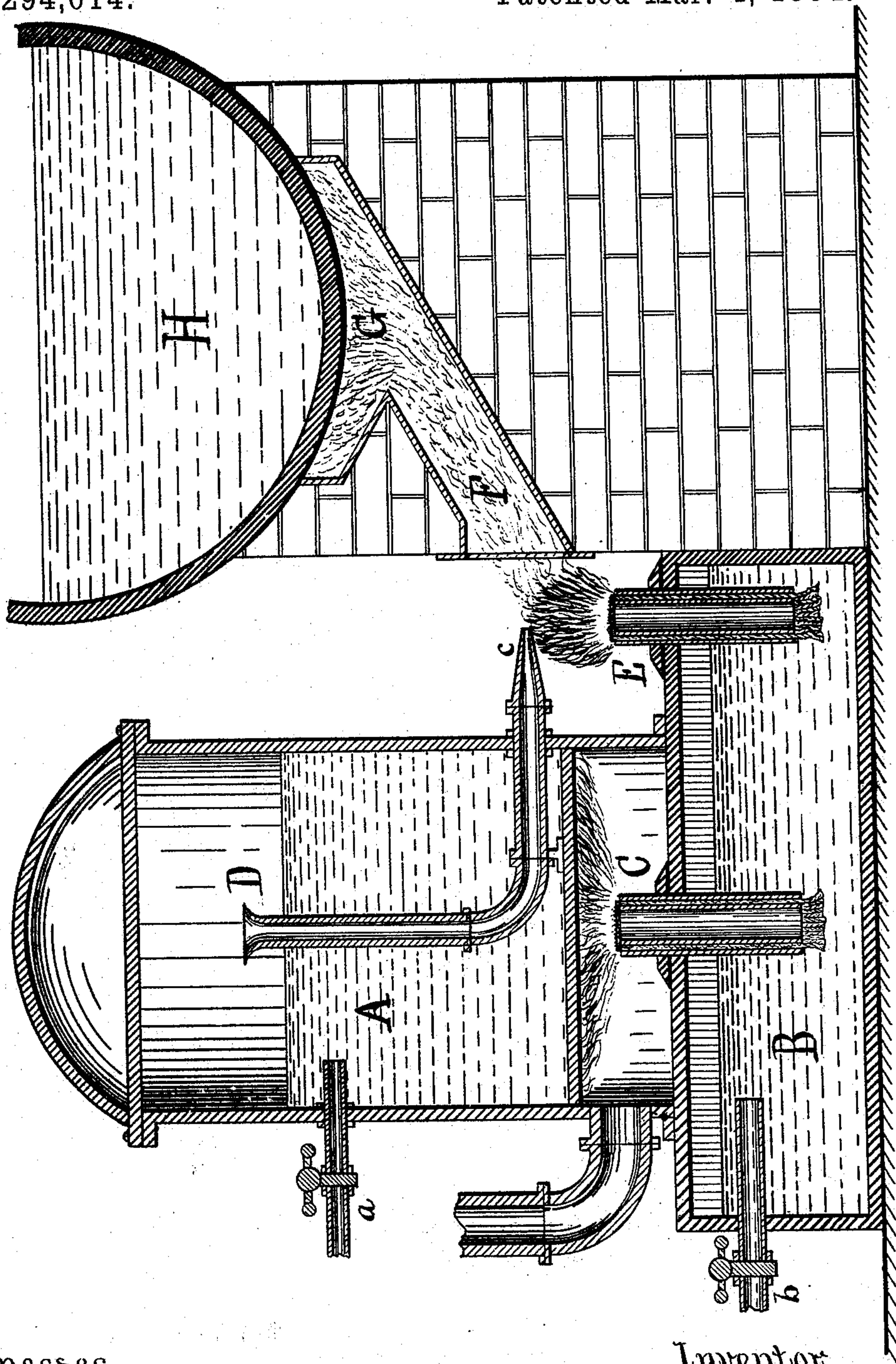


(No Model.)

W. L. GREGG.  
HYDROCARBON BURNER.

No. 294,614.

Patented Mar. 4, 1884.



Witnesses.

L. W. Lauer  
J. B. Blackwood

Inventor.

Wm L Gregg  
by Wm Woodhull  
Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM LAMPAS GREGG, OF PHILADELPHIA, PENNSYLVANIA.

## HYDROCARBON-BURNER.

SPECIFICATION forming part of Letters Patent No. 294,614, dated March 4, 1884.

Application filed June 11, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM L. GREGG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Hydrocarbon-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 appertains to make and use the same.

My invention consists in means for gasifying liquid naphtha or other volatile hydrocarbons, and in injecting said gas over a flame, where it is ignited, the gas being injected with such force that it acts as a blast to convey it when ignited through a flue to the place where it is desired to utilize the heat thus generated.

In the accompanying drawing, which forms part of this specification, and which shows an apparatus suitable for carrying out the objects of the invention in section, A is a tank or receiver, which may be of any suitable shape and dimensions, to which a liquid volatile hydrocarbon is supplied by the supply-pipe *a*. Beneath this receiver is an oil-tank, B; to which petroleum or other suitable oil is fed by the supply-pipe *b*.

Directly under the hydrocarbon-receiver is a burner or burners, C, fed by the petroleum, which furnishes the requisite heat for gasifying the hydrocarbon.

Within the receiver A is a discharge-pipe, D, open at the top, extending nearly to the top of the receiver, and at the other end terminating in a nozzle, *c*, outside of the receiver. The liquid hydrocarbon, being volatilized

by the heat from the burner, rises to the top of the receiver and is forced out through the pipe D, the force with which it is discharged depending on the rapidity with which the hydrocarbon is volatilized.

Under the nozzle *c* of the gas-discharge pipe is a second burner, E, fed, preferably, by the oil-tank B. The gas, being driven forcibly through the nozzle *c*, passes over the flame from the burner E, where it is ignited, and the ignited gas is forced with great force through the flue F, located on the other side of the burner E, directly opposite the nozzle of the pipe D, to the chamber G, under the boiler H or other receptacle to be heated.

The burner E is located outside of the flue F and chamber G in an uninclosed place, where is always a sufficient amount of air for the consumption of the gas.

The specific construction of the various parts shown may be varied without departing from my invention.

What I claim as my invention is—

The combination of the oil-tank B, the burners C E, fed therefrom, the receiver A, situated above the burner C, the discharge-pipe D, the nozzle of which is situated over the burner E, and the ignited-gas conducting-flue F, located in line with the nozzle of the pipe D, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM LAMPAS GREGG.

Witnesses:

R. M. GREINER,  
G. W. HOLMES, Jr.