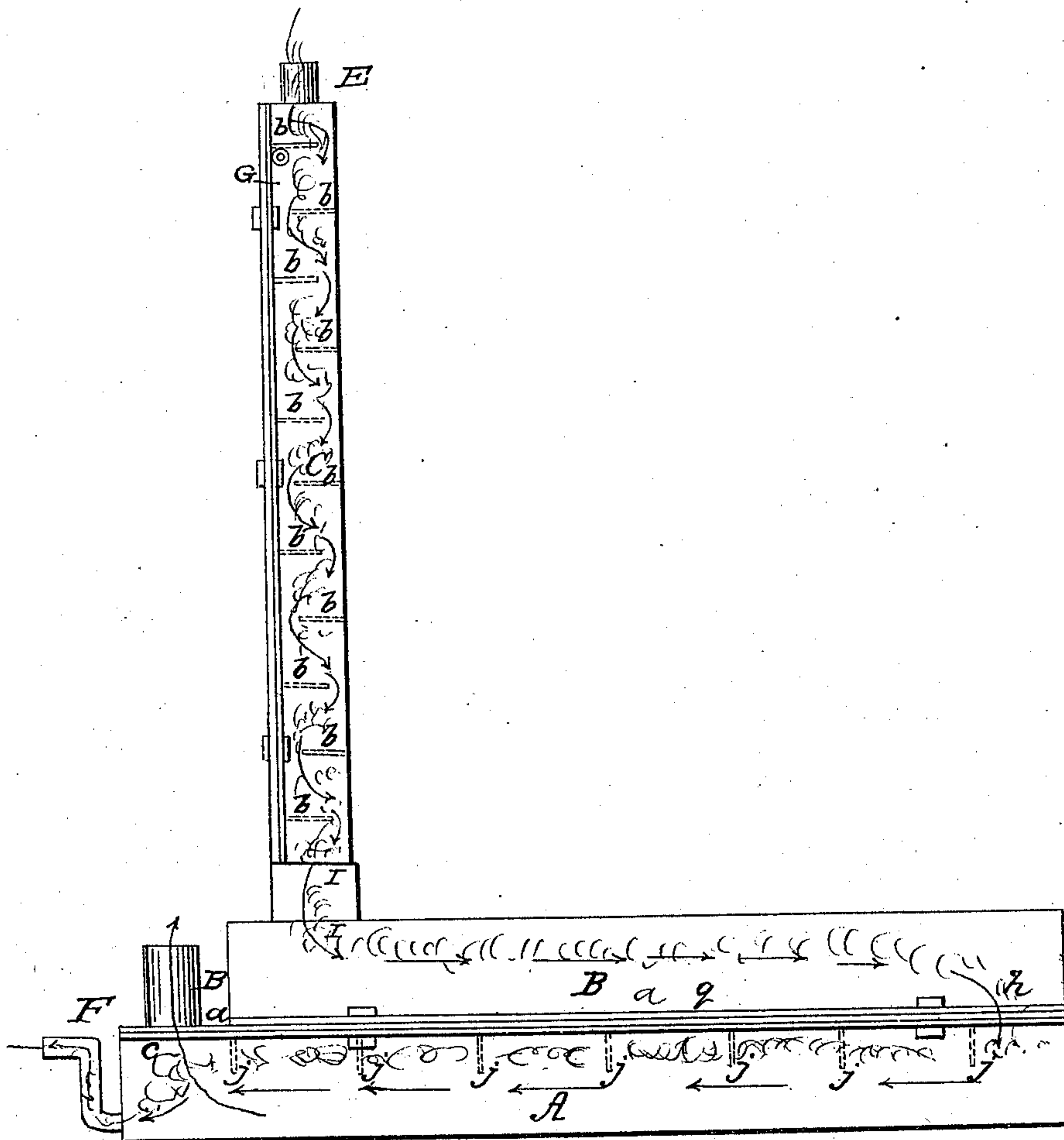


A. WALKER.  
Gas Purifier.

No. 21,095.

Patented Aug. 3, 1858.



# UNITED STATES PATENT OFFICE.

ANDREW WALKER, OF CLAREMONT, NEW HAMPSHIRE.

## APPARATUS FOR PURIFYING GAS.

Specification of Letters Patent No. 21,095, dated August 3, 1858.

*To all whom it may concern:*

Be it known that I, ANDREW WALKER, of the town of Claremont, in the county of Sullivan and State of New Hampshire, have  
5 invented a new and Improved Mode for Purifying Gas; and I do declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The drawing shows a side elevation, with the side casing removed showing the interior construction of the machine.

To enable others skilled in the art to make  
15 and use my invention, I will describe its construction and operation.

In the construction of my invention I use any of the known materials used for such purposes, out of which I construct, the horizontal box or washer A with top (a) to  
20 which is attached pins or teeth *j j* and on the top of which is placed the overflow or check box B, in the bottom of which is aperture H opening into the washer, I then attach  
25 to the overflow or check box, the purifier or vertical washer, C constructed with projections attached on each side of this box, extending about three-fourths of the distance across the box from each side alternately  
30 passing each other, leaving shelves *b* the whole distance of this vertical box, near the top of said box is pipe G for the admission of water and the gas escapes at pipe E. Pipe D is for the admission of the gas from  
35 the main pipe, and the pipe F for the escape of the water.

Having thus constructed my machine, the operation is as follows: The gas is admitted from the main pipe at pipe D thence  
40 passes into the horizontal washer at *c*. The

water at the same time is admitted into the vertical purifier C at pipe G and passes down onto, and around the projections *b* and enters the overflow, or check box B, at opening J, then through said box enters washer A  
45 at the aperture H, and is emptied at discharge pipe F carrying all the impurities of the gas out with it. At the time the water is descending as described the gas as stated enters the washer A and is above the water,  
50 and as it passes horizontally in said box, it comes in contact with the teeth *j j*, which breaks the current of the gas, and thus brings it more immediately in contact with the water, so that a greater amount of sur-  
55 face of the gas is washed by means of the teeth *j*, it passes through aperture H into the check box B and enters the vertical purifier at J, passing against and around the projections *b* and is allowed to escape at tube or  
60 pipe E. Thus the current of gas ascends, and the current of water descends, and thus mingling with each other the water washes from the gas all its impurities, and leaves it pure and ready for use. This arrange-  
65 ment I have found to work well in practice. The water is constantly flowing while the gas is ascending, and in its descent carries off all impurities at discharge pipe F.

Having thus fully described the nature  
70 of my invention what I claim as new and desire to secure by Letters Patent is—

The construction of the cover of the horizontal washer A with teeth *j* as described, and for the purpose set forth.

ANDREW WALKER.

Witnesses:

EDWARD D. BAKER,  
M. L. GENETT.