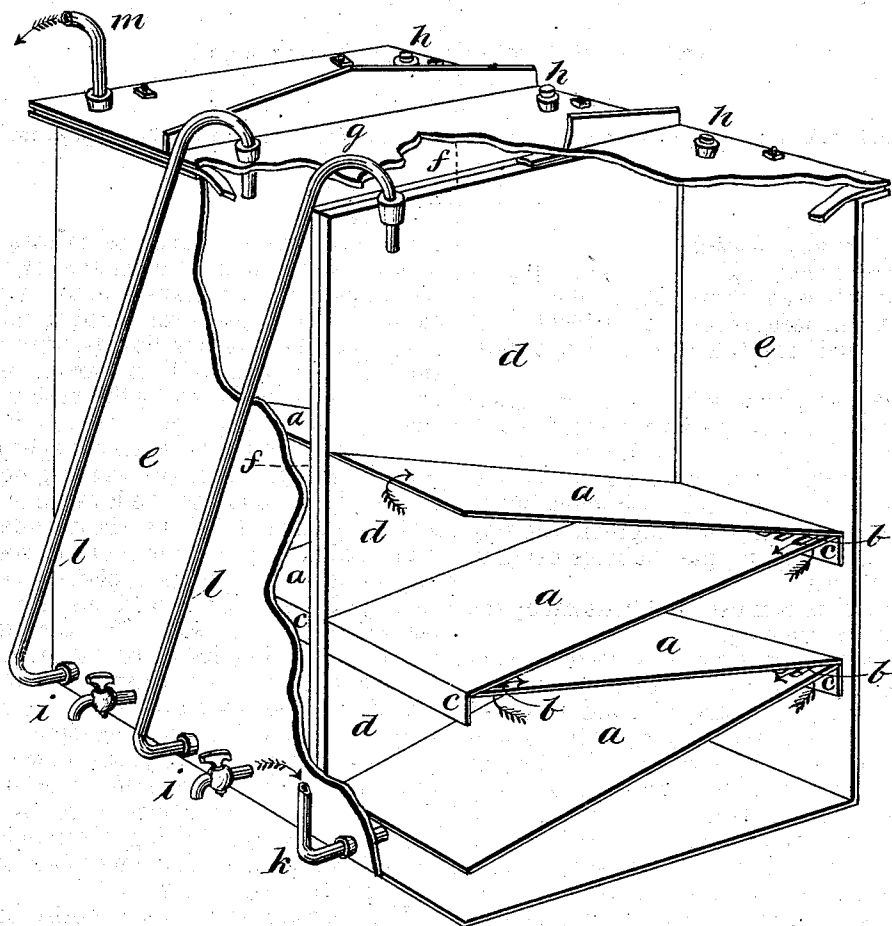


E. C. H. HILDEBRAND.
Gas-Purifiers.

No. 155,582.

Patented Oct. 6, 1874.



Witnesses
Louis Strehl
G. L. Hodges

Inventor:
E. C. Herman Hildebrand.

UNITED STATES PATENT OFFICE.

E. C. HERMAN HILDEBRAND, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GAS-PURIFIERS.

Specification forming part of Letters Patent No. 155,582, dated October 6, 1874; application filed March 14, 1874.

To all whom it may concern:

Be it known that I, E. C. HERMAN HILDEBRAND, of Chicago, State of Illinois, have invented an Apparatus for the Purification of Gases, of which the following is a specification:

The object of my invention is to free gases of their impurities by passing them through certain purifying-liquids in such a manner as not only to bring them into the greatest possible contact with the washing-liquids, but to retard their passage and lengthen the way they have to make, the gas bubbles being in a revolving state.

The apparatus is illustrated in detail by the accompanying drawing.

The apparatus consists of a vessel, *e*, containing one or more cells, in each of which is placed a number of inclined planes, *a*, either flat or corrugated, ascending in a zigzag and having such projections downward at their edges as to prevent the escape of gas any other way except through the channel thus formed and the perforations *b*. Where two inclined planes meet the lower one is perforated at *b*, having beyond the perforation a projection downward to prevent the escape of gas in that direction. *c*, projections. *g* is the common cover fastened on the flange of vessel *e* and the partitions *f* by means of screws or clamps shutting off one compartment completely from the other; *k*, inlet of the gas; *m*, outlet; *h*, openings to pour in the washing-fluids; *i*, faucets for emptying; *l*, tubes to convey the gas from one cell to the other, as illustrated by the arrows.

The operation of the apparatus is as fol-

lows: The inclined planes being inserted, the inlet-tubes projecting under the lower end of the lowest inclined plane, the top is securely closed and the apparatus filled to its greater part with the washing-liquids, thus leaving the inclined planes fully immersed under and on all sides surrounded by the washing-liquid. Close *h*, and let the gas pass in through *k*. As by the difference between the specific gravities of the gas and the washing-liquid the gas is pressed against the lower sides of the inclined planes, it follows the inclined plane *a* upward to *c*, passes through *b*, ascends below the other inclined plane, goes there through *b*, and so on until the last inclined plane has been passed. The gas leaves the liquid and makes its escape through tube *l*. In case other similarly-constructed cells be attached, the gas is made to enter the next cell at its bottom, and so on successively.

I do not claim, broadly, the invention of a gas-washer being composed of several cells, chambers, or compartments containing inclined planes and having a common cover, the compartments communicating by tubes one with the other; but

What I claim as new, and desire to secure by Letters Patent, is—

The inclined planes, with one or more open spaces at their upper ends, in combination with a vessel, *e*, inlet *k*, and outlet *m*, substantially as described, and for the purpose set forth.

E. C. HERMAN HILDEBRAND.

Witnesses:

LOUIS STREHL,
G. L. HOODLESS.