

A. HENDRICKX.
Gas Condenser.

No. 21,072.

Patented Aug. 3, 1858.

Fig. 2

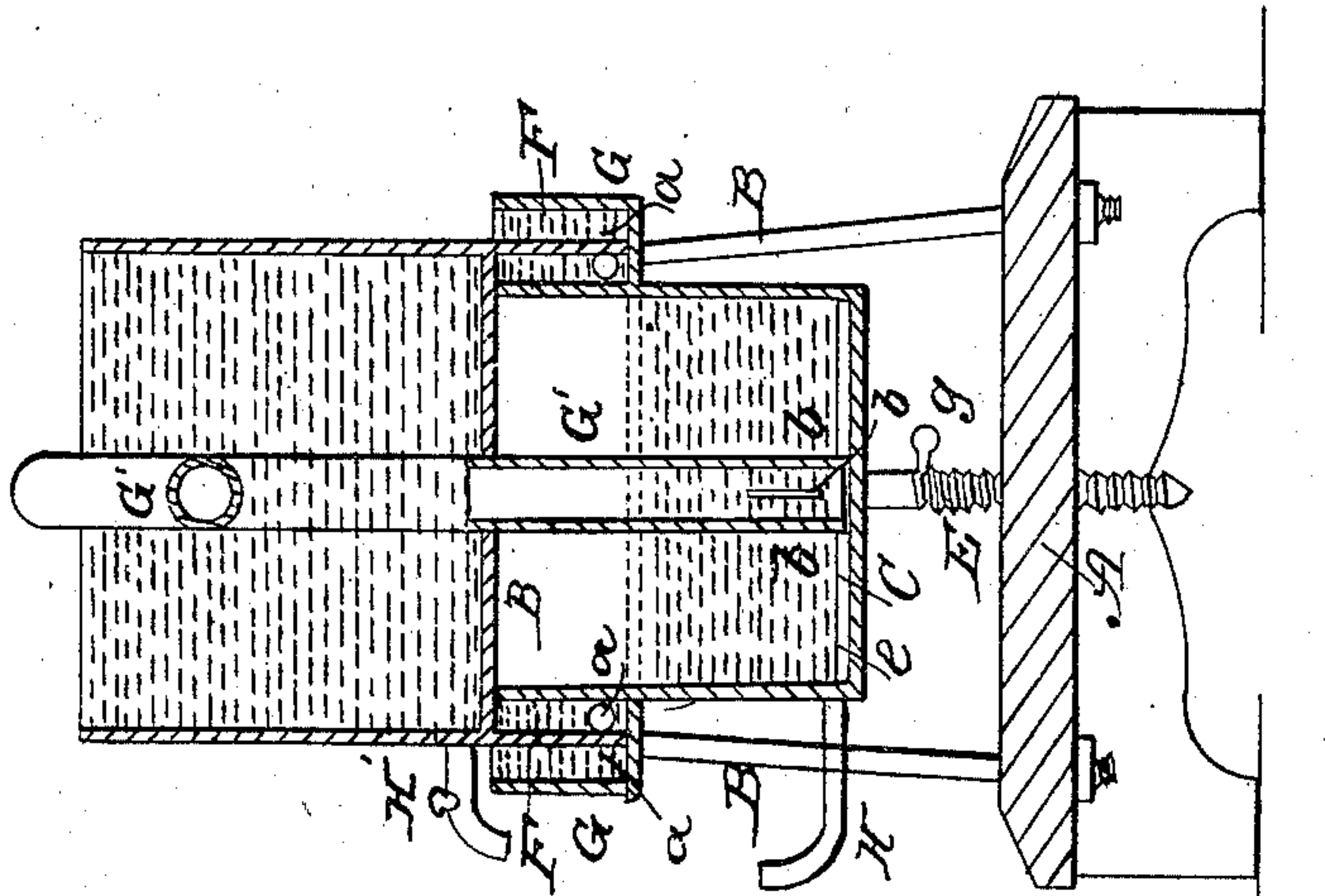
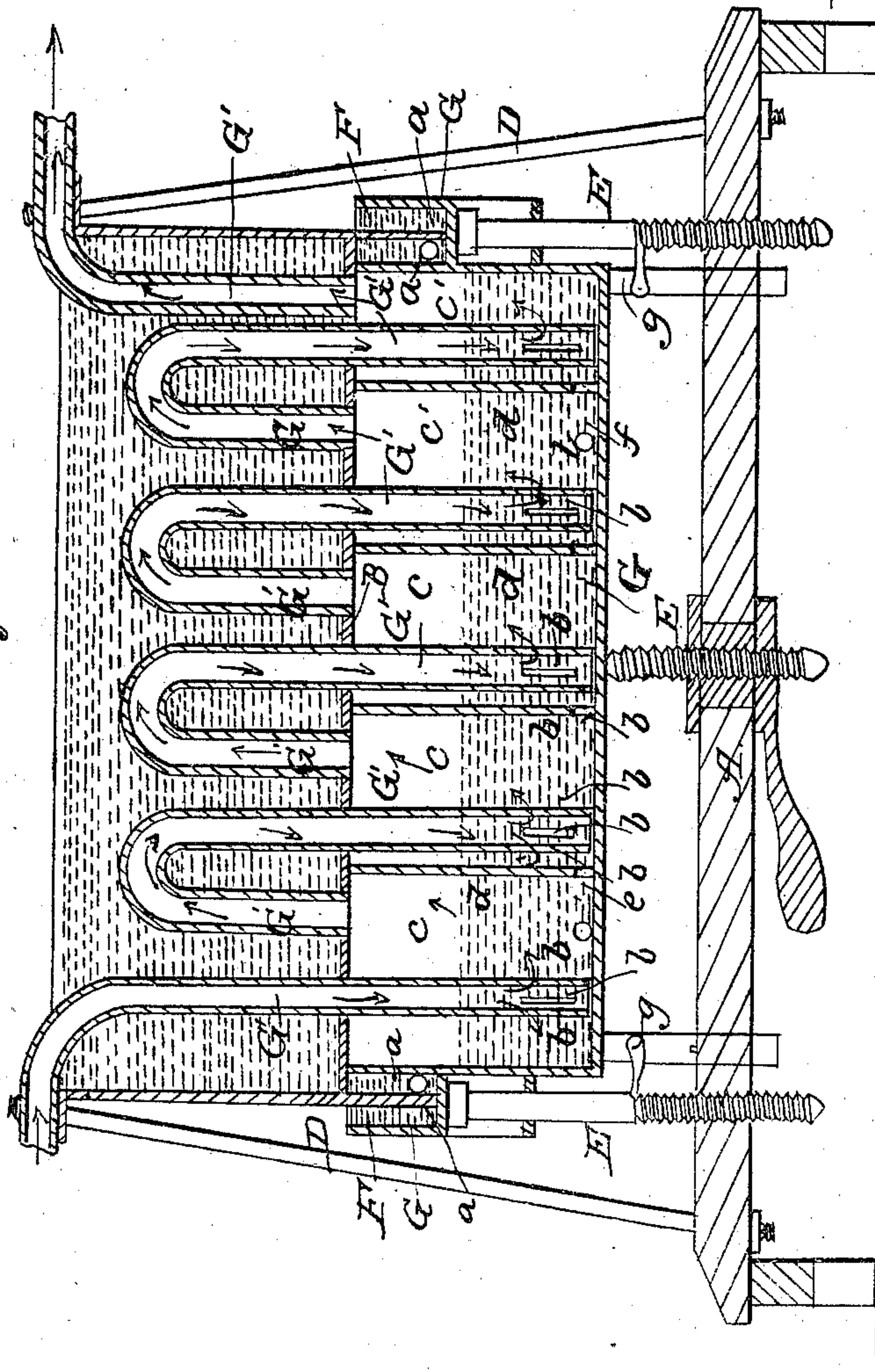


Fig. 1



UNITED STATES PATENT OFFICE.

A. HENDRICKX, OF NEW YORK, N. Y., ASSIGNOR TO VICTORIA HENDRICKX, OF SAME PLACE.

APPARATUS FOR CONDENSING AND PURIFYING GAS.

Specification of Letters Patent No. 21,072, dated August 3, 1858.

To all whom it may concern:

Be it known that I, A. HENDRICKX, of the city, county, and State of New York, have invented a new and useful Improvement in Gas-Condensers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a vertical longitudinal section of a gas condenser constructed with my improvements. Fig. 2, is a vertical transverse section of the same.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of my invention consists in a gas condenser which has the junction between its upper and lower chambers accomplished by means of a water channel formed around the upper edge of the lower chamber, and a flanch formed around the bottom of the upper chamber, in combination, with stationary rods which sustain the upper section, and adjusting suspension screws, or their equivalents, weights, cords and pulleys, whereby all necessity of screwing the two chambers together at the point of junction is avoided and thus great facilities for inspecting and clearing out or unclogging the condensing pipes and lower chamber afforded.

The nature of my invention consists, 2nd, in the within specified arrangement of condenser and purifier on the same level and within the same chamber, whereby room is economized and the condenser and purifier are brought compactly together and facilities afforded for inspecting and clearing out both by one and the same adjustment.

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

A, represents a stand upon which the condenser is arranged.

B, C, represent the condenser. The upper chamber B, is suspended upon stationary rods or standards D, D, and the lower chamber rests upon adjusting screws E, E, which are caused to work down through nuts set in the stand A. F, is a flanch formed around the lower edge of the upper chamber, and G, is a channel formed around the upper edge of the lower chamber as shown. The flanch F, fits down into the channel so as to rest upon the bottom of the same. By thus fitting the two chambers together and filling

the channel with water as shown a joint is formed which will remain gas tight so long as the pressure of the gas remains at the proper height or the condenser is not clogged, but as soon as the pressure rises above the proper height from any cause, the water is displaced from the channel by reason of the gas issuing through safety escape passages *a, a*, and rising to the top of the channel.

The condensing pipes G', G', are arranged in the chambers B, C, in the usual manner or as shown in the drawings. At their lower ends, narrow oblong slits *b, b, b, b*, are formed for the gas to escape through in thin sheets, into the lower condensing chamber C. The lower chamber C, is divided as usual into a series of sections *c, c, c*, by partitions *d, d, d*, which allow one section to communicate with another at *e, e*, as shown. This chamber has two additional sections *c', c'*, provided at its rear end, these sections which answer for receiving a purifying material, such as a solution of crude sugar of lead and soda, communicate with one another at *f*, but have no communication with the condensing sections *c, c, c*.

H, is a curved pipe for introducing the water into the sections of the lower chamber of condenser, and I, is a similar pipe for introducing the purifying material into the purifying sections.

Instead of screws for sustaining and adjusting the lower section, cords, weights and pulleys might be used with almost equal advantage. It may also be preferable to have only one screw at the center and two end guide and supporting rods as shown in red, and effect the adjustment of said screws and the lower chamber of condenser, by means of a nut furnished with a leverage as also shown in red.

From the foregoing description and accompanying drawing, it will be evident that the gas enters the first of the series of condensing tubes and takes the course indicated by the arrows until it arrives at the last of the series of pipes. In its progress the gas is condensed and stripped of tar and ammoniacal liquor in the sections *c, c, c*, and also purified of sulfuric and carbonic acid gas in the sections *c', c'*, whence it goes off pure and ready for use. It may also be evident that to inspect the sections of the lower chamber, it is simply necessary to turn the screws by the handles *g, g*, until its bot-

tom rests upon the stand. When thus adjusted every facility is afforded for cleaning out or unclogging the condensing and purifying tubes, and sections.

5 What I claim as my invention, and desire to secure by Letters Patent, is—

1. A gas condenser which has the junction between its upper and lower chambers B, C, accomplished by means of a water
10 channel G, formed around the upper edge of the lower chamber C and a flanch F, formed around the bottom of the upper chamber B; in combination with stationary rods

D, D, which sustain the upper section and adjusting suspension screws E, E, or their 15 equivalents, weights, cords and pulleys, substantially as and for the purposes set forth.

2. The within specified arrangement of condenser and purifier on the same level and within the same chamber, substantially as 20 and for the purposes set forth.

AUGUST HENDRICKX.

Witnesses:

G. YORKE AT LEE,
GEORGE WINDLE.