

E. J. JERZMANOWSKI.

Manufacture of Water Gases.

No. 145,350.

Patented Dec. 9, 1873.

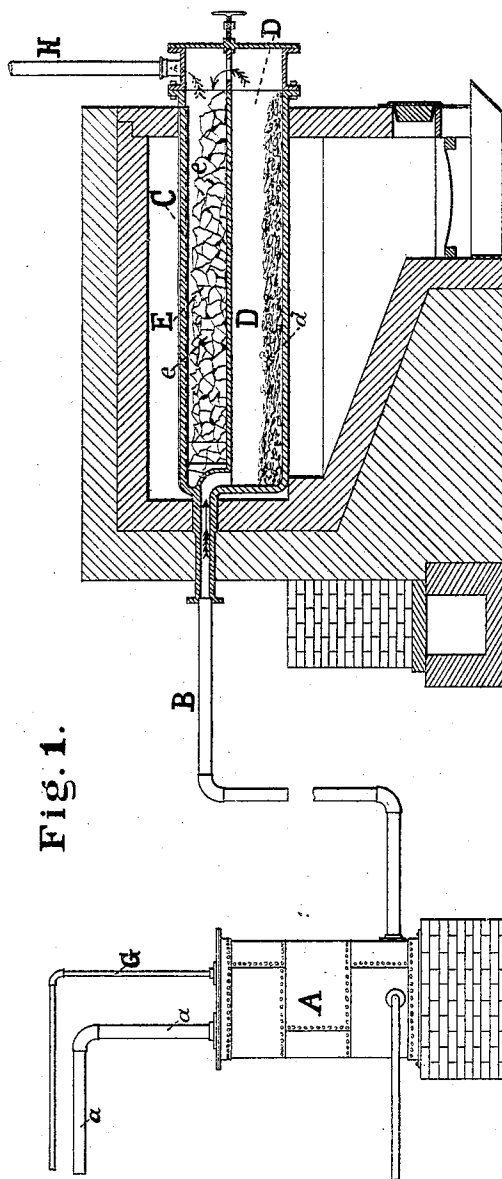


Fig. 1.

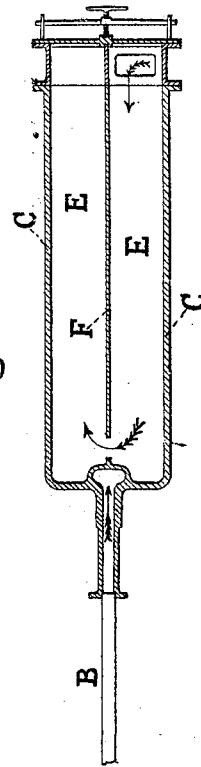


Fig. 3.

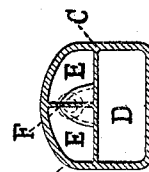


Fig. 2.

WITNESSES.

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IMPROVEMENT IN THE MANUFACTURE OF WATER-GAS.

Specification forming part of Letters Patent No. **145,350**, dated December 9, 1873; application filed October 8, 1873.

To all whom it may concern:

Be it known that I, ERAZM J. JERZMANOWSKI, a citizen of the Kingdom of Poland, but now a resident of the city, county, and State of New York, have invented, made, and applied to use a new Process for Producing Illuminating-Gas; and that the following is a full, clear, and correct description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, in which—

Figure 1 is a longitudinal sectional view of apparatus employed by me. Fig. 2 is a sectional view of retort C, showing divided upper section of same. Fig. 3 is a sectional view of retort C.

In the drawing, like parts of the invention are pointed out by the same letters of reference.

The nature of the present invention consists in improvements in the manufacture of illuminating-gas, as more fully hereinafter set forth.

To enable those skilled in the arts to make and use my invention, I will describe the same.

I first make water-gas by special apparatus. The water-gas thus made is composed of hydrogen and some carbonic oxide. The water-gas is then introduced, through pipe *a*, into a carbureter, A, which carbureter A may be supplied with naphtha, petroleum, or similar fluid through the pipe G. The carbureter is heated, by steam or otherwise, to allow a small percentage of hydrocarbon to be evolved from the naphtha, petroleum, or similar fluid placed in the carbureter A, so that as the water-gas is forced through the carbureter A it will take up and have mixed with it the hydrocarbon evolved from the naphtha, petroleum, or like fluid. The mixture is then conducted from the carbureter A, by means of pipe B, to a retort, C, the upper portion, E, of which is separated from its lower portion, D, by means of a division-plate, F. In the lower

portion, D, of the retort is placed bituminous coal *d*, while the upper portion is divided by a vertical partition, provided with an opening at one end, and is filled with broken brick, porcelain, or some proper refracting substance, *e*. This retort C is properly heated, so that gas will be evolved from the coal, and the brick, porcelain, or like material, be heated; and as the mixture passes through the lower portion of the retort C it takes up the carbon evolved from the coal, and, having done so, it passes through the upper portion of the retort, where all the gases are exposed to the refracting-surface, and are fixed; thence, through the pipe H, it passes to a condenser and purifier, and can be used.

The effect of passing the water-gas through the carbureter A, where it unites with the hydrocarbon evolved from naphtha or like material, and then, through the retort C, supplied with bituminous coal, is that the hydrocarbon evolved from naphtha or like material is, by this process, united with some of the hydrocarbon evolved from the coal, and a new element is thus formed.

Gas made as just set forth requires little purification.

Having now set forth my invention, what I claim as new is—

The process of forming a fixed gas for illuminating purposes by first producing a mechanical mixture of gas from water and the vapors of some hydrocarbon, and then combining the same with gas evolved from bituminous coal heated in a retort in the usual manner, and the whole volume of gas thus produced being finally and fully fixed by passing it through some suitable refracting substance, substantially as and for the purpose set forth.

ERAZM J. JERZMANOWSKI.

Witnesses:

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HENRY HOYT.