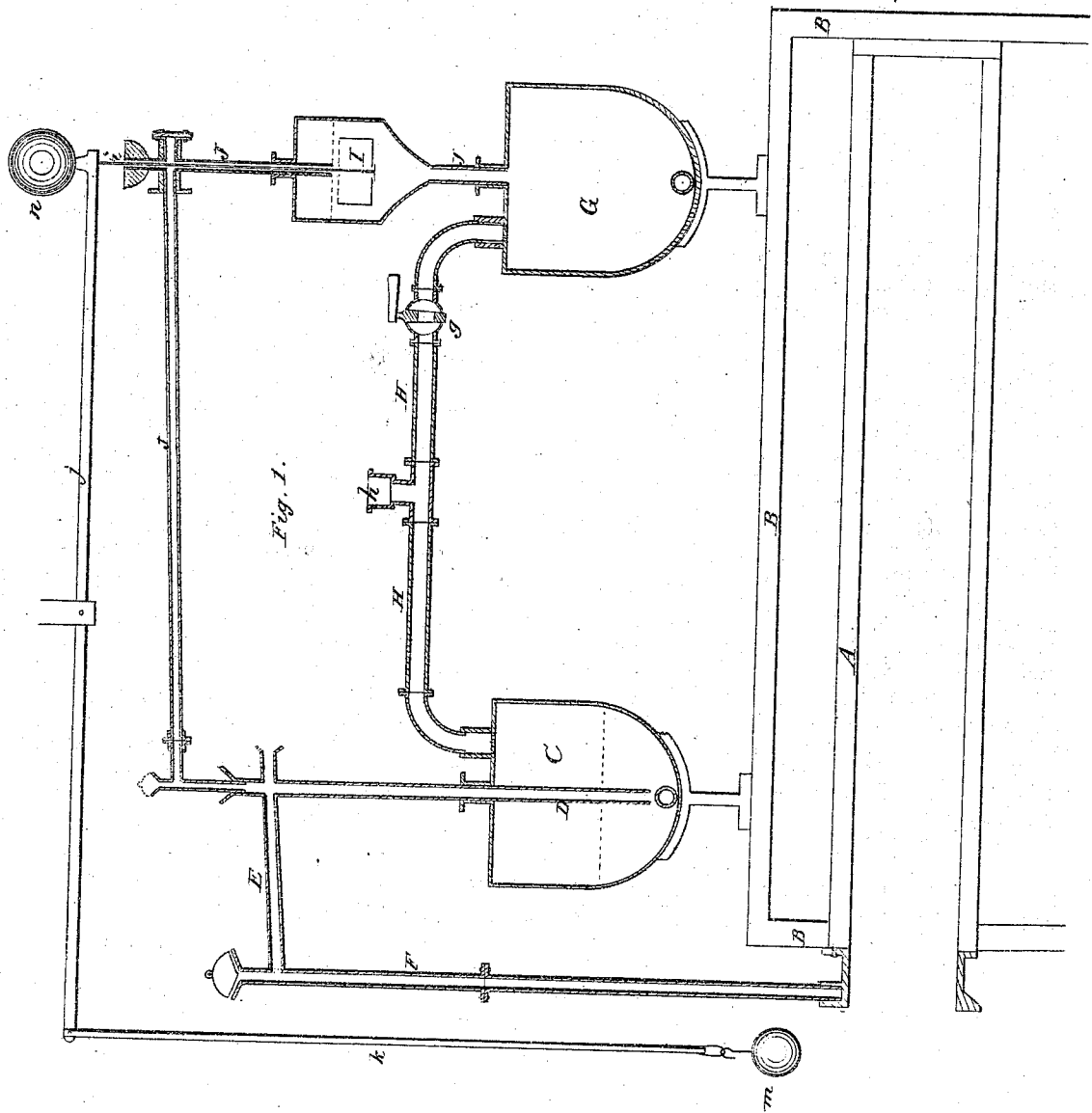


CHARLES COLLIER.

Improvement in Hydraulic Mains of Gas Works.

No. 119,919.

Patented Oct. 17, 1871.



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Charles Collier

UNITED STATES PATENT OFFICE.

CHARLES COLLIER, OF SELMA, ALABAMA.

IMPROVEMENT IN HYDRAULIC MAINS OF GAS-WORKS.

Specification forming part of Letters Patent No. 119,919, dated October 17, 1871.

To all whom it may concern:

Be it known that I, CHARLES COLLIER, of the city of Selma, in the county of Dallas and State of Alabama, have invented a certain new and useful Improvement in Gas-Works for Safety in Charging the Retorts; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a sectional-view elevation of my improvements in gas-works, showing an additional pipe, dry-main, or receiver, and its connections with the hydraulic main, cut-off valve, pipes, and retort.

The object and nature of my improvements are to relieve the pressure of the gas on the retorts, when being charged, by closing a valve connected with a dry-main or receiver and opening the same after it is charged, the whole being so constructed that it can be applied to any bench or benches of retorts while the gas-works are in full operation. My invention consists of an additional dry-main pipe or receiver placed in the rear of the hydraulic main, in general use in gas-works, and connected with the said main by an arch-pipe provided with a stop-valve or cut-off, and also an additional valve placed between the receiver and the dip-pipe.

To enable others to make, apply, and use my improvements, I will describe them, referring to the drawing.

To a bench of retorts, A, set in brick-work B on which the hydraulic main C is mounted in the usual manner, with its dip-pipe D, bridge-pipe E, and stand-pipe F, all connected for operation, I place an additional pipe-main or receiver, G, in

the rear of the hydraulic main, running parallel with it, at any suitable or convenient distance apart, and connect the two mains C and G together by an arch-pipe, H, having a T-pipe, *h*, to convey the gas from the retorts to the condenser, &c.; also providing it with a cut-off, *g*. The additional gas-main or receiver G is provided with a valve, I, placed anywhere in the pipe J, which connects the receiver G with the dip-pipe D, the valve I being operated by a rod, *i*, lever *j*, pendent *k*, and balance-weight *m* to counterbalance the weight *n* on the lever *j*, or any other suitable mechanical device.

The advantages of my improvements are that they can be applied to any gas-works, and the connections made therewith without the interfering with or stopping the manufacture of gas.

Having thus fully described my improvements in gas-works, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The dry-main or receiver G and the arch-pipe H, in combination with the hydraulic main C, substantially as herein shown and described.

2. In combination with the above, the valve I with its pipe-connections J J' with the dip-bridge and stand-pipe, the rods *i* *k*, lever *j*, and weights *m* and *n*, or their equivalents, for operating the same in the manner as and for the purposes herein set forth.

In testimony whereof I hereunto subscribe my name.

CHARLES COLLIER.

Witnesses:

J. B. WOODRUFF,
JNO. R. ERGOOD.

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