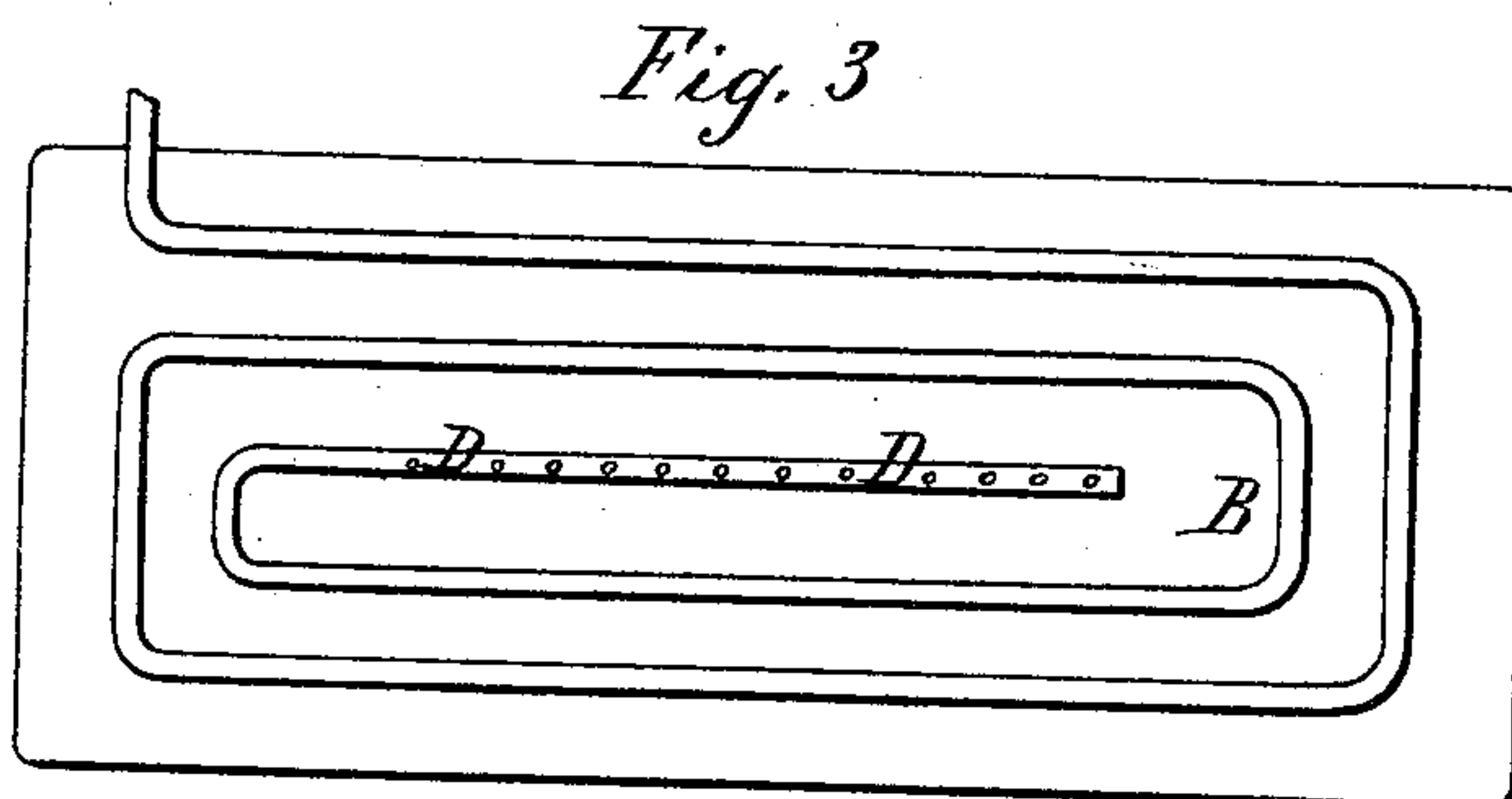
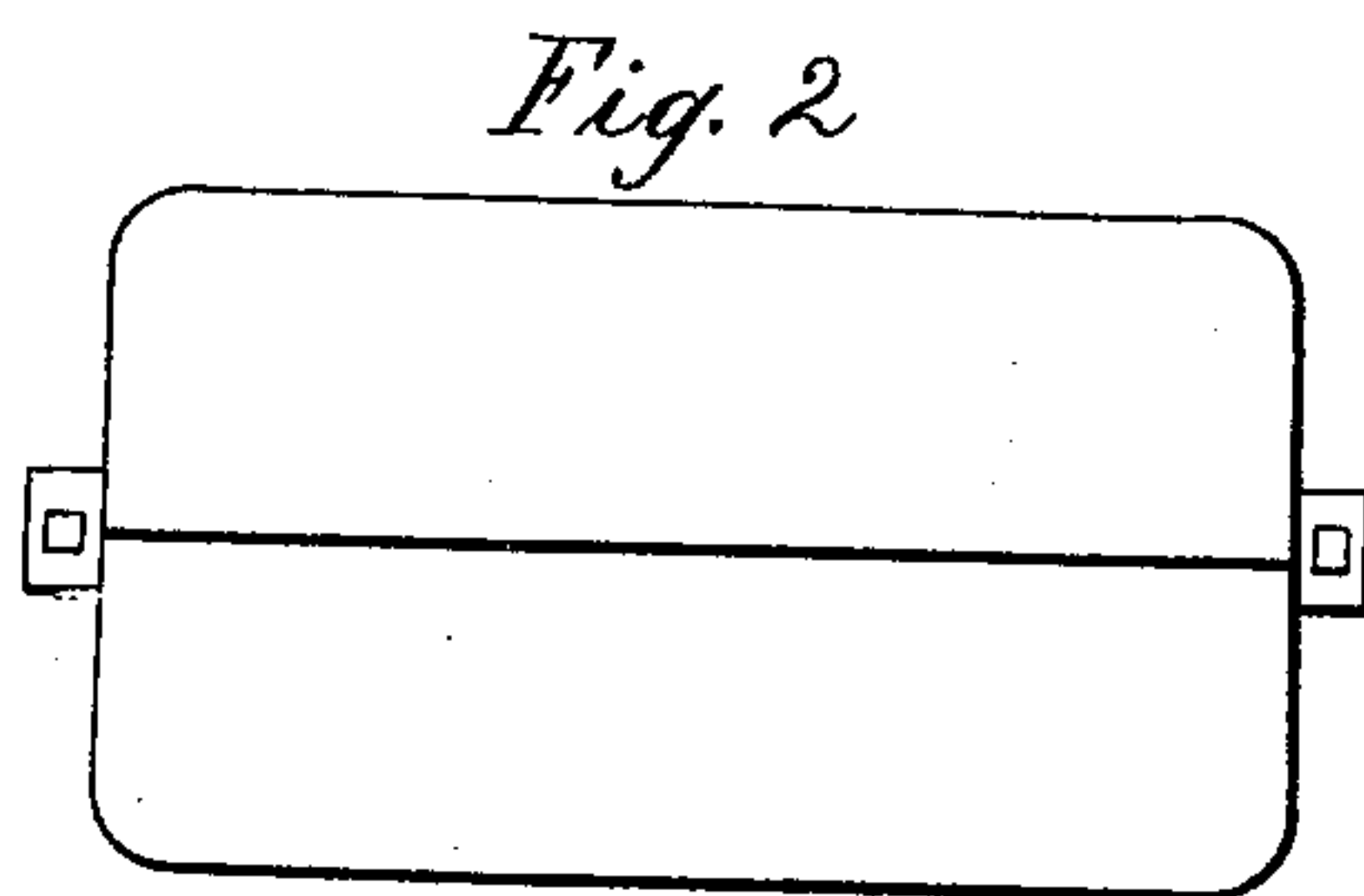
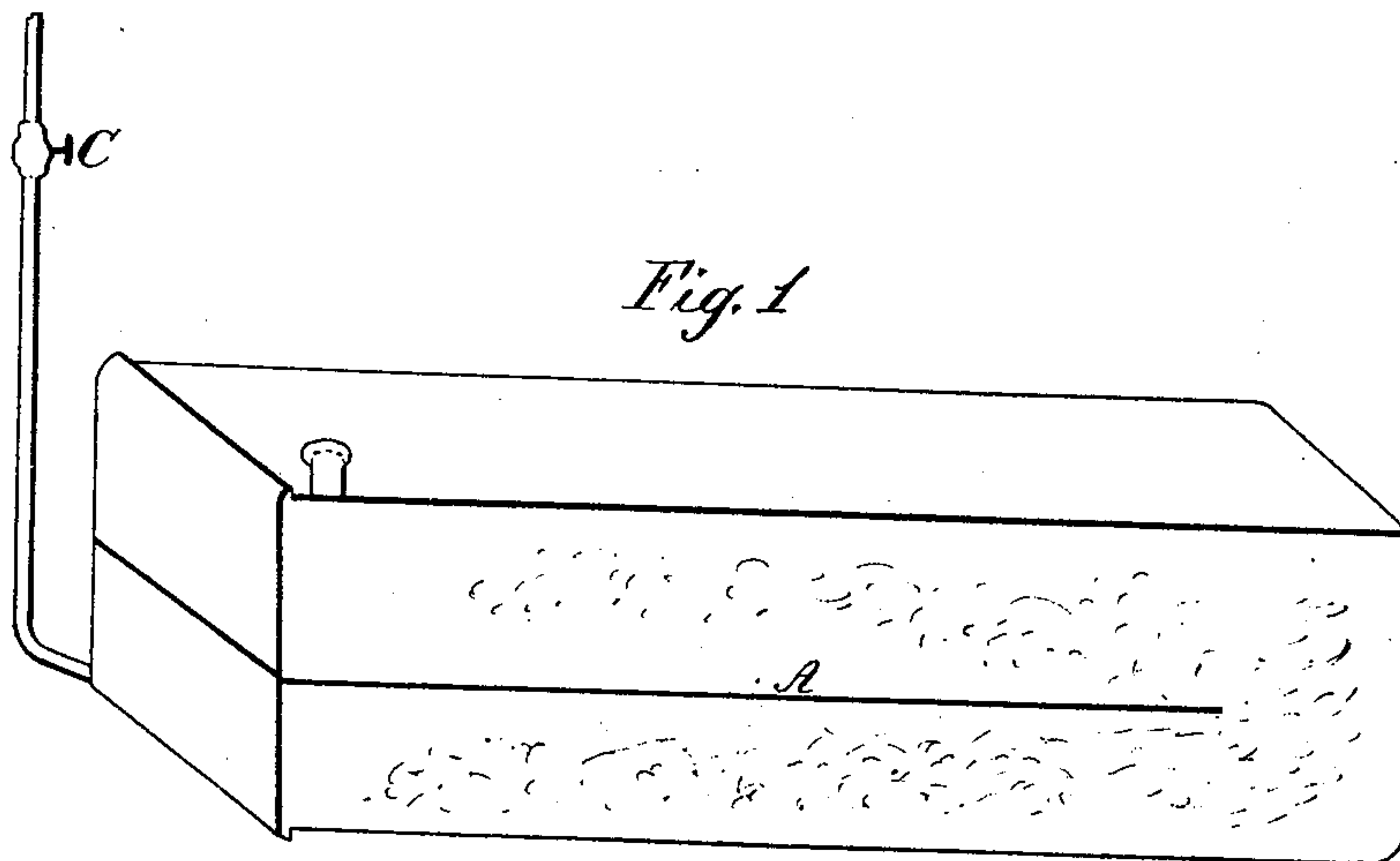


W. H. GWYNNE.
METHOD OF PRODUCING GAS FROM WATER.
No. 39,393. Patented Aug. 4, 1863.



UNITED STATES PATENT OFFICE.

W. H. GWYNNE, OF WHITE PLAINS, NEW YORK.

IMPROVED METHOD OF PRODUCING WATER-GAS.

Specification forming part of Letters Patent No. 39,393, dated August 4, 1863.

To all whom it may concern:

Be it known that I, WILLIAM H. GWYNNE, of White Plains, county of Westchester, State of New York, have invented a new and improved mode of decomposing water for the purpose of applying the gases produced therefrom to heating, lighting, and other purposes; and I do hereby declare the following to be a clear, full, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in introducing steam into a retort containing anthracite coal through a coil of pipe or box with circulating-passages cast therein, and the pipe or box perforated with fine holes, for the purpose of superheating the steam and passing it in finely-divided jets through the anthracite coal in the retort, said retort circulating-pipes and coal to be heated to redness during the time the gases are being made, thereby producing gas more cheaply and speedily than has been done by other methods.

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

In the drawings, Figure 1 represents a longitudinal section of a gas-retort, with a diaphragm running through the center for the purpose of increasing the heating-surface over which the steam must travel before it can leave the retort. Fig. 2 is a vertical front section of same. Fig. 3 shows the bottom of

retort with its superheating and distributing apparatus.

I do not, however, confine myself to any particular form of retort or apparatus, as the same may be varied to suit any kind of gas-works.

To operate my apparatus, fill the retort, Fig. 1, with anthracite coal on both sides of division A, and when it has reached a red-hot color the valve C is opened and steam let into distributing and superheating coil B, where its temperature is greatly increased, and, as it passes in fine jets through perforations D D into the heated coal, it is at once decomposed into permanent gas, and if any steam escapes decomposition in the lower part of retort it is decomposed in the upper layer of coal, and then passes off into the coolers and purifiers, and thence to the gas-holder, where it is stored for use.

It is obvious that water may be used with anthracite coal, but not to the same advantage as steam, hence my preference for steam.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

Producing gases for heating, lighting, and other purposes by decomposing highly-heated and finely-divided jets of steam by means of anthracite coal, substantially as herein set forth and described.

Witnesses:

W. H. GWYNNE.

THOMAS DONOHUE,
L. S. PECK.