

No. 742,321.

PATENTED OCT. 27, 1903.

G. L. HOGAN.
CARBURETER.

APPLICATION FILED JUNE 19, 1903.

NO MODEL.

Fig. 1.

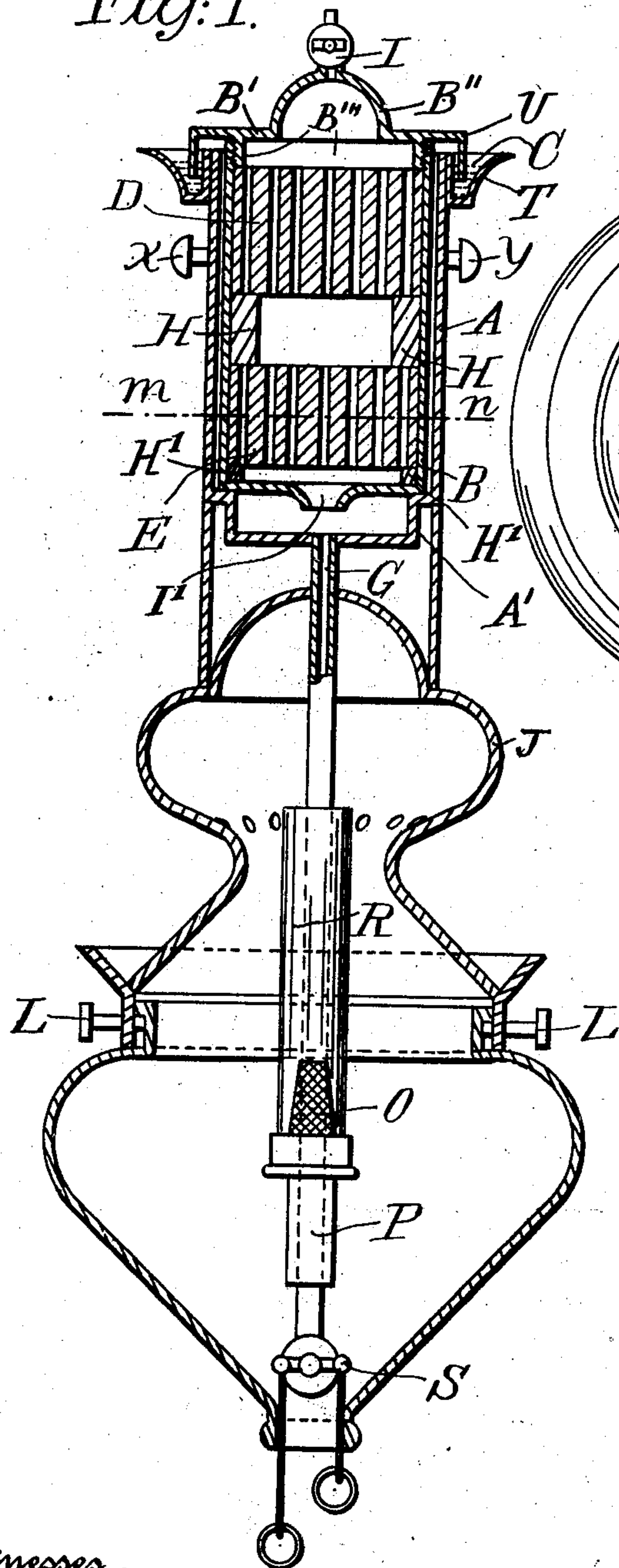
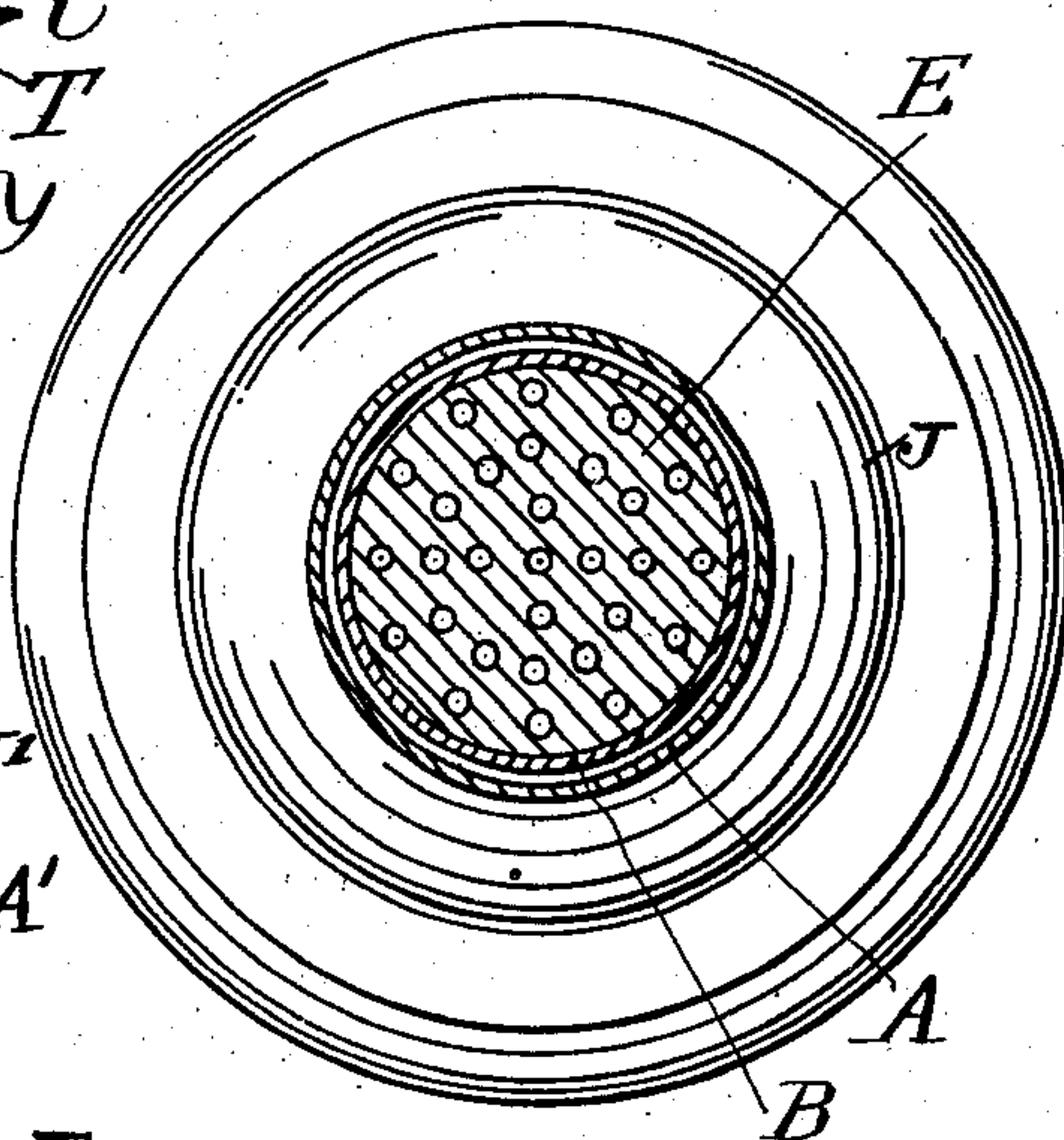


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE LEWIS HOGAN, OF LONDON, ENGLAND.

CARBURETER.

SPECIFICATION forming part of Letters Patent No. 742,321, dated October 27, 1903.

Application filed June 19, 1903. Serial No. 162,238. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LEWIS HOGAN, a citizen of the United States of America, and a resident of 27 Chancery Lane, London, England, have invented a certain new and useful Improvement in Carbureters, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in carbureters adapted to lamps and heating and power apparatus in which an absorbent material in the form of one or more blocks or pieces saturated with a light oil is contained in a suitable casing for the purpose of carbureting or enriching air or other gases passed through it and to means for utilizing the same for lighting or heating purposes.

In order that my invention may be better understood, I refer to the accompanying drawings, which show one form of my invention, and in which—

Figure 1 represents a vertical section through a lamp to be used in connection with air so carbureted. Fig. 2 represents a transverse section through the plane *m n* of Fig. 1.

In Fig. 1, D and E are absorbents which are composed of any suitable material—preferably a mixture of ground sponge, clay, and cement—and which are cast into porous blocks with a number of vertical holes extending through them for the purpose of allowing the air to pass through. These porous blocks are held apart by the spacing-blocks H, and the lower of the two blocks rests on stops H'. The porous blocks are preferably contained in a case B, which has at its higher end a cap B', provided with a downwardly-extending rim U, a dome B'', and an interlocking flange B'''. This case is fitted with an inlet or receiving air-cock I, connected with the dome B'', and its lower end is left open at I' as the outlet or delivery opening, or the absorbents may be sealed in this case and its bottom part fitted with a tube or nipple as an outlet for the enriched air. This case is removably held in an outer case A, which has at its lower end a reduced part A' and at its upper end a circular trough T for containing a liquid C, preferably mercury or water, which forms a seal with the rim U. The

lower end of the outer case is fitted with a delivery-pipe or connection G, which leads to the burner. X and Y are fittings on the outside of this case for suspending the lamp, which is attached thereto. This outer casing extends downward and is fastened to the frame of the lamp J. R is a chimney the purpose of which is to protect the mantle O and to create a draft which sucks the air through the porous blocks which, with the case B and its fittings, form the carbureter. P is an ordinary Bunsen burner fitted with a cock S. L L are means for attaching a glass globe to the lamp.

In Fig. 2 similar letters represent similar parts as shown in Fig. 1.

The operation of the lamp and carbureter is as follows: The case B, containing the absorbent material, is removed from the lamp, and the blocks are saturated with a light oil, such as benzolin. The trough T is then partially filled with a liquid, which may be water. The case B is then placed back in its position in the case A. The rim U, sinking below the surface of the liquid C, forms an air-tight seal. The cock I is then opened, through which air is admitted to the absorbents D and E. The cock of the lamp S is then opened, and the air, which becomes saturated within the case B, being heavier by such saturation, sinks through the pipe G and on the principle of a siphon rises through the burner P, which must be below the carbureter. The saturated air is then ignited, and the hot air rising through the chimney R tends to augment this supply by creating a suction through the carbureter, which makes the lamp applicable to use with incandescent burners. By increasing the length of the chimney R this suction is increased and a more intense light will be had.

It must be understood that the lamp with the carbureter shown and described is only one form of very many which my invention may take, as I do not limit myself to any particular shape of carbureter or lamp or to single burners, but may employ two or more burners, some of which may be a greater distance away from the carbureter than the burner shown in the drawings. The burners may also be used for heating or for lighting

purposes, or for both, or the enriched air may be used for power purposes with any suitable apparatus.

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

1. A carbureter comprising an outer case having an outlet at the bottom, and a trough surrounding the upper end of the outer case, an inner case having an outlet at its lower end and a cap interlocked with the inner case and provided with a depending flange entering the trough, and an inlet-cock, an absorbent block located within the inner case, and a delivery-pipe connected with the outlet of the outer case.

2. A carbureter comprising a case having an outlet at its lower end and a cap interlocked with the case and provided with an inlet-cock, and an absorbent block composed of a mixture of clay, cement, and sponge.

3. A carbureter comprising an outer case having an outlet at the bottom, an inner case

having an outlet at its lower end and a cap interlocked with the inner case, and provided with an inlet-cock, an absorbent block composed of a mixture of clay, cement, and sponge and a delivery-pipe connected with the outlet of the outer case.

4. A carbureter comprising an outer case having an outlet at the bottom, and a trough surrounding the upper end of the outer case, an inner case having an outlet at its lower end and a cap interlocked with the inner case and provided with a depending flange entering the trough and an inlet-cock, absorbent blocks and spacing-blocks located within the inner case, and a delivery-pipe connected with the outlet of the outer case.

In witness whereof I have hereunto set my hand in presence of two witnesses.

GEORGE LEWIS HOGAN.

Witnesses:

G. T. REYNOLDS,

W. M. HARRIS.