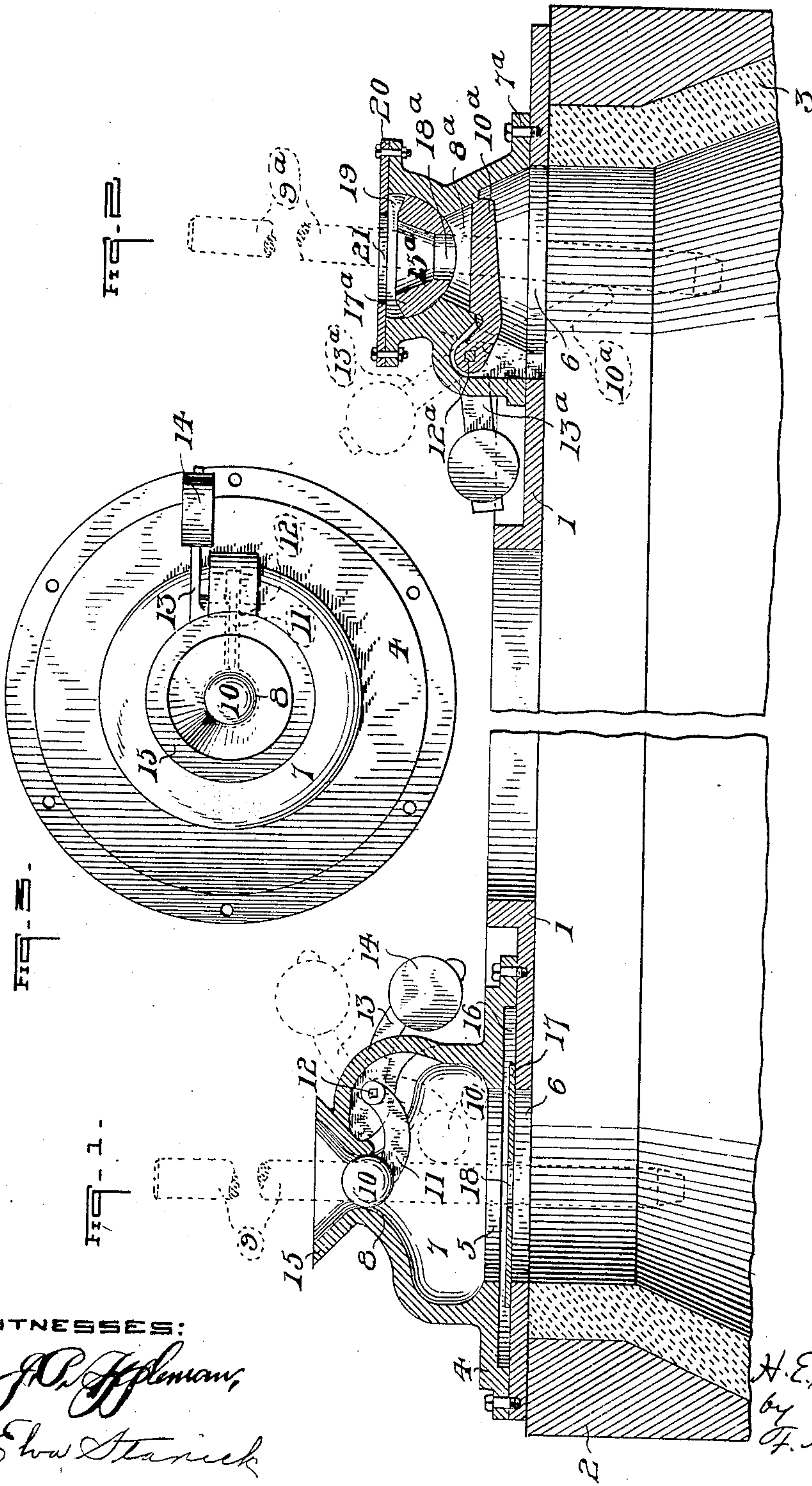


No. 887,536.

PATENTED MAY 12, 1908.

H. E. SMYTHE.
POKE HOLE FOR GAS PRODUCERS.

APPLICATION FILED DEC. 30, 1907.



WITNESSES:

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HORACE E. SMYTHE, OF OAKMONT, PENNSYLVANIA, ASSIGNOR TO THE S. R. SMYTHE COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF WEST VIRGINIA.

POKE-HOLE FOR GAS-PRODUCERS.

No. 887,536.

Specification of Letters Patent.

Patented May 12, 1908.

Application filed December 30, 1907. Serial No. 408,489.

To all whom it may concern:

Be it known that I, HORACE E. SMYTHE, a citizen of the United States, residing at Oakmont, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in Poke-Holes for Gas-Producers, of which the following is a specification.

My invention relates to improvements in poke-holes for gas producers or similar apparatus.

It is the object of the present invention to provide a gas producer or the like with poke-holes which permit at all times the insertion of a poker and which will automatically close on the withdrawal of the same.

Another object is to provide a poke-hole with means for preventing the escape of gas during the poking operation.

Referring to the drawings accompanying this specification, Figure 1 is a vertical central section through one form of my invention; Fig. 2, a similar view of a second form of my invention; and Fig. 3, a plan of Fig. 1.

Referring to Figs. 1 and 2, 1 represents the top plate of a gas producer, having the shell 2 and the lining 3, on which the top plate 1 sits.

Bolted to the top of the plate 1 is the base 4 of one form of poke-hole which embodies my invention. This base has a rather large central opening 5, registering with the opening 6 in the plate 1.

Rising from the base 4 is a somewhat irregular chamber 7 whose lower end surrounds the opening 5 and whose upper end is contracted to form the small opening 8 to receive the poker 9 shown in dotted lines. Normally the opening 8 is closed gas tight by the ball or valve 10 on the free end of the arm or lever 11 secured to the rock shaft 12 extending outside the chamber 7, where it has secured thereto the arm 13 having the weight 14. The weight is sufficient to raise the valve 10 and hold it tightly on its seat in the opening 8.

The chamber 7 has above the valve 10 a hopper shaped extension 15 to guide the poker into the opening 8.

In a recess 16 between the plate 1 and the

base 4 is a plate or gas-seal 17 which slides on the plate 1 and has a small hole 18 to receive the poker 9.

When it is desired to poke the charge in the producer, the lower end of the poker 9 is introduced into the hopper-like extension 7, by which it is guided into contact with the ball, or valve, 10. The poker in its descent into the producer pushes the ball inside so that it and its arms assume the position shown in dotted lines, the ball resting against the poker. The poker also passes through the hole 18 in the plate 17. As the poker is swung from side to side the plate 17 will slide on the plate 1 and maintain a gas-seal between the producer and the chamber 7. The poker should fit the holes 8 and 18 as closely as the movements of the poker will permit in order to prevent the escape of gas there-through. When the poker is withdrawn, the ball 10 follows the same and immediately closes the opening 8.

Referring now to Fig. 2, 7^a represents a casing secured to the plate 1 around the opening 6. The casing has the opening or valve seat 8^a which flares downwardly and is normally closed by the valve 10^a secured to the rock-shaft 12^a, which carries the weighted arm 13^a, the arrangement being like that in Fig. 1 for the valve 10. The casing 7^a has above the opening 8^a the semi-spherical seat 19 for the rocking gas-seal or device 17^a which is semi-spherical and is slidable gas-tight on the seat 19. The gas-seal 17^a has a central opening 18^a for the poker 9^a, shown in dotted lines, the opening 18^a being continued upwardly by the upwardly flaring poker guide 15^a. The top of the casing 7^a is provided with a cap-plate 20 having therein the opening 21 above the opening 18^a.

When the poker is passed through the openings 21, 18^a and 8^a, the valve 10^a is pushed aside as shown in dotted lines. The close fit of the poker in the opening 18^a prevents the escape of gas. When the poker is taken out the weighted arm 13^a at once seats the valve 10^a in the opening 8^a. It will be seen that the principles of Figs. 1 and 2 are alike but that the location of the parts have

been reversed so far as the valve and gas-seal device are concerned. The device 17^a rocks to accommodate all the angular positions the poker may take.

5 I claim:

In a poke-hole, a casing having therein an opening for a poker, a valve for closing the opening when unobstructed, a slidable plate through which the poker extends, and a seat

for said plate, the said plate and seat forming a gas-seal.

Signed at Pittsburg, Pa., this 24th day of December, 1907.

HORACE E. SMYTHE.

Witnesses:

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