

**No. 644,110.**

**Patented Feb. 27, 1900.**

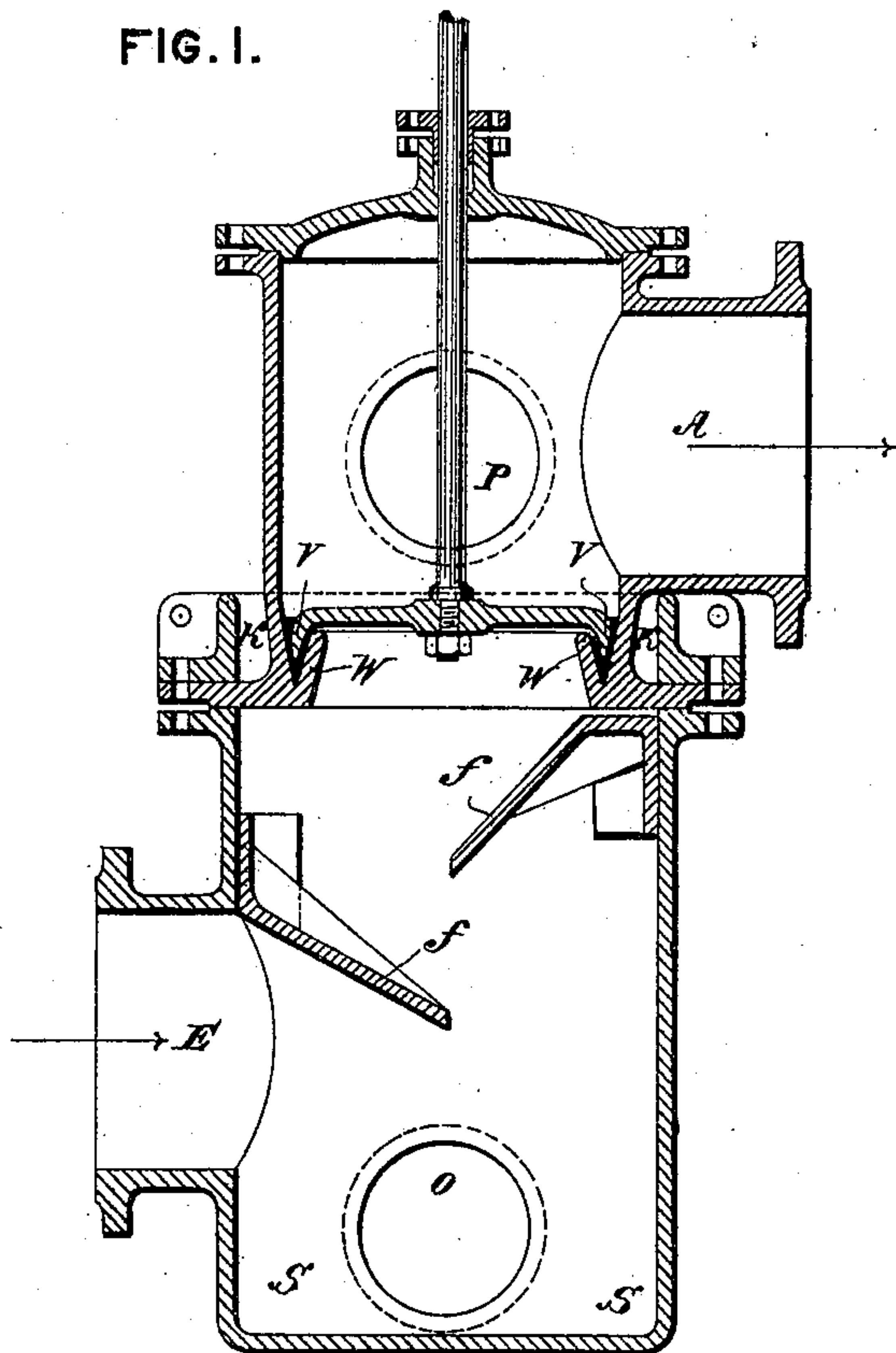
**H. STRACHE.**

## CLOSING VALVE FOR WATER GAS GENERATORS.

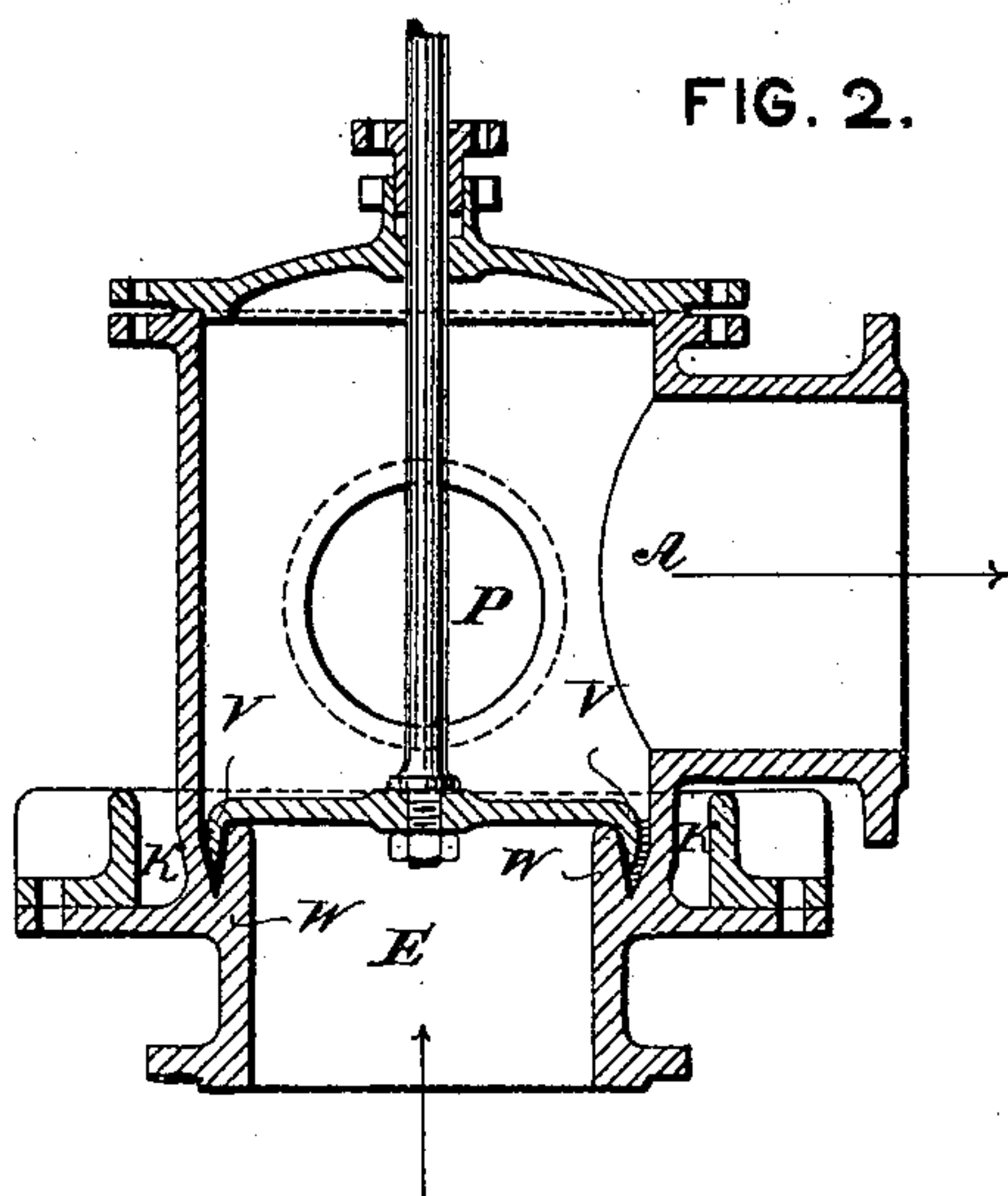
(Application filed Mar. 17, 1899.)

(No Model.)

FIG. 1.



**FIG. 2.**



**WITNESSES:**


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8.

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# UNITED STATES PATENT OFFICE.

HUGO STRACHE, OF VIENNA, AUSTRIA-HUNGARY, ASSIGNOR TO LA SOCIÉTÉ INTERNATIONALE DU GAZ D'EAU, BREVETS STRACHE, SOCIÉTÉ ANONYME, OF BRUSSELS, BELGIUM.

## CLOSING-VALVE FOR WATER-GAS GENERATORS.

SPECIFICATION forming part of Letters Patent No. 644,110, dated February 27, 1900.

Application filed March 17, 1899. Serial No. 709,511. (No model.)

*To all whom it may concern:*

Be it known that I, HUGO STRACHE, chemist, of Alserstrasse 49, Vienna VII, Austria-Hungary, have invented certain new and useful  
5 Improvements in Closing-Valves for Water-Gas Generators, of which the following is a description.

It is of special importance in water-gas-developing apparatus (generators and regenerators) to be able to shut up conveniently and securely gas-tight all orifices designed for the entrance of air and for the exit of gases to entirely avoid escape of steam or gas, as well as passing over of gas into the gas-conduits.  
15 Valves of various constructions are at present used to shut the said orifices and conduits; but all these possess tightening-faces often spoiled and getting untight by ash, &c., so that they do not answer the purpose aimed  
20 at, whereby losses of steam or gas or explosions are caused by the gas leaking into the air-conduits. An entirely tight and secure closure can, however, be attained by liquid seals. Specially adapted for this purpose are plate-  
25 shaped valves with liquid sealing devices, in which mercury is advantageously used as a liquid on account of the high pressure present in water-gas apparatus and of the high temperature of the gas developed in the same. To  
30 prevent evaporation of the sealing liquid, a jacket may be arranged containing a cooling liquid and surrounding the valve to cool it. In valves controlling gases which convey dust and smoke—for instance, discharge-valves—  
35 a compartment has to be provided in which the dust can settle and an aperture for conveniently cleaning the surface of the sealing liquid.

Figure 1 shows, for instance, a vertical section of a form of exhaust-valve for water-gas generators constructed on the aforesaid principles. E is the entrance. *ff* are ash-catch-

ers. S is the chamber where the flying ash settles down and which can be emptied by the aperture O. V V is the body of the valve, and  
45 *w* the cup containing the sealing liquid. A is the exit for the gases. P is an aperture for cleaning the surface of the sealing liquid. K K is the cooling-cup.

Fig. 2 shows, for instance, a form of the secondary air-valve in which the above letters have been used. The cooling-cup is here only necessary when blowing with hot air.

Having now particularly described and ascertained the nature of my invention, I declare that what I claim is—  
55

1. In combination, the valve-casing, the valve having a depending edge within the same, said casing having a groove adapted to contain a sealing liquid to receive the edge  
60 of the valve and form a liquid seal, and an annular wall outside the casing extending above the edge of the said groove and forming a larger groove for receiving a cooling fluid to cool the sealing liquid, substantially  
65 as described.

2. In combination, the valve-casing, the valve having a depending edge within the same, said casing having a groove adapted to contain a sealing liquid to receive the edge  
70 of the valve and form a liquid seal, and an annular wall outside the casing extending above the edge of the said groove and forming a larger groove for receiving a cooling fluid to cool the sealing liquid, and ash-retaining shelves or baffle-plates arranged in  
75 proximity to said valve.

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

HUGO STRACHE.

Witnesses:

C. B. HURST,  
ALVESTO S. HOGUE.