

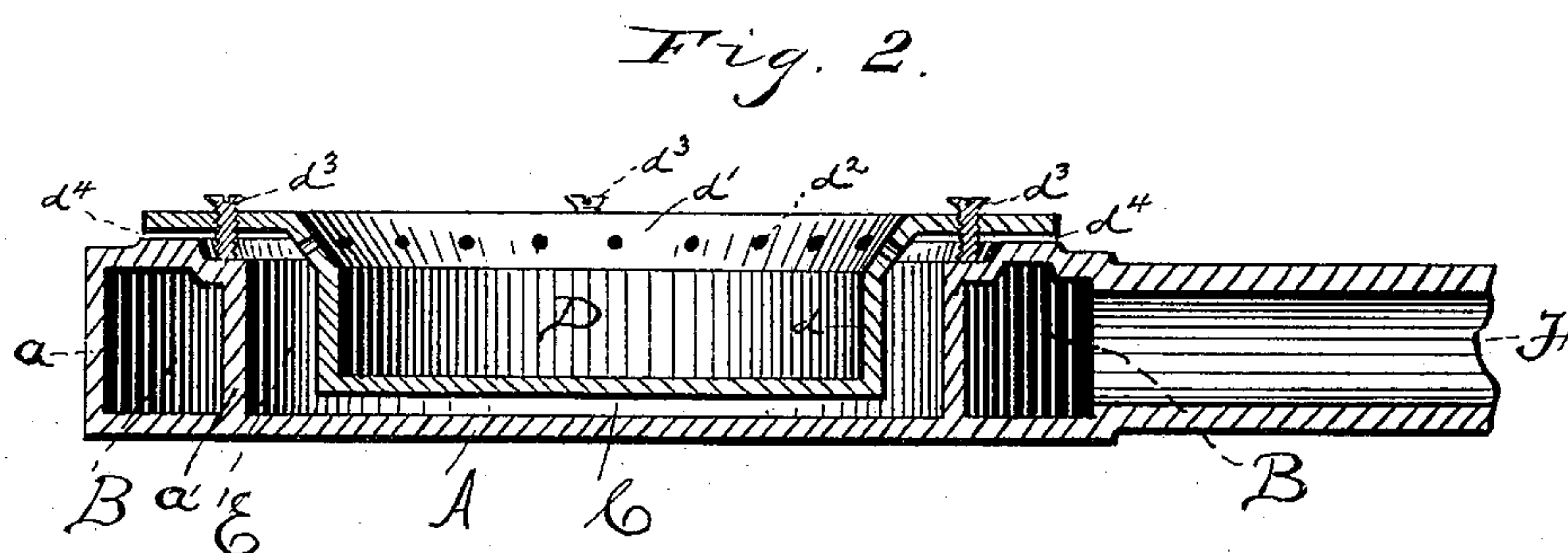
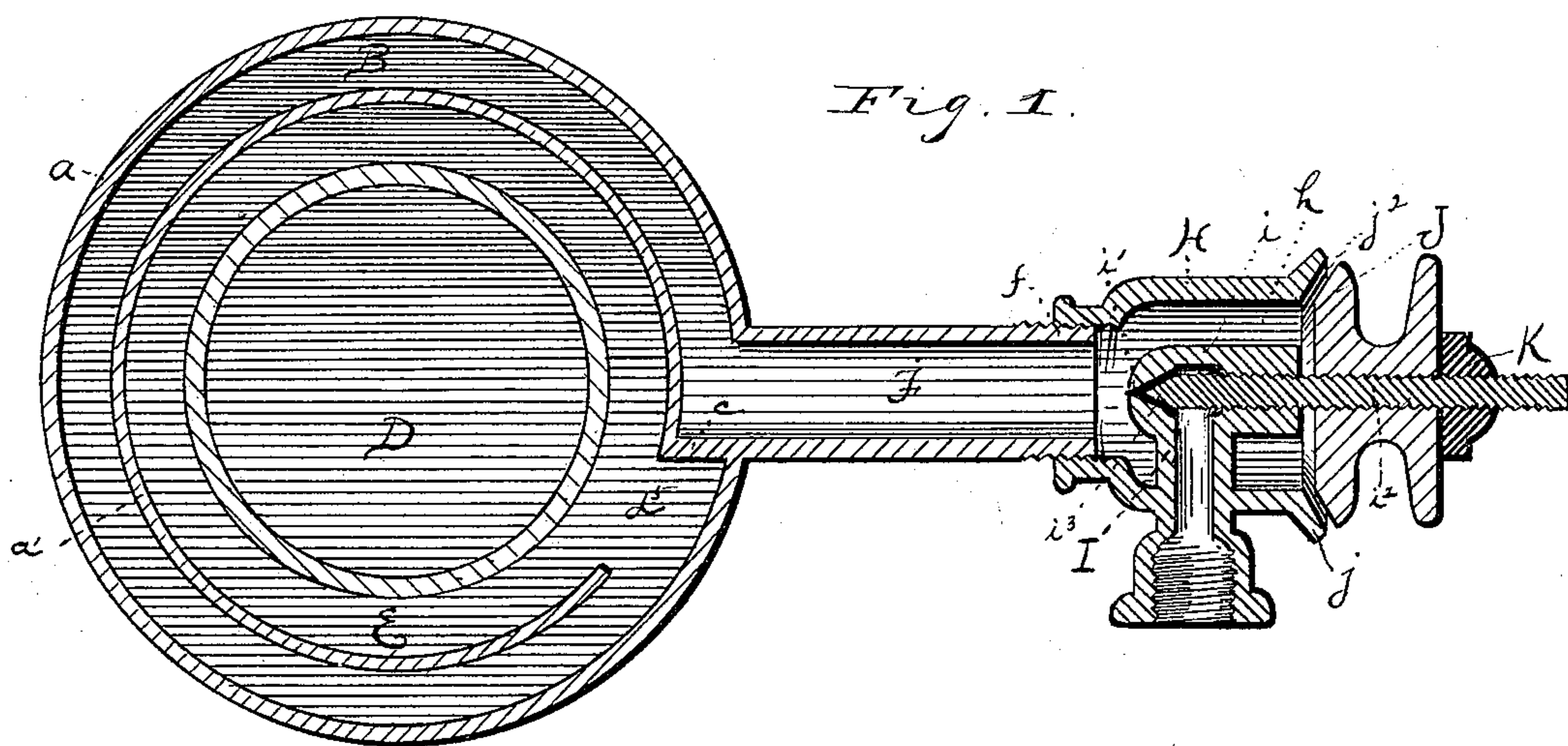
(No Model.)

P. G. VAN WIE.

GAS STOVE.

No. 366,704.

Patented July 19, 1887.



Witnesses

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PETER GARRETT VAN WIE, OF CLEVELAND, OHIO, ASSIGNOR TO THE VAN WIE GAS STOVE COMPANY, OF OHIO.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 366,704, dated July 19, 1887.

Application filed January 20, 1886. Serial No. 189,200. (No model.)

To all whom it may concern:

Be it known that I, PETER GARRETT VAN WIE, a citizen of the United States, residing at Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Gas-Stoves; and I do hereby declare the following to be a description of the same, and of the manner of constructing and using the invention, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, forming a part of this specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention consists of the improvements hereinafter described, and set out in the claims.

In the drawings, Figure 1 is a horizontal section of the burner-head and of the air and gas regulator connected therewith. Fig. 2 is a vertical section of the burner-head and a portion of the pipe leading from the air and gas regulator.

A is the base of the burner-head, having annular walls *a a'*, forming between them the heating-chamber B. The wall *a'* surrounds the distributing-chamber C. Into said latter chamber aperture *d*⁵ opens from chamber B. Near one edge of said aperture bridge *c* walls off chamber B from that side of said aperture.

D is a depressed cup-like cap located over and within chamber C, forming by its depressed wall *d*, in connection with inner wall, *a'*, of chamber B, the annular space E. Cap D has on the inner peripheral edge of its rim *d'* a series of jet-orifices, *d''*. Rim *d'* laps partially over the upper peripheral surface of chamber B, and is vertically adjustable thereon by set-screws *d'''*. By such adjustable fitting of rim *d'* of cap D upon the top surface of chamber B an annular space, *d⁴*, for burning gas in or through said space, can be opened and regulated; or by adjusting said rim close down upon said surface of chamber B said annular space can be entirely closed.

Connecting laterally with chamber B, and cast solid with it, is the supply-pipe F, open-

ing into said chamber at a point near bridge *c*, and separated by said bridge from immediate connection with aperture *d*⁵. Said pipe F has its outer end, *f*, screw-threaded to receive upon it the screw-threaded cylinder H. Said cylinder forms a part of my device for regulating the admission of gas and air into pipe F, and thence into the burner-head proper. Cylinder H is penetrated laterally by gas-supply I, fitted outwardly for connection with any preferred gas-tubing, and which has attached to it on its inner end and at right angles thereto the needle-valve sleeve *i*, having on its inner end needle-hole, *i'*. Between the inner surface of cylinder H and the exterior surface of said sleeve *i* is the annular space *h*. The interior of said sleeve is screw-threaded to receive and accommodate needle-valve stem *i''*, having terminal needle-valve *i'''* at its forward end.

The rear end of cylinder H has formed on it valve-seat *j*, in which air-valve J may be seated. Centrally through said air-valve, in a screw-threaded way, passes the needle-valve stem *i''*. Fitted on said stem, and in rear of said valve J, is jam-nut K, adapted to bear against said valve at the different points at which said valve may be adjusted on stem *i''*. When valve J is raised from seat *j* there is formed between the two said parts the annular space *j''* for the inlet of air into cylinder H. Thus, by this variable adjustment of valve J on the stem *i''*, air is admitted into cylinder H in quantities called for by the different quantities of gas admitted into pipe F, or by different gas-pressures through pipe I; also, by the adjustable arrangement of cap D over chamber C, as already described, any tendency of the flames through jet-orifices *d''* to burn to a white taper, through great pressure of supply, may be controlled, and a blue-heat flame secured and maintained.

Though my heating-chamber B is described and shown as annular in form, yet it is to be understood that I am not confined to that specific shape, but may use any other practicable shape of chamber—as a square, octagon, or any other form—which would substantially inclose or surround the distributing-chamber, thereby acting as a practical heater

to the distributing-chamber; also, I am not confined to any specific means for adjusting the covering-cap of the distributing-chamber over it. Any other preferred substitute to the set-screws that I mention may be used.

What therefore I claim is—

1. In a gas-stove burner-head, the combination, with pipe F and horizontal annular chamber B, with which said pipe communicates, of chamber C, inclosed horizontally by said chamber B and burner-cap D, said chamber B communicating with said chamber C, substantially as set forth.

2. In a gas-stove burner-head, the combination, with pipe F and horizontal annular chamber B, with which the latter communicates, of chamber C, horizontally inclosed by said chamber B, and burner-cap D, fitting within said chamber C, and forming between the side walls of the two a horizontal annular space, E, said annular space E having communication with said annular chamber B, substantially as set forth.

3. In a gas stove burner-head, the combination, with supply-pipe F and horizontal annular chamber B, with which the latter communicates, of interior chamber, C, horizontally inclosed by said chamber B and burner-cap D, said chamber B communicating with said chamber C by a horizontal opening, d^5 , substantially as set forth.

4. In a gas stove burner-head, the combination, with a heating-chamber, B, provided with aperture d^5 , supply-pipe F, and bridge e , of chamber C and cap D, having jet-orifices d^2 , said cap vertically adjustable over chamber C, substantially as set forth.

5. In a gas-stove, the combination, with distributing-chamber C, of cap D, having upper rim, d' , provided with jet-orifices d^2 , and an adjusting means for maintaining said cap relative to other parts of the burner-head, so as to form and control a continuous flame about the same in supplement to the flame-jets issuing from the orifices in said cap-rim, substantially as set forth.

6. In a gas-stove, the combination, with heating-chamber B and chamber C, of cap D, having upper rim, d' , provided with jet-orifices d^2 , and set-screws d^3 , threaded in the outer portion of said rim and having end bearings on the top of the chamber B, substantially as set forth.

7. In a gas-stove regulator, the combination, with cylinder H and parallel inclosed

sleeve i , said two parts forming between them annular air-duct h , of valve stem i^2 , carrying the valve i^3 at its forward end, and carrying valve J on its rear portion, substantially as set forth.

8. In a gas-stove regulator, the combination, with cylinder H, having rear valve-seat, j , parallel inclosed sleeve i , having valve-seat i' , and gas-supply pipe I, of valve-stem i^2 , carrying valve i^3 at its forward end, and valve adjustable longitudinally on the rear portion of said valve-stem, substantially as set forth.

9. In a gas-stove regulator, the combination, with a gas-feed device having a valve-seat, and an air-feed device having a valve-seat, of a valve-stem provided with two valves respectively fitting said two valve-seats, one of said valves being secured in longitudinal adjustment on said valve-stem, substantially as set forth.

10. In a gas-stove regulator, the combination, with cylinder H, having valve-seat j , gas-inlet pipe I, and valve-stem sleeve i , having terminal opening i' , of valve-stem i^2 , provided with terminal valve i^3 , and air-valve J, fitting in seat j and secured on said stem i^2 , substantially as set forth.

11. In a gas-stove regulator, the combination, with cylinder H, valve-stem sleeve i , having terminal opening i' , valve-stem i^2 , and valve-seat j , formed on the rear end of said cylinder, of air-valve J, adjustably secured on said stem i^2 , having terminal valve i^3 , and fitting in seat j , substantially as set forth.

12. In a gas-stove regulator, the combination, with cylinder H, gas-pipe I, communicating with said cylinder laterally, gas-valve-stem sleeve i , attached to the interior end of said pipe and communicating with it, and having terminal opening i' , said sleeve inclosed by said cylinder, and the two forming between them the passage h , and valve-seat j , formed on the rear end of said cylinder, of valve-stem i^2 , fitted in sleeve i , and having terminal valve i^3 , and air-valve J, secured on said stem i^2 and fitting in valve-seat j , substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 8th day of January, A. D. 1886.

PETER GARRETT VAN WIE.

Witnesses:

J. G. HALL, Jr.,

F. B. HALL.