

(No Model.)

F. A. W. DAVIS.
PURIFYING ATTACHMENT FOR GAS WELLS.

No. 560,783.

Patented May 26, 1896.

Fig. 1.

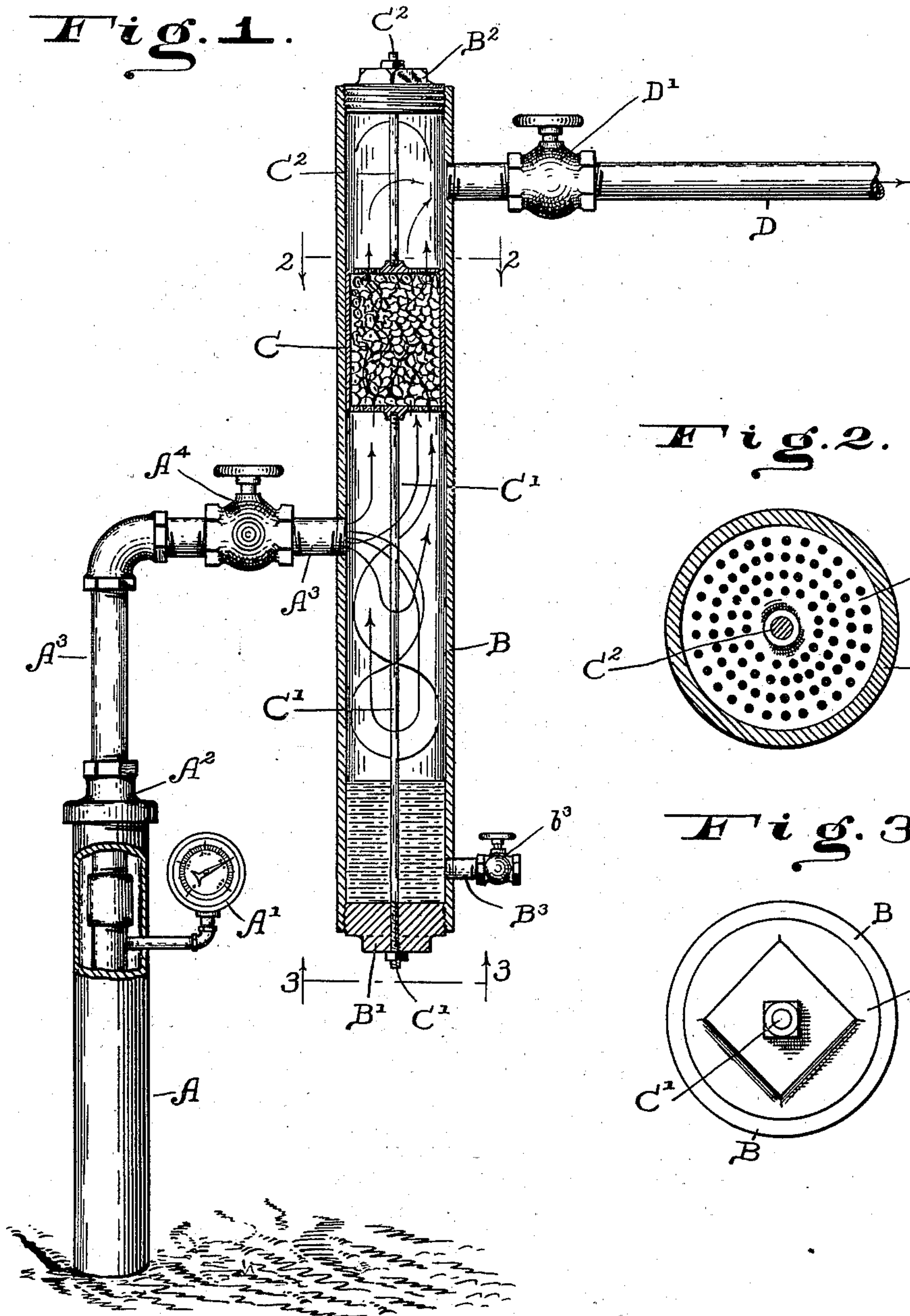


Fig. 2.

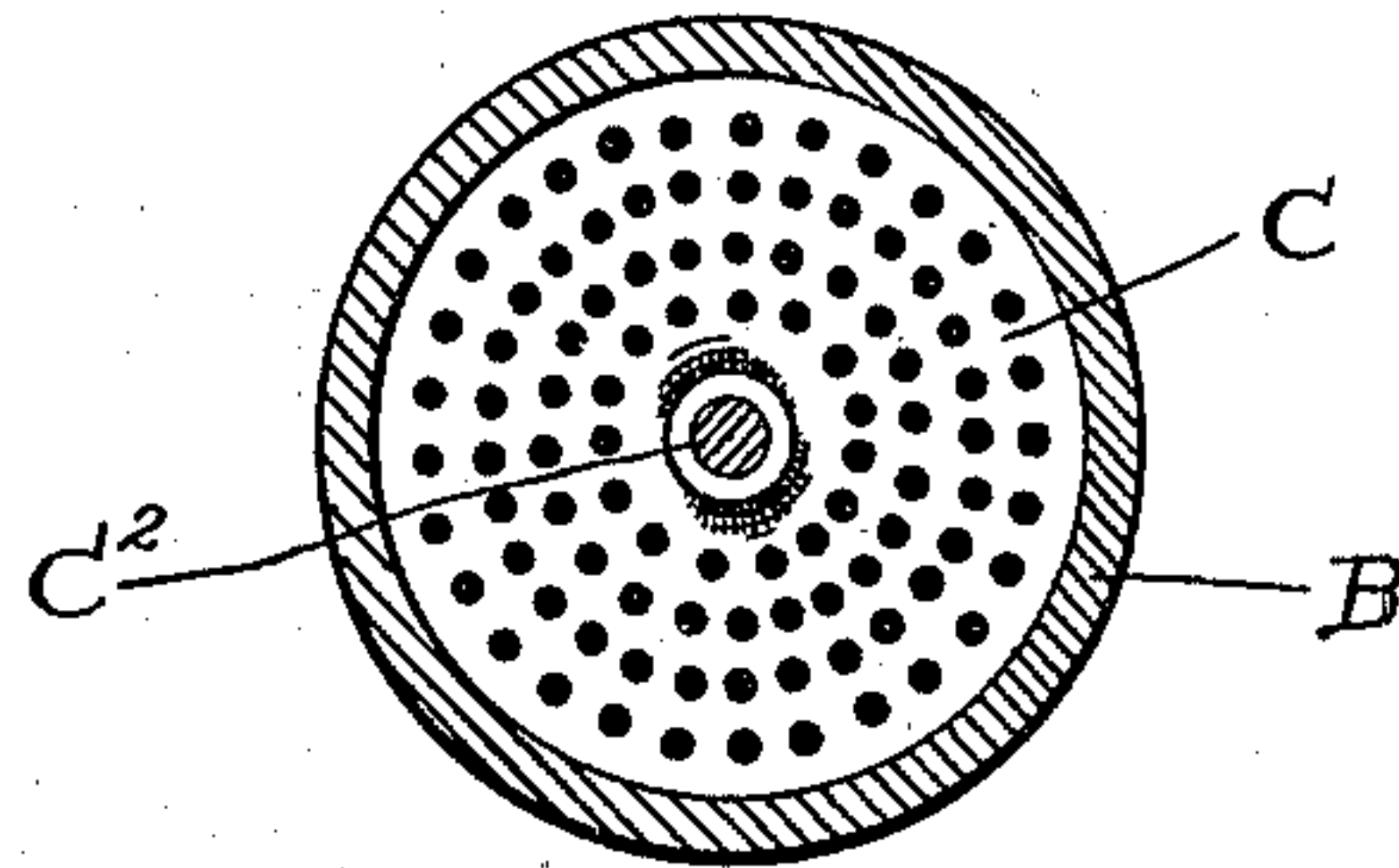
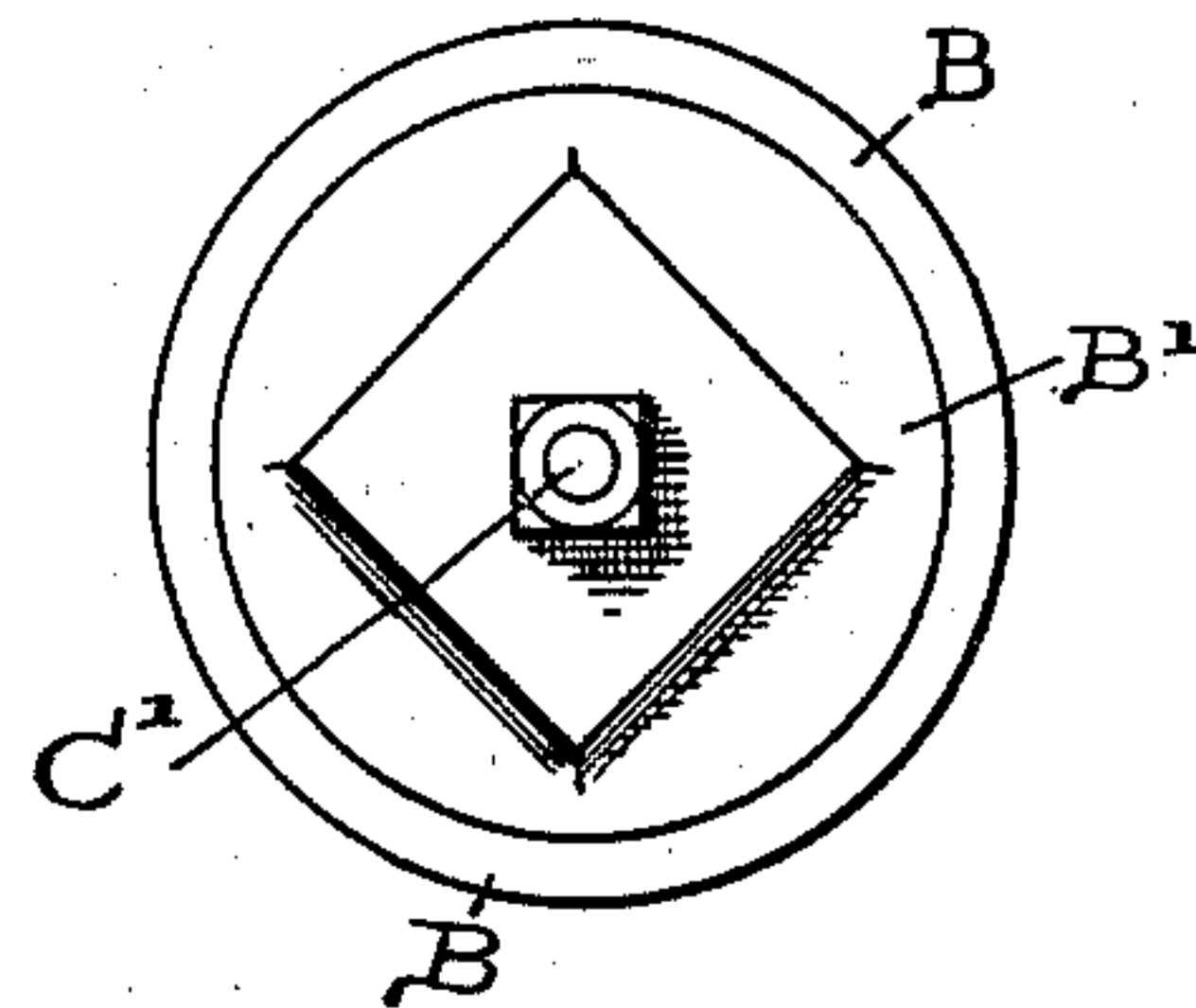


Fig. 3.



WITNESSES:

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PURIFYING ATTACHMENT FOR GAS-WELLS.

SPECIFICATION forming part of Letters Patent No. 560,783, dated May 26, 1896.

Application filed March 23, 1894. Serial No. 504,787. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. W. DAVIS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Gas-Purifying Attachments for Gas-Wells, of which the following is a specification.

The object of my said invention is to produce a device by which natural gas after it emerges from the wells may be purified, or separated from the fine particles of carbon, dirt, and other substances which otherwise may be driven into the gas-mains, and also from time to time to clean out or discharge these impurities from the apparatus.

An apparatus embodying my said invention will be first fully described, and the novel features thereof then pointed out in the claim.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is an elevation of a pipe emerging from a gas-well, with my improved separating apparatus interposed between the well and the gas pipe or main which leads off therefrom; Fig. 2, a horizontal sectional view across the purifying apparatus, on the dotted line 2 2 in Fig. 1, on an enlarged scale; and Fig. 3, an end view of said apparatus as seen from the dotted line 3 3.

In said drawings the portions marked A represent the pipe coming up out of the ground and forming the upper end of the well; B, the casing of my improved purifying apparatus; C, the filter in said casing, and D the gas pipe or main leading off from the purifying apparatus.

The pipe A is the ordinary well-pipe as it appears extending above the surface of the ground where the well is driven. Such a pipe is usually provided with a gage or indicator A' to show the pressure of gas, and has a cap A² from which a continuation-pipe A³ leads to the off-going gas pipe or main in ordinary cases, but when my purifying apparatus is used leads thereto. In this pipe A³, at a suitable point, is a valve A⁴, by which the flow of gas from the well can be shut off when desired.

The purifying apparatus consists of the casing B, having heads B' and B² in its ends, and is provided with a blow-off pipe B³. The pipe A³, leading from the well, enters this casing at an appropriate point on one side of the filter, and the off-going gas pipe or main D connects therewith at another appropriate point on the other side of the filter, as shown.

The filter C consists of a cage with perforated ends, and filled with some suitable filtering material adapted to intercept any particles of carbon, dirt, or other matter with which the gas may be mixed as it emerges from the well, while permitting the free passage of purified gas. This filter is positioned at an appropriate point between the pipes A³ and D, and is held in place by means of rods C' and C², which pass through the heads B' and B² of the casing B and bear against the ends of the cage of the filter C. Said rods are also screw-threaded, so that they may be adjusted as desired.

The off-going gas pipe or main D is of the usual character, and is provided with a valve D'.

The operation is as follows: The gas upon emerging from the well is discharged into the lower portion of the purifying apparatus, when the dirt, carbon, &c., is intercepted by the filter, and will drop to the bottom of the chamber in said apparatus, while the gas passes on and goes into the main D, as is usual. Dampness may also collect in this purifying apparatus and settle to the bottom together with the dirt. When the apparatus needs cleaning, it is readily done by closing the valve A⁴ and opening the valve b³ in the discharge-pipe B³, when the pressure of the gas in the main D will be sufficient to blow out the matter collected in the bottom of the purifying apparatus. If any substance collects upon the sides of the interior of this apparatus, it may be removed by shutting both the valves A⁴ and D', taking out the heads B' and B², and pushing the filter C through the apparatus from end to end, which will obviously clean it out fully and effectively.

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

The combination, with a gas-well, of a pipe

leading therefrom, a purifying apparatus connected with said pipe, a valve in said pipe between said well and purifying apparatus, said purifying apparatus consisting of a vertical casing, a removable top and bottom thereof, a filtering apparatus therein consisting of another casing with perforated ends filled with appropriate filtering material, rods adjustably secured in each head of the outer casing and extending to and bearing against said perforated ends of said filter-casing, said pipe from the gas-well connecting with said apparatus below said filter, and an outlet-pipe

provided with an appropriate valve connected thereto above said filter, and a blow-off pipe with suitable valve connected to said apparatus near the bottom of the casing, all substantially as described and for the purposes specified. 15

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 19th day of March, A. D. 1894. 20

FREDERICK A. W. DAVIS. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.