

(No Model.)

J. E. WEAVER.
GAS RETORT.

No. 583,665.

Patented June 1, 1897.

Fig. 1.

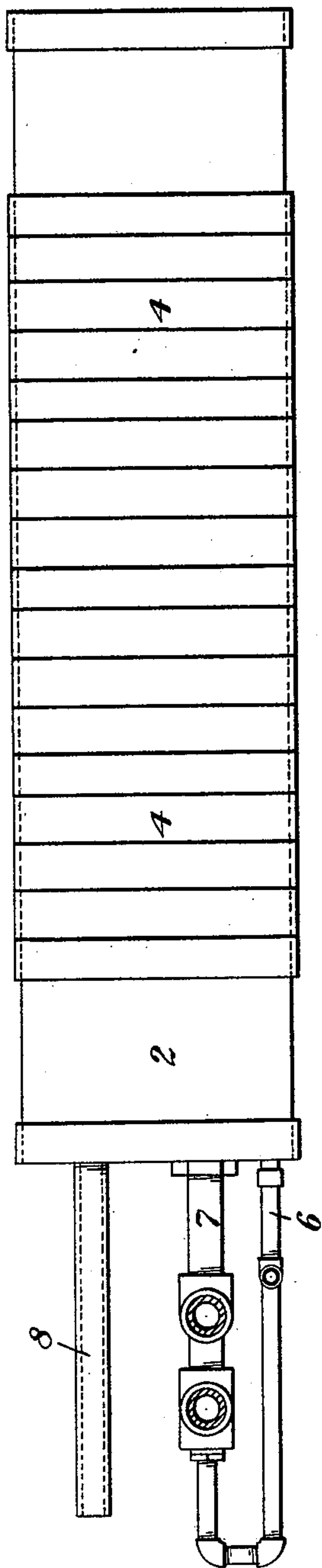


Fig. 2.

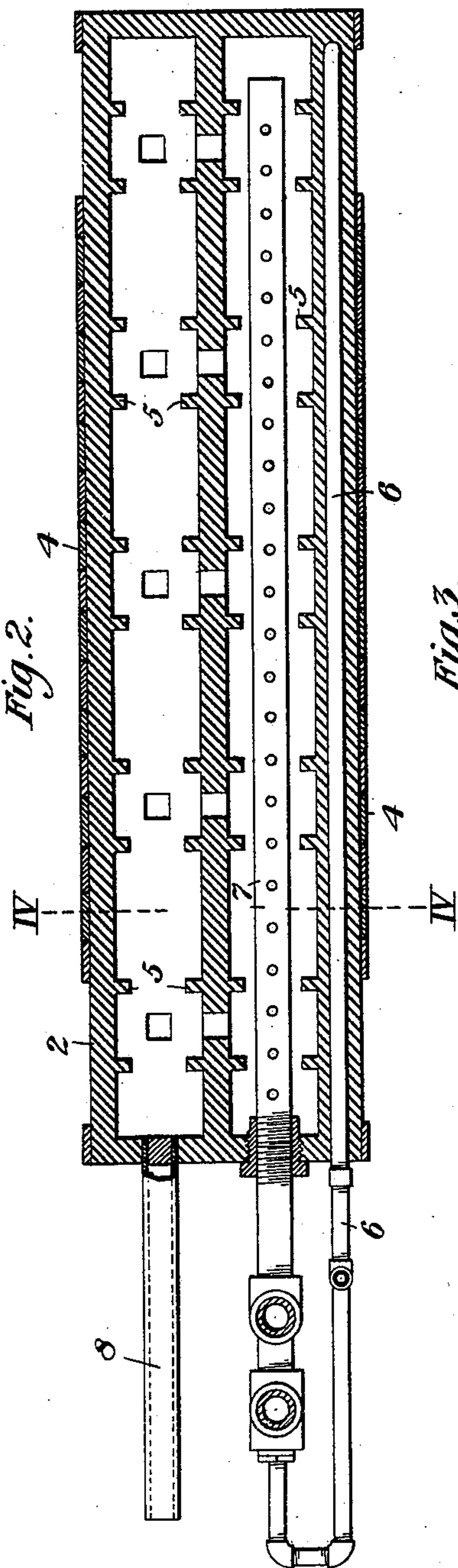


Fig. 3.

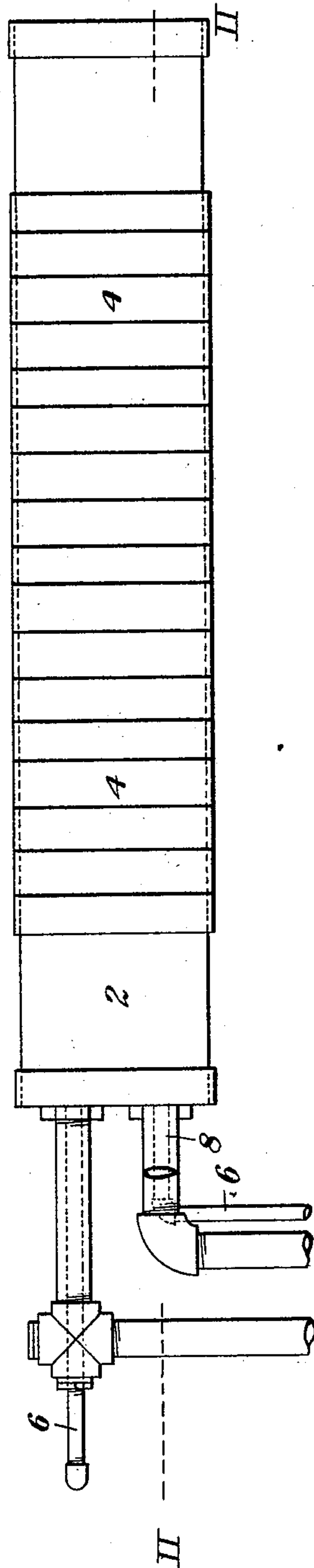
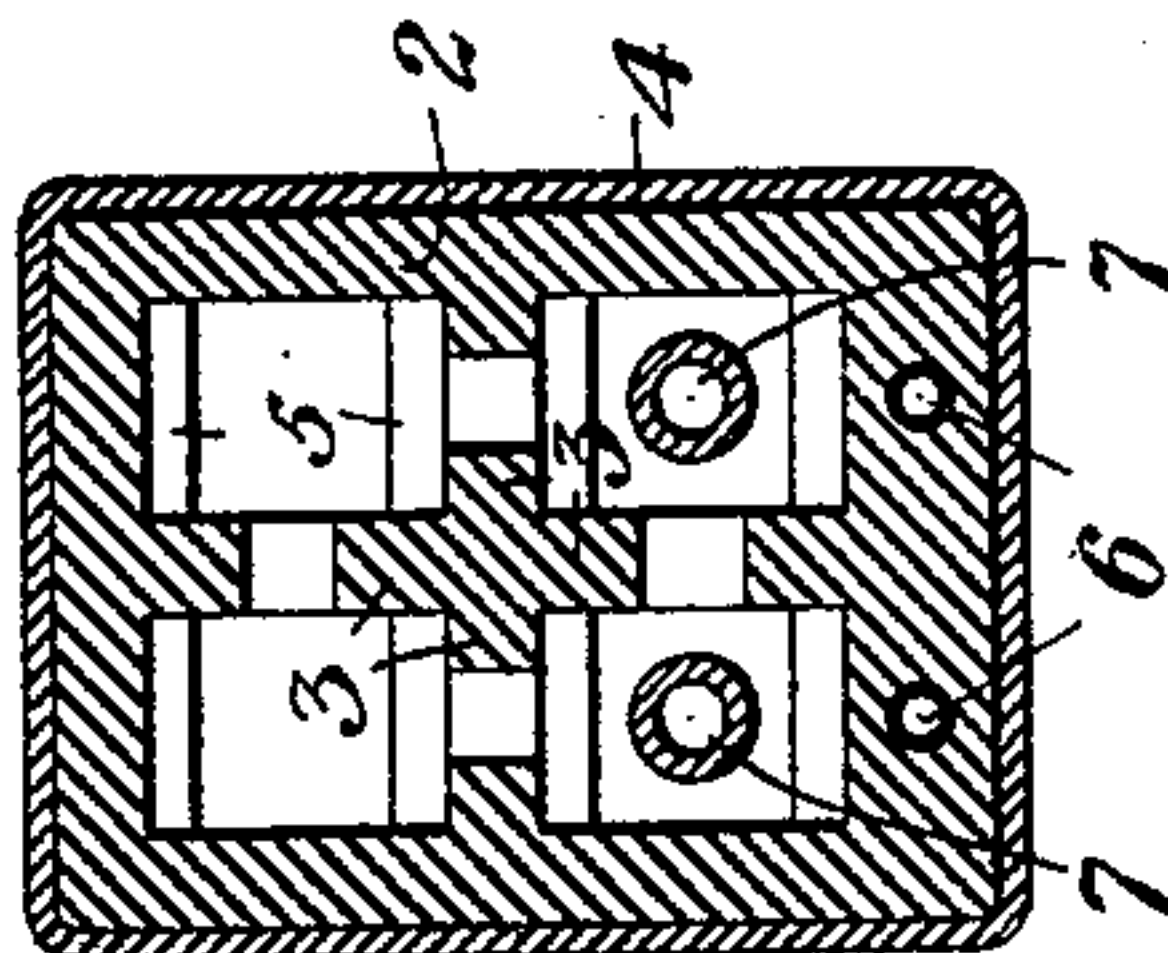


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES E. WEAVER, OF PITTSBURG, PENNSYLVANIA.

GAS-RETORT.

SPECIFICATION forming part of Letters Patent No. 583,665, dated June 1, 1897.

Application filed May 28, 1894. Serial No. 512,598. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. WEAVER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Retorts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved retort. Fig. 2 is a longitudinal vertical section on the line II II of Fig. 3. Fig. 3 is a top plan view, and Fig. 4 is a cross-section on the line IV IV of Fig. 2.

My invention relates to the class of retorts for the manufacture of gas, and more particularly that of oil-gas; and it consists in an improved construction of said retort and its pipes, as hereinafter described, and set forth in the claims.

In the drawings, 2 represents the retort, consisting of a square cast-iron box, having longitudinal partition-walls 3, which divide its interior into four chambers and are perforated to allow communication between such chambers. To strengthen the retort and prevent its warping and bulging, I shrink around it a series of wrought-iron bands 4. The bands along the intermediate part of the retort are preferably close together and abut against each other, so as to entirely cover such portion. Upon the interior faces of the retort and its partitions are cast a series of projecting ribs 5, which also serve to strengthen the retort and aid in vaporizing the oil. In the bottom of the retort is cast

a wrought-iron return-pipe 6, which at one end is connected to an oil-feed and at the other end leads to the outer end of a perforated pipe 7, through which, preferably, oil and steam are forced into the retort. The oil or vapor passed through the embedded pipe 6 enriches the gas manufactured in the retort, which, rising into the upper compartments, is drawn off through suitable pipes connected thereto. Each retort is cast with four holes at each end, and any holes not employed for the connecting-pipes are closed by screw-plugs. To show the heat in the retort, I employ a sight-tube 8, this tube fitting around a screw-plug and showing the heat of the retort by the color of the plug. In this way the degree of heat in the retort may be easily judged and regulated.

The advantages of the retort are apparent, as it is simple, easily and cheaply made, and highly efficient in service.

I claim—

1. A retort having longitudinal perforated partitions and provided with interior projecting ribs; substantially as described.

2. A retort having longitudinal perforated partition-walls, an oil and steam mixer, and a pipe leading therefrom to a perforated pipe within one of the chambers of the retort; substantially as described.

In testimony whereof I have hereunto set my hand.

JAMES E. WEAVER.

Witnesses:

H. M. CORWIN,
W. B. CORWIN.