

J. F. RICE.

APPARATUS FOR CHARGING RETORTS.

No. 173,344.

Patented Feb. 8, 1876.

Fig. 1.

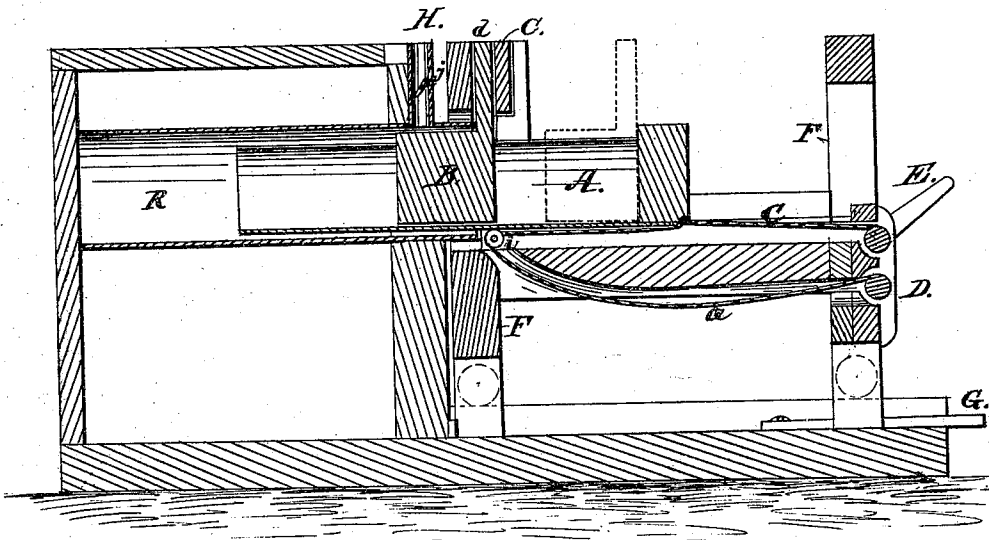
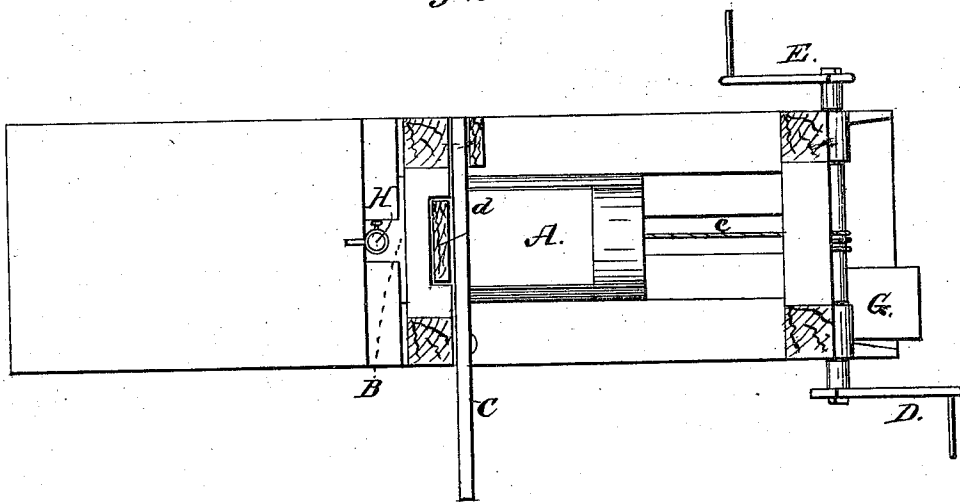


Fig. 2.



Witnesses:

Thos. L. Anderson
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UNITED STATES PATENT OFFICE.

JOEL F. RICE, OF LOUISIANA, MISSOURI.

IMPROVEMENT IN APPARATUS FOR CHARGING RETORTS.

Specification forming part of Letters Patent No. **173,344**, dated February 8, 1876; application filed November 22, 1875.

To all whom it may concern:

Be it known that I, JOEL F. RICE, of Louisiana, in the county of Pike and State of Missouri, have invented a new and Improved Apparatus for Charging Retorts with Coal; and I do hereby declare that the following is a full, clear, and exact description of the same.

In order to prevent loss of gas, and also cracking of retorts by sudden change of temperature, chargers holding a large quantity of coal, and provided with devices for operating them quickly, have been devised, and to some extent adopted in practice. My invention is an improvement in this class of apparatus; and consists, chiefly, in the arrangement of a plug or stop device and means for locking the same, or holding it stationary, in the frame that supports the tubular reciprocating charger, as hereinafter described.

In the accompanying drawing, forming part of this specification, Figure 1 is a sectional elevation of the retort and charging apparatus, and Fig. 2 a top view of the same.

The charger A is an iron tube, open on its upper side, as well as at its inner end, and having the same shape as the retort R, which it is adapted to enter. It is supported on the same horizontal plane as the retort, in a wheeled frame, F, mounted on a suitable track, so that the charger may be moved up to or away from the retort, as occasion requires. The means of forcing the charger into retort consists of a cord or rope, *a*, passing over stationary pulley *i* and a windlass-shaft, D, and the means for withdrawing it therefrom are a

rope, *c*, and similar shaft E, the operation of which parts will be readily understood from the drawing. When the charger is being filed with coal, the plug B is located at the head thereof, as shown in dotted lines; but when the charger has been thrust into the retort, the said plug is locked or held stationary by means of a lever, C, pivoted in frame F, and which is dropped into a horizontal position behind a vertical extension, *d*, of the plug, as shown in the drawing.

It is evident that when thus secured the plug will force the coal out of the charger into the retort as the charger is being drawn out. In the drawing the charger is represented as drawn partly out of the retort.

The tube H of the retort is shown provided with a valve, *j*, by which the discharge of gas to the purifiers may be controlled or cut off, as required.

I do not claim, broadly, the mode of filling gas-retorts with coal by means of a charger arranged to be moved up to or away from the same by suitable mechanism; but

What I claim is—

The combination, with the charger arranged in a supporting-frame, of the removable plug B, having the vertical extension *d*, and the lever C, pivoted to said frame, and thereby adapted to hold the plug stationary therein, as shown and described.

JOEL F. RICE.

Witnesses:

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FRED. HARRIS.