Samuel Rue jr. Impt in

The Gifford Injector.

Assigned to Himself
Samuel Mc Cambridge
and Edward G Martin.

73757

PATENTED
JAN 28 1868

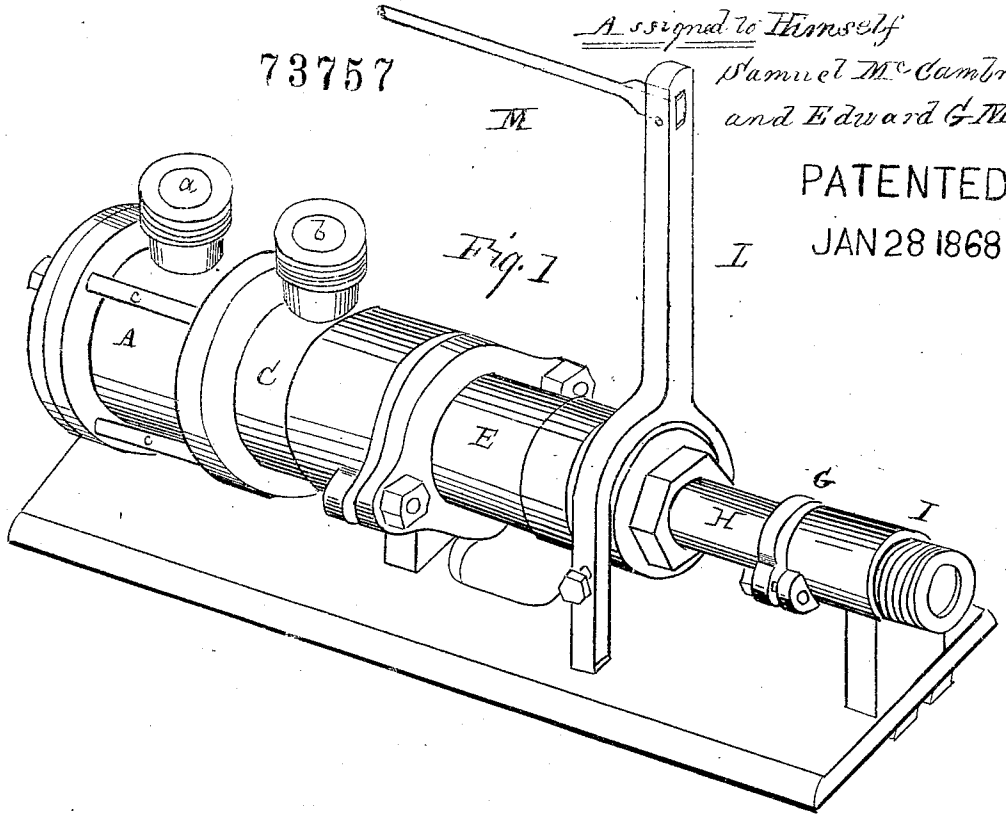


Fig. 1

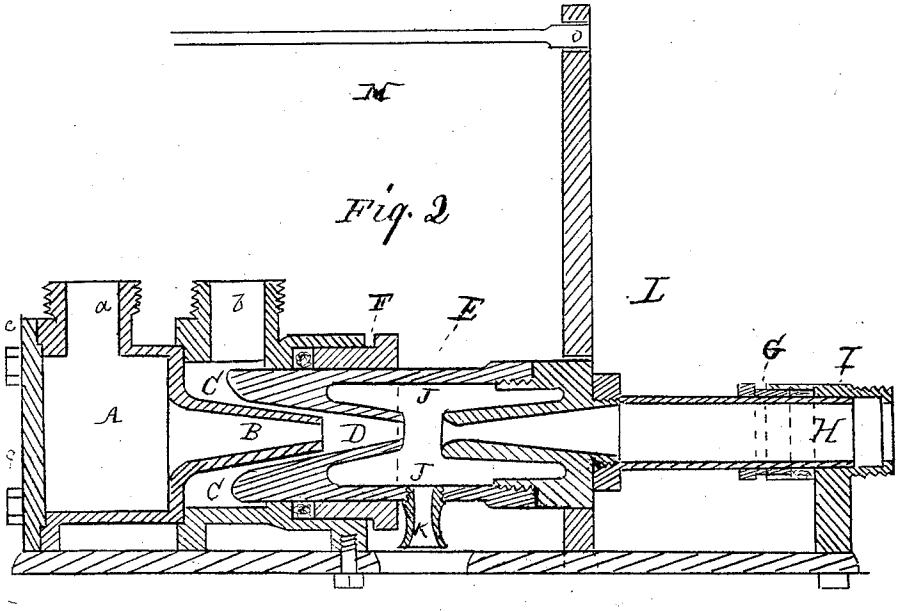


Fig. 2

Witnesses,
S. Boerum
Saml Oliver

Inventor
Samuel Rue jr
By his Attorney
Stephen Ustick

United States Patent Office.

AMUEL RUE, JR., OF CHESTER COUNTY, ASSIGNOR TO HIMSELF, SAMUEL McCAMBRIDGE, AND EDWARD G. MARTIN, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 73,757, *dated January* 28, 1868.

IMPROVEMENT IN INJECTORS FOR STEAM-GENERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL RUE, Jr., of the county of Chester, and State of Pennsylvania, have invented a new and useful Improvement in the Gifford Injector; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction of the Gifford injector with a closed partition between the receiving-chamber of the steam-delivery nozzle and the receiving-chamber of the water-delivery nozzle, whereby I dispense with the steam-packing, and the valves incidental to other modes of construction, thus giving great simplicity to the apparatus, so that it may be manufactured at a greatly-reduced price, and not liable to get out of order, as will be seen by the following description. In the accompanying drawings, which make a part of this specification—

Figure 1 is an isometrical view of the improved injector.

Figure 2 is a vertical longitudinal section of the same.

Like letters in both figures indicate the same parts.

A is the steam-receiving chamber, which has an elbow, *a*, to which the steam-pipe is connected, and a steam-nozzle, B, which projects through the water-receiving chamber C into the water-nozzle D, on the front end of the said chamber. The receiving-water pipe is connected to the elbow *b* of the chamber C. The steam-receiving chamber A is represented in the drawings as confined to the water-receiving chamber C, by means of screw-bolts *c*. The construction may, however, be varied without deviating from the principle embraced in the combination. E is an adjustable plug, to which the water-nozzle D is connected; and F is a stuffing-box of the same. G is the stuffing-box of the discharge-pipe H, which extends into the fitting, on the outer end of which a screw is cut to receive the water-supply pipe. J is the overflow-chamber, and K the discharge-pipe of the same. L is a forked lever for operating the plug; E and M, a rod jointed thereto, the said rod being extended to the engine-room, to be under the control of the engineer.

It will be seen that the flow of water is regulated by the adjustment of the water-plug E so as to vary the area between the external periphery of the steam-nozzle B and the internal periphery of the water-nozzle D.

What I claim as my invention, and desire to secure by Letters Patent, is—

The construction and arrangement of the receiving-chamber A with its nozzle B, the water-receiving chamber C, and adjustable plug E, substantially as hereinbefore described.

In testimony whereof, I have hereunto set my hand and affixed my seal, this 12th day of December, 1867.

SAMUEL RUE, JR. [SEAL.]

Witnesses:

STEPHEN USTICK,

JOHN WHITE.