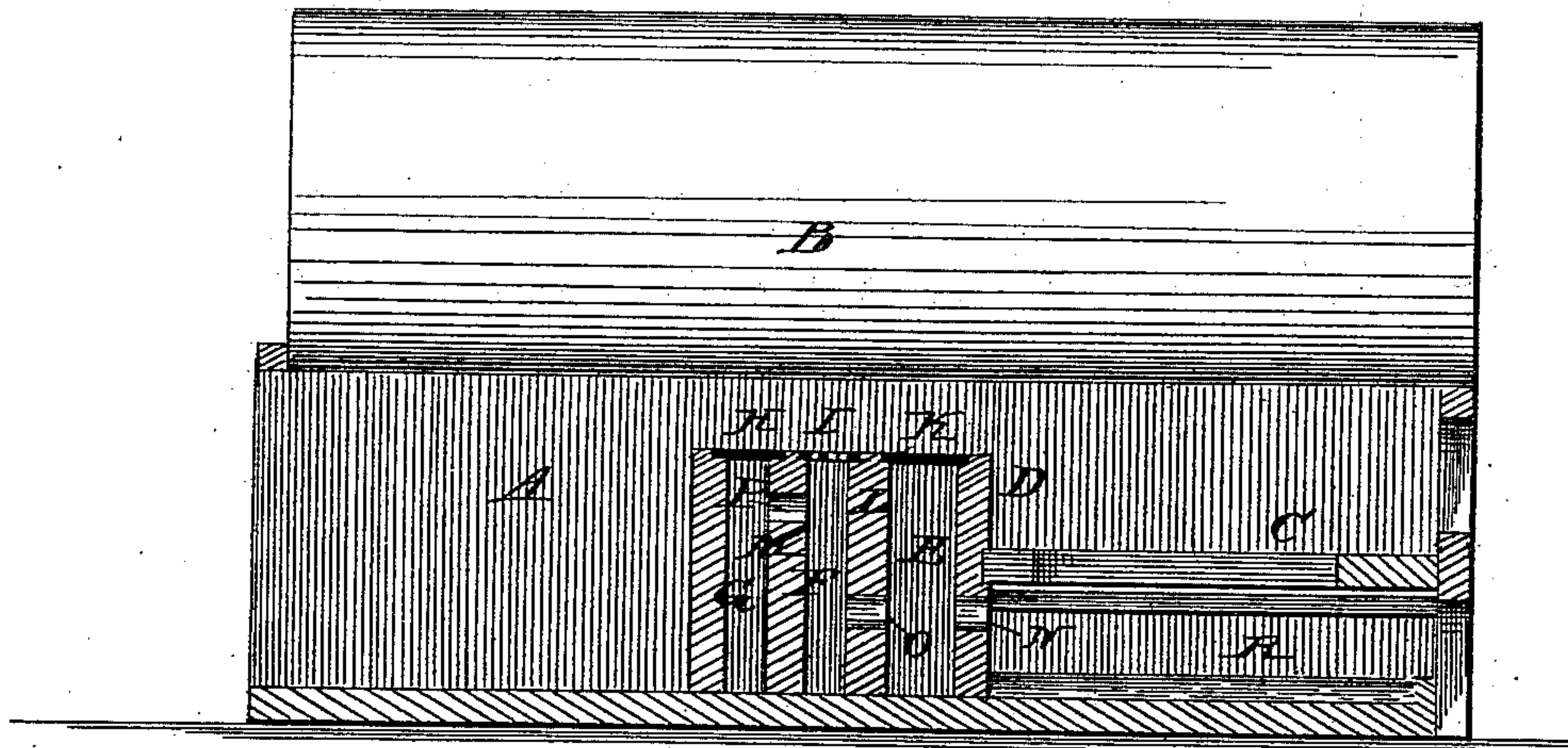


J. F. & M. SEIBERLING.  
Steam-Boiler Furnace.

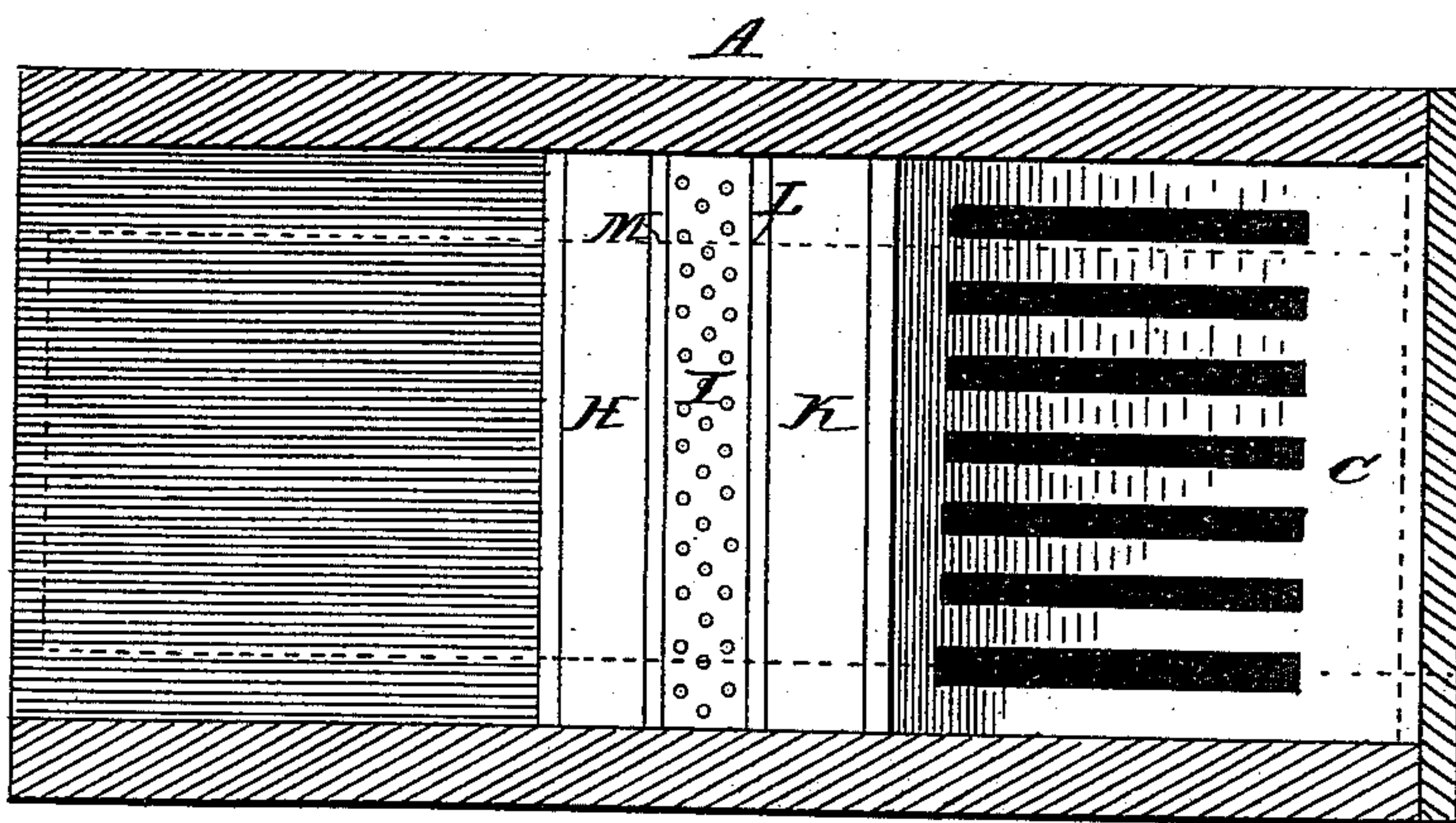
No. 212,156.

Patented Feb. 11, 1879.

*Fig. 1.*



*Fig. 2.*



Witnesses  
Fred G. Dittlerich  
Reuben Perrin

Inventor  
John F. Seiberling  
Monroe Seiberling  
By Daniel Breed Atty.

# UNITED STATES PATENT OFFICE

JOHN F. SEIBERLING AND MONROE SEIBERLING, OF AKRON, OHIO.

## IMPROVEMENT IN STEAM-BOILER FURNACES.

Specification forming part of Letters Patent No. **212,156**, dated February 11, 1879; application filed April 22, 1878.

*To all whom it may concern:*

Be it known that we, JOHN F. SEIBERLING and MONROE SEIBERLING, of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Furnaces for Steam-Boilers; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In the accompanying drawings, Figure 1 is a longitudinal section of our furnace with the boiler thereon. Fig. 2 is a top view of our furnace with the boiler removed.

Our invention consists of a novel construction and arrangement of hot-air chambers having removable covers, in combination with several perforated bridge-walls and a water-reservoir in the ash-pit, and other improvements, all of which will be understood by the following specification or description.

In Fig. 1 of the drawings, A represents the outer brick wall of the furnace, and B is the boiler resting thereon. The fire-chamber is shown at C, Fig. 2, with the ash-pit or water-reservoir R directly under the same. This ash-pit is made water-tight and is to be kept supplied with water, which is thus heated from its position under the fire.

Behind the ash-pit are three bridge-walls, D, L, and M, having perforations N, O, and P, for the passage of hot air and steam or vapor from the ash-pit into the three hot-air chambers E, F, and G. These three air-chambers

are provided with covers or plates H, I, and K, which are removable and exchangeable. One of these plates, I, is perforated, and the other two are close covers. This perforated plate or cover may be placed over either of the hot-air chambers, and thus supply hot air and steam nearer to or farther from the fire-chamber, as may be desired, in burning the smoke, according to the kind of fuel, the draft, and to other circumstances; and with some kinds of fuel and under certain circumstances all of these plates may be removed or the perforated plate may be withdrawn, and only the close plates used to regulate the supply of hot air and steam and the combustion of the smoke.

Having described our invention, we claim—

1. A furnace having hot-air chamber or chambers back of the first bridge-wall, with air-passages from the ash-pit through the bridge-walls, in combination with a water-reservoir in the ash-pit or under the grate, substantially as set forth.

2. The combination of the perforated plate I and the exchangeable close plate or plates with the hot-air chambers back of the bridge-wall, substantially as and for the purposes set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

JOHN F. SEIBERLING.  
MONROE SEIBERLING.

Witnesses:

DUDLEY SEWARD,  
ERNEST SEIDEL.