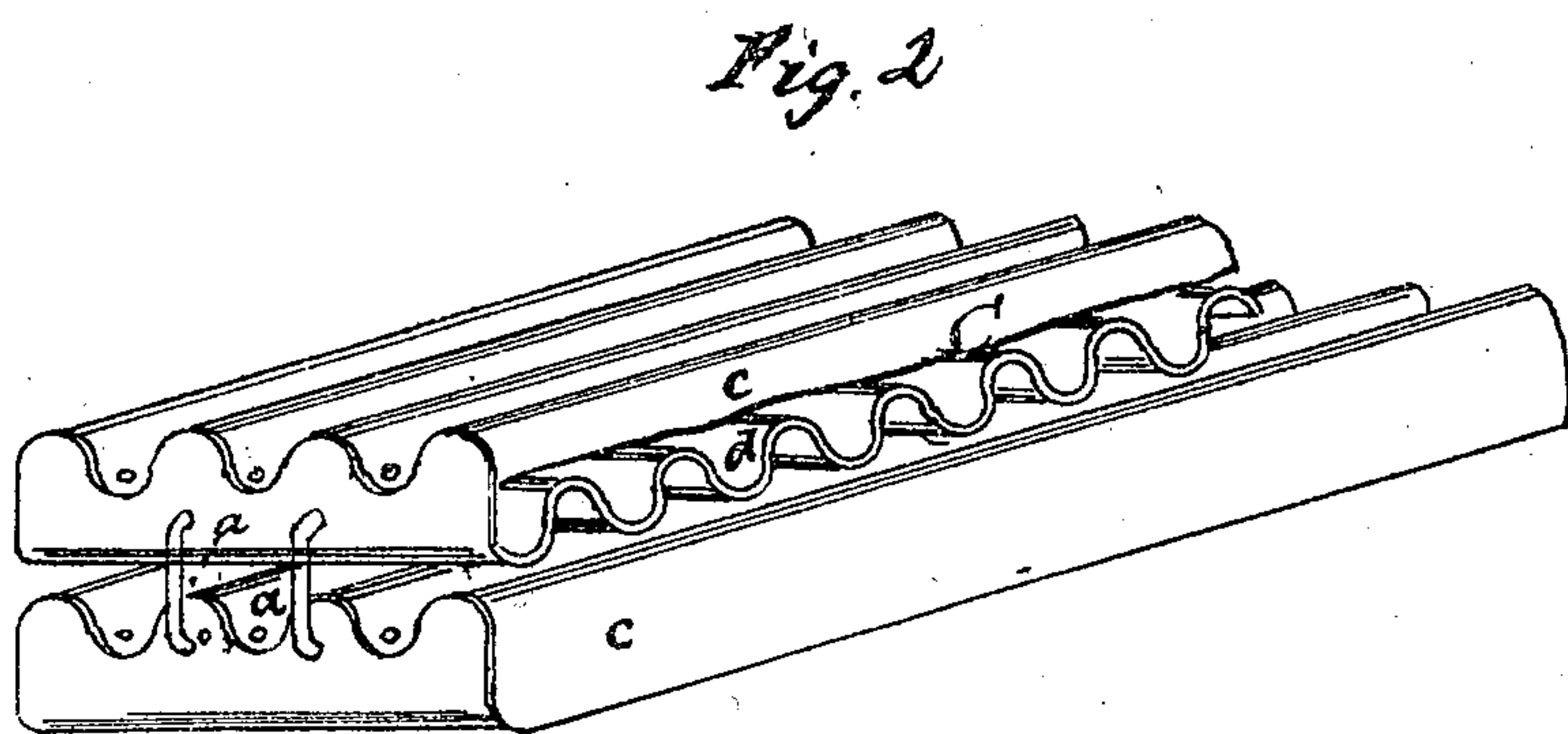
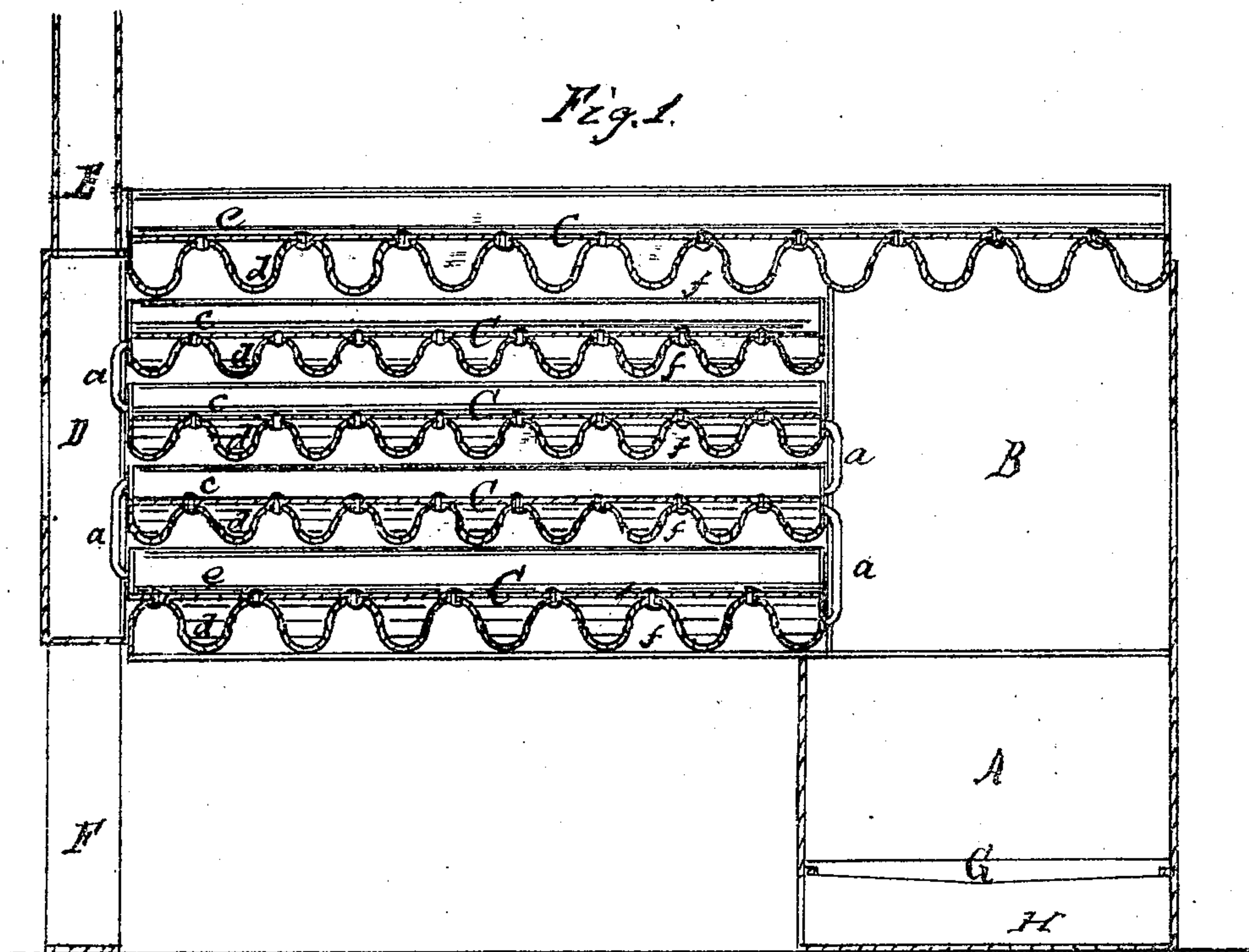


H Duhme
Steam-Generator

N^o 73083

Patented Jan. 7, 1868.



Witnesses.
Thos Tuschke.
J. A. Service

Inventor.
John H. Duhme
Per Munroe &
Attorneys

United States Patent Office.

JOHN H. DUHME, OF CINCINNATI, OHIO.

Letters Patent No. 73,083, dated January 7, 1868.

IMPROVEMENT IN 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, JOHN H. DUHME, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful Improvement in Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved method of constructing steam-boilers, and it consists in forming the boiler of corrugated plates of metal, whereby great strength, durability, and efficiency are obtained.

Figure 1 is a vertical central longitudinal section of the boiler, showing the fire-box, combustion-chamber, and the water and steam-compartments.

Figure 2 is a view of two sections of the boiler, showing the manner of construction, and the way they are connected together.

Similar letters of reference indicate like parts.

The boiler is made in sections, each section consisting of two corrugated plates, with the corrugations placed at right angles with each other, and with rivets through the points of intersection. These sections are placed horizontally, and in such a position that the products of combustion pass between them on their passage to the smoke-stack. The ends and sides of the sections are closed by lapping the plates, or by inserting plates of metal formed to fit the corrugations to which the corrugated plates are welded or fastened in some secure manner, so that the joint shall be water and steam-tight. The sections are connected by pipes, so that the water and steam circulate through the whole of them. The water-legs of the furnace, and also the sides of the boiler, may be constructed of corrugated plates, or of sections of the same construction as those described.

In the drawing, A represents the fire-box. B is the combustion-chamber. C represents the sections of corrugated plates. D is the smoke-box. E is the smoke-stack or chimney. F is a support for the back end of the boiler. G is the fire-box grate, and H is the ash-pit. The products of combustion rise into the combustion-chamber B, and pass from thence to the smoke-box between the sections C. The sections are connected together by the pipes marked *a*, which are as many in number as may be necessary to allow of free communication between the sections. *c* indicates the longitudinal plate, and *d* the transverse plate of each section. The flues for the passage of the smoke and products of combustion are marked *f*.

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

The steam-boiler constructed as described, consisting of the sections C placed one above the other, and connected together at the ends by means of the pipes *a*; said sections consisting each of the corrugated longitudinal plate *c*, and corrugated transverse plate *d*, secured together at their points of intersection, all arranged as described, as and for the purpose specified.

JOHN H. DUHME.

Witnesses:

W. W. DOUGHERTY,

JOHN F. GOODWIN.