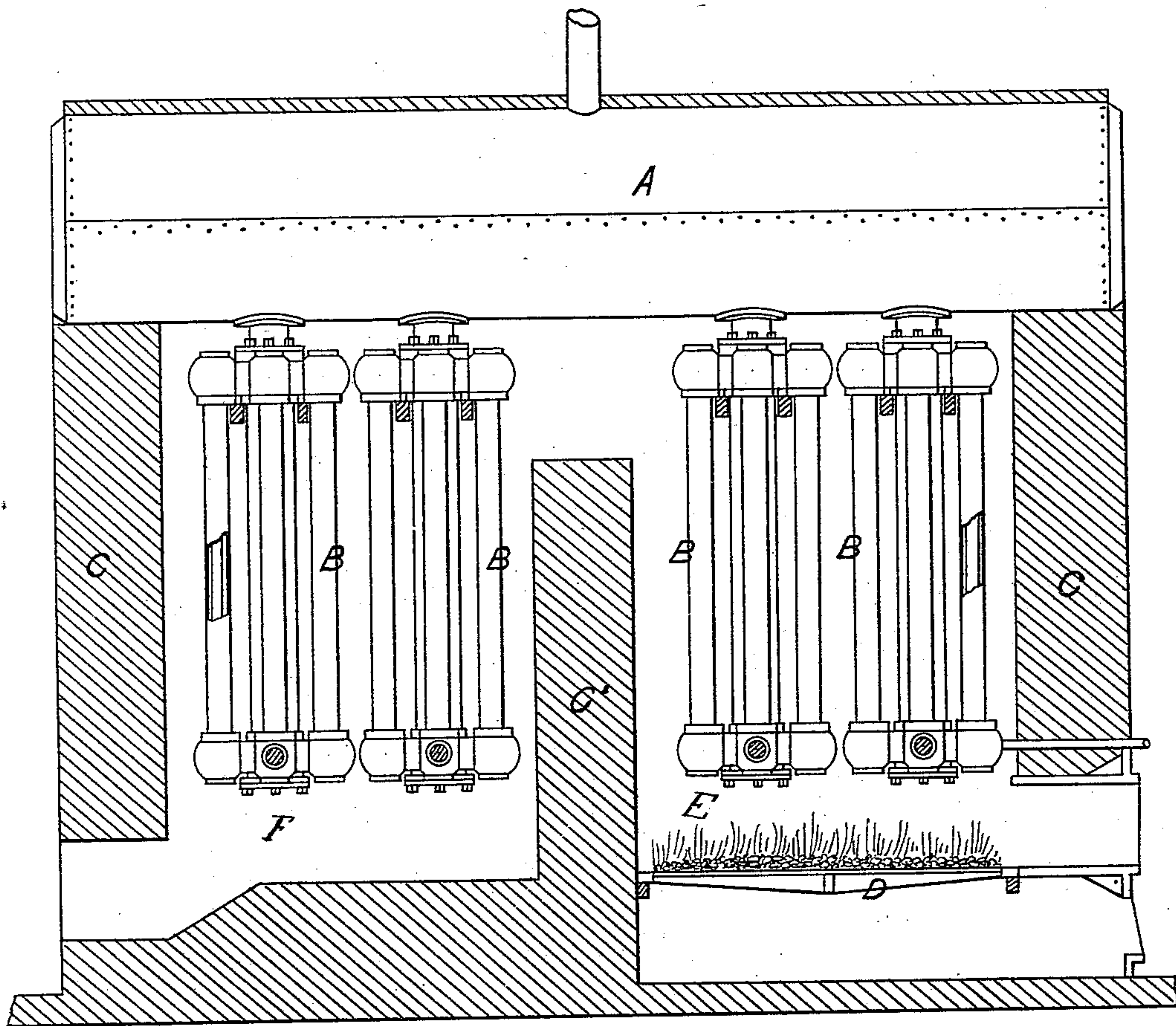


G. H. POND.  
Steam-Boiler.

No. 226,189

Patented April 6, 1880.



WITNESSES.

*L. P. Case*  
*A. Hurd*

INVENTOR.

*Goldsbury H. Pond*

# UNITED STATES PATENT OFFICE.

GOLDSBURY H. POND, OF NEW YORK, N. Y., ASSIGNOR TO POND & BRADFORD BOILER COMPANY, OF SAME PLACE.

## STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 226,189, dated April 6, 1880.

Application filed January 26, 1880.

*To all whom it may concern:*

Be it known that I, GOLDSBURY H. POND, of New York city, in the county and State of New York, have invented a certain new and useful Improvement in Steam-Boilers, which improvement is fully set forth in the following specification and accompanying drawing, in which the figure is a side elevation of my improved steam-boiler.

10 A is a steam-drum. B are clusters of tubes attached to and suspended from the drum A. C is the fire-grate. D is the frame. Said frame may be made of iron, brick, or other suitable material.

15 My invention consists in mounting an elongated steam-drum horizontally on a suitable wall or frame and attaching to it, and suspending vertically therefrom over the auxiliary fire-grate and within the fire-space, clusters of  
20 tubes with a partition-wall, C, (shown in the drawing;) but it is obvious that the steam-drum can be made any desirable length, and that two or more such clusters of tubes may be suspended vertically therefrom, and that  
25 one or more partition-walls, C', may be arranged for separating the fire-space E from the auxiliary fire-space F, increasing the number of spaces accordingly.

The object of my invention is economy in  
30 heating and facility in repairing. The tubular portion of the boiler being suspended in clusters, any one cluster of tubes may be removed, repaired, and replaced without interfering with the others.

35 The object of my invention is, also, to pro-

vide for an independent circulation in each cluster of tubes, which is accomplished by passages through the heads connecting the tubes, said tubes being double, one within the other.

I am aware that the suspending of clusters  
40 of tubes from crown-sheets by a single tube, the lower ends of said tubular clusters being connected with a water-space formed by the boiler-jacket for the purpose of water-circulation, is not new, and this I do not claim; nor  
45 do I broadly claim the suspending of clusters of tubes by a single tube connecting the cluster with the steam-drum; but

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

1. The elongated steam-drum A, mounted  
50 horizontally upon walls C, and having suspended therefrom clusters of double tubes B, concentrically arranged one within the other, with partition-walls C' to separate the clusters  
55 of tubes, so that a part may hang directly over the fire-grate, while the other clusters of tubes shall hang within the auxiliary fire-space F, substantially as and for the purpose set  
60 forth.

2. The combination of the clusters of double tubes B, concentrically arranged one within the other, with and suspended from the horizontal steam-drum A by a single communicating connection, substantially as shown.

GOLDSBURY H. POND.

Witnesses:

J. P. CASE,  
A. HURD.