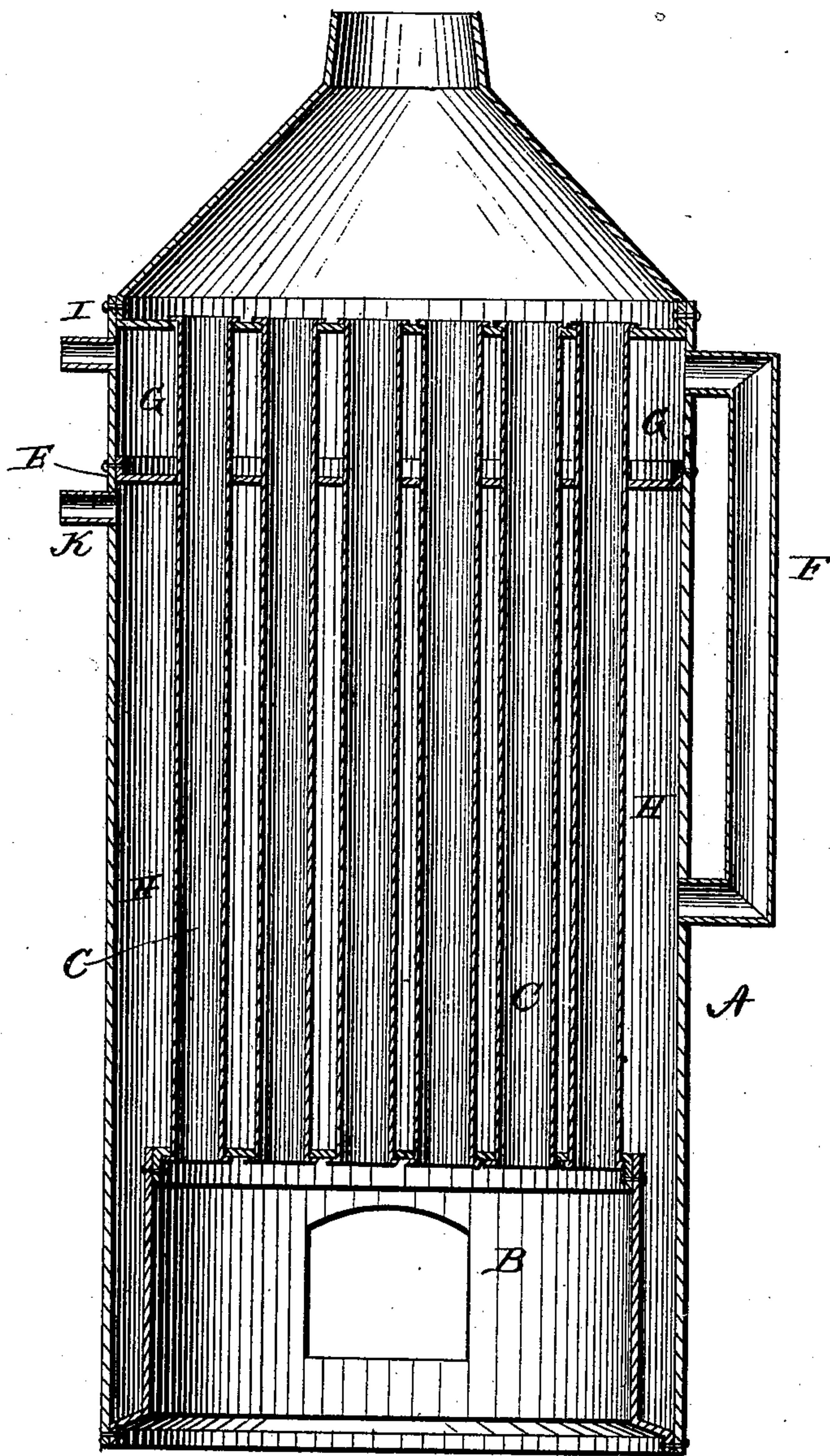


(No Model.)

E. HUBER.  
Heater for Steam Boilers.

No. 243,263.

Patented June 21, 1881.



Witnesses.  
Frank L. Curand  
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# UNITED STATES PATENT OFFICE.

EDWARD HUBER, OF MARION, OHIO.

## HEATER FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 243,263, dated June 21, 1881.

Application filed April 13, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD HUBER, of Marion, in the county of Marion, and in the State of Ohio, have invented certain new and useful Improvements in Heaters for Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in heaters for steam-boilers; and it has for its objects to form a feed-water reservoir in the upper part of an ordinary upright tubular boiler, from which the water may be supplied to the lower part of the said boiler, and in which the sediment will be collected and from which it can be readily removed. These objects I attain by the apparatus illustrated in the accompanying drawing, which represents a vertical sectional view of my improved boiler.

The letter A indicates the outer wall of the boiler, B the fire-box, C the vertical flues, and D the head, all of which may be constructed in the ordinary manner.

The letter E indicates a partition, which is bolted to the interior of the boiler at a suitable distance below, to form a water-reservoir of proper dimensions. The flues pass through this partition, the joints being made water and steam tight in any convenient manner.

The letter F indicates a pipe leading from the chamber or water-reservoir G into the lower chamber or compartment, H, of the boiler.

The letter I denotes the water-induction pipe, and K the steam-outlet.

The operation of my improved boiler is as follows: The water is forced into the upper compartment through the inlet-pipe, and from thence into the lower compartment to a suitable level, leaving proper steam-space in the lower compartment. As the water is evaporated in the lower compartment it is renewed, as required, by forcing fresh water into the upper compartment, which displaces the water therein, supplying the lower compartment with proper quantity. The sediment which collects in the upper compartment is removed through suitable hand-holes.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with the boiler A, provided with the flues C, the partition E, located in the upper part of the boiler and through which the flues extend, the induction-pipe I, and the tube F, connecting the compartments G and H, the whole adapted to operate substantially in the manner specified.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of April, 1881.

EDWARD HUBER.

Witnesses:

J. E. DAVIDS,  
O. J. JOHNSON.