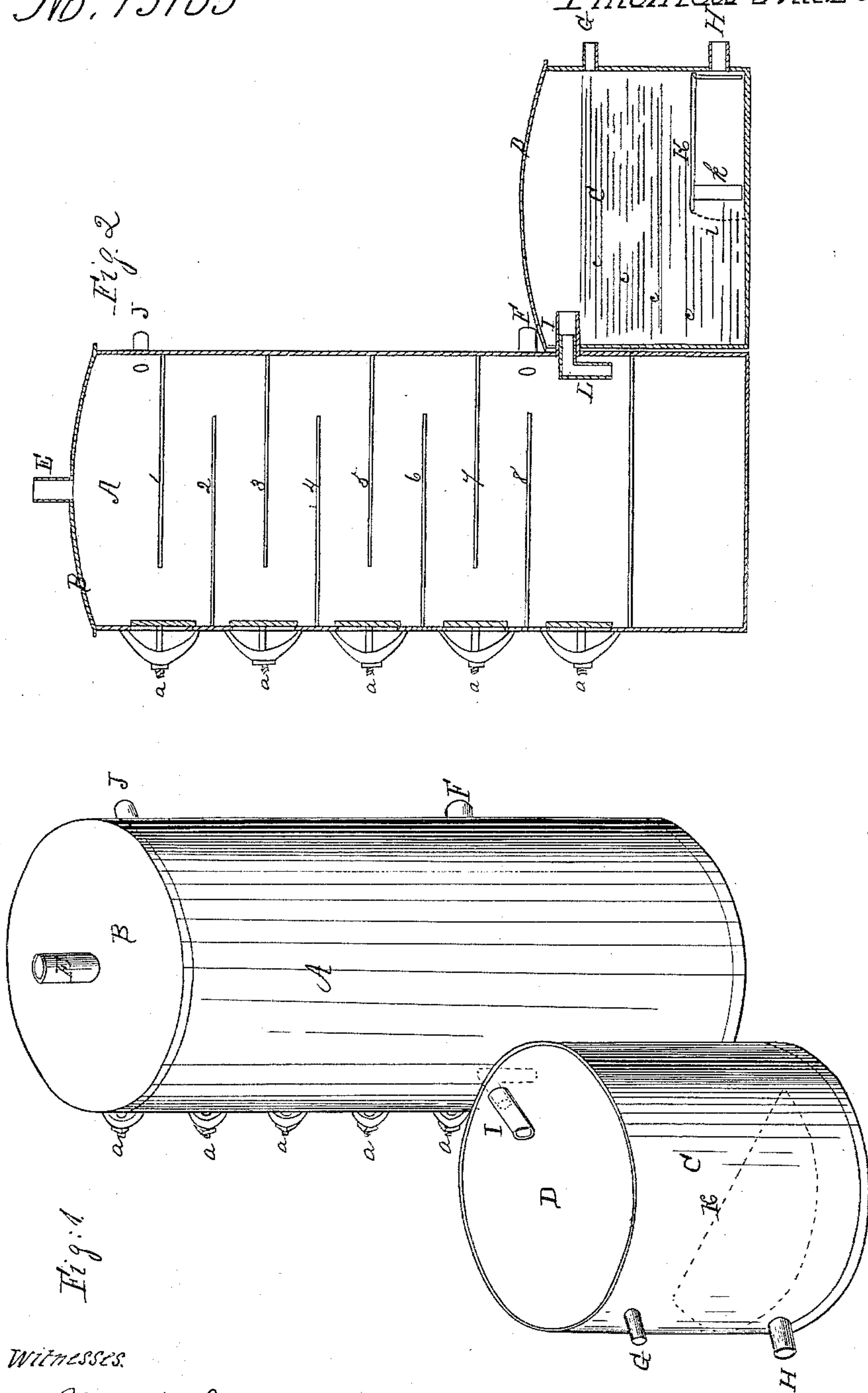


J. S. Hooten
Feed Water Heater

No. 75163

Patented Mar 3 1868



Witnesses:

W. L. Dennis
W. M. Lacy

Inventor

J. S. Hooten

United States Patent Office.

J. S. HOOTON, OF NEW CARLISLE, INDIANA.

Letters Patent No. 75,163, dated March 3, 1868.

IMPROVEMENT IN APPARATUS FOR HEATING AND PURIFYING FEED-WATER FOR STEAM-GENERATORS.

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

TO WHOM IT MAY CONCERN:

Be it known that I, J. S. HOOTON, of New Carlisle, Indiana, have invented certain new and useful Improvements in Feed-Water Heaters and Pumpers for Steam-Boilers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters of reference marked thereon, in which—

Figure 1 is a perspective view of my apparatus, and

Figure 2 is a central vertical section of the same.

Fig. 1 represents an upright tubular structure, of any desired size, intended to receive water from the top pipe J and steam from the bottom pipe F simultaneously.

In fig. 2, J represents the receiving-pipe for cold water, and 1 2 3 4 5 6 7 8 are a series of shelves or plates overlapping each other, substantially as set forth, and secured to me by Letters Patent of date of March 5, 1861, and as an improvement upon which this is intended.

My present improvement consists substantially in the addition of a filtering-case, C, which is connected with the condenser A by the pipe L, and is provided with a plate or shelf, K, a delivery-spout, H, and a waste-spout, G. The shelf or plate K occupies any necessary portion of the diameter of the filtering-case, and receives the water falling from the spout I, from whence it is distributed and filtered by means of and through any suitable material placed in the bottom of the same for the purpose of freeing the water from any remaining impurities. The man-holes *a a a a* are placed opposite the alternate shelves, and are intended to afford facilities for cleaning the deposits from the plates *x x x x*, as may be desired.

The lower portion of the filtering-case C is filled with straw, or any fibrous or suitable material, and the opening under the plate K is provided with a canvas or cloth strainer to remove any impurities remaining in the water intended for the boiler.

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

1. The combination of the man-holes *a a a a*, shelves or plates 1 2 3 4 5 6 7 8, and the structure or casing A, constructed and operating substantially in the manner and for the purposes herein set forth.

2. The filtering-case C, elbow-pipe L, spouts G and H, in combination with the casing A and plates or shelves 1 2 3 4 5 6 7 8, all arranged and operating in the manner substantially as herein set forth.

J. S. HOOTON.

Witnesses:

W. T. DENNIS,

M. M. LACEY.