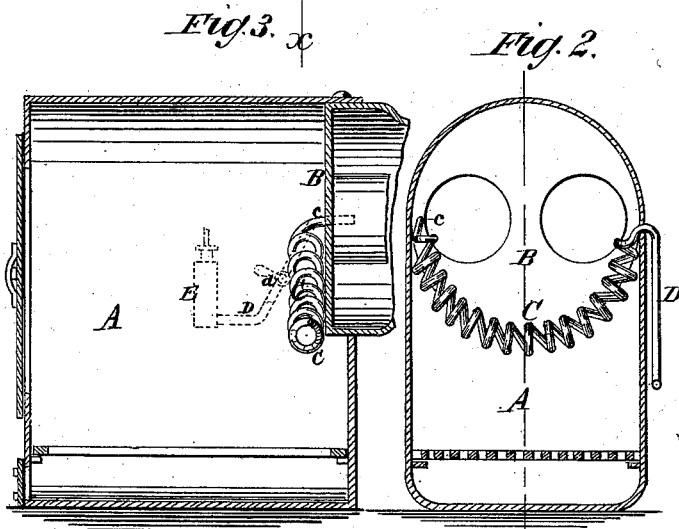
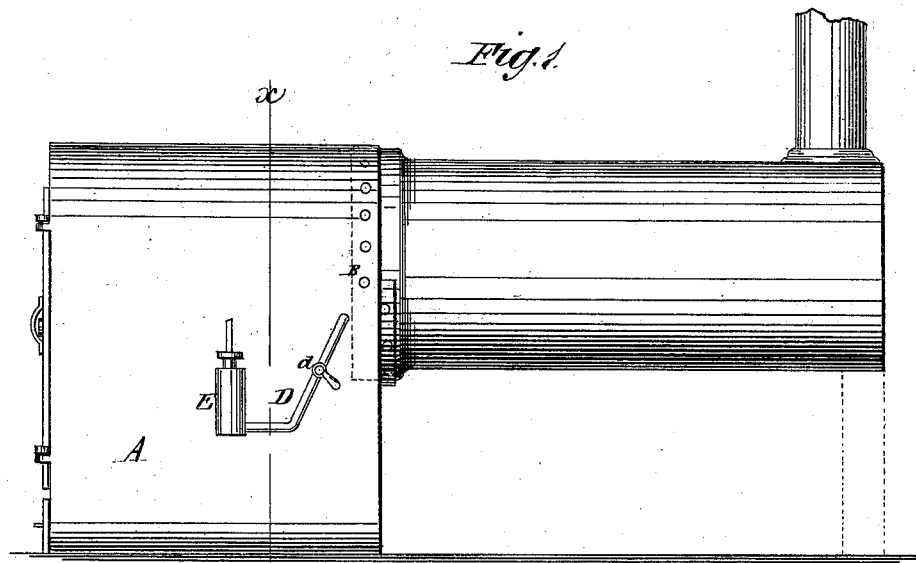


H. G. CADY.
Feed Water Heater

No. 201,649.

Patented March 26, 1878.



WITNESSES:

Francis M. O'Connell
C. S. Quinn

INVENTOR:

H. G. Cady
BY *Arthur H.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY G. CADY, OF BELLEVILLE, ARKANSAS.

IMPROVEMENT IN FEED-WATER HEATERS.

Specification forming part of Letters Patent No. **201,649**, dated March 26, 1878; application filed January 23, 1878.

To all whom it may concern:

Be it known that I, HENRY G. CADY, of Belleville, in the county of Jefferson and State of Arkansas, have invented a new and Improved Feed-Water Heater, of which the following is a specification:

The object of my invention is to furnish a simple and inexpensive device for heating feed-water previous to its entering the steam-boiler.

In the accompanying drawing, Figure 1 represents a side view of a steam-boiler with my improvement attached. Fig. 2 is a vertical section of the same, taken on the line *xx* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the fire-chamber of the boiler. B is the tube-plate. C is the coiled pipe (or series of pipes) entering the boiler at *c*, at the water-line. This coiled pipe or heater C is arranged at or on the front of the lower part of the tube-plate B, preferably in a circular form, as shown in the drawing, so as to leave room for a larger number of coils to increase the heating-surface, so that the coil will be impinged upon and heated by the fire before the latter enters the boiler-flues. The other end of the heater C is connected to the outside pipe D, which is pro-

vided with the valve *d*, and leading the water from the cold-water-supply pump E to the heater C, through which it is heated, and finally passes into the boiler.

By the use of the invention the water, before it reaches the boiler, will have attained a high temperature.

My invention is applicable, at a small cost, to steam-boilers now in use, and forms an economical and effective method of promoting the generation of steam.

I do not limit or confine myself to the exact form or arrangement of any of the parts here shown, as they may be varied without departing from my improvement.

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

The combination, with the fire-chamber A, of the coiled pipe C, connected at one end with the boiler at the water-line *c*, in front of tube-plate B, and connected at the other end by a valved tube, D, with a supply-pump, E, as shown and described.

HENRY G. CADY.

Witnesses:

A. E. BEARDSLEY,
PAUL JACKO.