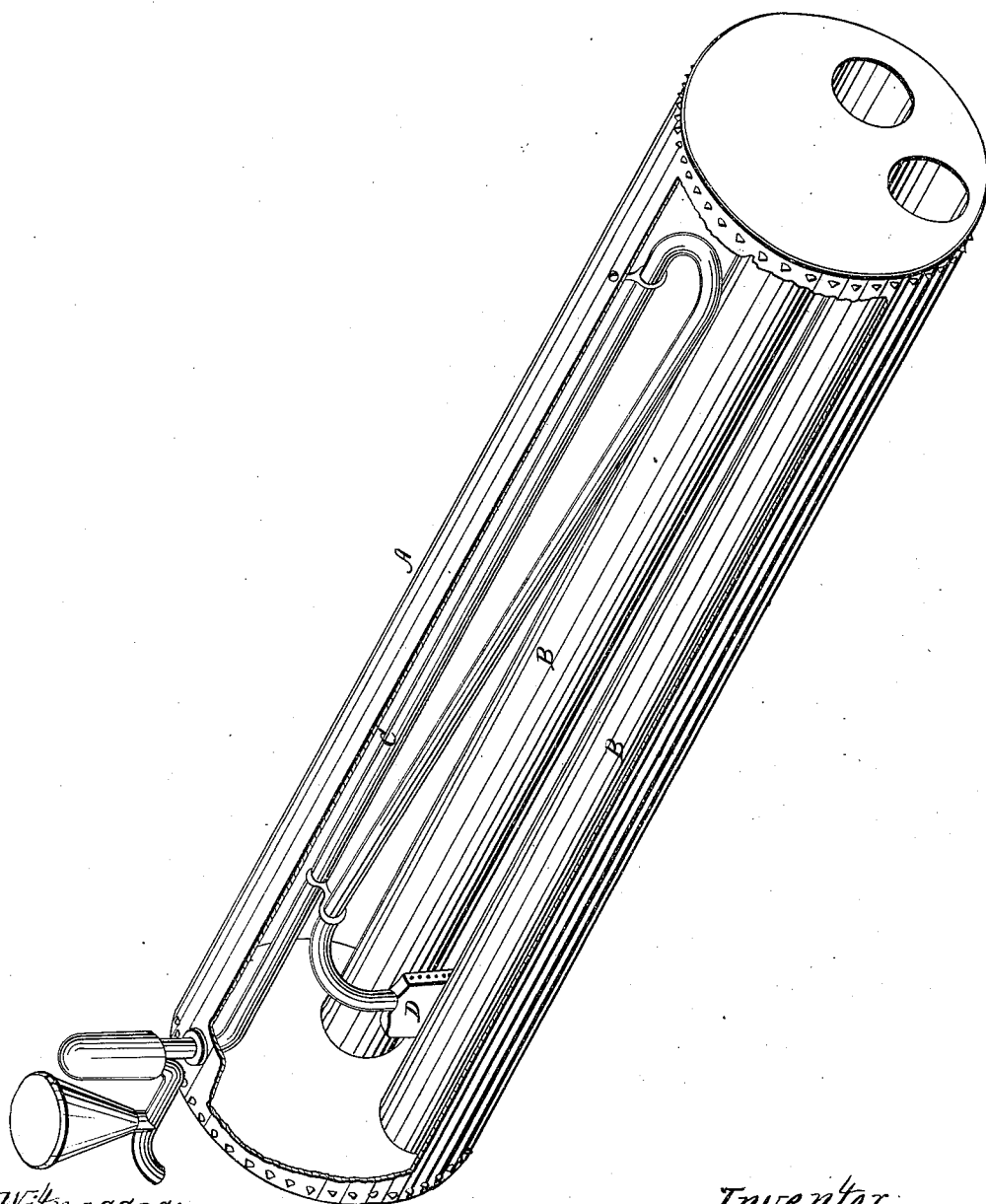


*E. Pierce,*  
*Steam-Boiler Water-Feeder,*  
*No 28,685,* *Patented June 12, 1860.*



*Witnesses;*  
*John W. Chitt*  
*Augustus Pohlman*

*Inventor,*  
*Knight Brothers, Attys.*  
*for Ephraim Pierce*

# UNITED STATES PATENT OFFICE.

EPHRAIM PIERCE, OF CINCINNATI, OHIO.

## FEED-WATER APPARATUS FOR STEAM-BOILERS.

Specification of Letters Patent No. 28,685, dated June 12, 1860.

*To all whom it may concern:*

Be it known that I, EPHRAIM PIERCE, of Cincinnati, Hamilton county, Ohio, have invented a new and Improved Feed-Water Apparatus for Steam-Boilers; and I hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, and being a perspective view of a boiler furnished with my improved feeding apparatus with a portion of the outer plates removed.

A represents the outer portion of a cylindrical boiler. B B are flues. The feed water pipe C enters the boiler at one end near its top and after passing back and forward through the steam space is bent downward and discharges the now heated water through a rose D into the water space between the flues B, which still further heat it

and effectually prevent any cool water reaching the bottom plates of the boiler. By this arrangement the feed water is heated in an economical and effectual manner and the external plates of the boiler preserved from sudden variations of temperature.

I claim as new and of my invention herein—

The spreader D applied between the flues B, B, below the water line to the discharge end of a feed water pipe traversing the steam space of a steam boiler substantially as and for the purpose set forth.

In testimony of which invention, I hereunto set my hand.

E. PIERCE.

Witnesses:

GEO. H. KNIGHT,  
C. STEEMER, Jr.