

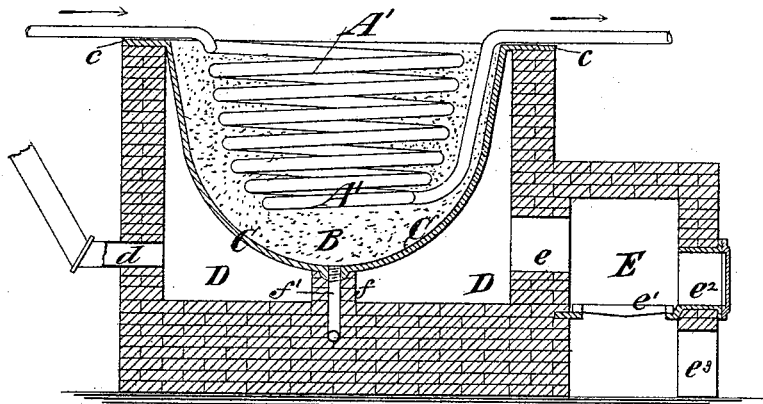
(No Model.)

R. A. CHESEBROUGH.

STEAM GENERATOR AND SUPERHEATER.

No. 344,476.

Patented June 29, 1886.



Witnesses.
Emil Carter.
C. Sundgren

Inventor.
Robert A. Chesebrough
by his attys
Brown & Hall

UNITED STATES PATENT OFFICE.

ROBERT A. CHESEBROUGH, OF NEW YORK, N. Y.

STEAM GENERATOR AND SUPERHEATER.

SPECIFICATION forming part of Letters Patent No. 344,476, dated June 29, 1886.

Application filed January 20, 1886. Serial No. 189,145. (No model.)

To all whom it may concern:

Be it known that I, ROBERT A. CHESEBROUGH, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Steam-Generators and Steam Superheaters, of which the following is a specification.

The object of my invention is to provide a simple and inexpensive apparatus which may be employed either as a steam-generator for heating dwellings and other buildings by steam or which may be employed as a steam-superheater. This apparatus when employed as a steam-generator has the advantage that it will be safe in its operation and will require very little attention, and when used either as a steam generator or superheater it has the advantage that it will not soon burn out and require renewal.

The invention consists, essentially, in the combination, with an imperforate steam generating or superheating coil, of a receptacle containing lead or other easily-fusible metal or other heat-transmitting medium, in which the coil is directly immersed, with the heat-transmitting medium in direct contact with its imperforate surface, and a furnace for supplying heat to the exterior of the receptacle.

The heat-transmitting medium may be of any material which will transmit uniformly to all parts of the steam generating or superheating coil immersed in it the heat received from the receptacle in which the medium is contained.

The accompanying drawing represents a sectional elevation of an apparatus embodying my invention.

A' designates a steam generating or superheating coil of pipe which is immersed directly in lead or other heat-transmitting medium B, the said medium being in direct contact with the convolutions of the coil A'.

C designates a receptacle represented as made in the form of a pot-like vessel, which is of sufficient size to contain the coil A' and the lead or other heat-transmitting medium B, in which it is immersed. This vessel may have at the upper edge a flange, c, whereby it is supported on a brick structure forming a heating-chamber, D, within which the vessel or receptacle C depends.

In this example of the invention the furnace E, whereby heat is imparted to the receptacle C, the lead or other heat-transmitting medium B, and to the coil A', is external to the heating-chamber D and communicates therewith by a throat or opening, e.

The furnace, in which is the usual grate, e', is provided with fire and ash-pit doors, e² e³, and the products of combustion from the furnace, after passing through the chamber D and heating the receptacle or vessel C therein, escape at the smoke-outlet d.

In order to support the receptacle C at the center, I have represented a brick pier or support, f, through which a pipe, f', may be extended, and when desired the lead or other heat-transmitting medium B may be withdrawn from the receptacle C through the pipe f'.

It will be observed that the lead or other heat-transmitting medium is in direct contact with most or all of the convolutions of the coil A', the latter being immersed in it, and hence the heat transmitted to the coil A' will be uniform, and no injury will result to the coil by lack of attention on the part of the person in charge. Hence the said construction of steam-generating apparatus will be very desirable for private dwellings and other buildings, and the same apparatus is of great value as a steam-superheater, because it will not soon be burned out and require renewal.

It will be understood that the steam generating or superheating coil A' is imperforate, and hence no water or steam which may be contained in or passing through the coil can escape into the heat-transmitting medium B.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with an imperforate steam-generating or superheating coil, of a receptacle containing a heat-transmitting medium in which the coil is directly immersed, with the said medium in direct contact with its imperforate surface, and a furnace for applying heat to the exterior of said receptacle, substantially as herein described.

ROBT. A. CHESEBROUGH.

Witnesses:

C. HALL,
FREDK. HAYNES.