C. CLAUSEN.
COMBINED OIL SKIMMER AND FEED WATER HEATER.
APPLICATION FILED JAN. 20, 1911.

1,025,863.

Fig. 1.

Fig. 2.

Patented May 7, 1912.

2 SHEETS—SHEET 1.
To all whom it may concern:

Be it known that I, CLAUS CLAUSEN, a subject of the King of Norway, residing at Christiania, Norway, have invented certain new and useful Improvements in Combined Oil-Skimmers and Feed-Water Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a vertical sectional view on line I—I of Fig. 2; Fig. 2 is a horizontal section on line II—II of Fig. 1; and Fig. 3 is a vertical section on the line III—III of Fig. 2.

The apparatus comprises a box divided by a partition into compartments A, B. The impure water from the hot well enters the compartment A through the pipe C. This pipe terminates in a nozzle having two openings so that the water is caused to circulate horizontally. In this compartment a grease skimming device D is located which takes off the accumulated oil and impurities from the surface of the water and directs it through a discharge valve E. The water which has been purified now flows through the openings F in the partition, these openings being located near the bottom of said partition. In passing into the compartment B through these openings the water is heated by steam discharged through a nozzle G. This nozzle is provided with a number of perforations for the passage of the steam jets, and is coaxial with the group of openings F leading from the compartment A to the compartment B. The valve H controls the inlet of the steam. The water is therefore quickly heated as it enters the compartment B, and it will be observed that this heating takes place upon the pure water and not upon the mixture of oil, water and impurities.

In order to prevent the passage of air to the boiler through the suction pipe leading from the compartment B, I provide a float I for controlling the valve K, which, in turn, controls the outlet of the water from the compartment B to the boiler.

It will be observed that the heating is effected by steam conducted into the water, and this steam may be taken from the low pressure slide box or from the exhaust.

Claims:

1. In a feed water heater, the combination of a chamber having two compartments, an inlet pipe leading to one compartment for the impure water, an oil skimmer in said compartment, a second compartment communicating with the first to which the water, free from oil, passes to be heated and discharged, heating means for the water in said second compartment, a suction pipe to connect with a boiler leading from the second compartment and a valve in said suction pipe with a float connected therewith for regulating the level of the water to a point above the said valve to prevent air being sucked therethrough, substantially as described.

2. In a feed water heater, the combination of a chamber having two compartments, an inlet pipe leading to one compartment for the impure water, an oil skimmer in said compartment, a second compartment communicating with the first to which the water, free from oil, passes to be heated and discharged, heating means for the water in said second compartment, a suction pipe to connect with a boiler leading from the second compartment and a valve in said suction pipe with a float connected therewith for regulating the level of the water to a point above the said valve to prevent air being sucked therethrough, said second compartment communicating with the first through a series of openings and said heating means consisting of a perforated steam pipe coextensive with and arranged opposite the said series of openings, substantially as described.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

Witnesses:

HENRY BORDEWICH,
MATTIN GULBERMSEN.