

No. 695,206.

Patented Mar. 11, 1902.

G. GRIESCHE.
ELECTRIC REHEATER FOR STEAM.

(Application filed July 30, 1901.)

(No Model.)

Fig. 1.

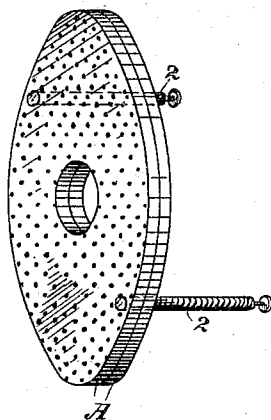
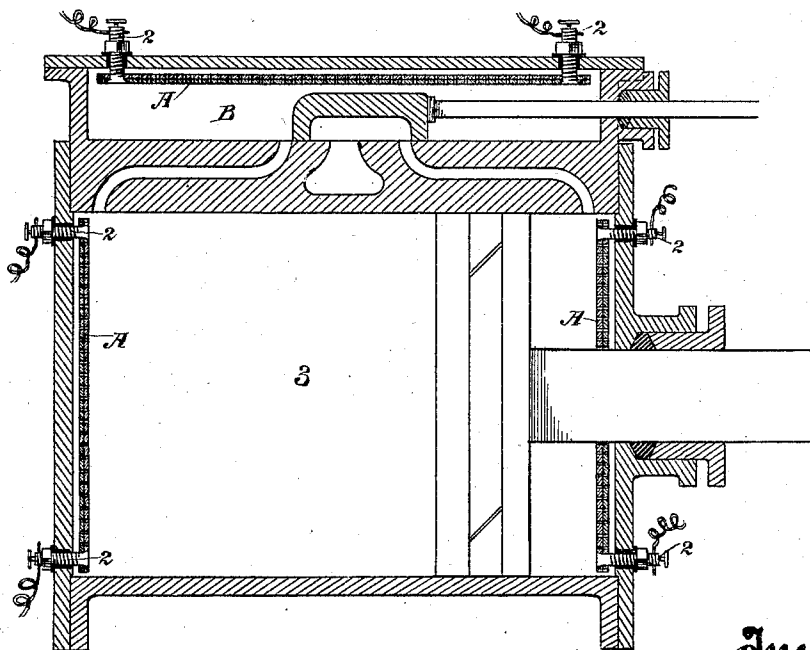


Fig. 2.



Witnesses,

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UNITED STATES PATENT OFFICE.

GUSTAV GRIESCHE, OF BERKELEY, CALIFORNIA.

ELECTRIC REHEATER FOR STEAM.

SPECIFICATION forming part of Letters Patent No. 695,206, dated March 11, 1902.

Application filed July 30, 1901. Serial No. 70,223. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV GRIESCHE, a citizen of the United States, residing in Berkeley, county of Alameda, State of California, have
5 invented an Improvement in Electric Reheaters for Steam; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a means for reheating or superheating steam after it has been
10 generated.

It consists in the introduction of an electric heater into the space occupied by the steam which is to be reheated.

15 Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a view illustrating a form of my device. Fig. 2 shows an application of a reheater to the intermediate cylinder of a
20 triple-expansion engine.

The object of my invention is to provide a means for reheating or superheating steam after its generation and wherever it is desired to use dry or superheated steam. In the
25 present illustration I have shown one form of the device for this purpose and its application to an engine-cylinder, which cylinder represents the intermediate cylinder of a triple-expansion engine; but I do not confine myself
30 to this particular apparatus, as it will be manifest that the reheater can be variously formed to suit conditions and may be employed in any connection where it is desirable to superheat or dry steam.

35 As herein illustrated, the reheater consists of plates or disks A, fitted to the place where they are to be used and having connections, as 2, for electric wires from a source of energy. These plates A are formed of any material suitable for the purpose, and they
40 introduce such a resistance into the electrical circuit that they are heated to a temperature sufficient to dry or superheat the steam which passes over or comes in contact with them.
45 In Fig. 2 I have shown an engine-cylinder 3, having the plates A, located at each end, and

the connections 2, extending out through the cylinder-heads. These connections are properly insulated from the surrounding conducting parts. B represents the steam-chest, having an ordinary slide-valve and ports communicating with the cylinder and with the exhaust. Within this steam-chest I have shown one of the plates A with its electrical connections. It will be seen that with this
50 or equivalent construction I am enabled to introduce this electrical heater into any chamber through which steam may pass or within which it may be contained, and the heat of these plates or disks is sufficient to properly reheat or superheat the steam.
55

Having thus described my invention, what I desire to secure by Letters Patent is—

1. In combination with the steam-space of an engine said space being contained directly
60 within the engine-casing, means for reheating steam consisting of electrical resistance-plates directing in said steam-space, and electrical conductors extending from said plates and through the engine-casing to the exterior
70 thereof.

2. The combination with the steam-space of an engine said space being included within the walls of the engine-casing, of electrical resistance-plates and means suspending them
75 directly within said space, and wires leading from the plates outwardly through the engine-casing.

3. The combination with a steam-engine cylinder of electrical heating-plates located
80 between the cylinder-heads and the ends of the piston-stroke, insulated connections fixed to said plates and extending through the cylinder-heads to the outside of the cylinder, and electrical conducting-wires therefrom.
85

In witness whereof I have hereunto set my hand.

GUSTAV GRIESCHE.

Witnesses:

H. F. ASCHECK,
S. H. NOURSE.