

No. 765,463.

PATENTED JULY 19, 1904.

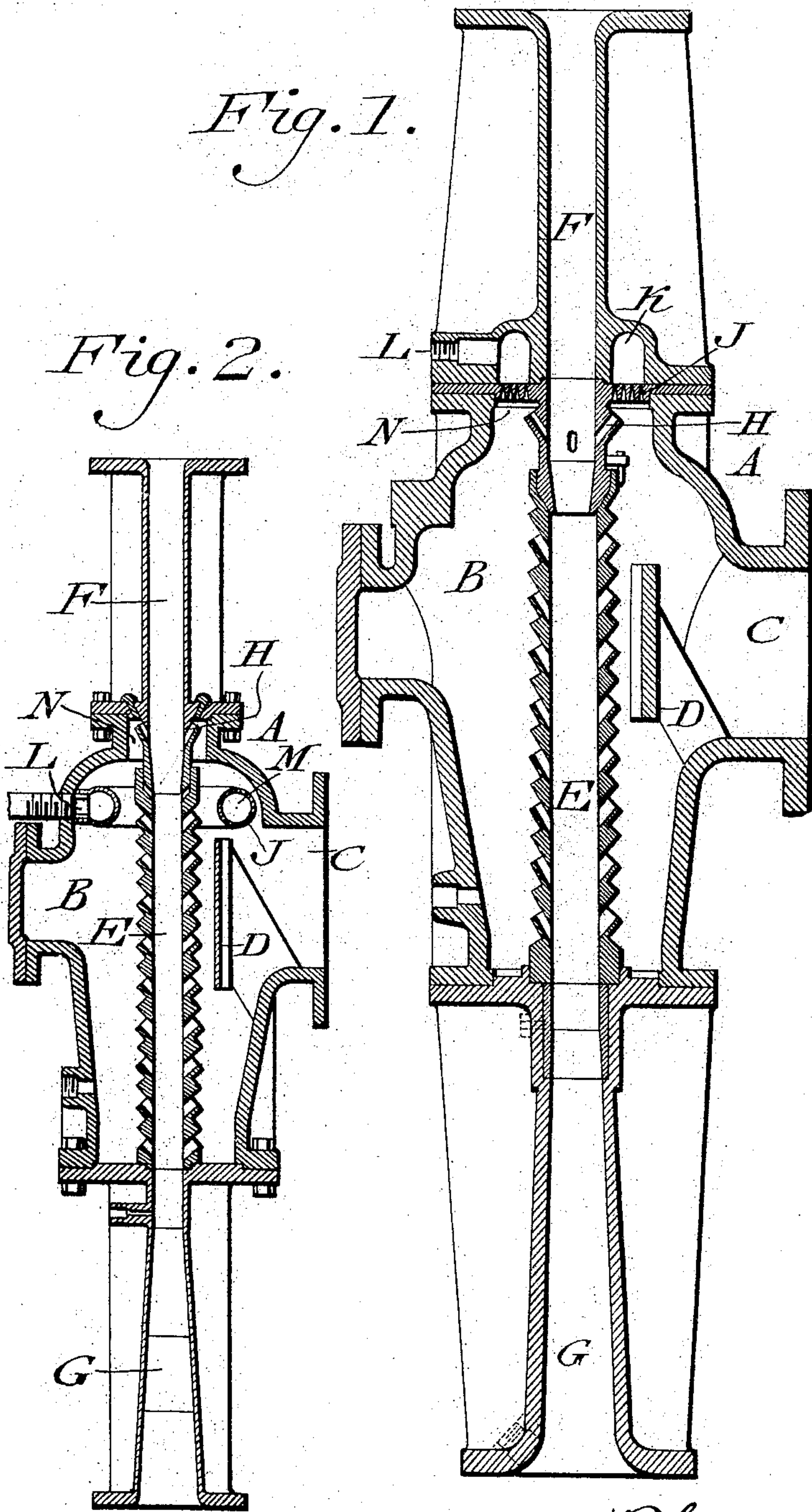
T. M. EYNON.
CONDENSER.

APPLICATION FILED DEC. 29, 1903.

NO MODEL.

Fig. 1.

Fig. 2.



Witnesses

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CONDENSER.

SPECIFICATION forming part of Letters Patent No. 765,463, dated July 19, 1904.

Application filed December 29, 1903. Serial No. 186,942. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. EYNON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Condensers, of which the following is a specification.

In a patent granted to me February 17, 1903, No. 720,908, I have shown, described, and broadly claimed a novel construction of invention wherein provision is made for the removal of the non-condensable gases from the steam-chambers thereof, provision being made for such removal by means of a passage communicating with a collecting-chamber in the upper portion of the steam-chamber, which passage leads to the waterway of the condenser.

So far as I am aware I am the first to employ a collecting-chamber located in the upper portion of the steam-chamber for the function described, and in the present invention I have devised additional appliances to more perfectly condense and carry off any excess of steam or vapor from said collecting-chamber by means of an additional water-supply exterior to the waterway.

So far as I am aware I am the first to introduce into a condenser of the character described in my former patent an additional or extraneous water-supply exterior of the waterway, and my claims to these features are therefore to be interpreted with corresponding scope.

To the above ends my invention consists of a novel construction of a condenser having in the upper portion of its steam-chamber a collecting-chamber or its equivalent, the above elements being combined with an additional water-supply located exterior of the waterway.

It further consists of other novel features of construction, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

Figures 1 and 2 represent vertical sections of different embodiments of my invention.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a condenser having a steam-chamber B provided with a steam-opening C, baffle-plate D, and combining-tube E, supported within the steam-chamber B and connected at its upper end with a waterway or nozzle F and at its lower end with a discharge-tube G. In addition my device is provided with openings H, formed in the waterway or nozzle F or in a portion connected therewith at the upper end of the combining-tube E. It will be seen that said openings H communicate at their outer portion with the collecting-chamber N, which is located in the upper portion of the steam-chamber, and that the parts thus far referred to are substantially the same and for substantially the same function as the corresponding parts seen in my prior patent hereinbefore referred to. In my present construction I provide means for more thoroughly condensing the steam or vapor in the upper portion of the chamber B, which would not otherwise be drawn down through the openings in the combining-tube G, which means consists of a plurality of apertures J, located at the upper part of the steam-chamber B and communicating with a water-chamber K, having a port L, to which a suitable water-supply tube may be attached. It is evident that water forced into the chamber K through the water-supply tube L will pass as a spray or drip through the apertures J into the chamber B, will assist in condensing the vapor therein, and will in addition act to carry off through the openings in the combining-tube E any condensed gases or particles which may find their way into the chamber B.

In the form of the device shown in Fig. 2 I have formed the apertures J in an annular chamber M, located within the steam-chamber B and connected, as before, by a port to a suitable source of water-supply L. It is clear that the operation of my device is not changed thereby.

It will be apparent from the foregoing that

my object is broadly, in addition to providing a communication between the upper portion of the steam-chamber or waterway or pipes, to provide an additional means for introducing into the condenser a supply of water exterior of or in addition to the usual waterway.

It will be apparent that the portion of the apparatus shown in Figs. 1 and 2 is substantially the same, the construction seen in Fig. 2 being the condenser in my former patent equipped with an annular or other shaped water-supply pipe in the upper portion of the steam-chamber, whereas in Fig. 1 I have shown a perforated plate J, above which is located the water-supply chamber K. It will, however, be apparent to those skilled in the art that the auxiliary or additional water-supply device K or M may be introduced into the upper portion of or above the steam-chamber B by other devices than that shown which will come within the spirit of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described, but reserve to myself the right to employ all such equivalent devices.

I desire it understood that the broad principle of my invention is applicable to either forms of the condenser seen in my patent hereinbefore referred to as well as to other forms of this type of condensers.

It is evident that various changes may be made by those skilled in the art which may come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

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

1. A condenser comprising a steam-chamber, a collecting-chamber, a waterway extending through said steam-chamber, an opening into said collecting-chamber and means for the admission of water to said steam-chamber exterior of said waterway.

2. A condenser comprising a steam-chamber, a collecting-chamber above said steam-chamber, a waterway extending through and

connecting with said chambers, and means exterior of said waterway for the admission of water to said steam-chamber.

3. A condenser, comprising a steam-chamber, a collecting-chamber, a waterway through said chamber having inclined openings in said collecting-chamber, means located at the upper end of said steam-chamber and exterior to said waterway for the admission of water to said chamber.

4. A condenser, comprising a steam-chamber, a collecting-chamber, a waterway through said chamber having inclined openings in said collecting-chamber and means in said chamber and exterior of said waterway for spraying water through said chamber.

5. In a condenser, a steam-chamber, an inlet therefor, a collecting-chamber in the upper portion of said steam-chamber, a waterway, a passage communicating with said collecting-chamber and with said waterway and means for introducing into said steam-chamber a supply of water exterior to said waterway.

6. In a condenser, a steam-chamber, an inlet therefor, a collecting-chamber in the upper portion of said steam-chamber, a waterway and a passage communicating with the upper portion of the steam-chamber and with said waterway, in combination with means for introducing into the upper portion of said steam-chamber a supply of water exterior of the usual waterway.

7. In a condenser, a steam-chamber, an inlet therefor, a collecting-chamber in the upper portion of said steam-chamber, a waterway, a passage in the walls of said waterway forming the communication therebetween and the upper portion of the steam-chamber whereby the non-condensed gases in the upper portion of said steam-chamber are withdrawn therefrom by the suction caused by the passage of the water through said condenser, and means for spraying water into the upper portion of said steam-chamber.

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