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M. L. POURCEL

AIR SCRUBBING AND COOLING DEVICE FOR ALTERNATORS

Filed Oct. 24, 1922

Fig. 1

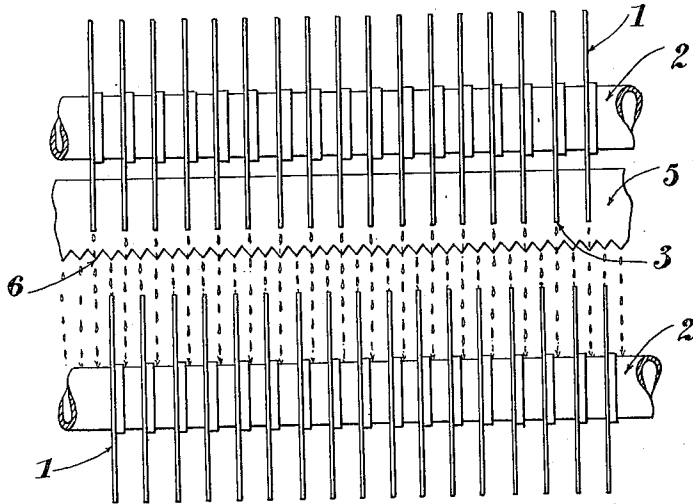
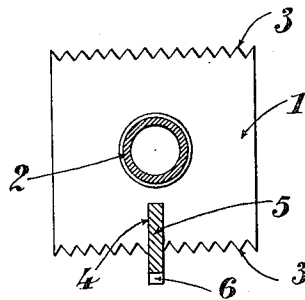


Fig. 2



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UNITED STATES PATENT OFFICE.

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AIR SCRUBBING AND COOLING DEVICE FOR ALTERNATORS.

Application filed October 24, 1922. Serial No. 596,696.

To all whom it may concern:

Be it known that I, MARIUS LÉON POURCEL, a citizen of the French Republic, residing at Paris, in the Republic of France, have invented new and useful Improvements in Air Scrubbing and Cooling Devices for Alternators, of which the following is a specification.

efficiency of the surfaces. These drawbacks are avoided by the improved arrangement which has for its object to render the whole surface active.

To this effect, the fins 1 are provided in their upper and lower parts with a set of cut-out parts 3 (Fig. 2) in the form of saw teeth.

Furthermore, each of the fins 1 has at its lower part a notch 4 of any shape for fitting in a strip of metal 5 of suitable form, connecting all the fins, and provided itself in its lower edge with a set of cut-out parts 6 also having the form of saw teeth.

By means of said construction, the natural tendency of a liquid to flow from points will be utilized, and the paths set out by these points will be followed by the liquid streaming over the surfaces, whereby said surfaces will be entirely utilized as filtering or scrubbing surfaces. In fact, the whole surface of the fins 1 will be wet and the strip 5 will distribute the liquid uniformly over its whole length, that is, it will automatically compensate the drawback which may arise from the staggered arrangement of the fins.

Obviously, the invention is not limited to the constructional details above described and represented which have been selected only by way of example.

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

1. A liquid distributing and spreading device for air scrubbing and cooling apparatus of alternators which comprises superposed tubes provided with fins and mounted in a substantially horizontal position, the fins having their upper and lower parts cut in the shape of saw teeth.

2. A liquid distributing and spreading device for air scrubbing and cooling apparatus of alternators, which comprises superposed tubes provided with fins and mounted in a substantially horizontal position, the fins having their upper and lower parts cut in the shape of saw teeth, and longitudinal strips extending through the fins at their lower part and having their lower edges cut in the shape of saw teeth.

In testimony whereof I have signed my name to this specification.

MARIUS LÉON POURCELL.

Witnesses:

W. R. SCOTT,
J. J. ROMAN.

This invention relates to improvements in the air scrubbing and cooling devices for alternators of the type wherein the air enters in contact with finely divided water or other liquid which washes and cools the same, said devices comprising a set of tubes provided with fins whereby the air current is divided into thin layers in an efficient manner, the said fins being sprinkled at the exterior by a suitable stream of water.

The present invention has for its purpose to render entirely active the whole of the said finned tubes, by making use of the natural tendency of liquids to flow from points, this being done by providing the fins at their upper and lower parts with a series of cut-out parts in the shape of saw teeth, and by connecting the fins together at their base by a strip of metal, or other material of suitable shape whose lower edge also has a series of cut-out parts in the shape of saw teeth.

In the accompanying drawing and by way of example:

Fig. 1 is an elevation view, partly in section, showing the improved construction.

Fig. 2 is a cross-section.

In air scrubbing and cooling devices for alternators which comprise a set of superposed tubes 2 provided with fins 1 and sprinkled by water or other liquid, it is difficult to obtain a regular distribution of the liquid over the fins and tubes.

Firstly, by reason of the relative coefficient of viscosity of the liquid used and of the irregularities inherent in the construction of the fins and tubes, it may happen that the bulk of the liquid will deviate considerably from the vertical and follow bodily a zigzag line across the whole set of tubes. Moreover, if, for example, the fins 1 of two or more tubes 2 are in staggered position, as shown in the drawing, it may happen that the liquid streaming on the fins of the upper tubes will drop without streaming over the fins of the row which is just underneath. These circumstances, which are difficult to avoid in practice, will bring about a reduced