

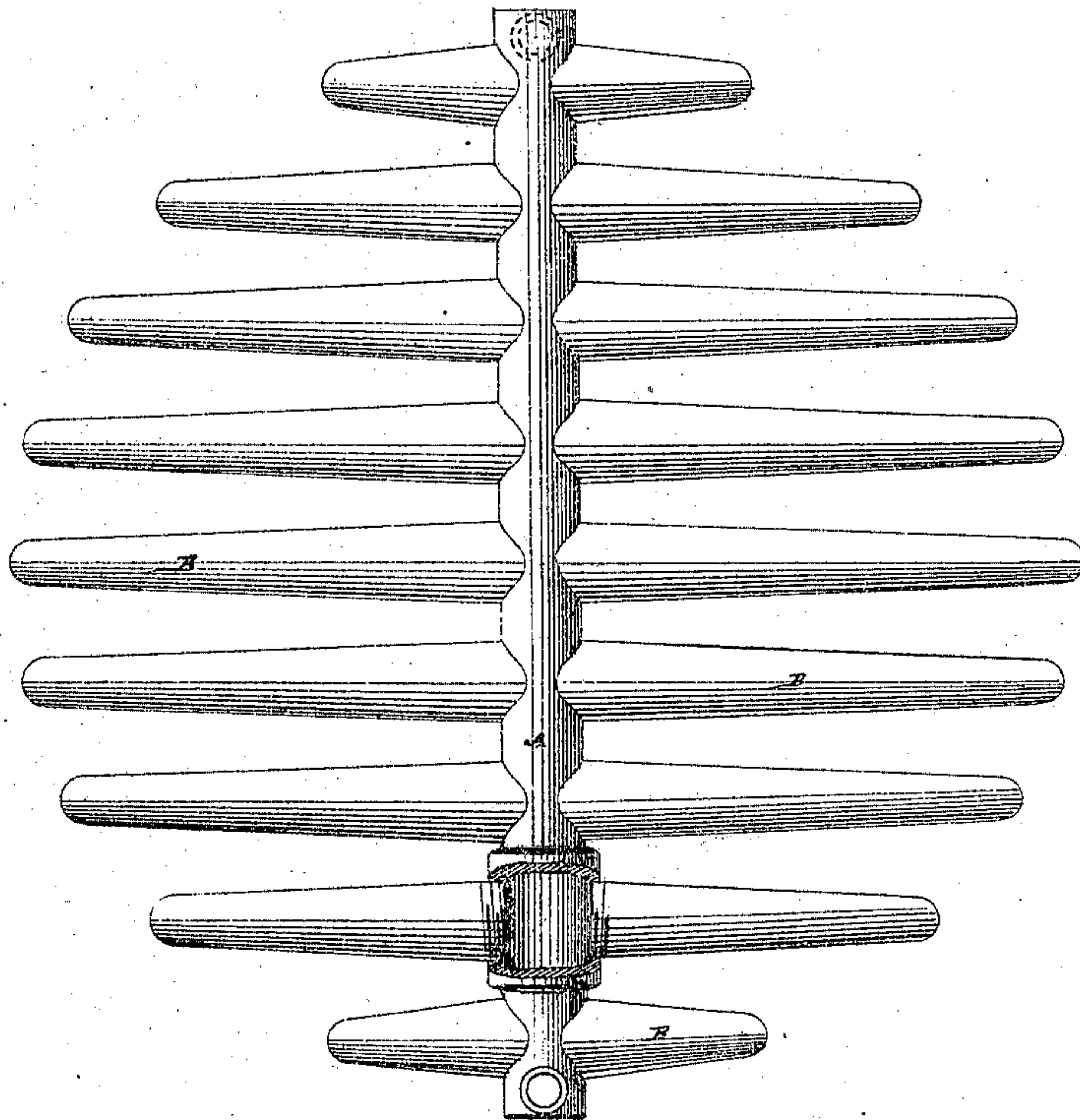
B. T. BABBITT.

Improvement in Apparatus for Heating and Evaporating  
Liquids by Steam.

No. 124,530.

Patented March 12, 1872.

*Fig. 1*



*Fig. 2*



Witnesses.

*W. R. Beechwith*  
*Thos. R. Howard*

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# UNITED STATES PATENT OFFICE.

BENJAMIN T. BABBITT, OF NEW YORK, N. Y.

## IMPROVEMENT IN APPARATUS FOR HEATING AND EVAPORATING LIQUIDS BY STEAM.

Specification forming part of Letters Patent No. 124,530, dated March 12, 1872.

*To all whom it may concern:*

Be it known that I, BENJAMIN T. BABBITT, of the city, county, and State of New York, have invented a new and useful Improvement in Heaters for Heating and Evaporating Liquids and various substances in pots and other vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a plan of my improved heater; and Fig. 2, a transverse section of the same.

Similar letters of reference indicate corresponding parts in both figures.

My invention consists in a tubular device of novel construction designed to be placed as an appendage within pots or other vessels the contents of which require to be heated or evaporated, and which is effected by steam, hot water, or air, made to circulate through said device. As it is preferred, however, to use steam for the purpose, the description of the device will here be made accordingly.

Referring to the accompanying drawing, the device as there represented consists of a central tube or stem, A, and branch tubes B, arranged to project from the stem on opposite sides and of different lengths—that is, successively shorter from the center of the stem toward either end of the latter on both or opposite sides of it—so that a circle struck from the center of the stem will circumscribe the ends of the stem and branches, whereby the device is better adapted to pots or vessels of circular form, compatible with the largest amount of heating-surface to be obtained from it. The branch tubes B are of a gradually diminishing and tapering form from their junction with the stem, into which they open, to their outer closed ends, so that any water of condensation arising from the use of steam will run back into and be discharged along with the spent steam out of the stem,

which latter is provided at its one end with an outlet, *b*, for such purpose, and at its other end with an inlet, *c*, said outlet and inlet being connected with suitable hose or tubes for establishing supply and circulation through the heater. The taper form of the tubes provides for the entrance of the steam and expulsion of the air, provision being thus made for the circulation of the steam and air along the inclined upper and lower surfaces of the tubes, along which the heavier fluid will flow downward while the lighter follows the upper incline. The branches B may either be cast in one piece with the stem or be separate from and screw into the stem, or the heater otherwise be formed in sections, as desired.

Heaters thus constructed may either be used separately or in groups, and will be found exceedingly convenient for heating or evaporating purposes generally when it is desired to apply the heat to the contents of the vessel direct, as by immersion of the heater therein. For culinary use, in hotels and other places, the device will be found very serviceable, as, for instance, for warming soups and other liquids or substances, by the simple attachment of a hose connecting the inlet of the heater with a steam-boiler, and another hose attached to its outlet to establish circulation and provide for escape, while the portability of the heater provides for its being readily transferred from one vessel to another.

What is here claimed, and desired to be secured by Letters Patent, is—

The heater, composed of a hollow stem, A, provided with an inlet and outlet at its opposite ends, and having tapering branch tubes B arranged to project from opposite sides of it, and made successively shorter from the center of the stem toward either end of the latter, substantially as specified.

BENJAMIN T. BABBITT.

Witnesses:

C. R. BECKWITH,  
THOS. R. LEWIS.