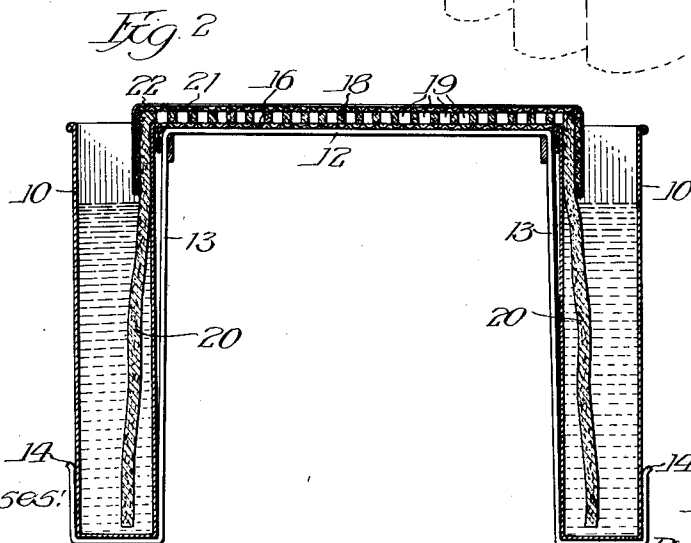
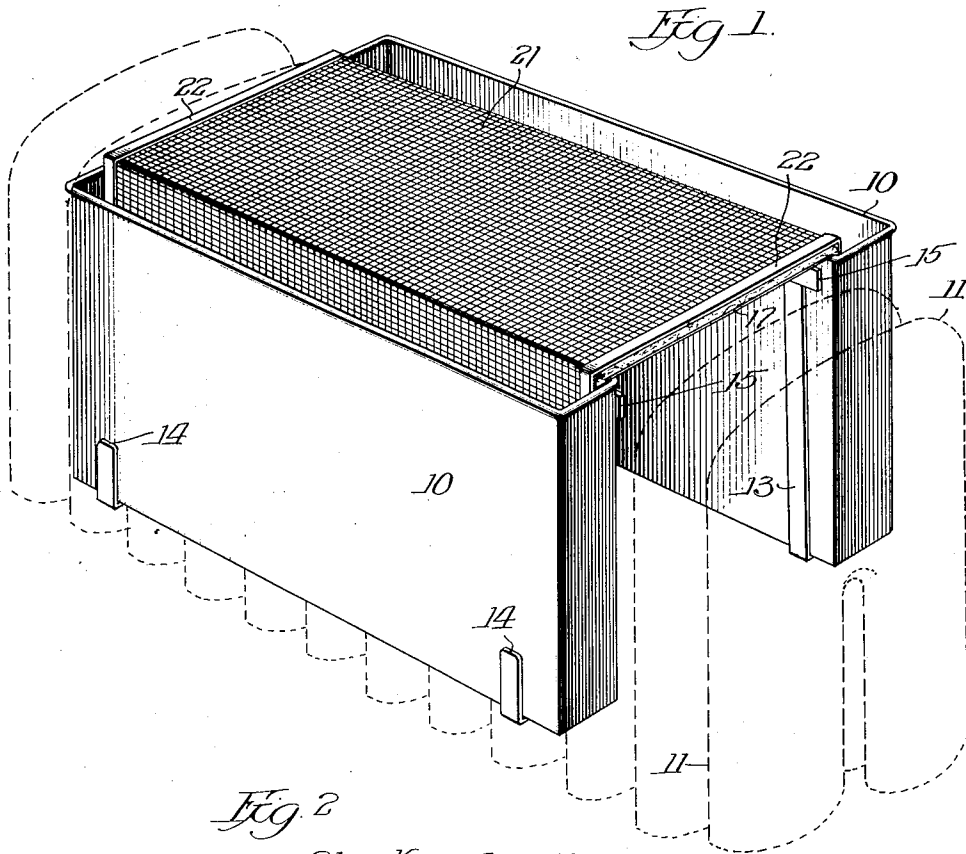


P. THILGES.
EVAPORATOR.
APPLICATION FILED MAY 10, 1912.

1,058,808.

Patented Apr. 15, 1913.

3 SHEETS—SHEET 1.



Witnesses:

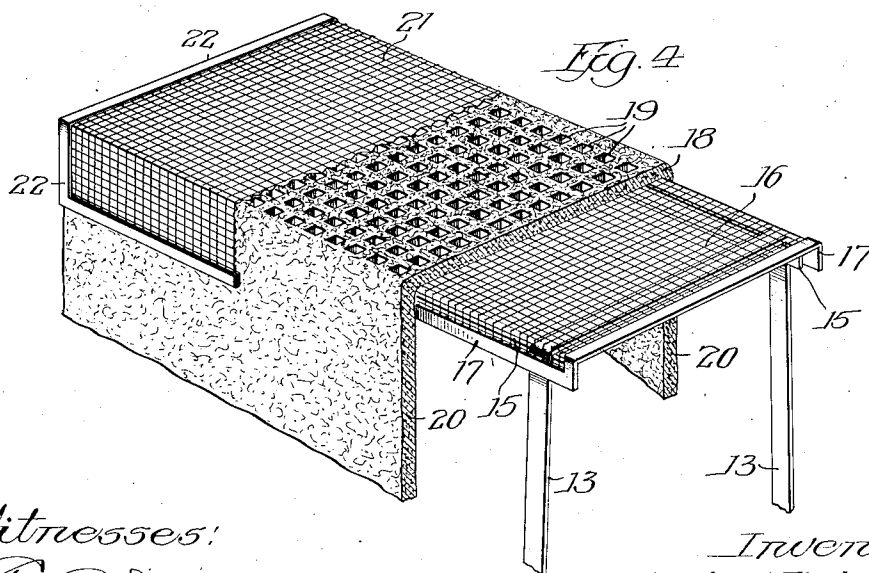
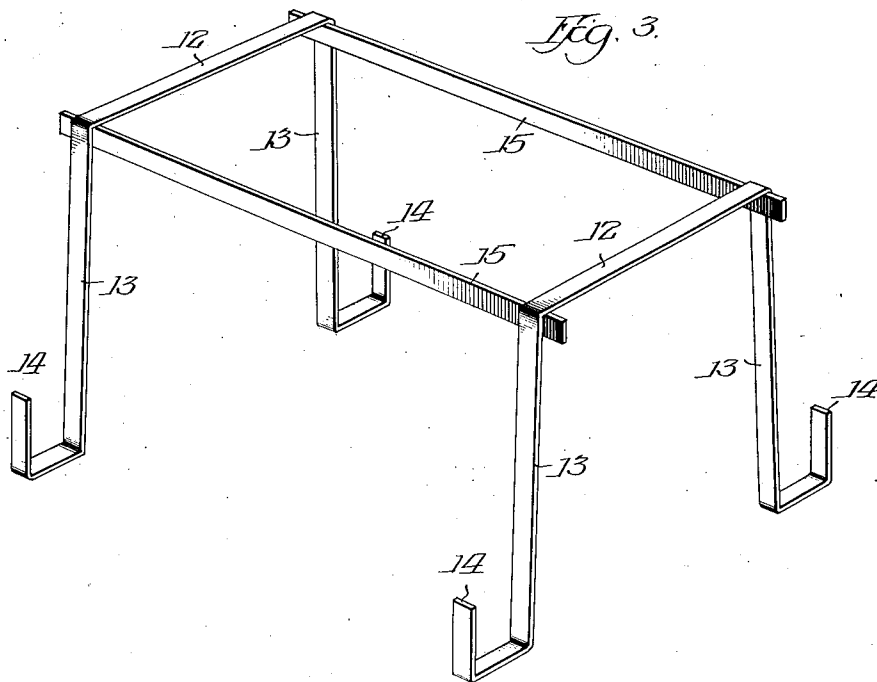
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3 SHEETS—SHEET 2.



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3 SHEETS-SHEET 3.

Fig. 5.

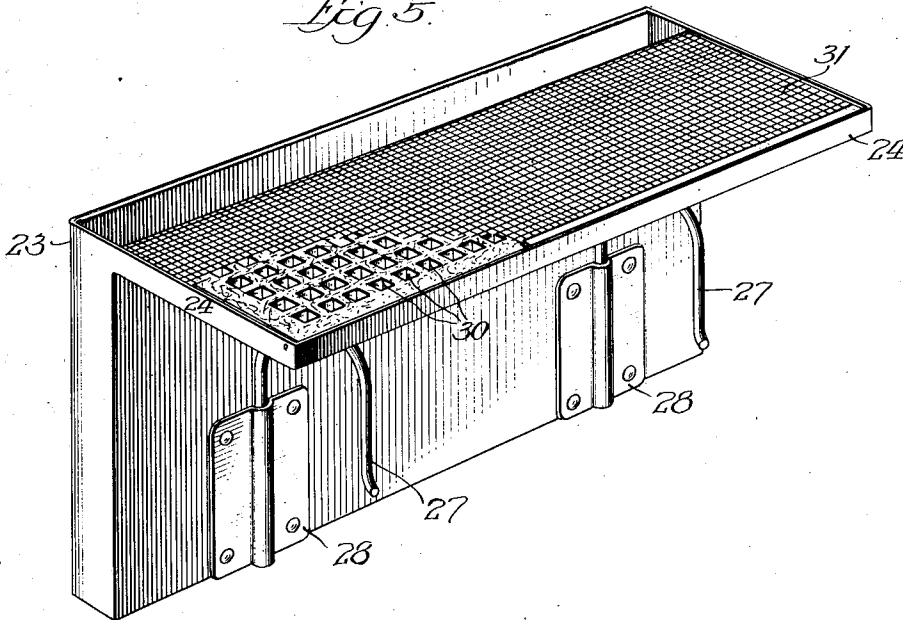
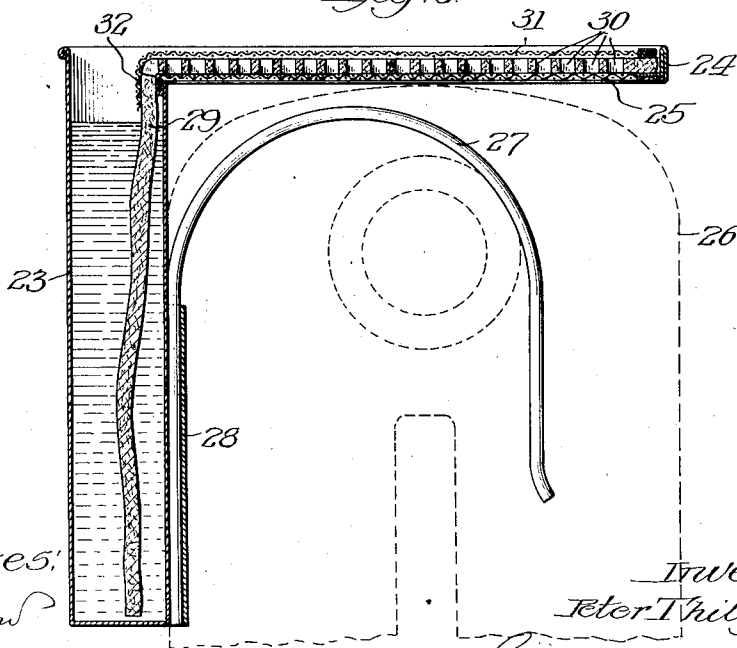


Fig. 6.



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UNITED STATES PATENT OFFICE.

PETER THILGES, OF KENOSHA, WISCONSIN, ASSIGNOR TO THE SIMMONS MANUFACTURING COMPANY, OF KENOSHA, WISCONSIN, A CORPORATION OF WISCONSIN.

EVAPORATOR.

1,058,808.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed May 10, 1912. Serial No. 696,300.

To all whom it may concern:

Be it known that I, PETER THILGES, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented new and useful Improvements in Evaporators, of which the following is a specification.

My invention pertains to improvements in humidors or evaporators employed to charge with water vapor the air from heated radiators, using the term radiator in a generic sense, whereby to humidify the air of heated rooms.

The object of my invention is to provide such a device wherein the evaporation of the water will be greatly facilitated, rendered continuous and proportioned more nearly than has hitherto been possible to the volume and temperature of the heated air to secure and maintain a proper degree of saturation. With these objects in view I provide improved means for supporting the water vessel adjacent the heater and an improved medium for conducting the water from the vessel and subjecting it to the action of the heated air having in mind the sightliness of the device as well as its efficiency for the purposes intended.

The invention as thus outlined will be fully understood from the following detail description of a preferred embodiment and a modified embodiment of the same based upon the accompanying illustrative drawings, wherein:

Figure 1 is a perspective view of the evaporator shown in assembled relation to one form of radiator. Fig. 2 is a vertical transverse section through the device shown in Fig. 1. Fig. 3 is a perspective view of the yoke or supporting member. Fig. 4 is a fragmentary perspective view partly in section showing the yoke and the absorbent pad and foraminous plates supported by said yoke. Fig. 5 is a perspective view of a modified form of evaporator, and Fig. 6 is a vertical transverse section through the form of the device shown in Fig. 5.

Referring to the drawings and more particularly to Figs. 1 to 4 thereof the evaporating device consists of one or more vessels 10 of flattened elongated rectangular shape adapted to be supported one upon each side of the radiator 11 by means of the yoke or saddle member shown in Fig. 3. The yoke may advantageously consist of a pair of

transverse members 12, 12 each provided with depending members 13, 13 terminating below in upturned hooks 14, 14, the pair of members connected by longitudinal members 15, 15 secured at the intersection of the transverse and depending members. This yoke is adapted to sit astride the radiator 11 and to support within the hooks 14 upon the opposite sides of the radiator the water vessels 10 after the manner of a pair of saddle bags, as shown in Fig. 1. The length of the depending members 13, 13 is substantially the same as the height of the vessels 10 and so that the rims of the vessels occupy substantially the same horizontal plane as the transverse members 12.

Supported upon the transverse members 12 is a foraminous plate 16 advantageously formed of woven wire cloth reinforced by a marginal binding 17 the sides of which are preferably downwardly turned to confine the same upon the yoke whereby to form a shelf extending laterally between the rims of the vessels, as shown in Figs. 2 and 4. An absorbent sheet 18 of a suitable fabric and preferably wool felt has its medial portion provided with a plurality of perforations 19 by means of a die or any other suitable manner while the end portions 20, 20 are preferably imperforate and of such texture as to facilitate transmission of water by capillary action. This sheet is so disposed with its medial perforate portion upon the shelf 16 that the imperforate portions 20, 20 depend one within each of the vessels 10, 10 extending substantially to the bottom thereof. Above the shelf and upon the absorbent sheet 18 is disposed a foraminous cover plate 21 likewise advantageously formed of woven wire cloth marginally reinforced by a binding 22 and bent downwardly along its two sides within the upper portion of the vessels 10, 10 to overlie and securely hold in place upon the shelf and within the vessels the sheet 18.

The vessels 10 having been filled with water, as indicated in Fig. 2, the water is by the capillary action of the fabric 18 carried upward and laterally from both sides so as to maintain the medial perforate portion of the sheet in a saturated condition. The heated air arising from the radiator passes freely through the foraminous shelf 16, the perforated sheet 18, and the foraminous cover 21 evaporating the water in the

saturated sheet whereby such air is properly charged with water vapor.

It will be readily understood that a device thus constructed is comparatively inexpensive to manufacture and by reason of the facility with which the parts may be disassembled and assembled the absorbent sheet can be readily removed for renewal or cleansing, the vessels 10 may be filled without removal, or they may be readily detached if desired for cleansing, the removal of sediment, etc.

I have discovered that while other forms of absorbent sheets may be used in a device of this character if properly divided to permit the passage therethrough of the heated air, yet perforated felt possesses many advantages over other absorbent fabrics because of the uniformity with which the water is carried by capillary action therein and the facility with which the water is evaporated from the belt by the heated air passing therethrough.

In Figs. 5 and 6 I have shown a modified form of the invention wherein a single water vessel 23 is employed having formed rigidly therewith a skeleton shelf 24 extending laterally from the rim thereof and supporting the foraminous plate 25 of suitably bound woven wire. In this form of the invention the water vessel 23 is suspended from the radiator 26 by means of a pair of hooks 27, 27 pivotally connected to the rear face of the vessel 23 by the ears 28, 28. In this embodiment, as in the other, a sheet of felt is employed having its lower portion 29 depending below the surface of the water in the vessel 23 while its upper perforated portion 30 rests upon the foraminous shelf 25 and is held in place by the foraminous cover 31 resting thereon and downwardly bent at 32 into the upper portion of the vessel. In this case the vessel is supported upon one side of the radiator with the foraminous shelf and perforated sheet overhanging the same and traversed by the heated air arising from the radiator.

I claim—

1. In a device of the character described, a water supply vessel adapted to be supported adjacent a radiator, and a sheet of perforated absorbent material of close texture disposed within the vessel and extending therefrom in the path of the heated air currents, substantially as described.

2. In a device of the character described, a water supply vessel, means to support the same adjacent a radiator, a sheet of felt disposed within the vessel and having a perforated portion extending therefrom and exposed to the heat from the radiator, substantially as described.

3. In a device of the character described,

a water supply vessel, means to support the same adjacent a radiator, and a sheet of wool felt having an imperforate portion disposed within the vessel and a perforated portion extending therefrom laterally, and means to support such lateral extension across the path of the ascending heated air currents, substantially as described.

4. In a device of the character described, a yoke adapted to overlie the radiator, a pair of water vessels supported by the yoke one on each side of the radiator, a foraminous shelf extending between the rims of the vessels above the radiator, and a sheet of absorbent material having its ends disposed within the two vessels and a medial permeable portion supported on the foraminous shelf above the radiator, substantially as described.

5. In a device of the character described, a yoke adapted to overlie the radiator, a pair of water vessels supported by the yoke one on each side of the radiator, a foraminous shelf extending between the rims of the vessels and above the radiator, and a sheet of absorbent material having its ends disposed within the two vessels and its medial portion supported on the foraminous shelf, the medial portion of the sheet provided with openings to permit the passage of air therethrough, substantially as described.

6. In a device of the character described, a yoke adapted to overlie the radiator, a pair of water vessels supported by the yoke one on each side of the radiator, a foraminous shelf extending between the rims of the vessel above the radiator and supported by the yoke, and a continuous sheet of felt having its ends disposed within the two vessels and its medial portion supported on the foraminous shelf, the medial portion of the sheet provided with openings to permit the passage of air therethrough, substantially as described.

7. In a device of the character described, a yoke adapted to overlie the radiator and provided with dependent hooks, a pair of water vessels supported within the hooks of the yoke one on each side of the radiator, a foraminous shelf extending between the rims of the vessels above the radiator and supported by a yoke, and a continuous sheet of felt having its end portions imperforate and disposed within the two vessels and its medial portion perforated and supported on the foraminous shelf and a foraminous cover sheet overlying the felt on shelf, substantially as described.

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Witnesses:

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A. R. DANIELS.