April 7, 1953 C. E. JONES 2,633,647

ELECTRIC HEATER AND FAN

Filed March 8, 1950 2 SHEETS—SHEET 1

Fig. 1

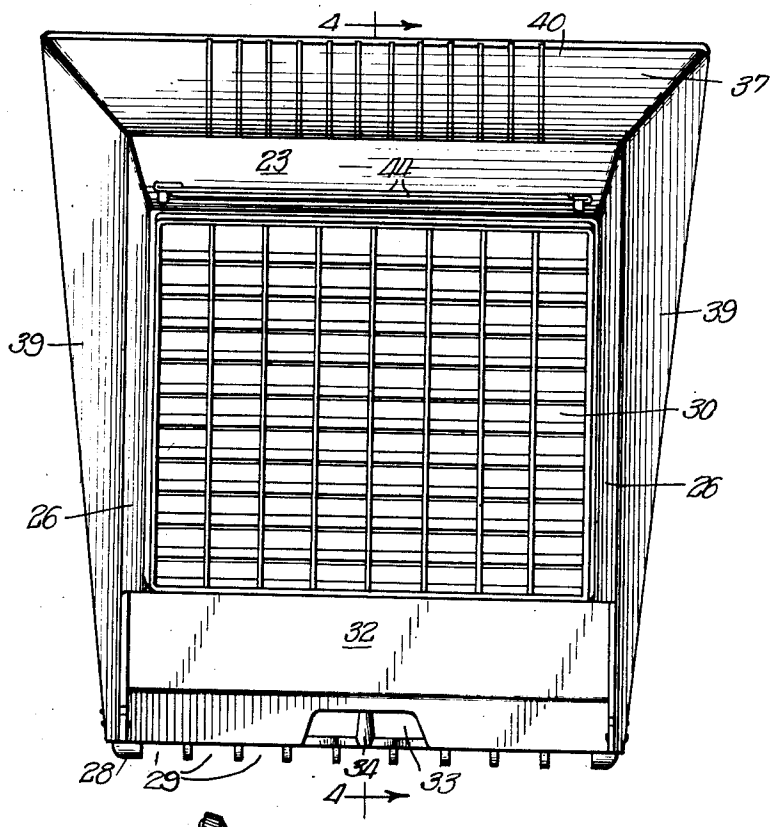
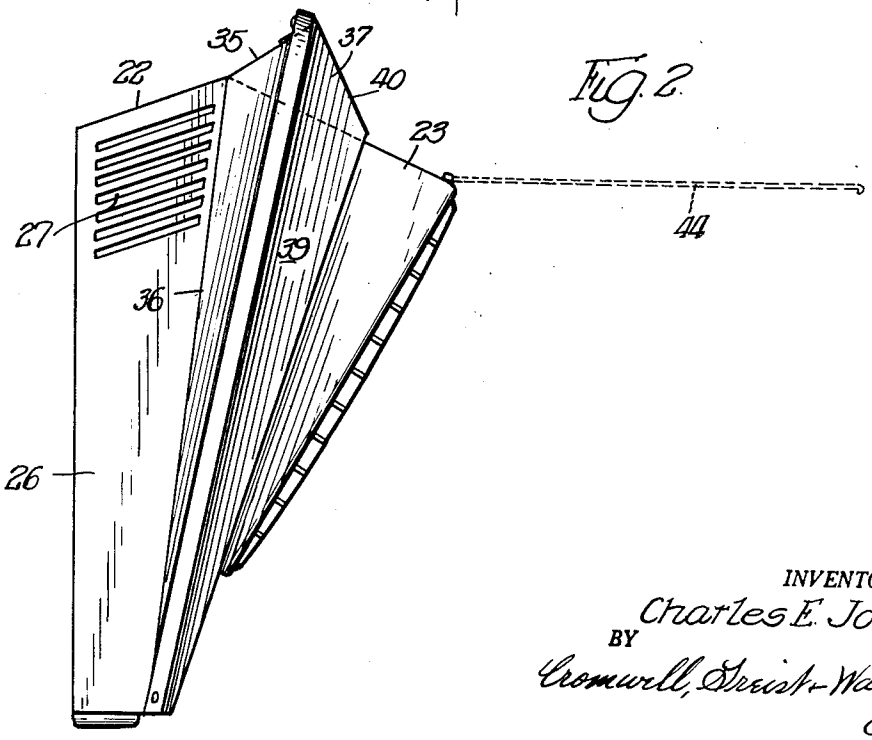


Fig. 2



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Fig. 3.

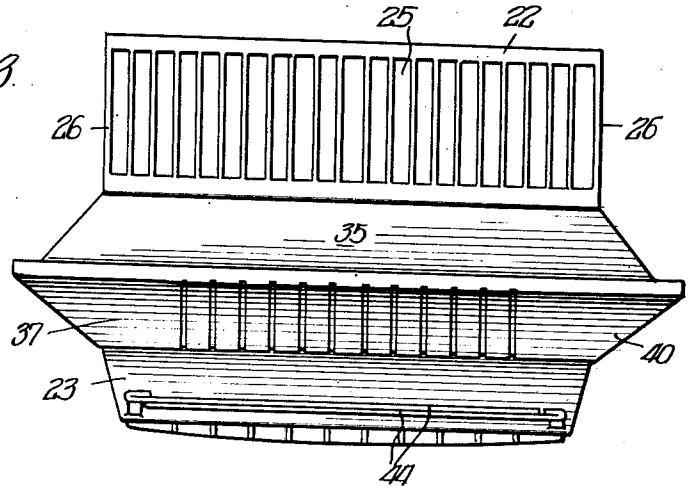
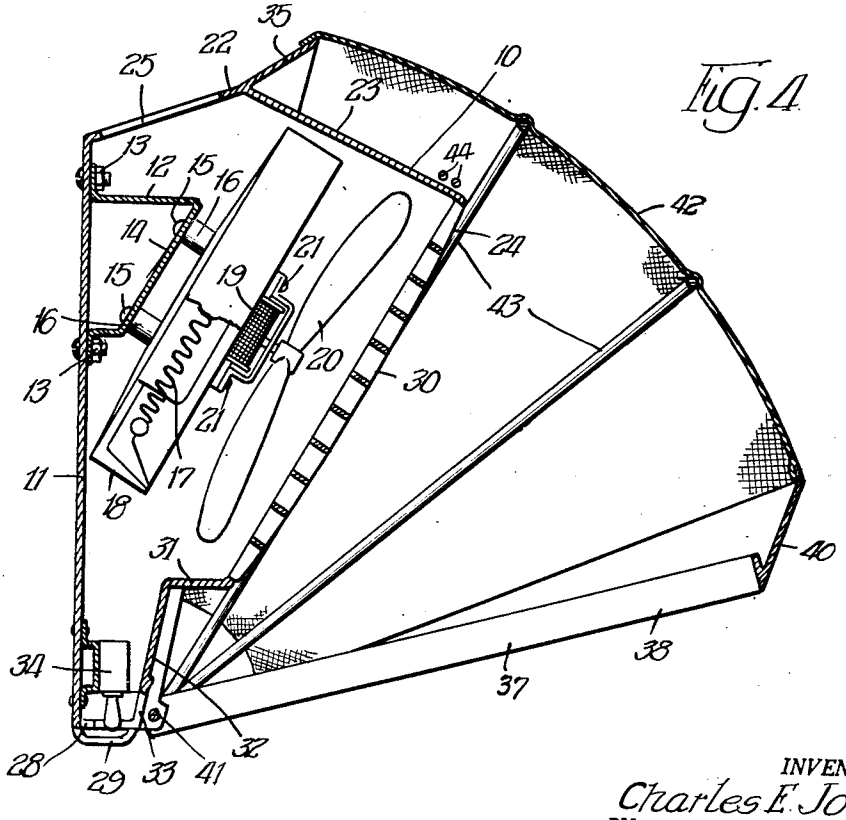


Fig. 4.



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ELECTRIC HEATER AND FAN

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7 Claims. (Cl. 34—99)

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This invention relates to an electric heater and fan combination, and it is more particularly concerned with a device of this character which is adapted to be supported on a wall or similar support.

It is a general object of the invention to provide a combination electric fan and heater unit which is constructed and arranged so that it may be supported in an inclined position on a vertical wall or similar support and which, when the fan and heater are operated, will direct a stream of warm air at an angle downwardly and away from the support on which it is secured.

It is a more specific object of the invention to provide a device adapted to be secured to a wall or similar support which comprises electric fan and heater units mounted in a casing of generally triangular cross section, the fan and heater units being so arranged that they will supply a stream of heated air through a downwardly and outwardly opening grilled side wall in the casing and a movable frame connected to the casing by a foldable bellows adapted to form a hood therefor.

Another object of the invention is to provide an electric heater and fan combination in which the fan and heater mechanisms are enclosed in a generally triangular casing, which casing supports a U-shaped movable frame pivotally connected to the bottom thereof and having a collapsible hood member connecting the same with the top and sides of the casing so that the hood may be lowered into a generally horizontal position for intercepting warm air delivered by the fan, whereby to provide a hair drying device.

Another object of the invention is to provide a device of the character described wherein foldable article supporting rod members are pivotally mounted adjacent the upper edge of the casing.

These and other objects of the invention will be apparent from a consideration of the device which is shown by way of illustration in the accompanying drawings, wherein:

Fig. 1 is a front elevation of a combination electric heater and fan device embodying the principles of the invention, the device being shown in position in which it is attached to a vertical wall or other similar support;

Fig. 2 is a side elevation of the device;

Fig. 3 is a top view of the device; and

Fig. 4 is a vertical section, taken generally on the line 4—4 of Fig. 1, with the hood in extended position.

Referring now to the drawings, there is illustrated a device which incorporates the principles

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of the invention and which is particularly adapted to be supported on the wall of a bathroom, or the like, where it may be used as a fan or heater generally, or as a hair drier.

The illustrated device comprises a casing 10 which has a vertical cross section generally triangular in shape as shown more particularly in Fig. 4. The casing 10 includes a back member or wall 11 which is adapted to be arranged in vertical position and to be secured to an upstanding wall or other supporting member (not shown).

At the top of the back casing member 11 an angular bracket 12 is secured by means of bolts 13. On the forward member 14 of the bracket 12 which is arranged at an upwardly and outwardly sloping angle relative to the vertical back wall 11 a combination fan and heater arrangement is secured in spaced relation thereto by bolts 15 and spacer sleeves 16. The arrangement comprises two or more heating elements 17 mounted on a suitable insulated support or reflector member 18, which is secured by the bolts 15 to the bracket 12. A fan including motor 19 and fan blade 20 is also secured to the support 18 by bolts 21 or other fastening elements. Alternately, the fan may be secured directly to the supporting bracket member 14. The fan blade 20 is arranged at an angle to the wall 11 so that it directs air outwardly and downwardly relative to the back casing member 11.

The casing 10 includes a top section comprising rear portion 22 which extends upwardly at a slight angle from the upper marginal edge of the back member 11 and a front portion 23 which extends downwardly and forwardly from the front margin of rear portion 22. The front top portion 23 terminates at the top edge of a downwardly and rearwardly sloping front member 24. The rear portion 22 is provided with spaced parallel transverse slots 25 to admit air to the fan.

Parallel side wall members 26 extend downwardly and in generally parallel relation from the end or side marginal edges of the top forming members 22 and 23. The side wall members 26 are slotted at 27 to permit air to be drawn in from the side. The side walls 26 are somewhat narrower at the bottom than the top and a relatively narrow bottom wall 28 connects the bottom marginal edges thereof, extending across the bottom of the casing 10 in a generally horizontal direction. The bottom wall 28 is slotted at 29 to provide for the circulation of air from the bottom of the casing. The front wall 24 comprises an upper grid-like arrangement 30 which ex-

tends down toward the bottom wall 28 a sufficient distance to accommodate the air delivered by the fan blade 20. The front wall 24 is offset at 31 adjacent the bottom edge to provide a panel-like portion 32 extending to the bottom wall 28.

The front panel portion 32 is recessed or slotted at 33 adjacent the lower center to provide access to a switch 34 which controls the current delivered to the heating elements 17 and the fan motor 19.

The top wall of casing 10 is provided with an apron member 35 extending outwardly and upwardly from the meeting edges of portions 22 and 23 and the side walls 26 are provided with a similar apron member 36 forming a continuation of the apron member 35 but being tapered to a point adjacent the lower forward side edges of the front panel member 32.

A generally U-shaped frame 37 is hinged to the bottom forward end edges of the casing 10 which consists of a rim portion 38, rearwardly sloping side wall members 39 which are narrower at the bottom than at the top, and a connecting top portion 40 which extends in a sloping direction upwardly and rearwardly from the rim portion 38. The rim portion 38 is secured at the bottom ends by bolts 41, or other means, to the side wall members 26 so that the frame 37 may swing from a position telescoping the forward portion of the casing 10 to a position generally horizontal and extending outwardly from the same. The wall portions 39 and 40 of the frame 37 are connected at their rear edges to the forward edges of a foldable or collapsible hood 42 which is connected at its opposite edges with the outwardly extending apron members 35 and 36. The hood 42 is supported intermediate its edges by a plurality of U-shaped rod-like frame members 43 which are also pivotally connected at their bottom ends by the bolts 41 to the side wall members 26 of the casing 10. The frame 37 is adapted to swing from a closed position as in Fig. 2 to an open position as in Fig. 4. In the closed position the frame 37 is positioned closely adjacent the apron 35, 36 with the hood folded and enclosed between the frame 37 and the apron 35, 36.

A pair of elongate wire-like rods 44 are each pivoted at one end on the top portion 23 of the casing 10. The rods 44 are adapted to swing outwardly of the casing 10 into a horizontal position to support clothing or small articles which may be hung thereon and extend downwardly into the path of the air delivered by the fan blade 20 through the grid 30 of the front wall 24.

The hood 42 may be replaced by a bellows or accordion type hood of suitable material and intermediate supporting members 43 may be omitted. Also the hood need not fold into the space below the apron 35 and frame 37.

The device of the present invention is particularly adapted to be supported on the wall of a bathroom or in a similar place where a stream of hot air is frequently desired. The hood 42 combined with the frame 37 permits the device to be used for hair drying or similar purposes. When the frame 37 is in the downward position extending generally horizontally from the wall or other supporting structure the air from the fan blade 20 will be directed to the hood 42 downwardly onto a person seated beneath the device.

The fan 20 and heat unit or units 17 are supplied with current from a suitable source and controlled by the switch 34 so that they may be used in combination to deliver through the grid 30 a stream of warm air or they may be used separately, as desired.

While specific details of construction and materials have been referred to in describing the illustrated form of the invention, it will be understood that other materials and other details of construction may be resorted to within the spirit of the invention.

I claim:

1. In a wall mounted heater and fan, a casing having a wall engaging back member and a perforated front member, said front member being arranged in angular spaced relation to said back member, an electric fan and heater unit mounted in said casing with the fan arranged to direct a stream of air through said perforated front member, an inverted U-shaped frame having the ends of the leg members thereof pivotally connected to the bottom of said casing and having the body thereof adapted to swing outwardly of said casing, and a collapsible hood connecting the body of said frame with said casing.

2. In a wall mounted heater and fan as recited in claim 1 and intermediate inverted U-shaped members pivotally connected at the ends thereof to the bottom portion of said casing to support said hood in extended position forwardly of said casing.

3. In a combination heater and drier, a supporting casing for an electric heater and fan construction, said casing comprising a back member adapted to be supported from an upstanding wall or the like, a top member, generally triangular side members and a front member extending outwardly and upwardly relative to said back member, said front member having a perforated portion, means for supporting an electric fan and heater in said casing with the fan arranged parallel to the front casing member, and an extensible hood secured to said casing and adapted to be extended outwardly of the same.

4. In a combination heater and drier, a supporting casing for an electric heater and fan construction, said casing comprising a back member adapted to be supported from an upstanding wall or the like, a top member, generally triangular side members and a front member extending outwardly and upwardly relative to said back member, said front member having a perforated portion, means for supporting an electric fan and heater in said casing with the fan arranged parallel to the front casing member, and a foldable hood secured to said casing and adapted to be opened out into a forwardly extending position relative to said casing.

5. In a combination heater and drier, a supporting casing for an electric heater and fan construction, said casing comprising a back member adapted to be supported from an upstanding wall or the like, a top member, generally triangular side members and a front member extending outwardly and upwardly relative to said back member, said front member having a perforated portion, means for supporting an electric fan and heater in said casing with the fan arranged parallel to the front casing member, an inverted U-shaped frame swingably secured at its ends to lower portions of said casing side members and a foldable hood forming member connected to said casing and said frame.

6. In a combination heater and drier, a supporting casing for an electric heater and fan construction, said casing comprising a back member adapted to be supported from an upstanding wall or the like, a top member, generally triangular side members and a front member extending outwardly and upwardly relative to said

back member, said front member having a perforated portion, means for supporting an electric fan and heater in said casing with the fan arranged parallel to the front casing member, an inverted U-shaped frame swingably secured at its ends to lower portions of said casing side members, a foldable hood forming member connected to said casing and said frame, and an apron extending forwardly and outwardly of the top and side casing members, said hood being secured to said apron and being foldable between said apron and said U-shaped frame when the latter is swung to a position adjacent said casing.

7. In a combination heater and drier, a supporting casing for an electric heater and fan construction, said casing comprising a base member adapted to be supported in vertical relation from a wall or other support, a top member, side members and a front member having a perforated portion extending in an outwardly and upwardly inclined relation to said base member, bracket means in said casing for supporting an electric fan and heater with the fan and heater arranged to direct a stream of heated air through

the perforated portion of said front casing member, and an extensible hood secured to said casing and adapted to be extended from a collapsed position adjacent the top and side members to an extended position outwardly of said front casing member.

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