

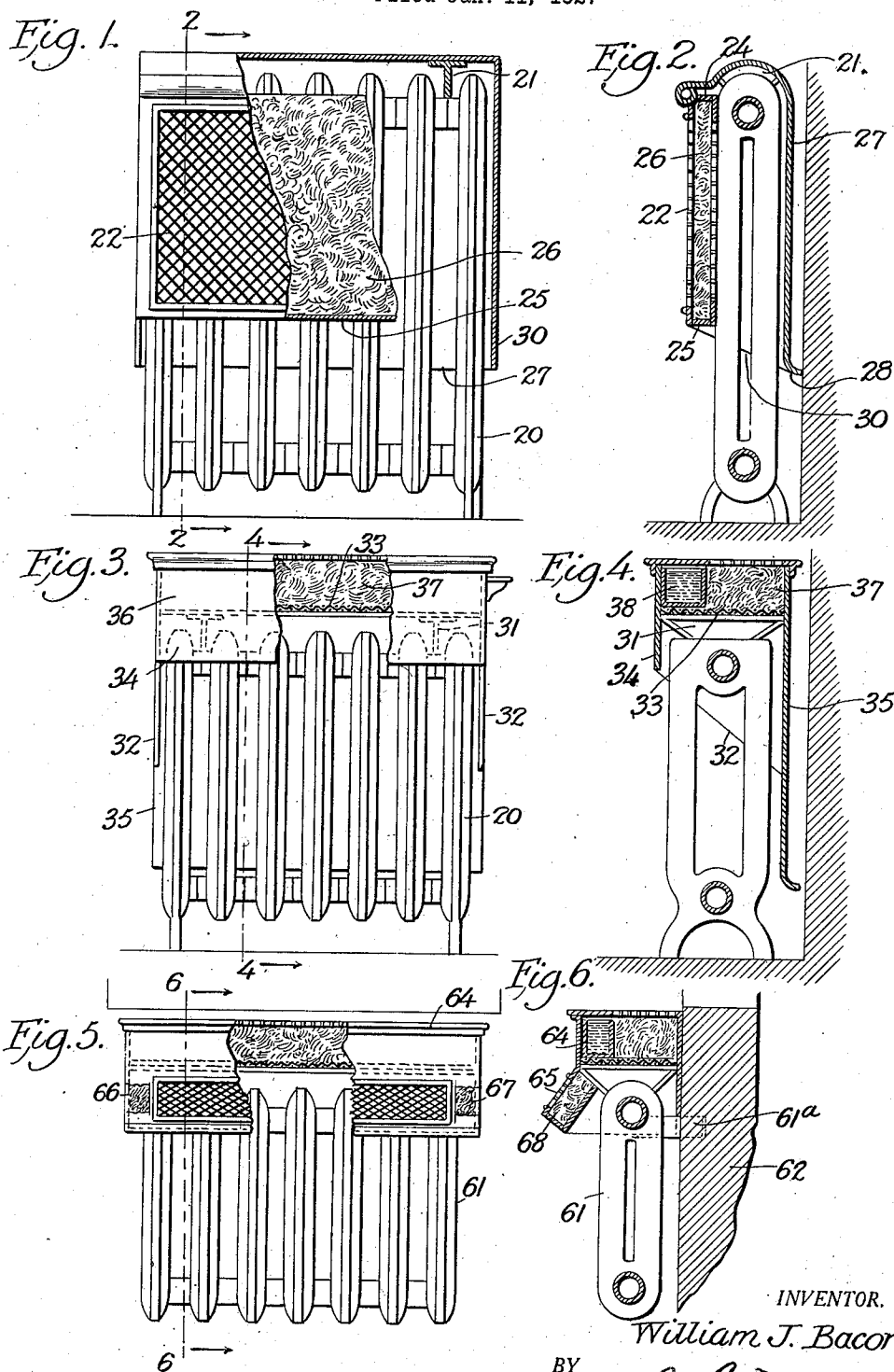
Feb. 28, 1928.

1,660,666

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AIR STRAINER FOR HEATING UNITS

Filed Jan. 11, 1927



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## UNITED STATES PATENT OFFICE.

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## AIR STRAINER FOR HEATING UNITS.

Application filed January 11, 1927. Serial No. 160,430.

The invention relates to air strainers for heating units, such as radiators, registers or stoves for heating rooms, and has for its object to provide a device of this character adapted to be placed in close proximity to the heating unit and provided with a chamber in which screening material, such as metal wool, is placed and through which air passes in its movement adjacent to the heating unit in being heated, thereby separating the dust and dirt from the air and thus preventing the deposit of dirt on the walls, ceiling and other objects in the room.

A further object is to provide means adjacent to the air strainer, such as metal flanges, which will cause air that circulates in proximity to the heating unit, such as a radiator, a register or a stove, to pass through the air strainer and thereby remove the dust and dirt from the air as it is being circulated and heated in the room.

A further object is to provide the air strainer with a removable apertured cover forming a closure for the screening material compartment, thereby allowing access to the screening material for renewal or cleaning purposes.

A further object is to provide the bottom of the screening material compartment with a screen preferably made from wire mesh material through which the air may pass to the screening material.

A further object is to provide, in combination with an air strainer for heating units, a fluid container for disinfecting the air or increasing the moisture in the air of the room in which the heating unit is placed.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

Figure 1 is a view in elevation of a conventional form of radiator supported from the floor showing the air strainer applied thereto on the side of the radiator in combination with a deflector.

Figure 2 is a vertical transverse section taken on line 2—2 of Figure 1.

Figure 3 is a view in elevation of a radiator supported from the floor showing the

air strainer applied to the top of the radiator.

Figure 4 is a vertical transverse section taken on line 4—4 of Figure 3.

Figure 5 is a view in elevation of a conventional form of radiator attached to the wall of the room showing the air strainer applied to the top, front and ends of the radiator, and

Figure 6 is a vertical transverse sectional view taken on a line 6—6 of Figure 5.

Referring to Figures 1 and 2 of the drawings the numeral 20 designates a heating unit such as a conventional form of radiator supported from the floor which may be any type and on which air strainer is removably located by supports 21. The air strainer shown in Figures 1 and 2 comprise perforated members 22 and 23 which are connected together with top and bottom plates 24 and 25 and in which is disposed the screening material 26, such as steel wool. The casing formed by the members 22, 23, 24 and 25 is detachably fastened to a shield 27 that covers the top of the radiator 20 and is disposed back of the radiator 20. The shield is flared at the bottom as at 28 to prevent air from passing between the shield 27 and the wall 29 and has end members 30.

Referring to Figures 3 and 4, the air strainer is disposed above the radiator 20, and supports 31 hold the air strainer in position. The casing of the air strainer comprises a perforated base 33, sides 32, 34 and 35 and a detachable perforated covering 36. Disposed inside of the casing is the straining material 37, such as steel wool, and a fluid receptacle 38. The fluid receptacle 38 is a receptacle for holding fluid or other substance for sterilizing or humidifying the atmosphere of the room.

Referring to Figures 5 and 6, the radiator 61 is supported from the wall 62 by brackets 61<sup>a</sup>. An air strainer 64 is superimposed above the radiator 61 and is constructed similar to the air strainer shown in Figures 3 and 4. In addition to the air strainer 64, the numerals 65 and 66 designate side and end air strainers. The side air strainer 65 depends at an angle from the air strainer 64 and the air strainer 66 depends from the ends of the strainer 64. The air strainers 65 and 66 are constructed similar to the air strainer 64

having a perforated casing containing air straining material 68, Fig. 6, such as steel wool.

The principle on which the air strainer operates is that the cool air in the room circulates near the floor and is drawn towards the heating unit and in moving towards the heating unit picks up the fine particles of dirt and dust and carries them into the radiating area of the heater. These particles of dirt and dust, when heated, become pliable so that they will readily stick to the walls, ceiling and other objects in the room while still warm and when these particles cool off they remain where they have been deposited and fastened to the walls, ceiling and other objects in the room.

From the foregoing it will be seen that an air screen for a heating unit is provided which may be easily and quickly applied to a conventional form of radiator, register, stove or other heating unit without materially varying the construction thereof; and, that air that circulates in close proximity to the heating unit will pass through a screening material thereby separating the

dirt and dust therefrom and preventing the deposit of said dirt and dust on the walls, ceiling and other objects in the room; and, that the air in so passing in proximity with the heating unit may be sterilized and humidified.

The invention having been set forth what is claimed as new and useful is:—

An air strainer for radiators comprising a compartment at the upper end of the radiator for holding loose fibrous material, said compartment having perforated top and bottom members, means depending at all sides of the device to cause substantially all the air from the radiator to pass through said loose fibrous material and said perforated members; transverse supports resting on intermediate parts of the radiator for holding the air strainer in place, and means to engage a wall at the rear of the radiator to prevent air currents from passing between the air strainer and the wall.

In witness whereof I have affixed my signature.

WILLIAM J. BACON.