

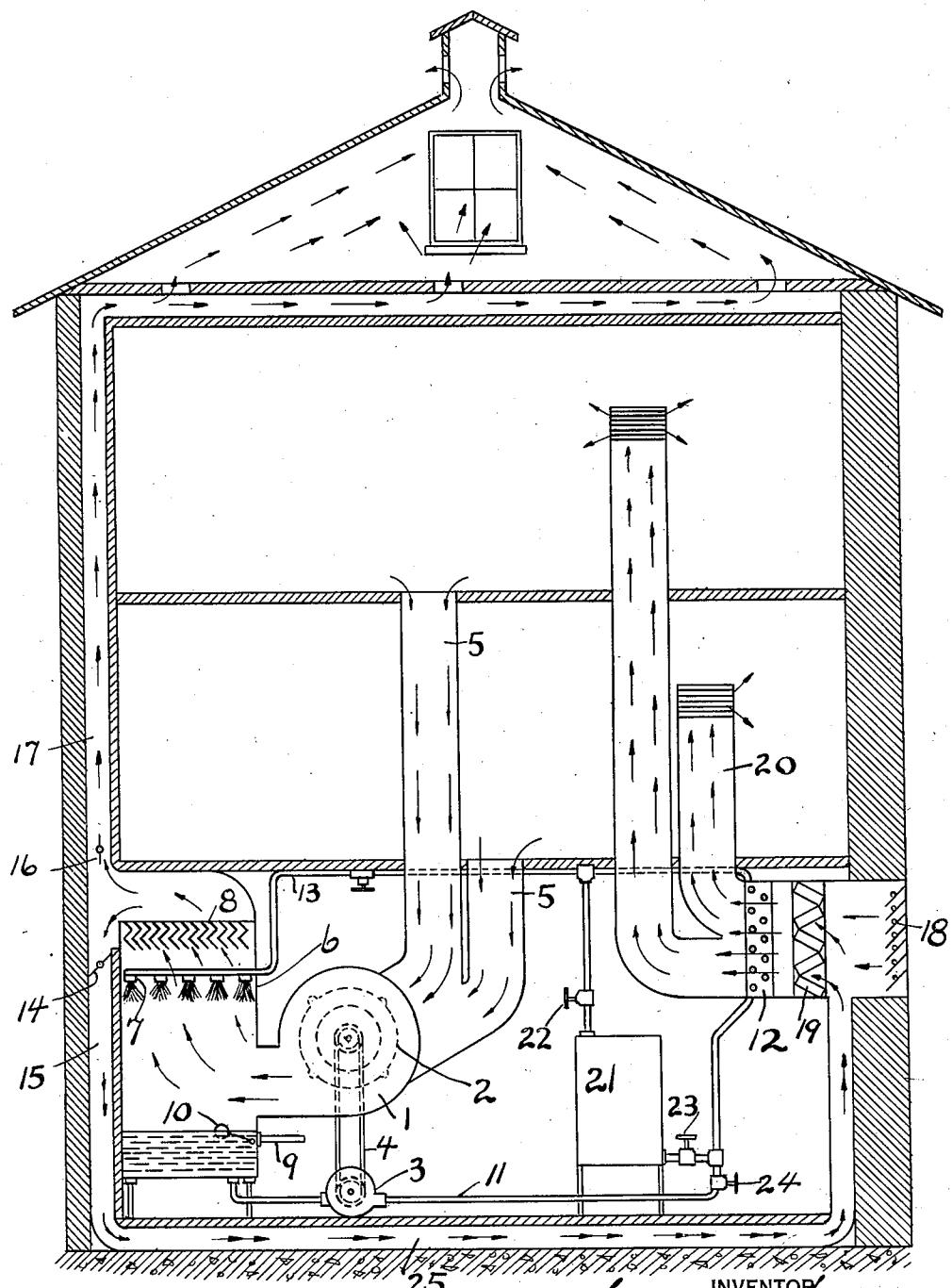
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PROCESS OF COOLING AND VENTILATING

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PROCESS OF COOLING AND VENTILATING

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3 Claims. (Cl. 62—171)

This invention relates to cooling and ventilating and has for its object an improved process which is extremely simple and reliable in operation as well as economical, and inexpensive.

Various other objects and advantages will be apparent from the following description of the embodiment of the invention, and the novel features will be particularly pointed out hereinafter in connection with the appended claims.

The accompanying drawing illustrates my process of cooling and ventilating diagrammatically.

Referring now to the drawing, the figure indicates a cross-sectional cut of a residence showing a basement, first and second floor and an attic.

The numeral 1 indicates an air blower operated by the motor 2, which motor also operates a water pump 3, which pump is driven from the motor 2 by the belt 4. The intake of the air blower is connected to the first and second floor rooms as shown in the drawing by ducts indicated by the numeral 5. The discharge from the air blower is connected to a tank 6, in which is located a multiplicity of water spray nozzles 7. Said tank is provided near the top with a series of baffle plates 8, which plates serve the purpose of preventing unevaporated water from passing with the air out of the tank 6. Said tank 6 is connected near the bottom with the water pipe 9 connected to the city water pressure. A float valve 10 controls the level of the water in the tank so that additional makeup water will be supplied through the pipe 9 as the water is evaporated by the air passing through the water sprays. The air blowing through the water sprays will evaporate water and cool same. Said cool water will be pumped from the bottom of the tank 6 by the pump 3, through pipe 11, through the cooling coil 12, and through the pipe 13 to the water sprays before mentioned.

The numeral 14 indicates a damper located in a duct 15, which damper is normally closed during the warm weather when it is desirable to cool the living rooms of the house. The numeral 16 indicates a damper located in the duct 17, which damper is normally open during the warm weather when it is desirable to cool the living rooms of the house. The duct 17 leads up through the side walls of the house taking up heat from said walls, preferably passing over the top wall of the upper rooms of the house into the attic and then out to the atmosphere.

When the motor 2 is in operation running the blower 1 and water pump 3, water will be pumped as before described and air will be sucked from the rooms through the pipes 5 and discharged through the blower as before described. By virtue

of the operation of the blower sucking air from the rooms, air will be drawn from the outside of the house through the air shutters 18, through the air filters 19, over the cooling coil 12 and discharge into the rooms through the ducts 20, and after passing through said rooms will pass out through the ducts 5 into the blower through the water sprays and finally discharge to the atmosphere through the attic as before mentioned.

The numeral 21 indicates a boiler for heating purposes in cold weather. When it is desirable to heat the rooms in the house, the shutters 18 are closed and damper 16 is closed, damper 14 is open, the valves 22 and 23 are open and the valve 24 is closed. With this arrangement steam or hot water can pass to the coils 12 and the blower motor 2 would be controlled by the room thermostat (not shown) so that when heat is desired in the rooms to be heated, the room thermostat would cause the motor 2 to operate the blower 1 and deliver air through the duct 25, through the filters 19, through the coil 12 and into the rooms through the ducts 20. Said air would be circulated by being drawn from the rooms by the ducts 5 as before described.

I claim:

1. The process of cooling and ventilating a room which comprises causing air to be moved through the room, passing said air through a water spray to evaporate water thereby lowering the temperature of said air and the water spray, passing said cooled air through ducts adjacent said room so as to extract heat from the room, collecting the water from the spray and conducting it through a cooling coil located in the path of air going to said room to be cooled.

2. The process of cooling and ventilating a room comprising withdrawing air from the room, passing the air through a water spray to lower the temperature of the air and the water by evaporation, conducting said air through a duct adjacent the room so as to extract heat from the room and thence to atmosphere, collecting the water from the spray, and conducting air into the room after cooling the same by out of contact heat exchange with the water so collected.

3. The process of cooling and ventilating a room comprising withdrawing air from the room, passing the air through a spray of water and over a body of water collected from said spray to lower the temperature of the air and the water by evaporation, conducting said air through a duct adjacent the room so as to extract heat from the room, conducting air into the room after cooling the same by out of contact heat exchange with water from said body, and conducting such water after said heat exchange to the spray.

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