J. C. VEIL.

HEATING, COOLING, AND VENTILATING SYSTEM.

APPLICATION FILED NOV. 20, 1907.

946,889.

Patented Jan. 18, 1910.

Fig. 2.

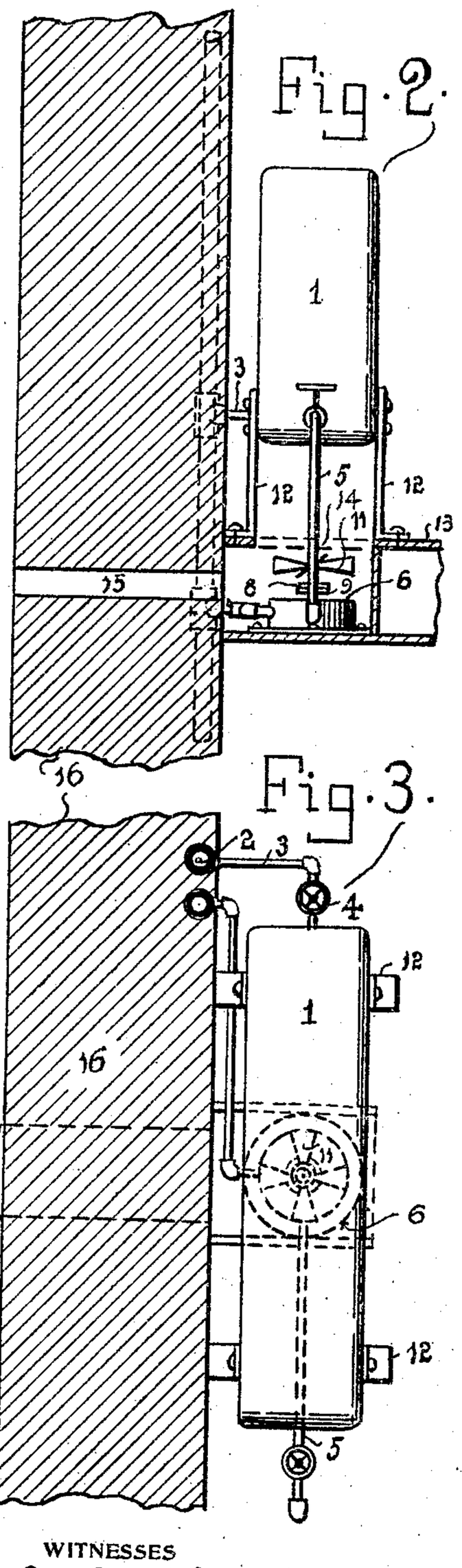


Fig. 1.

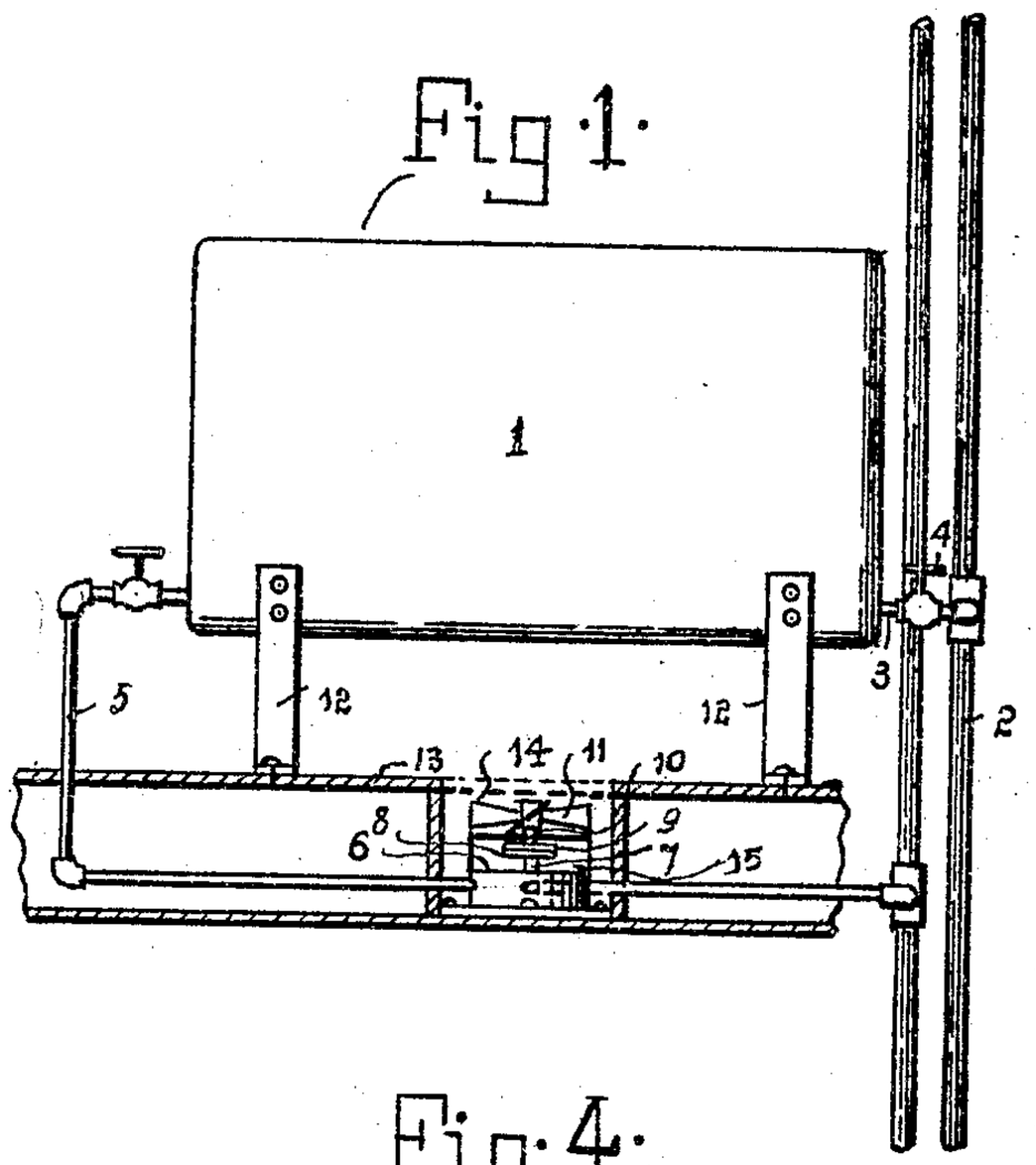


Fig. 3.

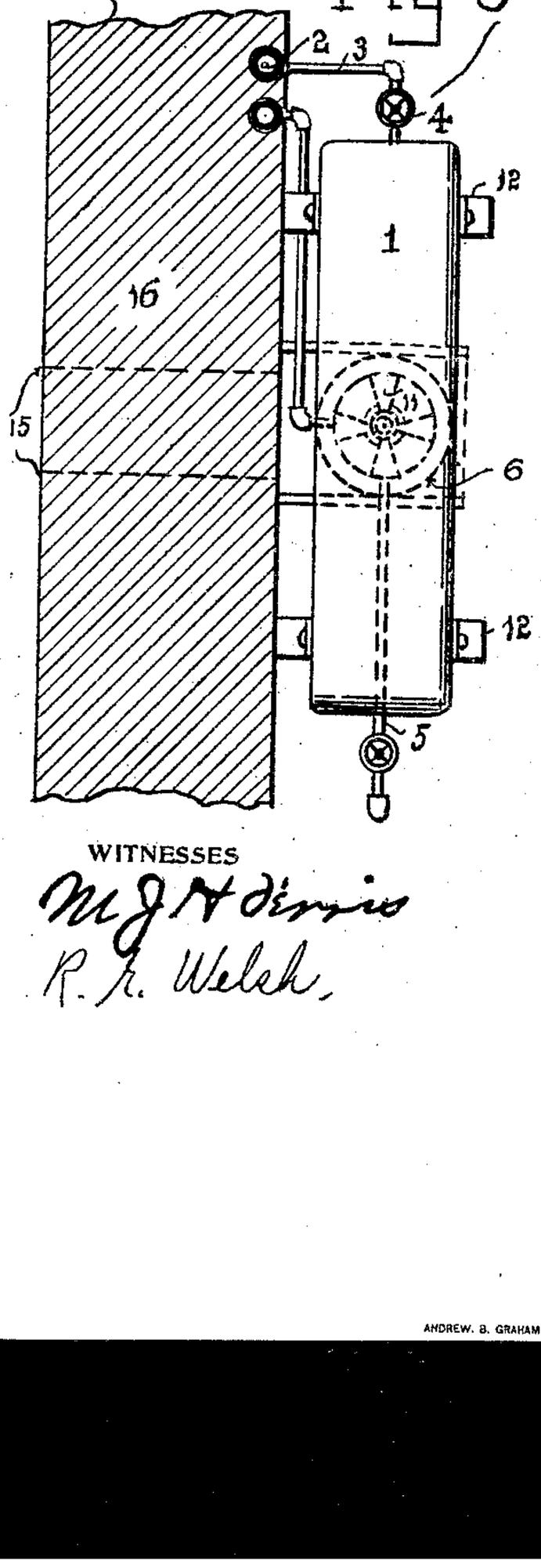
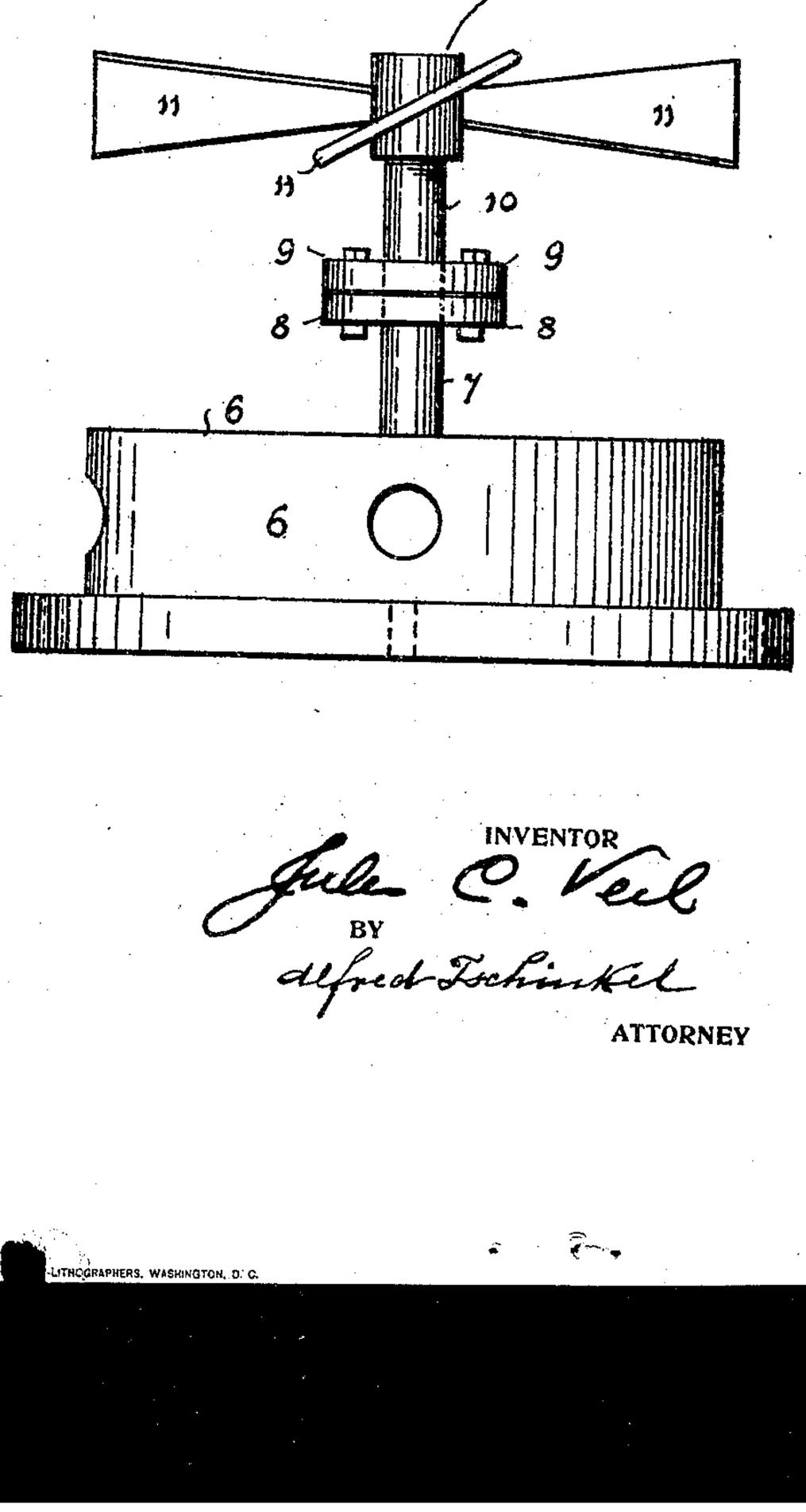


Fig. 4.



WITNESSES

M. J. A. Dennis

R. R. Welch.

INVENTOR

Jule C. Veil

BY

Alfred Tschinkel

ATTORNEY

UNITED STATES PATENT OFFICE.

JULES C. VEIL, OF NEW YORK, N. Y.

HEATING, COOLING, AND VENTILATING SYSTEM.

946,889. Specification of Letters Patent. Patented Jan. 18, 1910.

Application filed November 20, 1907. Serial No. 403,045.

To all whom it may concern:

Be it known that I, JULES C. VEIL, a citizen of the United States, residing at 17 West Sixteenth street, New York city, New York, have invented a new and useful Improvement in Heating, Cooling, and Ventilating Systems, of which the following is a specification.

My invention relates to improvements in heating, cooling and ventilating systems.

The object of my invention is to provide for means by which the upper and lower portions of rooms, of a building, of a school or church, compartments of a steamship or a railroad car may be evenly and economically heated, cooled and ventilated.

In carrying my invention into effect, air either taken from outside the building or from within the building is distributed by a fan evenly over the area of a heater or a cooling radiator thus circulating the heated or cooled air throughout the room to be heated or cooled at the same time thoroughly ventilating the same. The motor adapted to rotate the fan is driven by the steam, air or liquid used as a heating or cooling medium. Said motor can be secured to the inlet or outlet pipe of the heater or cooler as may be desired.

In the accompanying drawing forming a part of this specification: Figure 1. is a front-elevation of a heating or cooling plant made according to my invention. Fig. 2. is a side elevation of same. Fig. 3. is a plan showing the arrangement of the different parts of my new heating, cooling and ventilating device. Fig. 4. is an elevation of a motor having a fan secured to its driving shaft.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawing.

If my apparatus is used for heating and ventilating 1 is a heater, which may consist of an ordinary steam radiator. Instead of this when desired any other suitable heater may be employed. The heater 1 is connected to a steam, hot air or water supply pipe 2 by means of a delivery pipe 3 bearing an inflow regulating valve 4, a valved outflow pipe 5 extending from the other side of said heater 1 will connect the same with a motor 6 to be driven by the heating medium used in the heater 1 before entering or after leaving the same. The driving shaft 7 of said motor 6 has a bearing flange 8 fitted to flange 9 on the shaft 10 supporting a fan 11 used to accelerate the flow of hot air from the heater 1 and circulate the same throughout the room to be heated. The heater 1 supported by standards 12 placed over an opening 14 in the floor 13 above the fan 11 and its driving motor 6 said opening 14 and an aperture 15 in the wall 16 may be adapted for connection to a source of fresh air supply, but the air may be taken within the building if more convenient. If said apparatus is used for cooling and ventilating, brine or another refrigerant may substitute the heating medium, but the arrangement of parts and working will keep the same.

My new device for heating, cooling and ventilating as herein described may be applied to any heating, cooling or ventilating system in practical use, as only a motor and a fan has to be added to a plant to remodel the same to one of my construction.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

My invention may be modified in many ways within the scope of the appended claim without departing from its spirit.

Having thus described my invention, what I do claim as new and desire to secure by Letters Patent, is:—

The combination with a temperature changing device of a motor-driven fan for forcing air into operative relation with said device, the motor of said fan arranged to be operated by the heat changing agent after it is passed through said device, substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this the 18th day of November 1907.

JULES C. VEIL.

Witnesses:
M. J. H. FERRIS,
R. E. WELSH.