

No. 783,057.

PATENTED FEB. 21, 1905.

T. MAHONEY.
ELECTRIC AIR DIFFUSING DEVICE.
APPLICATION FILED NOV. 26, 1904.

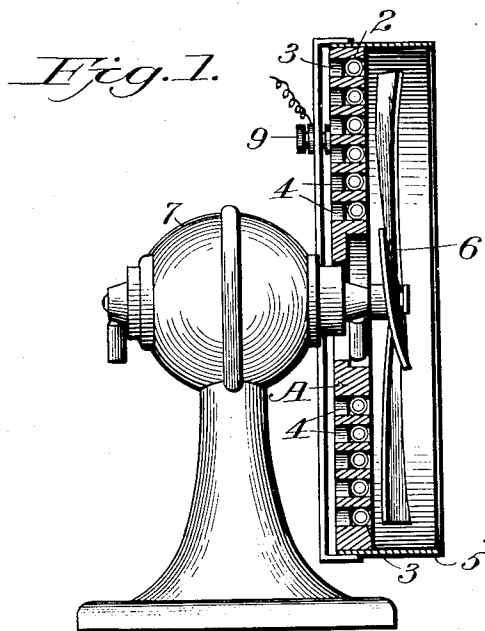
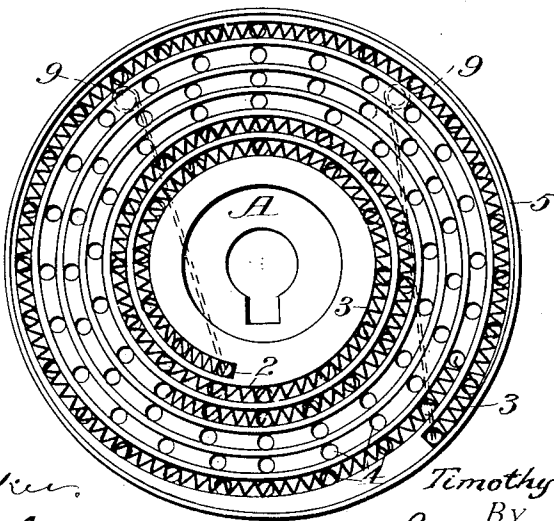


Fig. 2.



WITNESSES:

C. H. Walker.
W. Fowler

INVENTOR

Timothy Mahoney
BY
Geo. H. Strong
his Attorney

UNITED STATES PATENT OFFICE.

TIMOTHY MAHONEY, OF SAN FRANCISCO, CALIFORNIA.

ELECTRIC AIR-DIFFUSING DEVICE.

SPECIFICATION forming part of Letters Patent No. 783,057, dated February 21, 1905.

Application filed November 26, 1904. Serial No. 234,346.

To all whom it may concern:

Be it known that I, TIMOTHY MAHONEY, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Electric Air-Diffusing Devices, of which the following is a specification.

My invention relates to a device which is especially intended for the diffusion of air or other fluids, either hot or cold.

It consists in a combination and arrangement of mechanism whereby currents of air are caused to pass through a spirally-disposed electrical heater and are directed to points where such a current is desired.

It also consists in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a vertical section of my device.
Fig. 2 is a front view of same, the coil being partly broken away.

It is the object of my invention to provide an apparatus which is especially designed as a heater for apartments in cold weather and which may be equally well employed for cooling in warm weather.

As shown in the accompanying drawings, A is a disk of any suitable diameter, preferably made of asbestos or other equivalent non-conductor, and this disk is channeled upon one face, as shown at 2. These channels are here shown as being made in the form of an involute extending from the periphery and terminating near the center. Within this channel or equivalent channels similarly constructed is a coil or coils of indestructible wire, as at 3, having such resistance to the passage of a current of electricity that the wire will be heated to incandescence or any degree of heat less than that. In order to utilize this heat for the required purpose, I have shown openings made through the bottom of the channel 2 and a means for passing currents of air through these openings to impinge upon and pass over the heated wire or other conductor, so that the temperature of the air will be raised and be discharged into the room or apartment which is required to be heated. Various air-forcing mechanisms may be employed for this purpose. In the present case I have illustrated

the apparatus in such form as to be simple and easily portable and set up at any required point.

As shown, the disk A may have a surrounding rim 5, and within this rim a fan or propeller 6 may be revolved. This fan or propeller may be driven by any suitable motor. An electrical motor, as at 7, is shown in the present case, the shaft passing through a central opening in the disk A and fitting sufficiently close, and the lubricating mechanism for the journal-shaft may also fit in the slot in the side of this opening; but other equivalent devices may be also employed within the scope of my invention. The fan being set in motion, it will be seen that a blast of air will be drawn or forced through the holes 4, which are made in the channels, and this air passing over the heated wires will have its temperature sufficiently raised for the purpose required and being directed into a room will soon make a comfortable temperature therein.

The device is easily located at any required part of the room and may be as easily changed. The current to be passed through the wires may enter through binding-posts, as at 9, and connect with opposite ends of the coil.

It will be understood that the device may be equally well employed for cooling or refrigerating rooms in the summer by simply omitting the electrical current and allowing the air to be drawn through the openings in the disk and discharged into the room in the usual manner.

Having thus described my invention, what I claim, and desired to secure by Letters Patent, is—

1. An air diffusing and heating device consisting of a disk having perforations there-through, a resisting-coil disposed in line with the openings in the disk, means for passing an electric current through said coil and an air-forcing mechanism.

2. An air diffusing and heating device comprising a disk having one or more channels or grooves formed therein, resisting-coils located in said channels and having connections whereby an electrical current may be passed through the coils, openings made in the bottom of the channels and means for delivering a

current of air through said openings and across the heated coils.

3. In an air-diffusing device, a spirally-disposed electric conducting-coil, a non-heat-conducting base channeled to contain the coil, openings made through the channel transverse to the coil, and means for delivering a current of air through said openings and across the coil.

10 4. In an air-diffusing device, a spirally-channeled base of non-heat-conducting material having holes made through the bottom of the channel, a coiled electric conductor of low capacity fitting said channel, with binding-
15 posts through which the ends of the coil are connected with a source of an electric current

whereby the coil may be heated, a rim inclosing the base, and a fan revolubly journaled within the rim and contiguous to the coil.

5. An air diffusing and heating device consisting of an electric resisting-coil, a substantially flat plate or disk within which the coil is located, openings made transversely through the plate, and an air circulating and diffusing device.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

TIMOTHY MAHONEY.

Witnesses:

S. H. NOURSE,

HENRY P. TRICOU.