G. H. HOHNSBEEN.

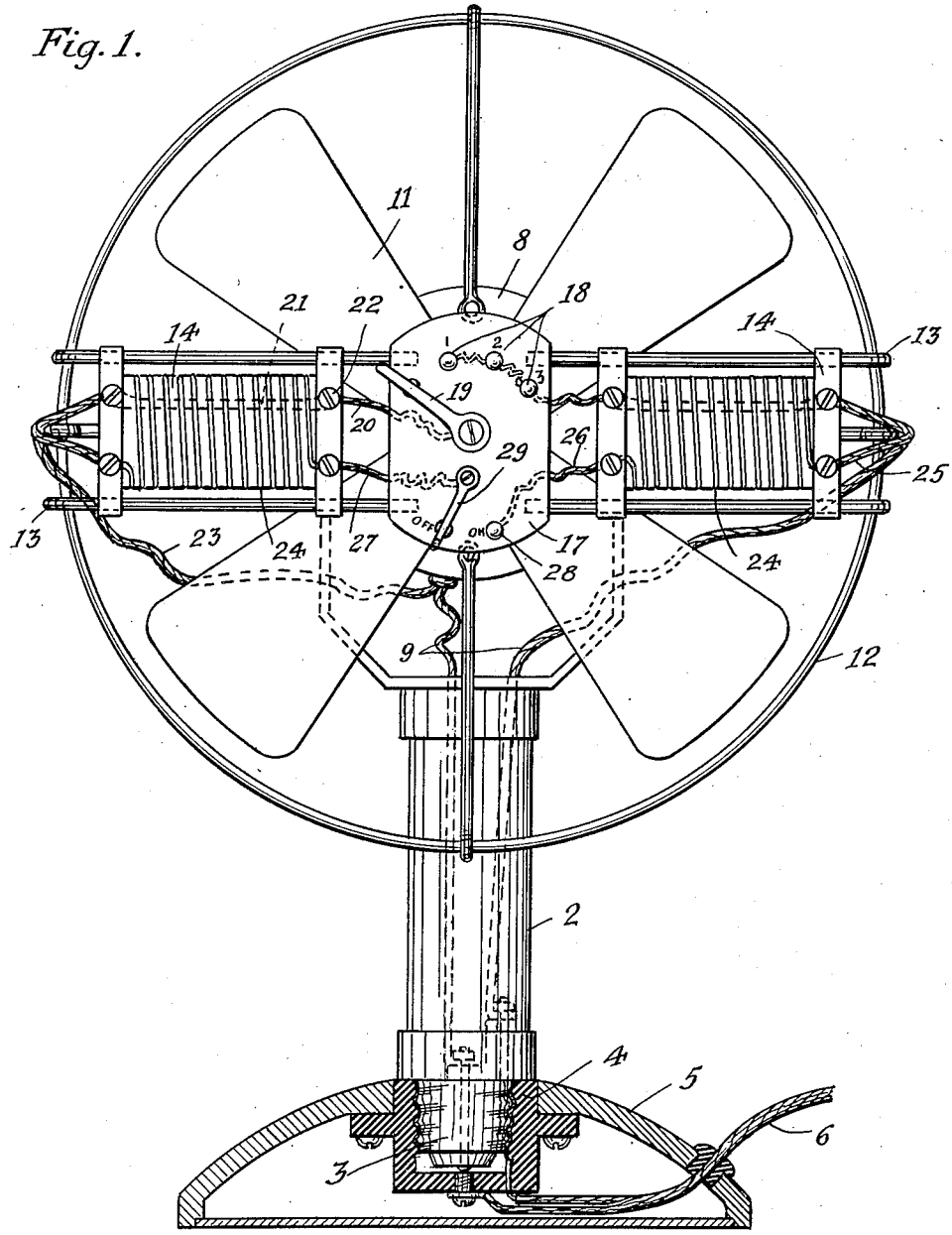
ELECTRIC FAN.

APPLICATION FILED FEB. 24, 1919.

1,374,658. **Patented Apr. 12, 1921.**

2 SHEETS—SHEET 1.

Fig. 1.



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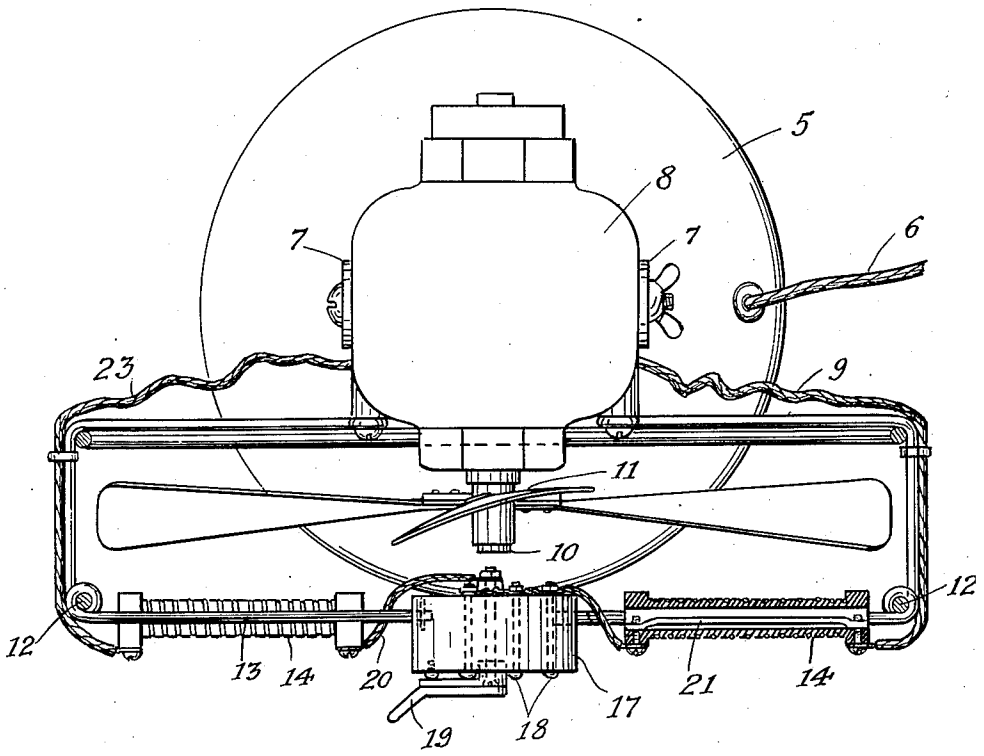
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2 SHEETS—SHEET 2.

Fig. 2



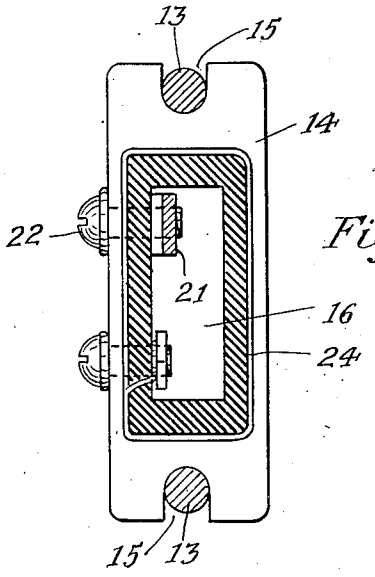


Fig. 3

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UNITED STATES PATENT OFFICE.

GEORGE H. HOHNSBEEN, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF THREE-FIFTHS TO J. D. BROWN, OF MINNEAPOLIS, MINNESOTA.

ELECTRIC FAN.

1,374,658. Specification of Letters Patent. Patented Apr. 12, 1921.

Application filed February 24, 1919. Serial No. 278,747.

To all whom it may concern:

Be it known that I, GEORGE H. HOHNSBEEN, a citizen of the United States, resident of Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Electric Fans, of which the following is a specification.

My invention relates to a fan used for creating a circulation of air within a room or inclosed space and the object of the invention is to provide an attachment for the fan by means of which currents of cold air introduced into a room by means of the fan may be heated to any desired degree of temperature while passing the fan, and thereby fresh pure air can be taken in from out of doors and delivered by means of the fan and its air heating attachment at any desired point where fresh air is needed but cold air, even though fresh, would be objectionable.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is a front view of an electric fan with my attachment applied thereto.

Fig. 2 is a plan section of the device.

Fig. 3 is a detail sectional view showing the manner of mounting the heating device on the guard.

In the drawing, 2 represents a suitable standard, having an electric plug 3 at its lower end, adapted to enter a socket 4 mounted in a base 5 and provided with a suitable electric conductor 6. The standard may be easily and quickly removed from the base and inserted into a socket in the wall or ceiling or any other suitable point where it is desired to mount the fan. The standard is provided with the usual forked arms 7 wherein an electric motor 8 is mounted. A conductor 9 leads from this motor down through the standard to the plug 3.

10 is the shaft of the motor and 11 a fan mounted thereon. 12 is the usual wire guard for the fan. On this guard I provide rods 13 composed preferably of a suitable gage of wire and held in parallel relation. Between the wires 13 on each side of the center of the guard I provide a block 14 of porcelain or any other suitable non-conducting material having recesses 15 in its longitudinal edges into which the wires 13 are inserted for holding the block in place between them. Each block has a longitudinal recess 16 extending therethrough from end to end. In the center of the guard is a disk 17 having a plurality of contact surfaces 18 thereon and a switch arm 19 mounted to move back and forth over the surfaces 18 for regulating the speed of revolution of the fan. A conductor 20 leads from the switch arm 19 to a bar 21 that is mounted in one of the recesses 16 by suitable means, such as screws 22, and from this bar a conductor 23 extends to the motor and a conductor 9 for regulating the current delivered to the motor and the revolution of the fan.

On the outside of each block 14 I provide a resistance coil 24 having conductors 25 at one end in circuit with the motor and conductors 26 and 27 at the other end leading to a contact surface 28 and a switch arm 29. By means of this switch arm the current may be broken through the resistance coils whenever desired to allow the fan to be used without the heater, and whenever the user of the fan desires to heat the currents of air it is only necessary to move the switch arm to the contact surface 28 when a portion of the motor current will be directed through the resistance 24 which, becoming heated in substantially the same manner as the resistance coil in bread toasters and like articles, will throw off waves of heat and raise the temperature of the air currents flowing through the guard by the action of the revolving fan. The use of this heating device may be maintained as long as the fresh air currents are below the desired degree of temperature and whenever it is desired to use the fan merely as a means for moving the air in the room without attempting to establish incoming currents of cold, fresh air, the switch of the heating device may be moved to the off position and the fan will then be used as an ordinary desk or table air circulating fan.

The device may be used on the standard, as shown, or it may be mounted in a socket

provided in the ceiling or wall of the room or space where it is desired to heat the incoming air currents.

I claim as my invention:

1. The combination, with an electric fan and a guard for the blades thereof and a standard adapted for mounting on a base or for wall or ceiling use, of rods mounted in parallel relation on said guard and extending across the same from side to side, blocks of insulating material supported by said rods on each side of the center of said guard, resistance wires wound on said blocks and in circuit with the fan motor, and a switch for controlling the circuit through said wires.

2. The combination, with an electric fan and a guard for the fan blade, and a standard for the fan having an electric plug for mounting it in different positions, of an electric heating device mounted in front of the fan blade and past which the currents of air are directed by the revolution of the fan, said heating device including resistance coils mounted on the guard in front of the fan.

3. The combination, with an air circulating fan, of a resistance coil mounted adjacent said fan and in the path of the air currents and having an electric circuit, and means for controlling the flow of the current through said coil, said fan having a standard provided with an electric plug for mounting it in different positions.

4. The combination, with an electric fan and a guard therefor and a standard for said fan having an electric plug for mounting it in different positions, of resistance coils mounted on said guard upon opposite sides of the center of the fan, electric conductors communicating with said coils and with the fan motor, and switches interposed between said coils for controlling the flow of the current to said motor and said coils.

5. The combination, with an electric fan and a guard for the fan blades and a standard for the fan, of a demountable base for said standard having a socket for making an electrical connection with said standard, said standard being adapted for mounting in said base or in a fixed socket for wall or ceiling use, and an electric heating device past which currents of air are directed by the revolution of said fan, said heating device including resistance coils mounted in front of the fan and having an electric circuit.

6. The combination, with an electric fan and a standard for the fan having a plug for mounting it in a base or in a fixed socket for wall or ceiling use, and an electric heating device mounted in front of and adjacent the fan blades and past which currents of air are directed by the revolution of the fan.

7. The combination, with an electric fan having a standard provided with a plug for mounting it on a base or in the wall or ceiling, of a heating device comprising resistance coils having an electric circuit and rods mounted on the guard of the fan and forming supports for said coils.

In witness whereof, I have hereunto set my hand this 12" day of February, 1919.

GEORGE H. HOHNSBEEN.