

J. FALLEK.
HOT BLAST APPARATUS.
APPLICATION FILED JULY 10, 1905.

Fig. 1.

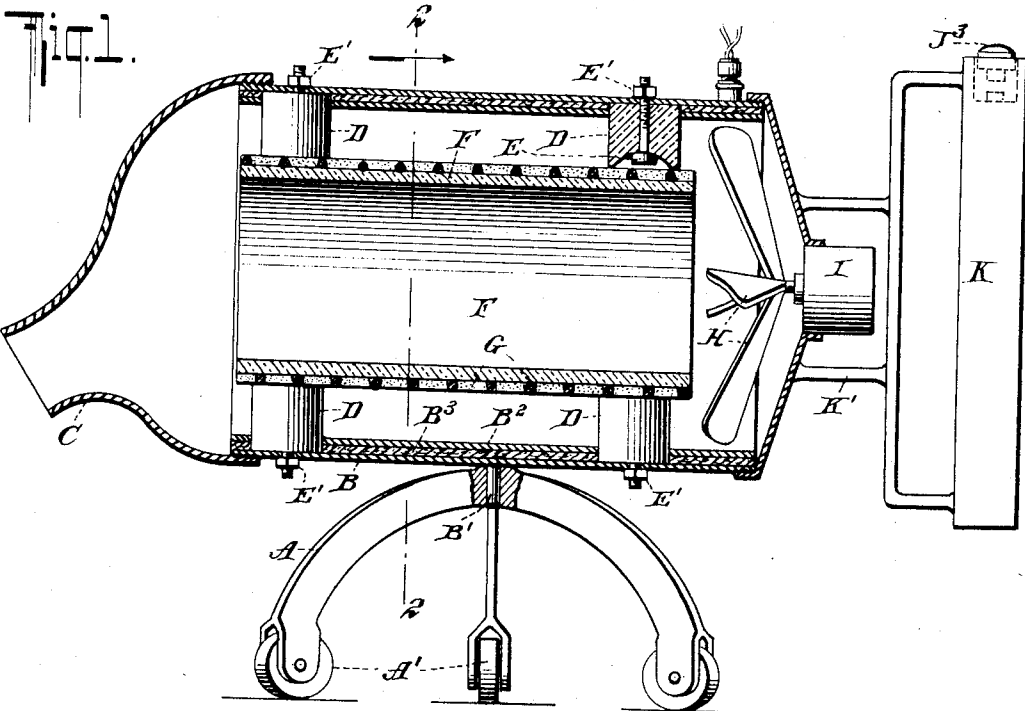


Fig. 2.

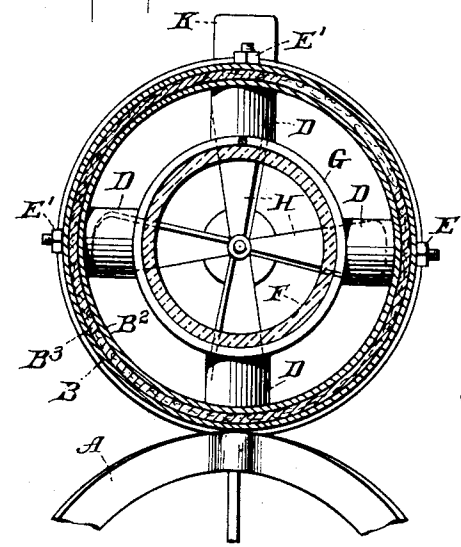
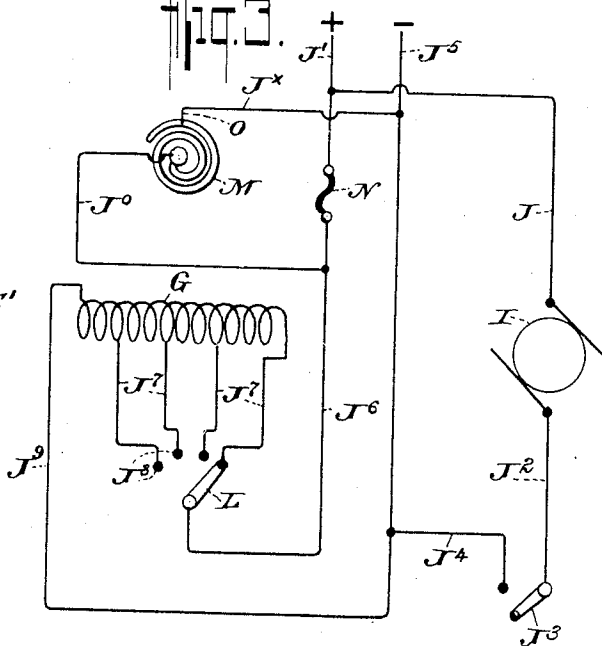


Fig. 3.



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JOSEPH FALLEK, OF NEW YORK, N. Y.

HOT-BLAST APPARATUS.

No. 815,915.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed July 10, 1905. Serial No. 268,940.

To all whom it may concern:

Be it known that I, JOSEPH FALLEK, a citizen of the United States, and a resident of the borough of the Bronx, city, county, and State of New York, have invented certain new and useful Improvements in Hot-Blast Apparatus, of which the following is a specification.

My invention relates to apparatus for delivering a blast of hot air, and is capable of application in many industries and professions, being adapted for use by furriers in drying skins, as well as in other industries where hot drying rooms are employed and where considerable space may be saved by the employment of my invention.

Further, my invention is adapted for use by physicians, as in the treatment of wounds.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of an apparatus embodying my invention.
Fig. 2 is a cross-section thereof on line 2 2 of Fig. 1, and Fig. 3 is a diagram illustrating the electric circuits.

The form of my invention shown in the drawings comprises a suitable tripod or support A, mounted on wheels A', so that it may be readily run from place to place to apply the hot-air blast to different parts of the substance under treatment. The body B of the apparatus is supported on this tripod, preferably by means of a pivot B', which allows the body to be swung so that the nozzle C may be caused to point in different directions. This nozzle is preferably separable from the body B, being, for instance, connected therewith by a screw-joint, so that nozzles of different shapes may be substituted, according to the particular use for which the apparatus is intended. The body or shell B preferably has an inner layer B², separated from its outer layer by an asbestos wrapper B³ or any other substance which is a poor conductor of heat, the object being to prevent a dissipation of the heat energy developed within the apparatus in the manner hereinafter set forth. To the body are secured at both ends a series of lugs D, made of porcelain or like material and held by countersunk screws E and nuts E'. In the space surrounded by the said lugs D is received and held the coil-cylinder F, generally made of porcelain or like material and having a coil of German silver or like conduc-

tor G applied to one of its surfaces, preferably the outer surface. The coil is generally held in place by applying enamel after the coil has been wound on the cylinder F and baking the article, so that the enamel will melt and securely hold the wire. At the end of the shell which is opposite the nozzle C, I locate a fan or blower H, driven by an electric motor I, of any suitable construction. This motor is connected by a wire J with a terminal J' and by wire J² with a switch J³, adapted for connection with a wire J⁴, connected to the other terminal J⁵. These terminals may be connected with the mains by means of the customary plug and receptacle connection, as indicated in Fig. 1. The switch J³ may be in the nature of a press-button, as indicated in Fig. 1, where such switch is shown upon the handle K, made of wood or like non-conductor of heat, the said handle being connected with the body of the apparatus by means of arms K', between which is left an opening large enough to allow the operator to insert his fingers. The terminal J' is also connected by a wire J⁶ with a switch L, controlling the rheostat, which is constituted by the coil G. As clearly shown in Fig. 3, this coil is connected at different points by wires J' with contact-plates J⁸, adapted to be engaged by the switch L, so that the heating effect of the coil G may be regulated by including a smaller or larger portion, or all of it, in the circuit. The return connection is made by means of a wire J⁹, connected with one end of the coil G and with the terminal J⁵. The switch L is mounted at any suitable point on the outside of the shell or body B.

As long as the switch L is off there will be no heating action. In the normal operation the switch L is first thrown into contact with one or the other of the contact-plates J⁸, according to the degree of heat desired, and after a suitable temperature has been reached the operator presses the button J³, which closes the circuit of the motor I. A blast of air will thus be forced both along the outside and along the inside of the coil-cylinder F, and such air will be discharged in a heated condition through the nozzle C. According to the particular use for which the apparatus is intended the nozzle will be caused to discharge through a strong thin jet of air or a more widely diffused blast. In very many cases the switch L may be thrown off as soon as the coil G has acquired the desired heat, so that the full amount of current may be used

to drive the motor I. The cylinder F will retain the heat for a relatively considerable time, so that the heating-current may be shut off while the motor is running.

- 5 If the heating-current should be left on too long while the motor is at rest, so that no heat is carried away by the air-blast, there would be danger of injury to the apparatus. In order to prevent this, I mount at any suitable point of the apparatus, preferably on the 10 outside of the shell, a thermometer, which, as shown, is in the shape of a helix M, made of glass and containing mercury. The bulb of this thermometer, which is at the inner end 15 of the helix, is connected with the wire J⁶ by a wire J⁰, and a fuse N is interposed in the wire J⁶ between the terminal J' and the point of connection with the wire J⁰. Another wire J^x connects the terminal J⁵ with a platinum 20 point O, which projects into the bore of the thermometer M at a point which is reached by the column of mercury at the moment the heat attains a predetermined limit. Should this occur, the fuse N will be included in a 25 short circuit running from the terminal J⁵ through the thermometer to the terminal J', and the moment a fuse melts the heating-current will be shut off automatically and injury to the apparatus thus prevented. The in-

section of a new fuse will restore the apparatus to operative condition.

I claim as my invention—

1. The combination of an electric heater, a heating-circuit, a motor-circuit in parallel with the heating-circuit, a motor in the motor-circuit, a casing inclosing the heater and 35 provided with a nozzle, a blower driven by said motor and arranged to force air in contact with the heater and out through said nozzle, and switches for independently controlling the heating-circuit and the motor-circuit. 40

2. The combination of an electric heater, means for passing air in contact with said heater, a heater-circuit, a thermometer-circuit in parallel with the heater-circuit, and a 45 fuse included both in the thermometer-circuit and in the heater-circuit to interrupt the flow of current to the heater when a certain temperature is reached. 50

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH FALLEK.

Witnesses:

JOHN LOTKA,
JOHN A. KEHLENBECK.