No. 649,521. Patented May 15, 1900.

H. W. LIBBEY.

MEDICATED VAPOR INJECTOR.

(Application filed Apr. 13, 1898.)

(No Model.)

FIG. 1.

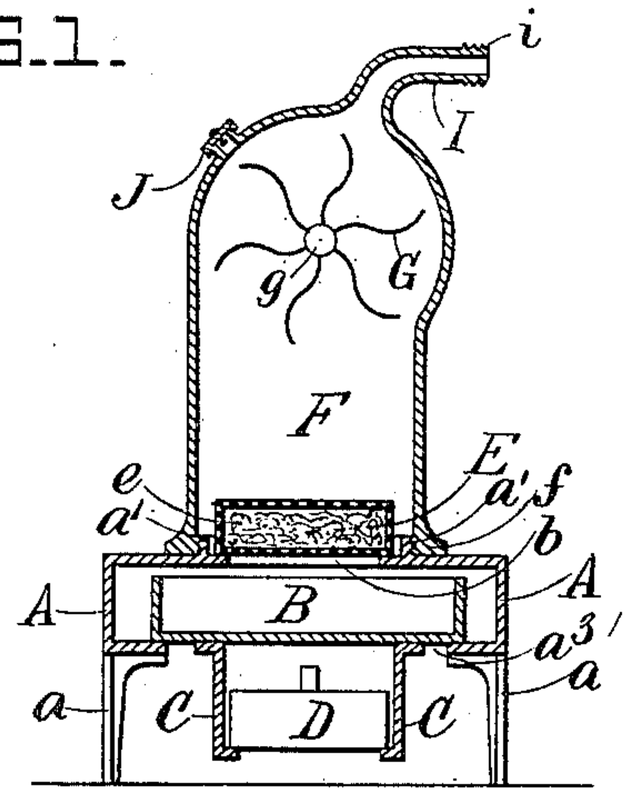


FIG. 2.

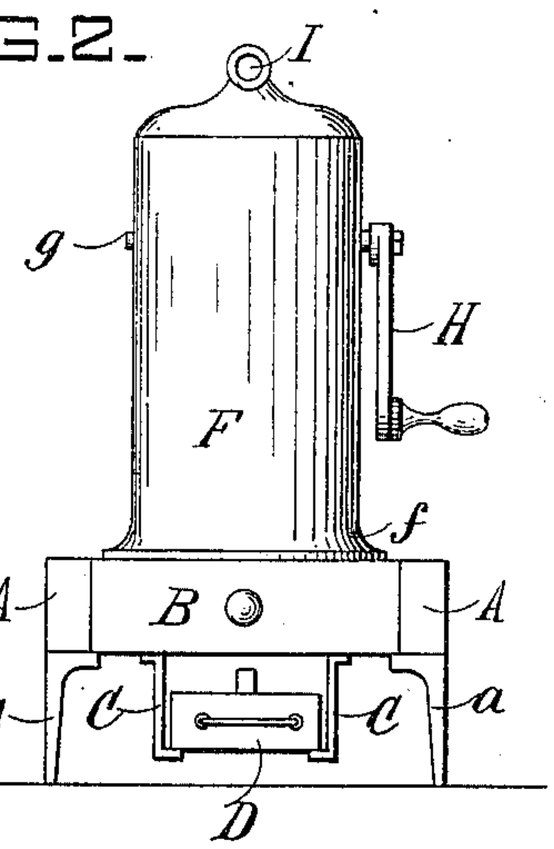


FIG. 3.

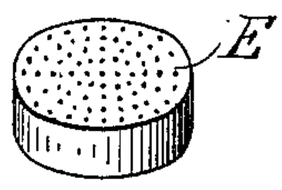


FIG. 4.

FIG. 4a.

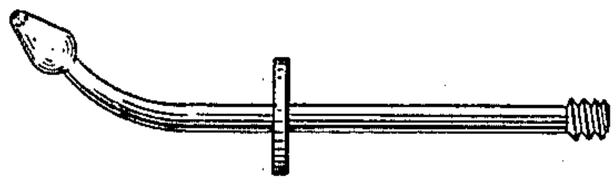


FIG. 5.

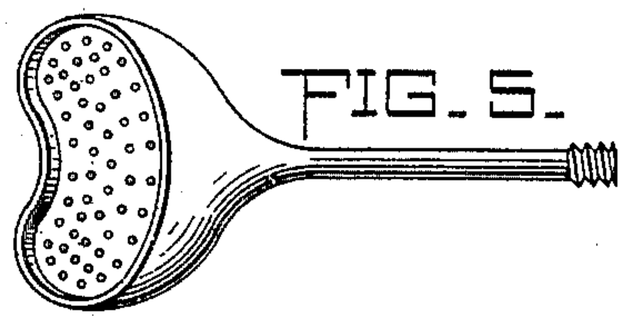


FIG. 6.

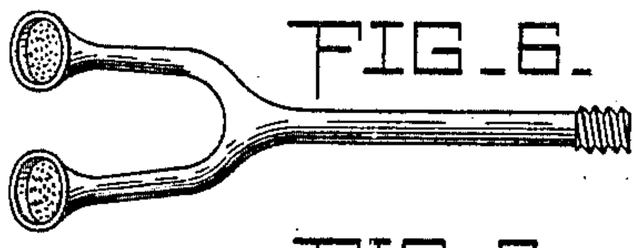


FIG. 7.

FIG. 8.

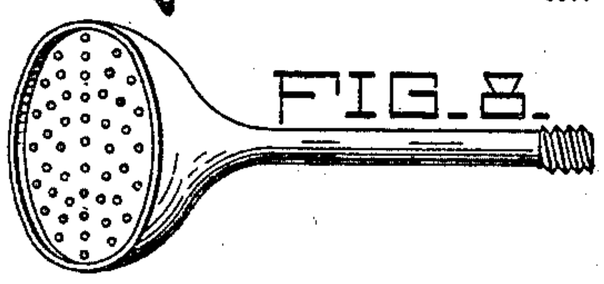


FIG. 9.

FIG. 10.

FIG. 11.

FIG. 12.

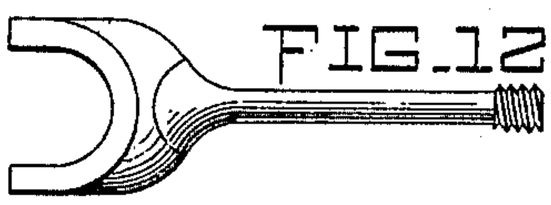
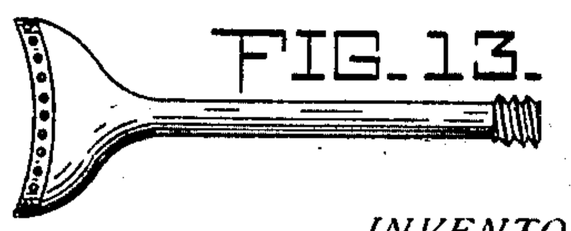


FIG. 13.



WITNESSES

W. E. Allen.

Harry A. Knight.

INVENTOR

Hosea W. Libbey.

By Harvey C. Knight

Attorney

UNITED STATES PATENT OFFICE.

HOSEA W. LIBBEY, OF BOSTON, MASSACHUSETTS.

MEDICATED-VAPOR INJECTOR.

SPECIFICATION forming part of Letters Patent No. 649,521, dated May 15, 1900.

Application filed April 13, 1898. Serial No. 677,507. (No model.)

To all whom it may concern:

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Medicated-Vapor Injectors, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to produce an injector whereby medicated vapors can be applied to any part of the skin-surface of the human body and force same through the perspiratory ducts.

Referring to the accompanying drawings, Figure 1 represents a vertical section through a medicated-vapor injector embodying my invention. Fig. 2 is a front view of same. Fig. 3 is a perspective view of the outer casing or holder for the sponge or other filtering medium. Figs. 4 to 13 show various attachments to be employed in connection with the medicated-vapor injector.

It is a well-known fact that cold will cause the pores of the human skin to close so as to exclude any outside influences, while heat will cause said pores to open, so that any vapor can be injected through the perspiratory ducts of the skin into the body, and it has been found that very beneficial results in many diseases have been attained by injecting certain medicated vapors through the skin. Now by my invention a cheap and efficient apparatus is produced whereby medicated vapors can be forced through the perspiratory ducts as a medicament.

In order to carry out my invention I construct a square or rectangular chamber A and support the same by legs *a*, the bottom of said chamber A being formed with an opening a^3 and adapted to receive a trough or drawer B, to the under side of which are secured pendent arms C, adapted to receive a heating device, such as a lamp D. The upper central portion of this chamber is also formed with an opening *b*, over which is placed a filter E, consisting of an outer casing or holder having a perforated top and bottom and filled with sponge or other suitable material *e*. The upper surface of the chamber A is formed with a circular projecting rim *a'*, screw-threaded on its outer side, surrounding the opening *b*, and adapted to receive a flange *f*, screw-threaded on its inner side, of a cylindrical casing F, in the upper end of which is fitted a fan or blower G, mounted upon a shaft *g* and operated by a crank or handle H. The extreme upper end of the casing is contracted, so as to lead to a single discharge-tube I. It is also provided with an air-escape or pressure valve J, so that should the pressure in the cylindrical vessel F become too great it can readily escape through said valve J. The end of the tube I is formed with a screw-thread *i*, so that by a union any desired attachments can be applied thereto to conduct the vapor to the part of the skin-surface as may be required.

In operation the filter E is first put in place and the casing F screwed into the base A. The trough or drawer B is then filled with the desired medicated solution and then a tube having the desired form of injecting-nozzle is attached to the tube I. The lamp D is now lighted and heats the medicated solution in the trough or drawer and vapor arises therefrom. The handle H is now turned and the blower G rotating causes a draft to be created and the vapor forced out through the tube I and conducted through a pipe having the desired injecting-nozzle to fit the part of the body to be operated upon.

In the drawings I have shown in Fig. 4 a pipe having a nozzle adapted to be applied to the breast.

Fig. 4^A shows a nozzle adapted to be applied to the rectum.

Fig. 5 shows a nozzle adapted to be applied to the chest.

Fig. 6 shows a furcated nozzle adapted to be applied to the eyes.

Fig. 7 shows a nozzle adapted to be applied to the ears.

Fig. 8 shows a nozzle adapted to be applied to the body.

Fig. 9 shows a furcated nozzle adapted to be applied to the nostrils.

Fig. 10 shows a furcated nozzle adapted to be applied to ruptures.

Fig. 11 shows a nozzle adapted to be inserted into the uterus.

Fig. 12 shows a nozzle adapted to be applied to the throat.

Fig. 13 shows a nozzle adapted to be applied to the mouth.

It will be seen that by the above-construct-

ed apparatus a medicated vapor under pressure can be applied to any part of the body, and as the vapor is of a high temperature the pores of the skin will open and allow said vapor to impregnate the body, it being very penetrating. Thus any local disease can be treated directly at the proper point by injection only, thereby obtaining quick and positive results.

Although I have shown and described a fan for forcing the vapor forward, any other suitable device might be employed.

What I claim is—

A medicated-vapor injector comprising a chamber having a bottom opening and a top opening, a drawer for receiving medicated solution occupying a position within the chamber, a filter consisting of an outer casing having perforated top and bottom and located on the chamber over the top opening, a cylinder having a discharge-tube and seated on the chamber, and a fan located in the upper part of the cylinder; substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 31st day of March, A. D. 1898.

HOSEA W. LIBBEY.

Witnesses:

CHAS. STEERE,

EDWIN PLANTA.