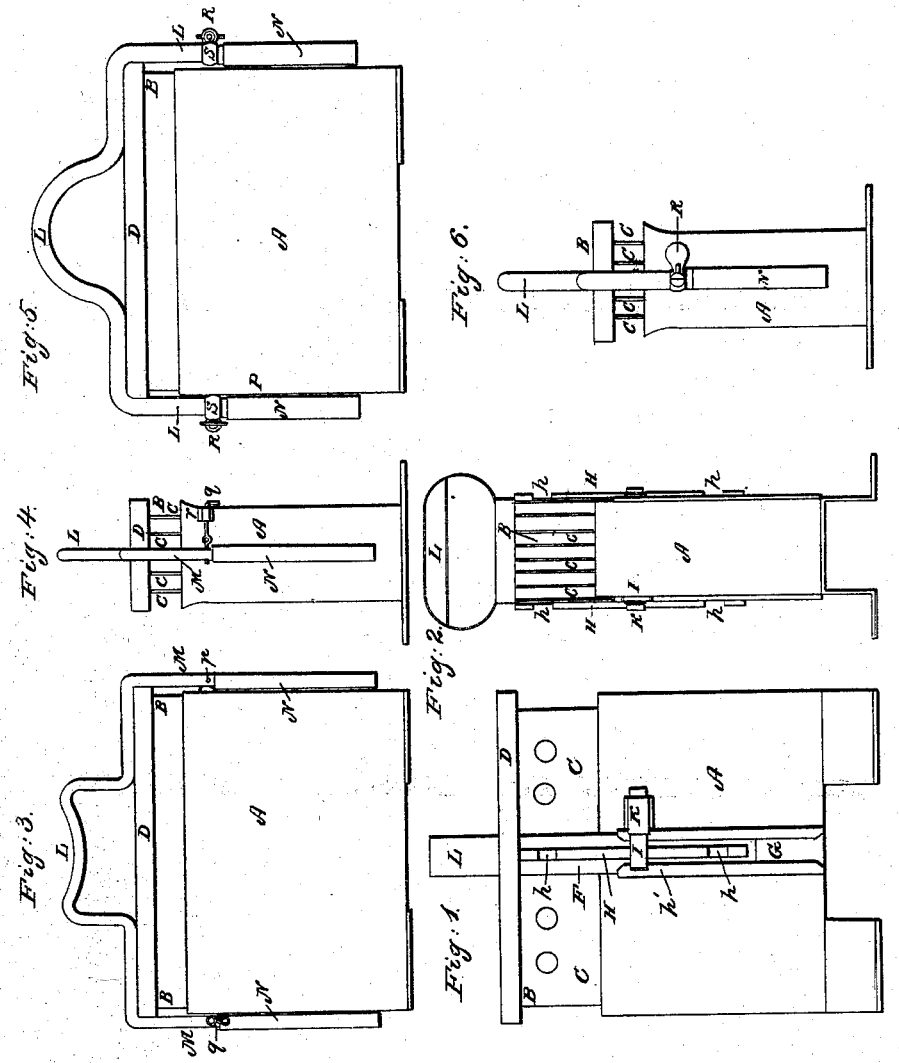
A. J. SAX.

Apparatus for Impregnating the Air of Rooms with Antiseptic Vapors.

No. 48,352. Patented June 20, 1865.



Witnesses:

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UNITED STATES PATENT OFFICE.

ANTOINE JOSEPH SAX, OF PARIS, FRANCE.

IMPROVED APPARATUS FOR IMPREGNATING THE AIR OF ROOMS WITH ANTISEPTIC VAPORS.

Specification forming part of Letters Patent No. **48,352**, dated June 20, 1865.

To all whom it may concern:

Be it known that I, ANTOINE JOSEPH SAX, alias ADOLPHE SAX, of Paris, in the Empire of France, have invented Improvements in Apparatus for Impregnating the Air of Rooms, hospitals, or other confined places with the emanations or vapors arising from tar, creosote, or other suitable antiseptic or anti-putrid substances; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The invention relates to improvements in apparatus for impregnating the air of rooms, hospitals, churches, theaters, or other confined places with the emanations or vapors arising from tar, creosote, or other suitable antiseptic or anti-putrid substances, with the object of causing the air thus treated to become an active anti-putrid agent for preventing the spreading of contagious diseases, or for other hygienic purposes.

Although the antiseptic or anti-putrid properties of the emanations or vapors arising from tar, creosote, phenic or carbolic acid, naphtha, oil of turpentine, or other analogous more or less volatile liquid hydrocarbons were long since known, these emanations or vapors arising from them, either in the cold state or when suitably heated, had not hitherto been employed as an easy means of rendering more wholesome the air impregnated therewith, preventing the spreading of contagious diseases, curing pulmonic diseases, or for other hygienic purposes.

The apparatus of which hereinafter a description will be given is intended to offer an easy and effectual means for disseminating the said emanations or vapors in the air of rooms, hospitals, churches, or other space intended for men to breathe in for a longer or shorter length of time.

In the annexed drawings are shown three arrangements of apparatus which may serve for the said purposes; but I want it to be understood that I do not intend to restrict or restrain myself to these arrangements, as many other devices might be resorted to for obtaining similar effects, as will be explained; neither do I intend to limit myself to any particular shape or size to be given to them, or to any special metal or material of which they may be constructed; but what forms the conspicuous object aimed at in the construction of these arrangements is to obtain with an apparatus of comparatively small bulk a powerful spreading or disseminating in the air of the vapors or emanations arising from the antiseptic or anti-putrid liquid contained in the apparatus.

Figures 1 and 2, 3 and 4, 5 and 6, respectively, represent elevation, front, and side views of the apparatuses.

In these figures the same letters refer to corresponding parts.

The apparatuses consist of a sort of trough, A, or vessel, of tin-plate or other suitable metal or material, which trough serves for holding the tar, creosote, or other suitable antiseptic or anti-putrid liquid the emanations or vapors of which are to be disseminated in the air of the room or other place where the apparatus is put up. In the trough A may be introduced and kept at any required height a movable part, B, or what I call the "impregnator," also made of tin-plate or other suitable metal or material, and consisting of a series of blades, plates, or leaves, C, connected together and kept parallel to each other, at the required distances apart, by means of the cross-plate D, which latter at the same time serves as a lid for the trough, and is provided with a handle, E, for lifting the impregnator at any required height, for which purpose, in the apparatus shown in the Figs. 1 and 2, a tongue or blade, F, fixed to the plate D, glides in a slot, G, fixed to the side P of the trough. On the blade F is soldered a rod, H, provided at suitable distances apart with notches or openings *h*, in which may be introduced a small bolt, I, gliding in a guide, K.

In the arrangement represented in Figs. 3 and 4 a stout wire or rod, L, is soldered to the ends of the cross plate or lid D, and rises above this latter toward the middle part, so as to form a handle. Each of the two free ends M of the rod L enters vertically into a corresponding tube, N, soldered to the narrow slide P of the trough. In these ends M are perforated, at suitable distances apart, a series of holes, *p*, in which may be entered a sort of small bolt, *q*, formed merely of a piece of stout wire, and gliding in a guide, *r*, fixed to the side P of the trough, thus allowing to keep the

impregnator lifted more or less high out of the trough, according to the height of the hole *p* in which the bolt has been put.

In the apparatus represented in Figs. 5 and 6 another device is resorted to for setting the impregnator at the required height. To the upper end of each of the two tubes N is soldered a split ring, S, which may be tightened more or less by means of the set-screws R, and consequently the ends M of the rod L, and consequently the entire impregnator be fixed at any required height.

Various other devices for setting the impregnator at will at any desired height might be resorted to. If required, also, the trough may be provided with any suitable arrangement for suitably heating the liquid contained therein and causing the vapors or emanations to be evolved more rapidly and more abundantly, as in the cold state.

I also intend to have apparatus in which a series of blades or plates hinged together endwise, in the manner as the links of a chain or of a lazy-tongs, might be allowed either to clasp together, and thus apply themselves flat on each other in a shallow trough containing the tar or other suitable antiseptic liquid, or allow the blades or plates to be lifted up and kept stretched by a standard or other suitable means, so as in that case to offer a large surface covered with tar or other liquid for the air to act on; or a series of plates might be connected in the manner as the leaves of a book, so as to permit of either folding them together, so as to lie on the bottom of the trough, or have the leaves kept extended for allowing the air to pass freely between them, and thus become impregnated with the liquid in which the plates have been dipped, while, if required, an artificial draft of air may be caused to circulate between the leaves or plates by means of a ventilator or fan-blower; or a sort of paddle-wheel might be made to turn with its paddles in the liquid in the trough for the purpose of continually stirring the said liquid, and thus promote the evolution of the emanations or vapors arising therefrom. I also intend to make use of a similar apparatus or of a fan-blower for disseminating in the air flowers of sulphur or other suitable finely-pulverized substances possessing anti-putrid, antiseptic, or hygienic properties, while motion may be transmitted to the paddle-wheel or to the blowing apparatus by hand, by clock-work, or any other suitable prime mover.

I also intend to have small apparatus consisting of a series of finely-perforated thin plates or pieces of wire-cloth provided with tar or other suitable antiseptic liquid, which apparatus may, by a string, tape, or other means, be kept applied or worn before the mouth, so as to cause the air, before entering into the lungs, to pass through the holes or meshes of the perforated plates or wire-cloth, and thus become impregnated with the emanations or volatile parts evolved from the tar or other suitable antiseptic liquid made use of.

I further intend to provide the bell of trumpets, horns, saxophones, or other similar musical instruments actuated by human insufflation with an interior double jacket or other analogous arrangement containing tar or other suitable antiseptic liquid, or having its sides coated therewith in such manner that the air inhaled through the bell of the instrument is forced to become impregnated with the emanations evolved from the said antiseptic liquid.

I finally wish it to be observed that the antiseptic substances to be made use of may be employed either in the liquid or in a semi-liquid or clammy state, and, if required, be diluted with or dissolved in any suitable menstruum.

Having thus made known the nature of my invention and described the manner or various means of putting the same into effect, what I claim as my invention, and desire to secure by Letters Patent, is—

An apparatus composed of the reservoir A and movable and adjustable impregnator B, substantially as herein described, for the purpose of impregnating the air of rooms, hospitals, and other buildings with the vapor of antiseptic substances, as herein described.

A. J. SAX.

Witnesses:
A. G. WADE,
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