

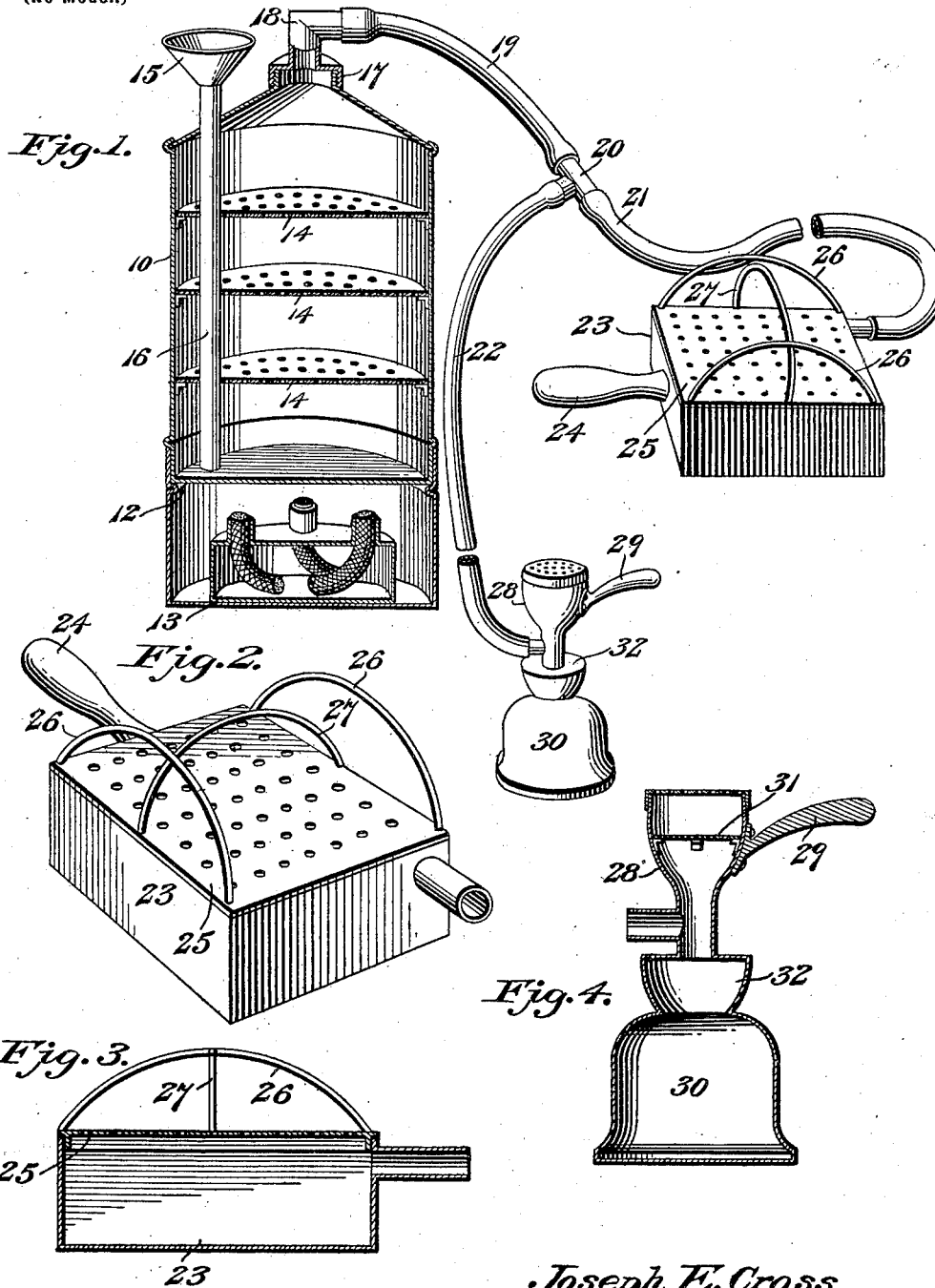
No. 676,713.

Patented June 18, 1901.

J. E. CROSS.  
THERAPEUTICAL VAPORIZER.

(Application filed May 1, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSEPH E. CROSS, OF BRATTLEBORO, VERMONT.

## THERAPEUTICAL VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 676,713, dated June 18, 1901.

Application filed May 1, 1900. Serial No. 15,080. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH E. CROSS, a citizen of the United States, residing at Brattleboro, in the county of Windham and State of Vermont, have invented a new and useful Therapeutical Vaporizer, of which the following is a specification.

My invention relates to improvements in vaporizers; and one object is to provide a simple and inexpensive apparatus which may be used for taking a sweat-bath by the occupant of a bed or for inhaling medicated vapor or for diffusing medicated vapor in a sick-room.

A further object is to provide a tray or pan which may be used to diffuse the vapor in a bed and which tray is provided with means for holding the bed-covering in a raised condition, so as to insure circulation of the vapor around a patient.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty in the combination and construction of parts will be defined by the claims.

In the drawings, Figure 1 is a view of the complete apparatus, illustrating the generator in section. Fig. 2 is a perspective view of the diffusing-tray on an enlarged scale. Fig. 3 is a sectional view through said diffusing-tray. Fig. 4 is a sectional view of an inhaler adapted for use in connection with the vaporizer.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

The generator 10 of my apparatus is provided with a closed bottom and is adapted to rest or be fitted with a base 11, so as to be sustained by an internal flange 12 on the base. This flange may be formed by the groove or bead, as shown by Fig. 1, and the base is suitably provided with an opening, through which a heater 13 may be introduced or withdrawn, as desired. This heater may be in the form of an oil-stove, an alcohol-stove, or any other type of portable heater which is adapted to generate sufficient heat beneath the bottom of the generator for the purpose of bringing the liquid contents thereof to a boil, whereby the vapor is generated in the apparatus. This generator is also provided with a series of

trays or shelves 14, which are suitably supported within the chamber and are adapted to contain the herbs or other medicaments which permeate the vapor, and thereby produce the medicated vapor, which may be diffused in a sick-room or beneath the bedclothing, so as to circulate around the occupant of the bed. This generator is supplied with a suitable liquid through a funnel 15, the latter having the tube 16, which extends through the shelves and terminates at a point close to the bottom of the generator. A suitable cleaning-orifice is provided in the upper head of the generator, which orifice is closed by a removable cap 17. Said cap has an elbow 18 secured thereto, and a tube or pipe 19 is attached to this elbow.

My apparatus may be used in connection with a diffusing-tray and an inhaler appliance, and to these ends I provide the pipe or tube 19 with a branched coupling 20, the stem of which is suitably united to the tube. To the other branches of this branched coupling 20 are attached the flexible tubes 21 22, one of which is connected to the diffusing-tray 23. This diffusing-tray consists of an imperforate pan having a handle 24 for its convenient manipulation. A perforated cover 25 is fitted removably to the tray, so as to close the open top side thereof, the perforations in said cover providing for the free exit of the vapor, while the tray collects and retains any water of condensation which may result from the condensation of the vapor as it circulates through the tube and the diffusing-tray. This cover is provided on its upper side with the upstanding bails or guards 26, the same being secured near the end portions of the cover and arranged to span the same transversely across the tray. Another guard or bail 27 extends longitudinally of the cover and between the first-named guards 26. These guards may consist of wire secured in a suitable way to the cover, and the guards serve to support the bedclothing in a raised condition when the diffusing-tray is placed in a bed, whereby the vapor supplied to the tray may escape freely beneath the bedclothing and circulate around the occupant of the bed, so as to induce perspiration in the patient under treatment.

The inhaler 28 is provided with a suitable

handle 29 for its manipulation, and this inhaler has a base 30, a shelf 31, and a collecting-chamber 32. The shelf or tray 31 may contain herbs or other suitable medicaments adapted to be absorbed by the vapor and carried thereby to the patient. The chamber 32 serves to collect the water resulting from the condensation of the vapor, and the inhaler has the flexible tube 22 connected thereto at a point between the tray or shelf and the collecting-chamber.

It is evident that the inhaler may be disconnected from the branched coupling by removing the tube 22 from one of the branches thereof, or the diffusing-tray may be disconnected by removing the tube 21 from the other branch of the branched coupling, in which event the unused branch of the coupling should be closed by a suitable plug or stopper. (Not shown.)

Under ordinary conditions the diffusing-tray is used in connection with the generator, and this tray is employed to distribute the vapor, medicated or otherwise, into the atmosphere of the sick-room. It is obvious, however, that the tray may be placed in a bed close to the patient, and the guards or bails thus become useful in upholding the bedclothing, to the end that the vapor may circulate around the patient. The cover may be removed from the diffusing-tray for the purpose of cleaning and drying the latter.

It is evident that any suitable medicament may be used on the shelf or shelves of the generator and on the shelf of the inhaler. Hence I do not consider it necessary to specify the medicament which I may employ.

Changes within the scope of the appended claims may be made in the form and proportion of some of the parts, while their essential features are retained and the spirit of the

invention is embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described the invention, what I claim is—

1. In combination with a generator, a movable diffusing-tray flexibly connected therewith and comprising a box-like receptacle provided with a handle to facilitate its manipulation, said handle being located at the end of the receptacle opposite the flexible connection with the generator, a removable foraminous cover closing the top of the tray, parallel guards upstanding from the cover at the opposite sides thereof and extending from end to end of the tray, and a transverse guard likewise upstanding from the cover and located intermediate of the ends of the latter and at right angles to the first-named guards, said guards serving to hold the bedclothes away from the cover as the tray is moved about in a bed.

2. A vaporizer comprising a base adapted for the reception of a suitable heater, a generator seated on the base and provided with the interior shelves and with the filling-tube extending through the sleeves, a distributing-pipe coupled to the head of the generator, a branched coupling attached to the pipe, flexible tubes attached to the branches of the branched coupling, a diffusing-tray connected to one tube, and an inhaler connected to the other tube, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH E. CROSS.

Witnesses:

FRANK STOWE,  
J. H. MERRIFIELD.