

(No Model.)

2 Sheets—Sheet 1.

J. M. VAN HEUSEN.
STERILIZER FOR SURGICAL BANDAGES.

No. 488,725.

Patented Dec. 27, 1892.

Fig. 1

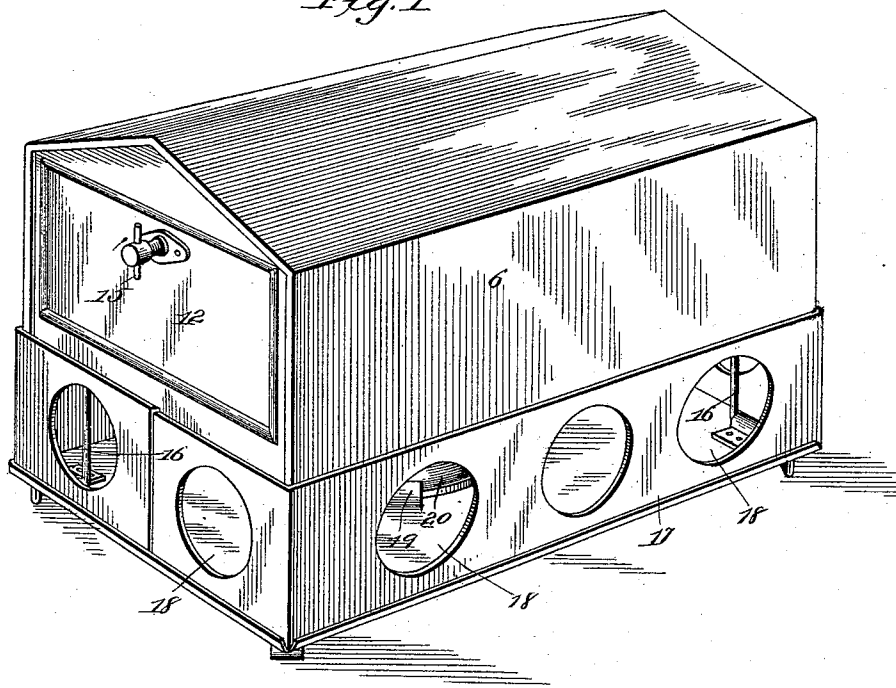
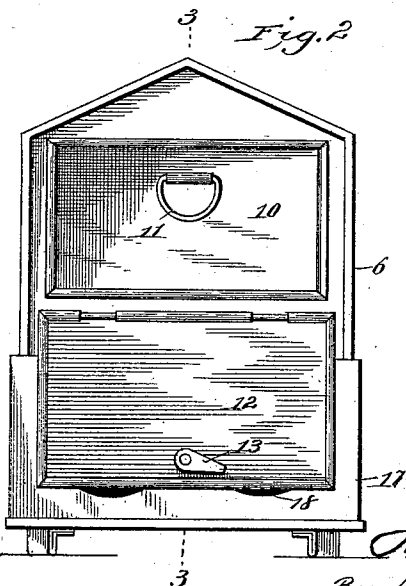


Fig. 2



Witnesses:

Harry S. Arthur
W. E. Boughton

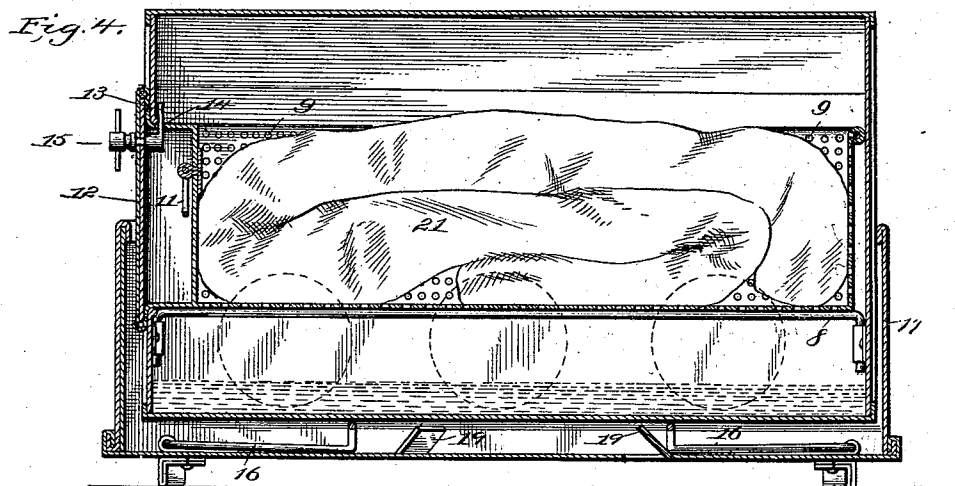
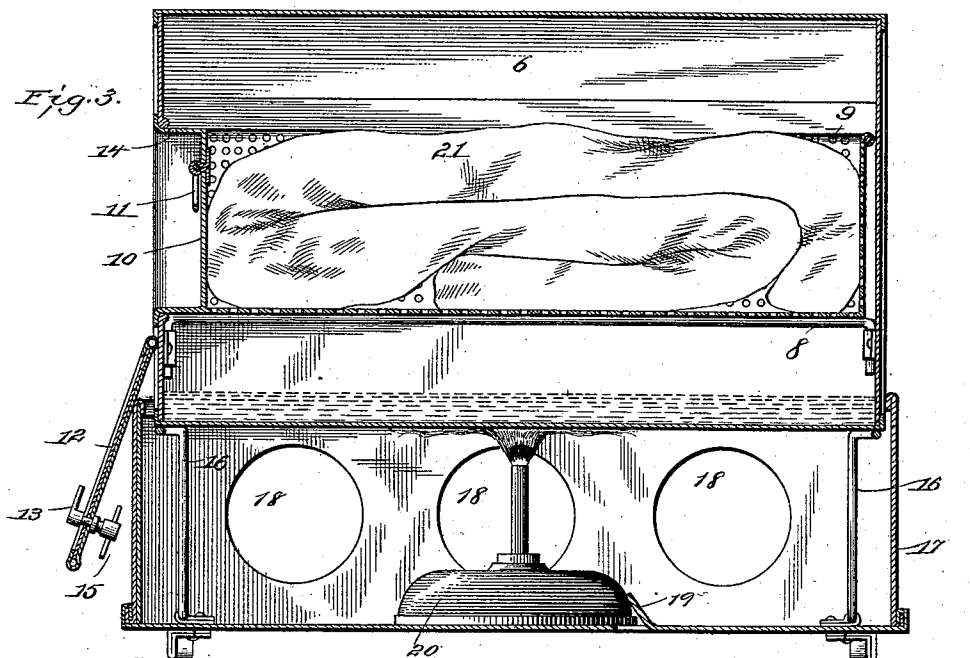
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UNITED STATES PATENT OFFICE.

JOHN MANNING VAN HEUSEN, OF ALBANY, NEW YORK.

STERILIZER FOR SURGICAL BANDAGES.

SPECIFICATION forming part of Letters Patent No. 488,725, dated December 27, 1892.

Application filed September 28, 1892. Serial No. 447,115. (No model.)

To all whom it may concern:

Be it known that I, JOHN MANNING VAN HEUSEN, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Apparatus for Heating and Sterilizing Surgical Bandages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to produce a simple, effective, and readily portable apparatus for heating and sterilizing surgical bandages and the like.

It is especially desirable that the heating and sterilizing operation to which surgical bandages and the like are subjected, should be of such a character as to leave the fabric in a substantially dry condition, so that on subsequent cooling, it will have no tendency to chill the patient. It is also desirable, in the closed operating rooms or chambers where the patient is located, that as little of the steam and fumes generated in the apparatus as possible should find its exit therefrom, either during the period that the bandages are being heated, or at the time they are withdrawn from the apparatus. My invention is particularly adapted to fulfill these requirements. By its employment, the heating and sterilizing operation is quickly performed, without inconvenience or discomfort to the occupants of the room, and the heated and sterilized fabric remains practically dry upon cooling, so as not to be a source of annoyance or danger to the patient. The apparatus may, moreover, when not in use, be conveniently packed into a comparatively small space, so as to be readily portable.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of a form of apparatus embodying my improvements, in position ready for use; Fig. 2 represents a front elevation of the same, with the hinged door open; Fig. 3 represents a central longitudinal vertical section and partial elevation on the line 3—3 of Fig. 2; and Fig. 4 represents a similar section with the parts compactly nested together in condition for transport.

Similar numerals of reference indicates similar parts throughout the several views.

Referring to the drawings, 6 indicates a metallic receptacle, preferably of sheet copper or the like, and having a thin top, thereby presenting an effective condensing surface subjected constantly to the cooling effect of the external air. The roof is inclined in such manner as to conduct any liquid condensing upon its inner surface, to the side walls of the receptacle, so as to rejoin the body of water at the bottom of the receptacle and from which the steam is generated rather than to drop upon and soak the bandages that are being heated and sterilized.

At the bottom of the receptacle 6 a shallow space is left below the downwardly swinging hinged door 12, for the reception of the small quantity of water utilized in the generation of the steam desired. Above this space are located suitable rails as 8 for supporting a drawer 9, the main body portion of which is reticulated or made up of perforated metal, so as to permit a free passage of the steam through it. The end of the drawer is, however, closed by a metallic plate 10 through which the steam cannot pass, and which is so constructed as to close the opening in the receptacle 6 through which the drawer is inserted and withdrawn. A ring 11, or the like, serves as a convenient means for inserting and removing the drawer.

The swinging cover 12 is provided with a catch 13 which is adapted to engage within a slot or perforation 14 of the end plate 10, so as to lock the said swinging cover in its upper position, and a handle 15 serves to release the catch when it is desired to remove the drawer.

When in use, the receptacle 6 is adapted to rest upon the upper surface of the foldable wire loop supports 16, and within the upper edge portion of a casing 17 having in its side walls the air admission ports 18, as shown. A number of lugs 19 are struck up from the sheet metal bottom of the casing 17, for the purpose of removably holding in place at a point midway beneath the bottom of the receptacle 6, an alcohol lamp or other suitable source of heat.

From the construction shown and described,

the operation will be readily understood. A bandage 21 or the like, to be heated and sterilized, is placed within the drawer 9, whereupon said drawer is inserted within the receptacle 5 6, and immediately above the shallow body of water in the bottom of said receptacle. The swinging door 12 is then closed, and the wire loops 16 having been raised to the position shown in Fig. 3, and the lamp 20 having 10 been ignited, the receptacle 6 with its contents is placed upon the loop supports 16 and above the burning lamp, all as illustrated in Fig. 1 of the drawings. Steam is rapidly generated, and passes upward through the drawer 9 and the bandage contained therein, rapidly heating and sterilizing the bandage. In passing 15 through the bandage, the steam, in giving up its heat thereto, becomes somewhat cooled on arriving in that portion of the receptacle 20 6 above the drawer. The thin top of the receptacle, however, prevents the accumulation of the damp steam and its absorbence by the bandage, by condensing it rapidly and effectively over the large extent of the lower surface of said top, the cooling effect of the external air being sufficient to thus condense and remove said damp steam continuously during the operation. The inclined roof, instead of permitting the condensations to fall 25 back upon the bandages, conducts said condensations to the side walls of the receptacle, down which they pass to rejoin the main body of water. When the operation has continued for a period sufficiently long to thoroughly heat and sterilize the bandage for the purpose intended, the swinging cover 12 is unlocked and dropped to the position shown in Figs. 2 and 3; whereupon the drawer and its contents can be instantly withdrawn by means 35 of the ring 11, and the swinging cover 12 immediately raised and locked to cover the opening. This manipulation can be performed so quickly that practically none of the steam or fumes from the sterilizer escape into the apartment. 45

When the apparatus is not in use, the lamp

20 is removed, the wire supports 16 are turned down, and the receptacle 6, is dropped to the bottom of the casing 17 so as to rest upon the loops 16, and to be nested within the casing 50 17, in compact form for transportation.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

1. A sterilizer for surgical bandages and the 55 like consisting of a chamber adapted to be entirely closed at the top and sides and provided with a perforated or reticulated drawer having a closed end adapted to close the opening through which the same is inserted, said 60 chamber having a thin metallic top capable of acting as a condenser, said sterilizer being adapted to be heated by a lamp or other heating device, substantially as described.

2. A sterilizer for surgical bandages and the 65 like, consisting of a chamber adapted to be entirely closed at the top and sides and provided with a perforated or reticulated drawer having a closed end adapted to close the opening through which the same is inserted, said 70 chamber having a thin inclined metallic top capable of acting as a condenser, said sterilizer being adapted to be heated by a lamp or other heating device; substantially as described. 75

3. A portable, knock-down sterilizer for surgical bandages and the like, consisting of a chamber adapted to be closed at the sides and provided with a perforated or reticulated drawer having a closed end adapted to close 80 the opening through which the same is inserted, said chamber having a thin top capable of acting as a condenser and suspended or held above a lamp or heating device by the folding loops or supports, *a, a*, substantially 85 as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN MANNING VAN HEUSEN.

Witnesses:

JOHN C. PENNIE,

PERCY B. HILLS.