

No. 724,964.

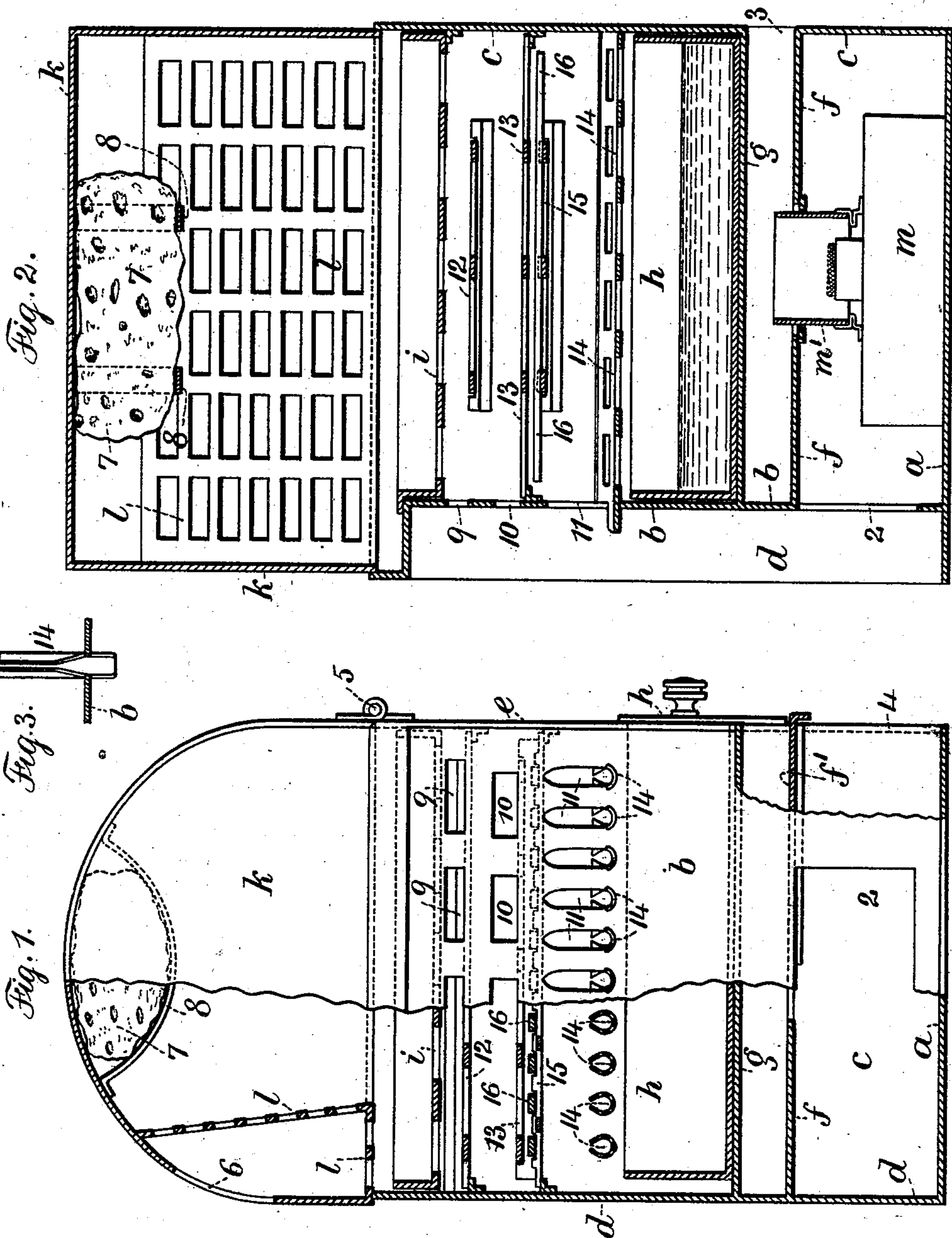
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R. H. SPEARE.

STERILIZER.

APPLICATION FILED SEPT. 6, 1902.

NO MODEL.



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UNITED STATES PATENT OFFICE.

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STERILIZER.

SPECIFICATION forming part of Letters Patent No. 724,964, dated April 7, 1903.

Application filed September 6, 1902. Serial No. 122,289. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. SPEARE, a subject of the King of Great Britain, residing at Lewisburg, in the county of Union and State of Pennsylvania, have invented an Improvement in Sterilizers, of which the following is a specification.

My invention relates to a device adapted to receive and hold implements, instruments, and tools of various kinds—such as are employed by surgeons, dentists, barbers, and others in a professional or business capacity—for the purpose of sterilizing the same after use and preparatory to further use, with the object of destroying bacteria, bacilli, or other germs or microbes to prevent the dissemination thereof.

In carrying out my invention I provide a case with a cover, a receptacle in the bottom for a fluid-burning lamp, a chamber for the heated products of combustion, a drawer or similar receptacle located above the lamp and for holding the disinfectant to be vaporized, and suitable devices within the case to support the implements, instruments, or tools, and apertures in the case for the insertion of the same, and which apertures are preferably made according to the shape of the said instruments, implements, or tools, or their advantageous location or position.

My invention generically may be best set forth by illustrating and describing a sterilizer for barbers' implements. In this structure there is a case with a cover, a receptacle in the bottom for a fluid-burning lamp, a chamber for the heated products of combustion, a drawer or receptacle for the disinfectant to be vaporized, and which drawer is placed at a suitable or desired elevation above the lamp, and there are within the case suitable devices to support the barbers' implements and apertures for the insertion of the same through one side of the case—in fact, provision is made in said structures for razors, scissors, combs, hair-brushes, shaving-brushes, and shaving-mugs—there being in the case a perforated top plate for holding the hair-brushes and the shaving-mugs, a receptacle in the cover for holding the shaving-brushes, devices for supporting the combs and scissors,

and devices for supporting the razors at the broad side with the edge uppermost, the handles of the razors preferably hanging by gravity outside of the case.

In the drawings, Figure 1 is a vertical section and partial elevation at one side of the case. Fig. 2 is a vertical section and partial interior elevation at right angles to Fig. 1, and Fig. 3 is a sectional plan of one razor-slideway.

The case is preferably made of sheet metal and comprises a bottom *a*, sides *b*, *c*, *d*, and *e*, and is of rectangular form in horizontal section. The side *b*, with reference to the sides *d* and *e*, is preferably recessed or placed inward from the edges of the sides *d* and *e* to provide a space for the ends or handles of the implements, and in the side *b* are made the apertures through which the instruments, especially the razors, scissors, and combs, are inserted into the case. At a suitable distance above the bottom *a* there is a partition *f*, in which is a central aperture formed inward from the side *e* and provided with a slide *f'*, which fills part of the aperture, so that the central portion is left open. Above the partition *f* is an imperforate partition *g*, forming a base or support for the drawer *h*, which enters the case through an opening in the side *e* and is preferably provided with a finger-knob (shown in Fig. 1) for moving the same. A receptacle is thus formed in the bottom of the case below the partition *f* for a lamp *m* for burning fluid, which lamp may be provided with a chimney *m'*, passing through the central aperture in the partition *f*, and there is an opening 2 in the side *b*, through which the lamp can be viewed, this being the side of the case at which the operator will usually stand. There is an opening 3 in the side *c* between the partitions *f* and *g*, and the lamp and its chimney are to be placed in the case through an opening 4 in the side *e* when the slide *f'* is withdrawn, said slide being replaced after the insertion of the lamp, so as to center the same and its chimney.

I provide a perforated top plate *i* at the upper end of the case and below the cover *k*. This is secured in any desired manner and is adapted for holding the hair-brushes and

shaving-mugs. The cover *k* is shown of semi-cylindrical form, hinged at 5 to the case and at its other end simply resting thereon, or it may be fastened by any suitable device, if
 5 desired. I have shown the cover as provided with a perforated partition *l*, which has a horizontal portion and an upright portion and within the cover extends over the opening 6. The receptacle thus provided is adapted to
 10 receive the shaving-brushes. In the under side of the cover, at the upper portion, I provide a sponge 7, held in position by bands 8, of metal, secured to the cover and from which the sponge is readily removed. In the side
 15 *b* of the case there are openings 9, 10, and 11, and within the case and on the same planes as the lower edges of said openings there are perforated trays or partitions 12 and 13 and slideways 14. The openings 9 and the tray
 20 12 are adapted for combs, the openings 10 and the tray 13 for scissors, while the openings 11 and the slideways 14 are adapted for receiving razors, the blades only being inserted into the case and the handles hanging
 25 down outside of the side *b* and between the ends of the sides *d* and *e*. The slideways 14 are preferably curved to conform to the thick edge of the razor, and in the case the razors are held with the blades vertical, the cutting
 30 edges being uppermost.

I have shown a perforated tray or partition 15, located above the slideways 14 and above the position to be occupied by the blades of the razors, and on this tray 15 I have shown
 35 and prefer to place magnets or magnetized bars of metal 16, for the reason that magnets are believed to have an influence on molecular construction, and therefore such influence upon the blade of a razor as will be beneficial
 40 to the edge.

In the operation of the structure the heat of the fluid-burning lamp is communicated through the partition *g* and the metal of the
 45 drawer to the contents thereof, which are vaporized. The vapor passes upward, first, between and around the blades of the razors, then around the blades of the scissors, around and through the parts of the combs, through the perforations of the top plate *i* into the
 50 shaving-mugs, through the bristles of the hair-brushes, through the perforations of the plate *l*, and into the shaving-brushes, sterilizing the same, or, in other words, killing the bacteria, bacilli, or other germs or microbes,
 55 and the action of the sponge is believed to be twofold: first, in collecting any germs or microbes that may have been removed or floated with the vapor from the implements, and, second, to collect moisture and condense
 60 the vapor. The cover extends over the hair-brushes and shaving-mugs and, except for the opening 6, forms a closure at the top of the case to retain in the case the sterilizing-vapor, so that it may effectively do its work.
 65 The cover is readily thrown back for the removal of the hair-brushes and shaving-mugs. The shaving-brushes are readily removed, and

the combs, scissors, and razors are equally readily removed from the apertures or openings in the side *b* of the case. 70

The slideways 14 for the razors may be short or may extend across the case. They are preferably perforated, although I do not limit myself in this respect. I prefer in forming these slideways to bring the free edges appreciably close together and to taper said edges
 75 from their nearest point of approach to the width of the openings 11 in the side *b*, thus forming of each edge guides to insure the proper entrance of the razor-blades. (See
 80 Figs. 1 and 3.) The proximity of these edges of the slideways insures the razor-blades maintaining a vertical position. The gravity of the handle outside of the side of the case *b* also insures the handle occupying a vertical
 85 position, and consequently the blade inside of the case.

I do not limit myself to the precise details of construction of the case, to the arrangement of the openings therein, or to the arrangement of the case for holding implements
 90 of a given trade or profession, as the same may be varied according to circumstances and the uses to which the device is put.

I claim as my invention— 95

1. A sterilizer for implements, instruments and tools of various kinds, comprising a case, a cover, partitions in the lower portion of the case respectively forming a receptacle in the
 100 bottom for a fluid-burning lamp and a chamber for the heated products of combustion, a drawer entering the case from one side and resting upon the uppermost partition and adapted to contain disinfectant to be vaporized, suitable devices within the case to support the implements, instruments, or tools,
 105 there being apertures in the case for the insertion of the same, the shape of which generally conforms to the implement, instrument or tool employed. 110

2. A sterilizer for implements, instruments and tools of various kinds, comprising a case, a cover, partitions in the lower portion of the case respectively forming a receptacle in the
 115 bottom for a fluid-burning lamp, and a chamber for the heated products of combustion, a drawer entering the case from one side and resting upon the uppermost partition and adapted to contain disinfectant to be vaporized, suitable devices within the case to support the implement, instruments or tools, there
 120 being apertures in the case for the insertion of the same, the shape of which generally conforms to the implement, instrument or tool employed, and a sponge or other absorbing agent, and means for holding the same in the cover. 125

3. A sterilizer for implements, instruments and tools of various kinds, comprising a case, a cover, partitions in the lower portion of the
 130 case respectively forming a receptacle in the bottom for a fluid-burning lamp, and a chamber for the heated products of combustion, a drawer entering the case from one side and

resting upon the uppermost partition and adapted to contain disinfectant to be vaporized, there being apertures or openings in the case for air and for the insertion of the fluid-burning lamp alone or with a chimney, suitable devices within the case for supporting such implements as shaving-brushes, shaving-mugs, hair-brushes, combs and scissors with apertures or provision for the insertion of the same in the case, and slideways and adjacent openings in the side of the case for the insertion of razors, said slideways receiving the razor-blade at the broad edge with the blade in a substantially vertical position and with the handles outside of the case, substantially as specified.

4. A sterilizer for implements, instruments and tools of various kinds, comprising a case, a cover, partitions in the lower portion of the case respectively forming a receptacle in the bottom for a fluid-burning lamp and a chamber for the heated products of combustion, a drawer entering the case from one side and resting upon the uppermost partition and adapted to contain disinfectant to be vaporized, there being apertures or openings in the case for air and for the insertion of the fluid-burning lamp, suitable devices within the case for supporting such implements as shaving-brushes, shaving-mugs, hair-brushes, combs and scissors with apertures or provision for the insertion of the same in the case and slideways and adjacent openings in the side of the case for the insertion of razors, said slideways receiving the razor-blades at the broad edge with the blade in a substantially vertical position and with the handles outside of the case, and a perforated tray within and extending across the case above the razor-blades, and magnets or magnetized bars of metal supported thereby adjacent to the cutting edges of the razors.

5. A sterilizer for implements, instruments, and tools of various kinds, comprising a case having a bottom *a*, sides *c*, *d* and *e*, a side *b* extending between the sides *d* and *e* at an appreciable distance within and from the edges of said sides so as to form a vertical recess, a cover for said case, means for holding a disinfectant to be vaporized, a heating means for effecting the vaporization, and devices within and connected to the case for supporting implements, instruments and tools to be sterilized, substantially as set forth.

6. A sterilizer for implements, instruments and tools of various kinds, comprising a case having a bottom *a*, sides *c*, *d* and *e*, a side *b* extending between the sides *d* and *e* at an appreciable distance within and from the edges of said sides so as to form a vertical recess, a cover for said case, partitions *f* and *g* arranged horizontally and at appreciable distances apart in the lower portion of the case forming between the partition *f* and the bottom of the case a receptacle for a lamp for burning fluid and between the said partitions a receptacle for the heated products of combustion, there being openings 2, 3 in the sides *b*, *c*, and an opening in the side *e* for the introduction of said lamp, a drawer *h* for holding the disinfectant to be vaporized above the partition *g* and resting thereon, and devices forming supports above the drawer containing the disinfectant with apertures in the case adjacent to said supports for receiving implements, instruments and tools to be sterilized, substantially as set forth.

Signed by me this 1st day of September, A. D. 1902.

R. H. SPEARE.

Witnesses:

WM. J. SEAMAN,
H. H. KNAUFF.