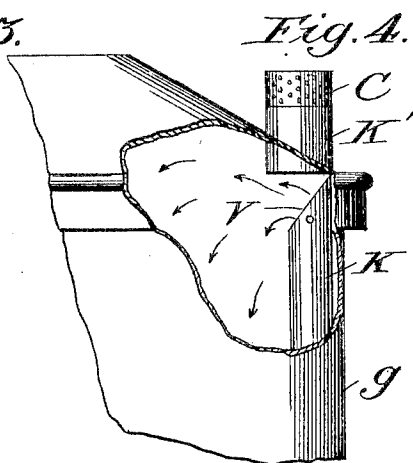
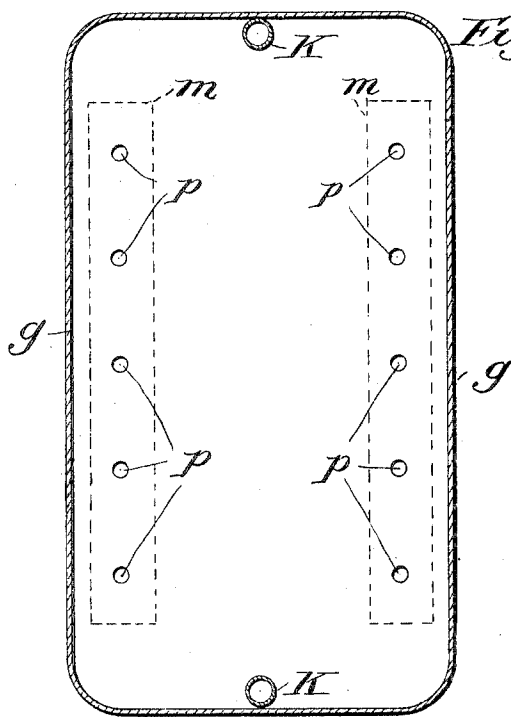
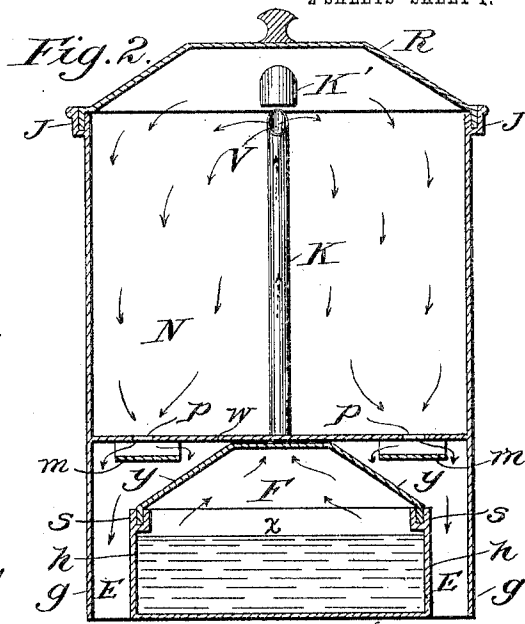
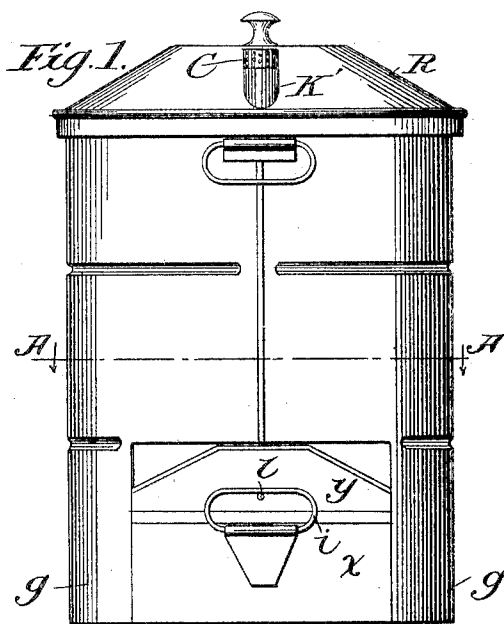


S. G. SCANLAN.

STERILIZER FOR SURGICAL DRESSINGS, INSTRUMENTS, &c.

APPLICATION FILED JAN. 9, 1905.

2 SHEETS—SHEET 1.



Witnesses:

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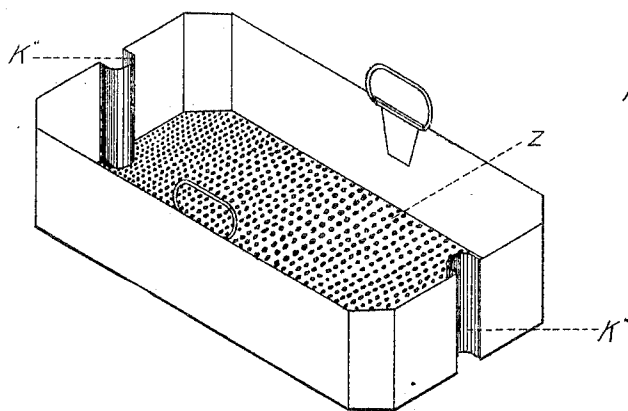
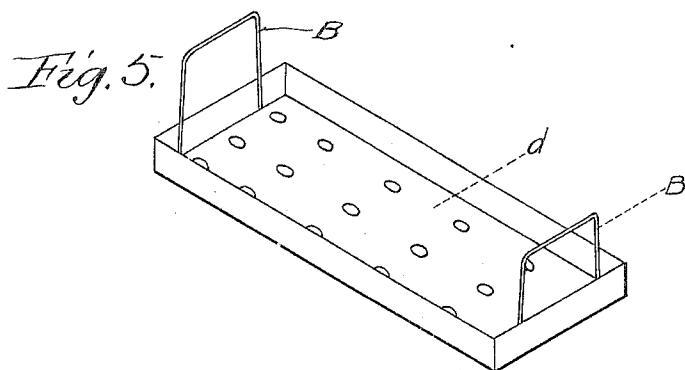
Samuel Scanlan

No. 802,601.

PATENTED OCT. 24, 1905.

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2 SHEETS—SHEET 2.



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STERILIZER FOR SURGICAL DRESSINGS, INSTRUMENTS, &c.

No. 802,601.

Specification of Letters Patent.

Patented Oct. 24, 1905.

Application filed January 9, 1905. Serial No. 240,367.

To all whom it may concern:

Be it known that I, SAMUEL GWYN SCANLAN, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Improvement in Sterilizers for Surgical Dressings, Instruments, and other Uses, of which the following is a specification.

My invention relates to improvements in sterilizers.

My object is to obtain a sterilizer for surgical dressings, instruments, and other uses in which the sterilizing-chamber is entirely emptied of air and filled with steam of a temperature of not less than 212° Fahrenheit by pressure of the steam downward from the uppermost part of the chamber where the steam enters and out through exits along the side walls of the chamber and in which the sterilizing-chamber is readily convertible into a drying-chamber and the detachable boiler into an instrument-sterilizer. This I attain by the device illustrated in the accompanying drawings, in which—

Figure 1 is an elevation showing end view. Fig. 2 is a section view at center, showing also the steam-tube. Fig. 3 is a horizontal section at A A, showing the diaphragm *w* in Fig. 2 and the location of the strips *m* in Fig. 2. Fig. 4 is a detail of the steam-tubes K. Fig. 5 is a tray for instruments. Fig. 6 is the tray for dressings.

Like letters refer to like parts throughout the several views.

In Fig. 2, *x* is a boiler for water, so constructed that heat from a jet or stove may be applied under the bottom. It is constructed with a groove at *s*, Fig. 2, to receive the horizontal rim of the sloping cover *y*, Fig. 2, forming a water-joint at *s*, Fig. 2.

y is the sloping cover of the boiler *x*, forming the steam-chamber F and connecting directly with the steam-tubes K through the diaphragm *w* at each end of the sterilizing-chamber, as shown in Fig. 3 at K K.

w is a diaphragm attached solidly to *y* and to the sides *g* of the sterilizer and to the steam-tubes K, as shown in Figs. 2 and 3. The only openings out of the steam-chamber F are the two tubes K, which lead the steam into the upper part of the sterilizing-chamber N. The sloping covers *y* to the boiler *x* are so constructed as to permit the series of open-

ings *p p* (also shown in Fig. 3) along each side of the sterilizing-chamber N from the chamber N into the outlet-space E between the sides *h* of the boiler *x* and the sides *g* of the sterilizer proper. *m* is a strip of metal under each series of holes *p p* to prevent the flames from the jet under the boiler penetrating the chamber N and so constructed as to permit the free circulation of steam or air (as the case may be) from the chamber N to the outlet-passage E, or vice versa.

The strips *m* are hung slightly below the openings *p* of the diaphragm *w* and are greater in width than the diameter of the openings they protect. The horizontal rim of the cover R fits into the groove J in the sides *g*, forming a water-joint at J.

The tubes K open into the uppermost portion of the chamber N at V, Figs. 2 and 4. Directly above these tubes and over their open upper ends are tubes K', larger than the tubes K passing through the cover R and forming outlet-tubes both from the tubes K and the chamber N. These outlet-tubes may be opened or closed by means of the cork C, Fig. 1. The parts *g w y* and K are all attached together, so as to form but one piece in the practical sterilizer. The outlet-tubes K' penetrate the cover R and form a part of it.

i, Fig. 1, is a pin or knob attached to the sloping cover *y*, so that the handle *i* on the boiler *x* may be swung over this knob, and thereby the entire sterilizer be lifted at once.

Fig. 3 shows the series of openings *p* on each side of the diaphragm (*w* in Fig. 2) and the location of the strips underneath (*m* in Fig. 2) by the dotted lines *m*. It also shows the location of the tubes K penetrating the diaphragm *w* at each end. *g* is the side of the sterilizer.

Fig. 4 is a detail of the tubes K, showing opening into sterilizer at V. This drawing also shows the outlet-tube K' closed by the cork C.

Fig. 6 is a tray with numerous perforations in the bottom Z to permit the free passage of steam and air. The tray is provided with grooves at K' at each end to fit the tubes K and is constructed to pass readily into and from the sterilizing-chamber (N in Fig. 2) when the cover (R in Fig. 2) is removed. This tray is intended to receive and hold the dressings during sterilization. This tray is

provided with strips or a projecting rim underneath to leave a free space between the tray and the diaphragm *w*.

Fig. 5 is a tray for instruments, with perforations *d* in the bottom and with strips beneath it to permit the circulation of water through the tray. It is intended to set readily into the boiling-hot water in the boiler *x* when the rest of the sterilizer is removed for the purpose of sterilizing the surgical instruments. This tray is equipped with high handles *b*, so as to be readily managed in the water in boiler *x*.

When heat is applied to the water in boiler *x*, the steam generated thereby is forced up through the tube K to the upper portion of the chamber N. The vent in the outlet-tube K' is closed by the cork C. The steam is forced at low pressure into the upper portion of chamber N, and the air in the chamber is forced by the pressure of the steam above down and out through the openings *p p* in the diaphragm *w* and out through the space E until the chamber N is entirely emptied of air and filled with steam. The pressure of the steam in the chamber N will then force the steam out through the same openings, which continues until the surgical dressings in the tray, Fig. 6, in the chamber N are sterilized sufficiently. Then the cork C, Figs. 1 and 4, is removed from the outlet-tube K', Figs. 1 and 4, and the steam from tube K escapes directly outside the sterilizer. At the same time heat from under the boiler *x*, Fig. 2, passes up through the space E, through the openings *p*, Fig. 2, through the chamber N, and out through the outlet-tubes K', Fig. 1, converting the chamber into a drying-chamber, so that the dressings are completely sterilized and dried before removing from the sterilizer and in the best possible manner. The sterilizer proper, including cover R, may then

be lifted off and the instruments in tray, Fig. 6, immersed in the boiling water in boiler *x*, Fig. 2, and thus sterilized.

What I claim as new, and seek to secure by Letters Patent, is—

1. A sterilizer comprising a detachable boiler; a steam-chamber formed by the detachable sloping cover of the boiler; a sterilizing-chamber; steam-tubes leading into the upper part of the sterilizing-chamber from the steam-chamber; a cover to the sterilizer with outlet-tubes directly above the openings in steam-tubes and provided with removable corks; a diaphragm in the sterilizer which forms the bottom of the sterilizing-chamber, with perforations along the outer sides into the space between the sides of the boiler and the sides of the sterilizer proper; a tray for dressings, with perforated bottom, with rims under the bottom, and grooved at each end to fit the tubes at the ends of the sterilizing-chamber, and to pass readily into and out of the sterilizer; a tray for instruments, with a perforated bottom and with high handles to fit readily into the detachable boiler of the sterilizer.

2. In a sterilizer the combination of a boiler with detachable sloping covers attached to the bottom of the sterilizing-chamber; and a bottom in the sterilizing-chamber with openings therein into the space between the outside walls of the boiler and the outside walls of the sterilizer proper; and strips wider than the openings, hung below the openings.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

SAM GWYN SCANLAN.

Witnesses:

CARRIE HOLT,
EMERSON ELA.