

No. 612,625.

W. M. DECKER.
STERILIZER.

Patented Oct. 18, 1898.

(Application filed Feb. 18, 1896.)

(No Model.)

Fig. 1.

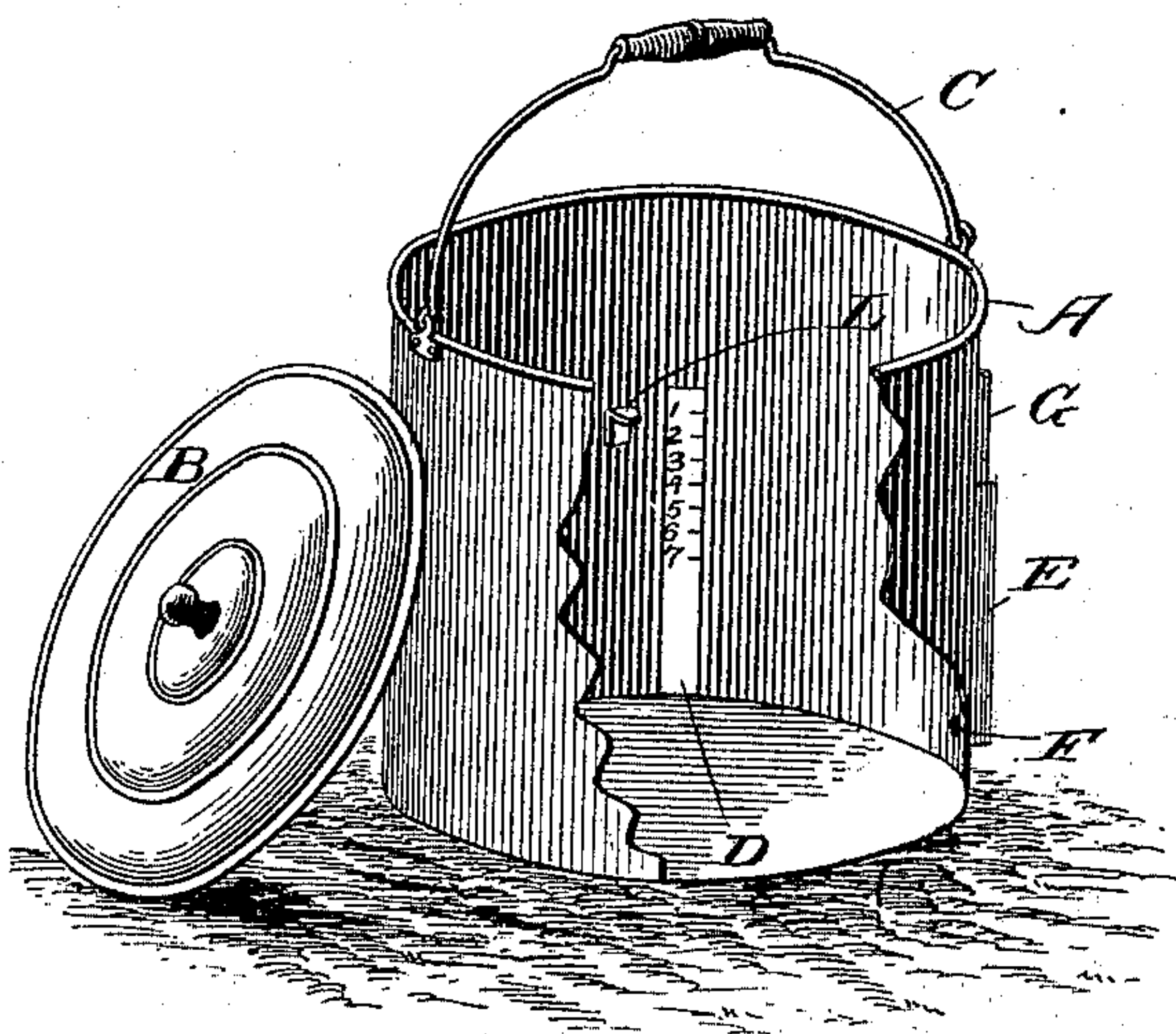


Fig. 2.

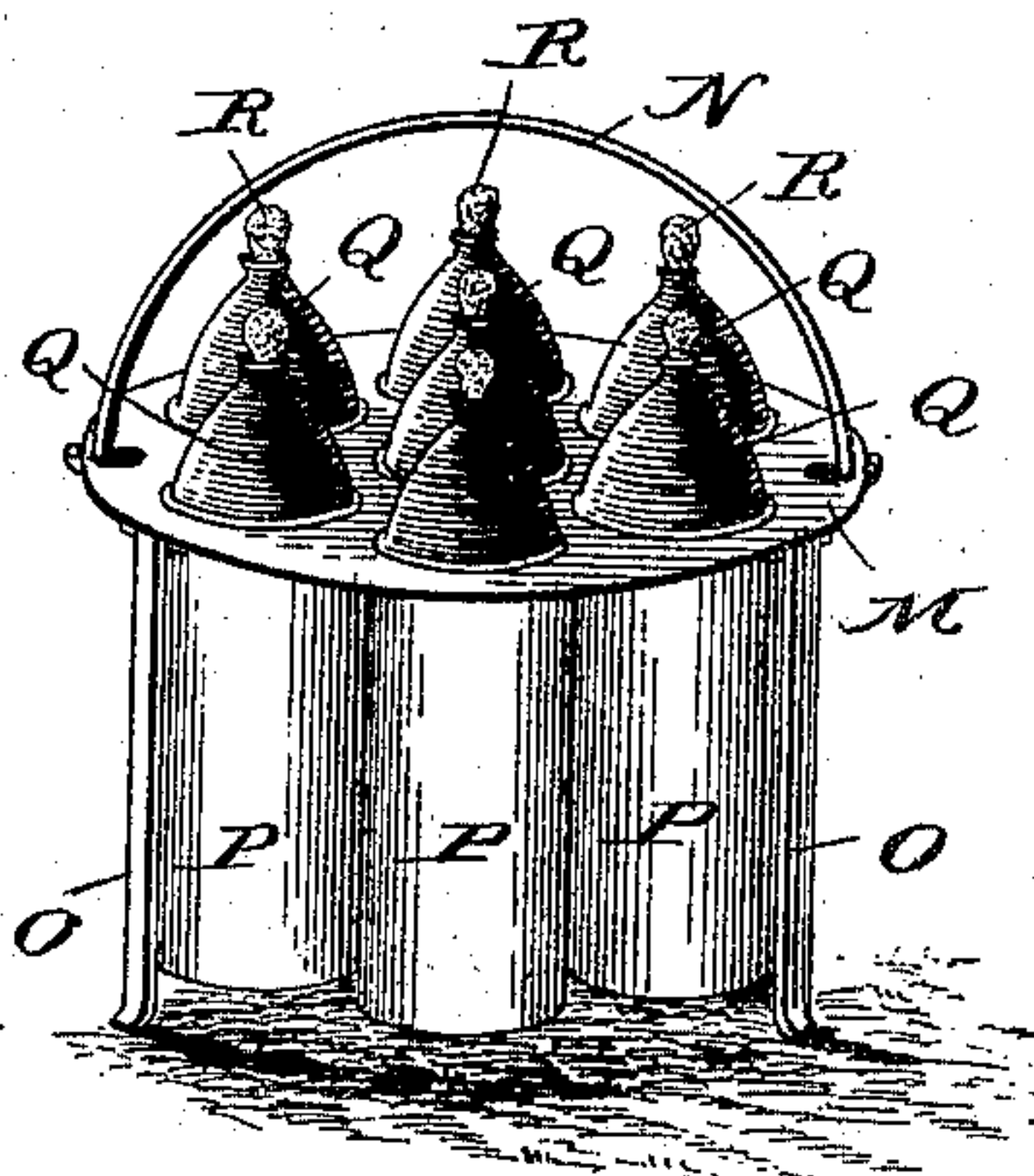
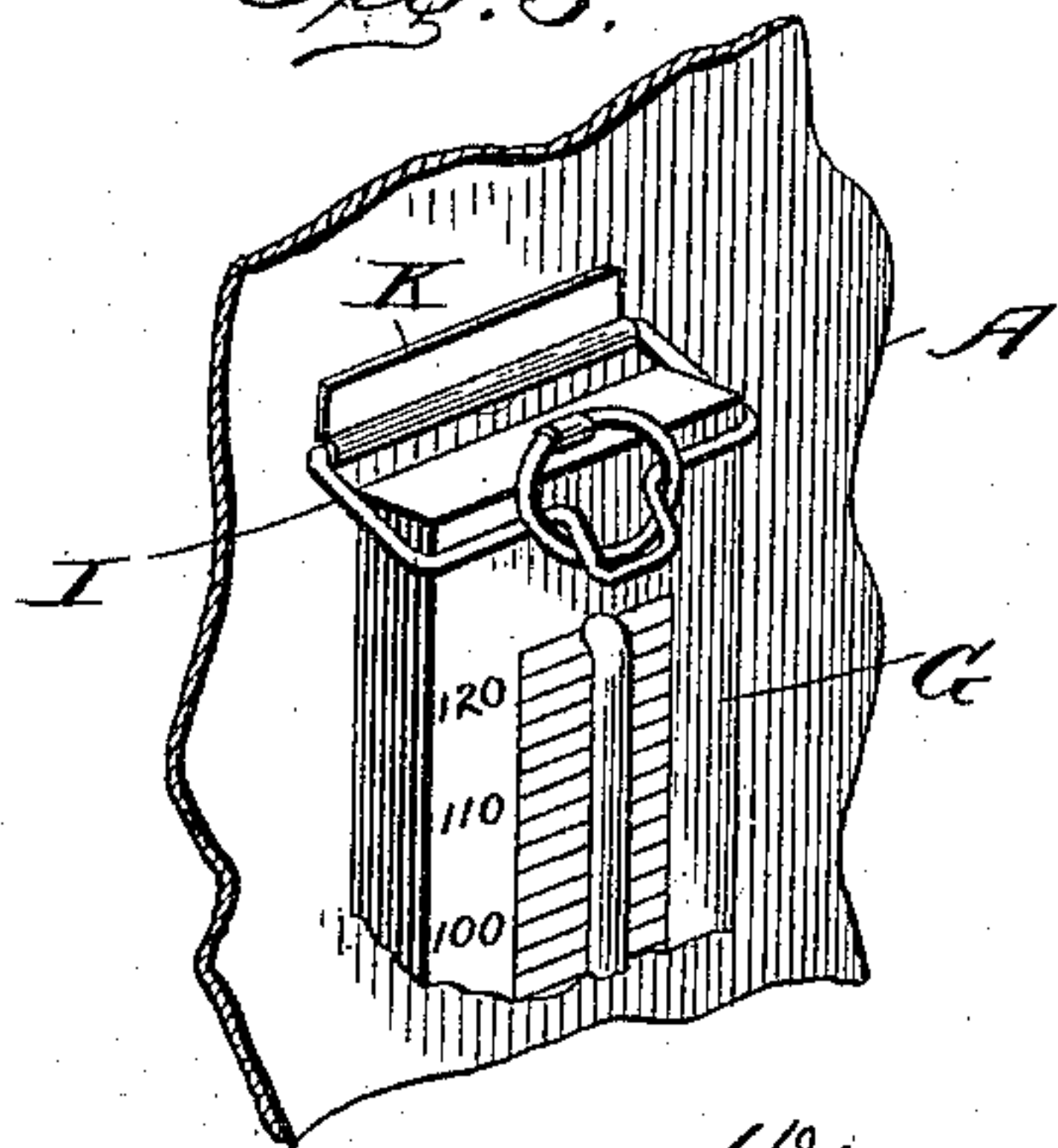


Fig. 3.



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STERILIZER.

SPECIFICATION forming part of Letters Patent No. 612,625, dated October 18, 1898.

Application filed February 18, 1896. Serial No. 579,688. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. DECKER, a citizen of the United States, residing at Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Sterilizers; 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.

My invention relates to certain new and useful improvements in sterilizers.

It has for its object to so construct the parts that the vessels containing the food to be sterilized shall at all times be out of contact with the water or steam reservoir and be subject to the free and unobstructed action of the steam or water and to at the same time secure economy and lightness in construction as well as durability of the supporting-rack, all as will be hereinafter more fully explained.

In order that those skilled in the art to which my invention pertains may know how to make and use my improved sterilizer, I will proceed to describe its construction and the method of using the same, referring by letters to the accompanying drawings, in which—

Figure 1 is a perspective view of the reservoir with the top removed and the side wall partially broken away to expose the water-gage and rack-supports and water overflow. Fig. 2 is a perspective view of the receptacles and frame removed from reservoir; and Fig. 3 is a perspective view, on an enlarged scale, of a portion of the side wall of the reservoir with the overflow-water cup removed to show more clearly the means for securing the thermometer in place during transportation.

Similar letters of reference denote like parts in the several figures of the drawings.

A is a sheet-metal reservoir which may be of cylindrical form, as shown, or rectangular and with rounded corners. This receptacle should be made of such metal or so coated or galvanized as to be free from oxidation. It is provided with a close-fitting and removable cover B and suitable bail C, for which latter, when the reservoir is made large and more unwieldy than as shown, may be substituted any other suitable means for lifting the same. At one side the wall of the reservoir is pro-

vided with a scale or gage D, designed to indicate the quantity of water necessary for sterilization, (when hot water is used.) At another point and on the outside of the wall of the reservoir is secured what I denominate a "water-cup" E, open at top and closed at its bottom and sides and securely connected by water-tight joint to the wall, which latter is perforated, as shown at F, Fig. 1, to form a channel into the water-cup near its base. The objects of the water-cup and its connection with the reservoir are twofold—first, to constitute an overflow for the contents of the reservoir after reaching a given level, and, second, to serve as a receptacle for a thermometer G, Fig. 3, which during the use of the sterilizer for sterilizing purposes is placed in the water-cup, with face outward, as shown, and which may be readily removed for inspection, and when the sterilizer is being transported may be placed in the water-cup, with its face inward and secured against accidental displacement by the swinging locking-bail I, secured to the wall of the reservoir by the sheet-metal plate K, as clearly illustrated at Fig 3.

On the inside of the reservoir at suitable distances apart are secured inwardly-projecting lugs or supports L to sustain the rack M, which latter (see Fig. 2) is composed of a plate of sheet metal, to which is removably attached a handle or bail N and three or more vertically-projecting and removable legs or supports O. The rack-plate is perforated or formed with suitable openings for the passage of any desired number of milk-cells P, which are formed with straight side walls open at the top and with a surrounding flange adapted to extend beyond the openings in the plate and to rest thereon, and thus hold the cells in a suspended position, as clearly shown, the bottoms of the cells lying in a plane above the extremities of the legs or supports O, so that a suitable space will exist between the bottoms of the cells and the bottom of the reservoir A.

The milk-cells P are provided with flexible waterproof dome-shaped caps Q, terminating at the apex or top in short reinforced open necks adapted to receive cotton stoppers R or other suitable corks.

Having described the construction of my

improved sterilizing apparatus, I will now explain how the same is used, and in doing so the advantages of the details of construction will be made apparent.

5 The milk to be sterilized is first placed in the open-topped cells P, over which are placed the flexible dome-shaped caps Q, the necks of which are closed with a suitable packing of cotton R. The cells are then placed in the
10 rack M, as shown at Fig. 2, and by means of the bail or handle N the rack is deposited within the receptacle A and upon the radial lugs L, the reservoir having been previously supplied with sufficient water, which can be
15 determined by the gage D and according to the number of cells P in the rack. For instance, if the rack contains but one cell the reservoir should be filled to a level coincident with "1," indicated on the gage. If seven
20 cells are used, the water should only rise to "7" of the gage, and likewise with any intermediate number of cells used, so that the displacement of the water by the introduction of the cells will not cause it to rise above
25 the desired or proper level. The reservoir is then covered with the cover B and placed upon the stove or other heater and the water heated to 160° or 165° Fahrenheit and kept at that temperature for a period of ten min-
30 utes, and as the water in the reservoir communicates with the water-cup E, in which is located the thermometer G, the temperature is readily determined. To expedite the process, the water employed may be heated to a
35 degree somewhat less than that required for sterilization before it is placed in the reservoir. After the milk has been properly heated and sterilized the rack, with its cells, is removed and the hot water poured out of the
40 reservoir, and an equal quantity of cold water is placed in the reservoir and the rack and cells replaced, and to maintain the water at its cooling temperature a continuous flow of water may enter the reservoir, and through
45 the medium of the water-cup E and its connection with the reservoir the proper level will be maintained by overflow in an obvious manner.

50 While my improved apparatus may be used, as just described, at a low temperature, (pasteurization,) it may also be used for a high temperature by means of steam.

After the food has been properly sterilized the rack constitutes a convenient device for
55 transporting it about the apartments and the legs or supports O enable the rack and contents to rest securely upon a table or other support. The reservoir A, by reason of its construction, may be used as an ordinary
60 bucket or water vessel by simply closing the

opening F with an ordinary stopper. It will also be observed that by reason of the construction and relation of the parts the apparatus may be employed as a portable refrigerator, sufficient space existing between the
65 bottoms of the cells P and the bottom of the reservoir to contain a reasonable supply of ice and the water-cup preventing undue rise of water resulting from melting ice. Ice may also be stored or packed around the cells be-
70 low the rack and around the dome-shaped caps Q above the rack.

The rack M, as will be observed and by reason of its construction and arrangement, constitutes not only a suitable device for holding
75 the cells P in a suspended position and away from the bottom of the reservoir, but the horizontal perforated plate constitutes an effective means for preventing the swashing or turbulent movement of the water contained
80 in the reservoir and also confines the heat thereof.

The peculiar construction of the cells enables them to be readily cleansed, as they are devoid of the usual breast and contracted
85 neck of the ordinary bottle, and they may be used as receivers, within which surgical instruments and other devices may be placed for sterilization.

Having described the construction and
90 mode of using my improved sterilizer, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the reservoir A, having the water-cup and thermometer-re-
95 ceptacle E, the swinging locking-bail I arranged above the water-cup and adapted to secure the thermometer in place, substantially as described.

2. The sterilizing-cells P having straight
100 side walls open at the top and formed with a circumferential supporting-flange, in combination with the removable dome-shaped elastic and waterproof cap Q, having open neck adapted to receive cotton plugs R or other
105 suitable corks, substantially as and for the purpose set forth.

3. The dome-shaped elastic waterproof caps Q, adapted to fit over the circumferential
110 flanges of the cells P, and formed with the reinforced open necks to receive the cotton stoppers R, or other suitable corks, substantially as hereinbefore set forth.

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

WM. M. DECKER.

Witnesses:

CHARLES TAPPEN,
SAML. G. DIMMICK.