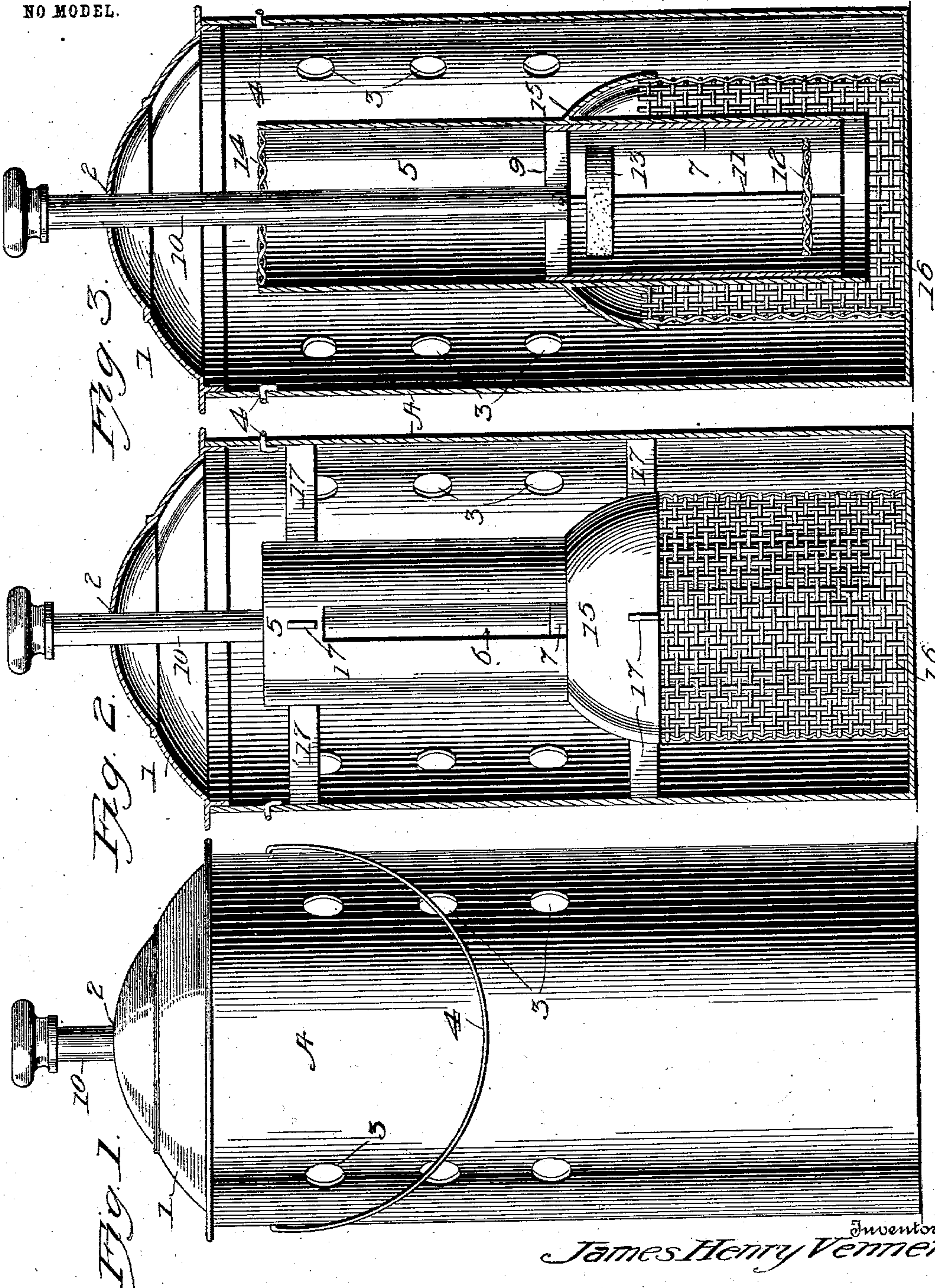


No. 730,494.

PATENTED JUNE 9, 1903.

J. H. VENNERS.
DISINFECTANT GRADUATOR.
APPLICATION FILED JUNE 7, 1902.

NO MODEL.



Witnesses

Am. North.
A. G. Keylman.

By

Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JAMES H. VENNERS, OF BROOKLYN, NEW YORK.

DISINFECTANT-GRADUATOR.

SPECIFICATION forming part of Letters Patent No. 730,494, dated June 9, 1903.

Application filed June 7, 1902. Serial No. 110,695. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. VENNERS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Disinfectant-Graduators, of which the following is a specification.

My invention has relation to improvements in disinfecting apparatus of that kind or style adapted to be utilized in the disinfection of the water in tanks, basins, cisterns, closet-bowls, in waste-pipes, and, in fact, wherever a quantity of water may assimilate with or mix with the disinfectant.

The general construction of the vessel embodies a suitable containing vessel having inlet and outlet ports or apertures, an inclosed slotted cylinder having a reticulated or foraminous cylindrical skirt, and a slidable interior cylinder or slide to graduate the height and capacity of the slot in the outer stationary cylinder; and the object is to provide a disinfecting device of the kind indicated and generally stated which is simple and durable in construction and efficient in operation and certain in results.

With these objects in view the invention consists in the novel construction of parts and their arrangement and aggroupment in dependent and operative combination.

I have fully and clearly illustrated the improvements in the accompanying drawings, forming a part of this specification, and wherein—

Figure 1 is a side view of the complete vessel, showing the inlet and outlet ports and the projecting portion of the pull-rod. Fig. 2 is a vertical central section showing the central slotted cylinder, the reticulated cylindrical inclosure or cage, and the means for holding them in vertical position within the vessel or casing. Fig. 3 is a vertical central section taken through the casing of the vessel and through the interior cylinder and reticulated cylinder and showing the float and agitator.

Referring to the drawings, wherein like parts shown in the several figures are designated by like references, A designates the containing vessel or casing made of some non-corrodible metal, as brass, and of such ca-

capacity as may suit it to the uses intended. The general purpose is to utilize the device by placing it partially or wholly submerged in the flush-water tank of closets; but it is apparent that it can be with like utility placed in any locality where water is to be occasionally drawn from a vessel. A suitable cover 1, having a central perforation 2 in the top, is provided and the cover being detachably applied to the vessel. In the upper portion of the vessel is made a suitable number of openings 3, constituting inlets for the water and outlets for the disinfecting material. A bail 4 is suitably hung to the vessel, whereby it may be carried as usual. In the casing is detachably disposed a cylinder 5, open at both ends and extending well through the length thereof and formed with a vertical slot 6, extending approximately from the middle line of the cylinder to adjacent its upper end, as shown in Fig. 2 of the drawings. The object or purpose of the slot 6 is in connection with a slide or telescoping internal cylinder movable lengthwise of the slot to regulate and graduate the discharge of the disinfecting fluid. To effect this essential, I slidably fit in the cylinder 5 a shell or cylinder 7. The shell or cylinder 7 is of such length that it may close the slot 6 entirely, if so desired.

Across the upper end of the shell or cylinder 7 is fixed a bar 9, to which is rigidly fixed the lower end of a pull-rod 10, which slidably projects through the aperture 2 in the cover.

To the cross-bar 9 is hung a rod 11, having on its lower end a disk 12, of wire-netting, to act as a depending weight tending to keep the rod, with a float 13 mounted thereon, in straight depending position. The disk 12 also serves as a mixer or agitator when reciprocated in the cylinder and when the rising fluids encounter it.

The cylinder 5 is provided with a wire-netting 14 in its upper end, through which the water may descend or through which the water may rise when the vessel is immersed in the water of the tank. About the middle of the cylinder is secured an annular flange 15, curved outward and downward, so as to be of larger diameter at its lower end and stand the desired distance from and around

the cylinder 5. To the lower end of the flange 15 is rigidly secured the upper end of a cylindrical wire cage 16 open at its ends and adapted to set with its lower end on the floor of the vessel, as shown in Figs. 2 and 3 of the drawings. In the annular space between the vertical surface of the wire cage 16 and the inner face of the vessel is deposited the disinfecting material, which usually and preferably consists of crystals of permanganate of potash, which has all the qualities of lasting and efficiency essential to effect the object of a thorough disinfection. To maintain the cylinder with the wire cage in proper central vertical relation to the vessel, I secure radially-extending arms 17 adjacent to the top of the cylinder and to the lower end of the flange 15, as shown in Fig. 2 of the drawings.

To utilize the device, the parts or elements are assembled, as shown in the drawings and the disinfectant deposited in the annular space between the wire cage and the interior face of the vessel, and the vessel then closed and placed in the tank or vessel containing the water to be remedied by the disinfecting process. When the charged vessel is placed in the tank, the water will enter through the ports and fall to the bottom and submerge the disinfecting material and percolate through the wire cage and, rising up through the cylinder, find outlet through the graduated slot in the cylinder with such force or as freely as may have been provided for by the graduated position of the slide or cylinder in relation to the slot. When the water is drawn off from the tank a circulation will be created and the fluid escape through the parts of the casing, carrying with it the charged solution, which may have become diffused in the water within the casing. This result will continue until the water-level reaches the lower limit or end of the slot as graduated, which point being reached the fluid in the cylinder will pass down and out through the wire cage into the disinfectant and rising therethrough will diffuse with the water and be carried off through the ports until a level is reached on a line with the lowermost port.

The slot 6 is closed at any point or height desired by the movable graduating-cylinder, which is operated and adjusted by the rod 10, so that the discharge of the medicated water is increased or diminished and regulated to suit the purpose.

It will be observed that by the graduating system above described the water drawn off from the tank does not disturb the solution in the cylinder after the level in the tank

reaches a point on and below the line with the opening in the graduated slot.

I desire it to be understood that I do not limit myself to the particular constructions and precise arrangement of the parts, since changes may be made without departing from the scope of the invention.

Having thus described my invention, what I claim is—

1. A disinfecting vessel comprising a vessel provided with suitable ports, a cylinder having a vertical discharge-slot, a sliding element to graduate the opening of the slot, and a wire-cage inclosing the lower portion of the cylinder.

2. A disinfecting vessel, comprising a vessel provided with suitable ports placed in vertical succession, a cylinder in the vessel having a vertical slot, and supported with its lower end above the bottom of the vessel, a downwardly and outwardly arranged flange around the cylinder, a wire cage secured to the lower end of the said flange, and a slidable element to regulate the opening in said slot.

3. A disinfecting vessel, comprising a vessel provided with ports in vertical succession, a cylinder in the vessel having a vertical slot, and supported with its lower end above the bottom of the vessel, a wire cage of larger diameter than the cylinder and secured to and extending below the same, and a sliding element to regulate the opening of the slot.

4. A disinfecting vessel, comprising a vessel provided with inlet-ports, a cylinder in the vessel having a vertical slot and supported with its lower end above the bottom of the vessel, a wire cage of larger diameter than the cylinder and secured to and extending below the same, a sliding element to regulate the opening of the slot, and an agitating-disk suspended from the said element.

5. A disinfecting vessel, comprising a vessel provided with suitable ports, a cylinder in the vessel formed with a discharge-port, a slide to adjust the capacity of the port, an annular flange about the middle portion of the cylinder, a wire cage secured to the edge of the flange and adapted to set on the bottom of the vessel to support the cylinder, radial arms to hold the cylinder and cage in vertical position in the vessel, and an agitating-disk suspended within the cylinder.

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

JAMES H. VENNERS.

Witnesses:

THOMAS R. VENNERS,
SAMUEL C. BROOKS.