M. P. ORR.

STERILIZING APPARATUS.

APPLICATION FILED JUNE 26, 1913.

1,106,579.

Patented Aug. 11, 1914.

2 SHEETS—SHEET 1.

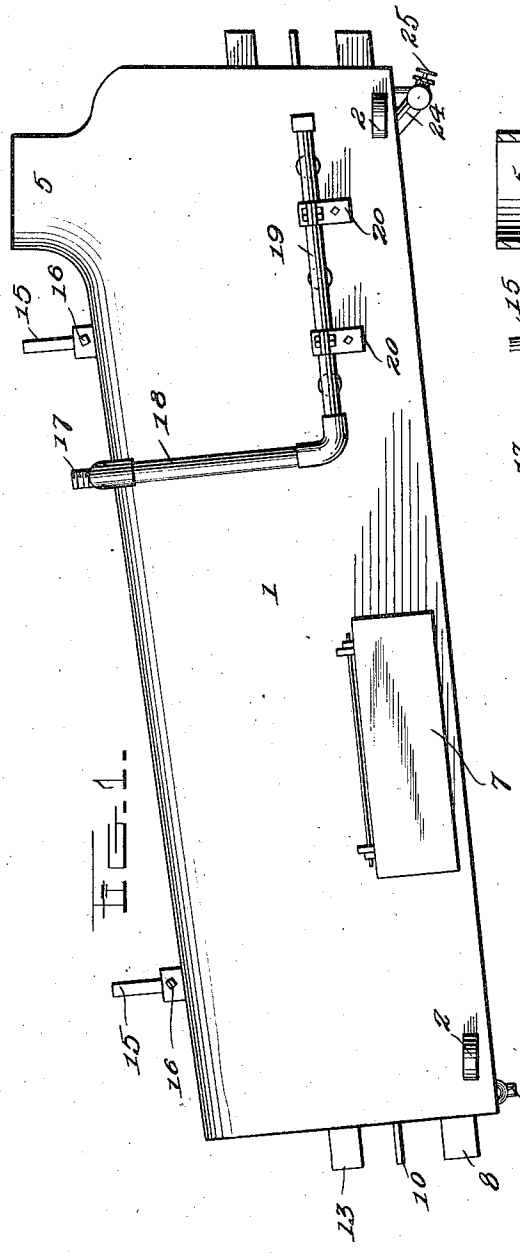


FIG. 1.

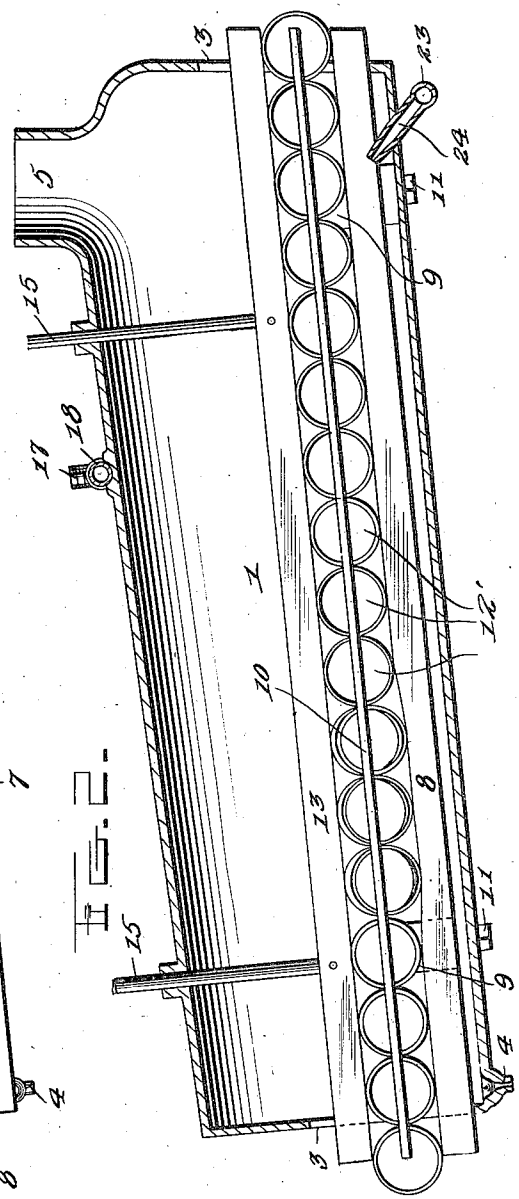


FIG. 2.

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WITNESSES:

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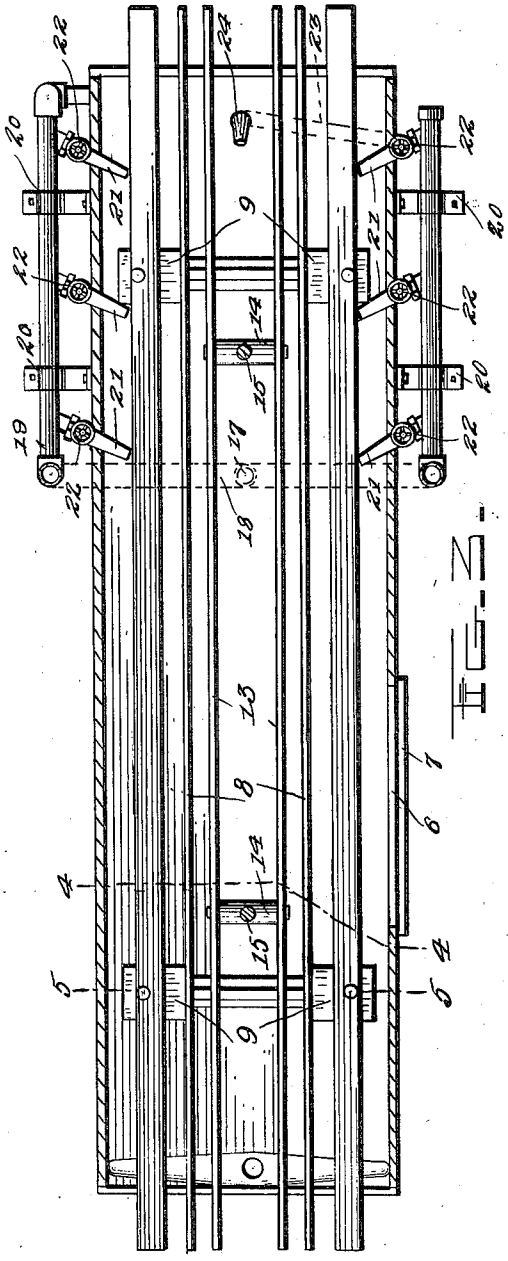


FIG. 3.

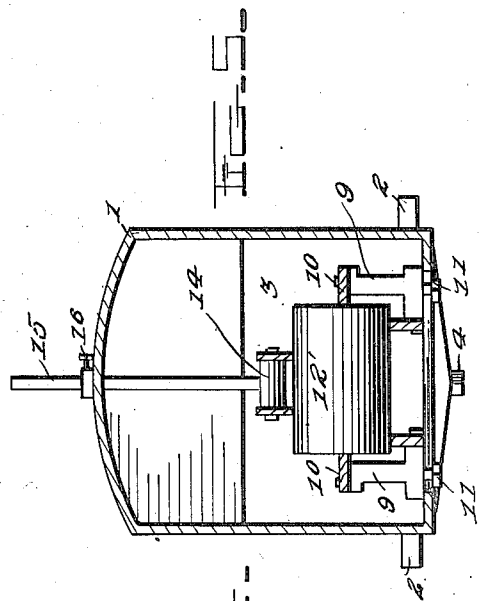


FIG. 5.

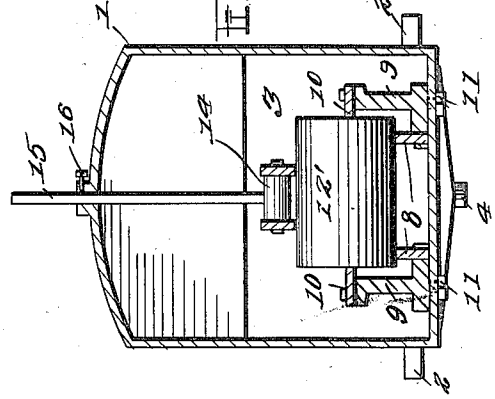


FIG. 4.

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UNITED STATES PATENT OFFICE.

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STERILIZING APPARATUS.

1,106,579. Specification of Letters Patent. Patented Aug. 11, 1914.

Application filed June 26, 1913. Serial No. 775,908.

To all whom it may concern:

Be it known that I, MARK P. ORR, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Sterilizing Apparatus, of which the following is a specification.

My invention relates to improvements in sterilizing apparatus, and refers particularly to an apparatus for washing or sterilizing cans or receptacles of a cylindrical shape, one object of the invention being the provision of an apparatus which will subject every part of the can or object to the action of the cleansing or sterilizing agent and which in addition to cleansing the cans will cause them to travel from the entrance to the discharge end of the apparatus.

Another object of my invention is the provision of a sterilizing apparatus which will have a large capacity and thus be able to sterilize a great many cans and which will require very little attention, making its operating cost very small.

Another object of my invention is the provision of a sterilizing apparatus of the character mentioned which will permit of adjustment to cans or objects of various sizes, thus permitting the apparatus to be suited, or to accommodate cans of various sizes, and which in addition to this adjustment will retain the cans and cause them to travel in a smooth and rapid manner.

Another object of my invention is the provision of an apparatus which in addition to thoroughly cleansing or sterilizing the cans or objects and providing for adjustments and large handling capacity, will be of very simple, durable and inexpensive of production, and entirely practical in every particular.

With these objects in view my invention consists of a sterilizing apparatus of the character and for the purpose mentioned embodying novel features of construction and combination of parts substantially as disclosed herein.

Figure 1 represents a side elevation of a sterilizing apparatus constructed in accordance with and embodying my invention. Fig. 2 represents a central longitudinal sectional view of the apparatus. Fig. 3 represents a horizontal sectional view. Fig. 4 represents a transverse sectional view on line 4—4 of Fig. 3, and Fig. 5 represents a transverse sectional view on line 5—5 of Fig. 3.

Referring by numeral to the drawings in which similar characters of reference denote corresponding parts in all the views, the numeral 1, designates the receptacle or tank of my apparatus, which in use is supported in an inclined position upon a suitable structure by means of the supporting lugs 2, the tank or receptacle being provided with openings 3, one at each end and with a discharge cock or nozzle 4, and with the stack 5, for carrying off steam or fumes which arise, and further provided with an opening 6, covered by a hinged door 7, the purpose of this opening being to allow for cleaning the interior of the receptacle.

From this construction it will be observed that I provide a receptacle which has an entrance and discharge opening and is supported in an inclined position and upon the lower portion of the receptacle is mounted the pair of rails or tracks 8, adjacent to each side of which are supported brackets 9, the upper ends of said brackets having mounted thereon the guide rails 10, and the lower ends of said brackets carrying headed studs 11, fitting in slots 12, this construction providing means for guiding the cans or objects 12′ in their travel upon the tracks 8, from the entrance to the discharge end of the receptacle, and also permitting lateral adjustment of said guides to accommodate cans or objects of different widths.

In order that the cans or objects may be caused to travel between the guides and upon the tracks in a smooth, rapid and even manner, as well as to accommodate cans or objects of different diameters I provide the upper track 13, connected by shafts or rods 14, and resting upon the top of the cans or objects to retain them in their travel and this upper track is adjusted vertically by means of the pair of rods 15, passing upward through the receptacle and retained in

place by means of clamping or binding screws 16, which bear upon the rods 15, and retain them in the desired adjustment.

From the foregoing description it will be observed that the cans or objects are supplied to the receptacle at the entrance or elevated end thereof and travel upon the upper and lower track and between the guides and to effect the cleansing or sterilizing of the cans as well as to cause them to travel rapidly I provide a novel mechanism which consists of the supply pipe 17, leading from the suitable source, preferably a steam supply, the supply pipe communicating with the yoke shaped connection 18, with which is connected the pair of horizontal branches 19, which are secured to the receptacle by suitable brackets 20, and from these branches lead the series of inclined nozzles 21, provided with control cocks 22, and the terminal branch 23, which is provided with an upward extending nozzle 24, provided with a control cock 25, the nozzles 21, directing the steam against or into the cans or objects and the nozzle 24, projecting the steam against the outer surface of the cans or objects, and all nozzles extend in the inclined direction of the receptacle whereby they not only serve to discharge the steam into and against the entire surface of the cans but by the force of the steam serve to cause the cans to travel rapidly toward the discharge end of the receptacle. It will thus be seen that the tracks and guides are adjusted to accommodate the cans according to size and that the cans are subjected thoroughly to the action of the steam to cleanse and sterilize and to cause the cans to tilt and discharge any matter therefrom before leaving the receptacle. I provide the tracks 8 with a curved or depressed portion 8′ which causes the cans to drop or tilt slightly and drain the contents therefrom.

From the foregoing description taken in connection with the drawings it will be apparent that I provide an apparatus of large capacity, also that cans or objects of various sizes may be accommodated, also that a thorough cleansing or sterilizing is assured, and also that an apparatus embodying my improvements can be manufactured at a low price and will prove entirely practical.

I claim:

1. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle, a track extending through the ends of said receptacle to receive the cans, means for retaining and guiding the cans on said track consisting of vertically adjustable rods mounted in the tank and longitudinal strips connected with said rods and arranged above the cans, and means for sterilizing or cleansing the cans and causing them to travel on said track.

2. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle having an entrance and discharge opening, a steam supply medium mounted in the entrance portion of the receptacle and having nozzles for directing the steam into the side and from the bottom of said receptacle, guides for the cans consisting of vertically adjustable means arranged above the cans and laterally adjustable means arranged at the sides of the cans, and tracks extending through the receptacle and projecting outside the entrance and discharge openings to receive the cans or objects to be subjected to the steam supply medium, said cleaning or sterilizing medium by means of its projecting force against the cans causing said cans to travel upon the track.

3. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle having an entrance and discharge opening, a track extending throughout the receptacle and beyond the entrance and discharge openings to receive the cans or objects, a steam injecting means located in the receptacle near the entrance opening thereof, and vertically and laterally adjustable means for guiding and retaining the cans or objects in their travel upon the track, said cleaning or sterilizing medium by means of its projecting force against the cans causing said cans to travel upon the track.

4. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle disposed at an incline and having an entrance and discharge opening, means in said tank or receptacle having adjustment to guide and adjust the cans or objects in their travel within said receptacle, and means for subjecting the cans or objects to the action of a cleansing or sterilizing medium for cleansing and causing said cans to travel upon said track.

5. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle open at both ends and arranged at an incline, a track mounted on the base of said receptacle to receive the cans, adjustable guiding tracks above the main tracks for guiding the cans in their travel upon the main track, and means for subjecting the cans to the action of a cleansing medium which cleanses the cans and by its impact causes the cans to travel upon said main track.

6. A can sterilizing apparatus consisting of a sterilizing chamber or receptacle having an entrance and discharge end and disposed at an incline, a main track ar-

ranged on the base of said receptacle upon which the cans travel, a pair of laterally adjustable guides to accommodate cans of different widths, guiding tracks above the main track for retaining and guiding the cans in their travel upon the main track, means for vertically adjusting said guiding track, and a steam injecting means arranged at the forward or entrance portion of the receptacle to cleanse the cans and also force them to travel upon the main track.

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

MARK P. ORR.

Witnesses:
ORA FESLER,
GEO. R. CLARK.