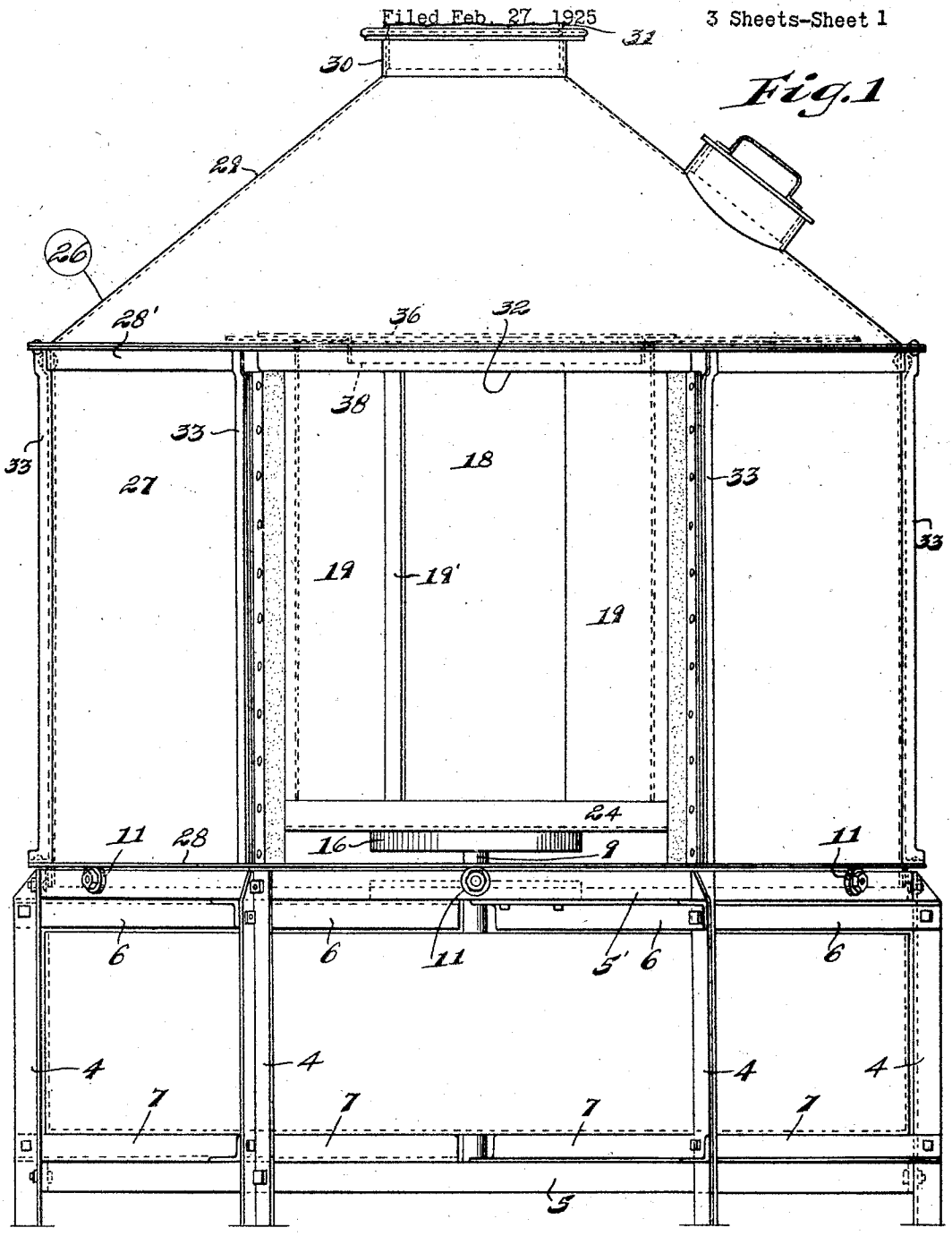
Dec. 20, 1927. 1,653,219

H. D. LATHROP

ROTARY CAN WASHER

Filed Feb. 27, 1925 3 Sheets-Sheet 1

Fig. 1



Witnesses:
C. E. Wenzel.
E. G. A. [illegible]

Inventor:
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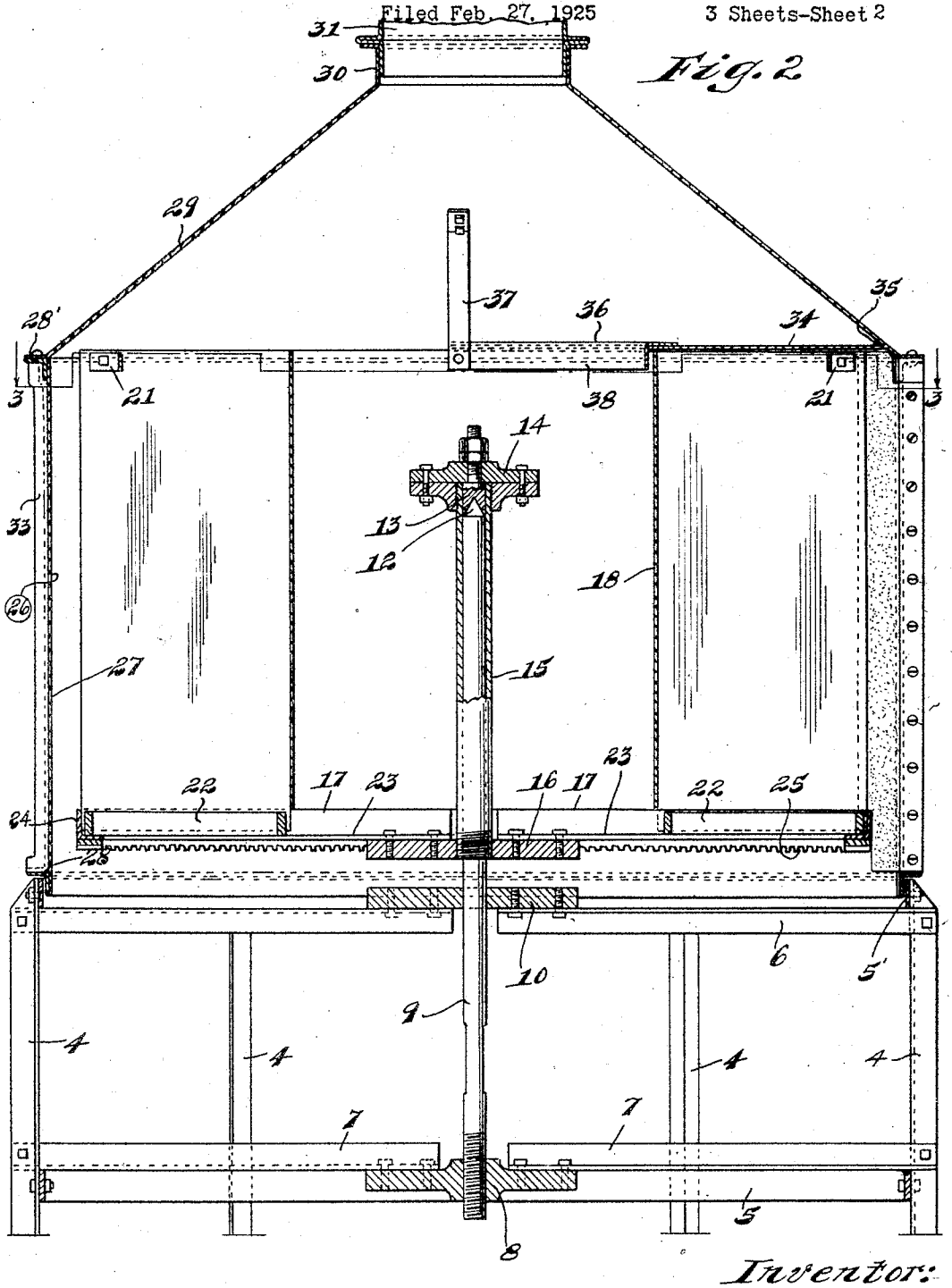
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ROTARY CAN WASHER

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Fig. 2.



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ROTARY CAN WASHER

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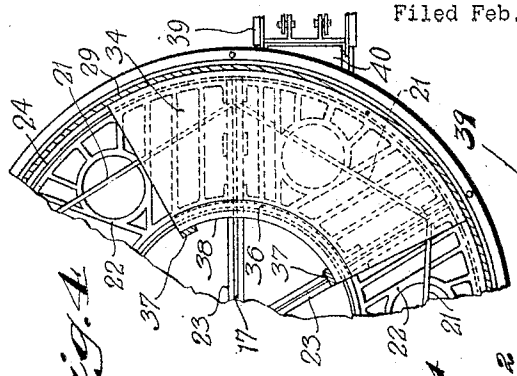


Fig. 4.

Fig. 3

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Patented Dec. 20, 1927. 1,653,219

UNITED STATES PATENT OFFICE.

HARRY D. LATHROP, OF CHICAGO, ILLINOIS.

ROTARY CAN WASHER.

Application filed February 27, 1925. Serial No. 11,916.

My present invention relates to rotary can washers, especially adapted for washing and sterilizing milk cans and the like, and the main object of my invention is the provision of an improved machine of this class, which will be highly efficient in use and economical in manufacture.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 represents a side elevational view of a machine constructed in accordance with the present invention;

Fig. 2 is a central vertical section taken approximately on line 2—2 of Fig. 3;

Fig. 3 is a cross section through the machine taken approximately on line 3—3 of Fig. 2; and

Fig. 4 is a fragmentary plan and section showing the plate means for protecting the compartment with which the doorway is registered.

In the drawings, wherein I have illustrated the preferred embodiment of my invention, the reference character 4 denotes a circular series of leg supports which are bolted to a bottom ring 5 and to a top spider frame 6 to constitute a circular base structure. Secured upon the bottom ring 5 and to the supporting legs 4 is a spider frame 7 characterized by having a center plate 8 into which is threaded a center shaft 9 that extends for a considerable distance above the base structure as shown. The top spider frame 6 includes a central plate member 10 through which the center shaft 9 extends. Secured upon the inner faces of the supporting legs 4, above the top spider frame 6 is a top ring 5′ carrying roller members 11 for the purpose of rotatably supporting a hood to be presently described.

Preferably and as shown, the top end of the center shaft 9 is made cone-shaped as at 12 and rotatable thereon is a stud member 13 having a cavity or bearing receptive of said cone-shaped end 12, the said stud member 13 being rigidly carried by a two-part head 14 which is threaded upon a sleeve 15 that surrounds the center shaft. Upon the lower end of the sleeve 15 is threaded a center plate 16 carrying equi-spaced, radially extending T-shaped bars 17 designed to constitute a skeleton base for the support of a compartmented rotary section. In the embodiment herein shown, this rotary section is produced by supporting upon the T-shaped bars 17 a cylindrical casing or wall 18 which surrounds the center shaft and extends a distance thereabove. Bolted to and extending upwardly from each of the radial bars 17 is a vertical partition 19 whose inner marginal edge 19′ is bent at an angle for securement to the cylindrical member 18, as best shown in Fig. 3. These vertical partitions 19, by means of which in association with the cylindrical member 18 the rotary section is divided into a plurality of milk can receiving compartments as 20, terminate at their upper ends in the plane of the cylindrical member 18 as shown in Fig. 2; and the same are braced at their upper ends by the sector bars 21, best illustrated in Fig. 3. In this construction, each of the compartments 20 is open at both its top and bottom ends and is also open between the sector defined by the radially extending partitions 19. Each of the compartments is provided at its bottom end with a removable rack or grate 22 designed to rest upon the horizontal flanges or cross pieces 23 of the T-shaped bars 17. These racks serve as means for supporting in the compartments the milk cans while they are being washed by means of jets of steam, or of water, or of cleansing solutions which may be variously arranged for the purpose within the base structure. To the extremities of the T-shaped bars 17 is attached a ring 24 of angular form in cross section for the purpose of furnishing a support for the outer ends of the racks 22. To the underside of this ring 24 is secured a crown gear 25 whereby the compartmented section may be driven through proper connections with any suitable source of power.

Surrounding the compartmented section is a hood 26 which consists of a suitable cylindrical sheathing 27, to the bottom end of which is secured a circular member 28 of angular form in cross section so as to operatively rest upon the rollers 11 whereby suitably to support said hood for ready rotation about the compartmented section. At the upper end of the cylindrical sheathing

27 is attached a re-inforcing ring 28′ upon which is mounted a cone-shaped top 29 which terminates in a central projecting portion 30 designed rotatably to receive the end of a suitable conduit 31 for the exit of the steam resulting from the washing operations.

The hood 26 is provided with an opening or doorway 32 which is preferably of the same size as each of the can receiving compartments 20. Through this doorway the cans to be washed are passed into the compartments for the washing operations, and through this doorway also the cans are removed after being washed. Moreover, this doorway provides an opening through which the racks 22 may be removed and applied, it being remarked in this connection that the racks 22 may be of different types and designs. This doorway, furthermore, provides ready access to each of the compartments for the purpose of ascertaining whether the washing operations are being carried on properly, it being readily understood from the description, taken in connection with the accompanying drawings, that this hood is rotatable independently of the rotation of the compartmented section. By preference, the hood is rotated manually, and to this end strips 33, adapted to be grasped by the hand are positioned at intervals about the hood, the same being connected between the members 28 and 28′. These vertically extending strips 33 also serve as braces for the hood structure. Owing to the fact that the doorway 32 is always open, it is desirable to prevent the steam from entering the compartments 20 from the cone-shaped top 29 when the attendant for the machine is engaged in placing cans in the compartments or removing them therefrom. To this end I provide a segmental plate 34 which is supported by the hood in association with the doorway 32; the said plate being welded as at 35 or otherwise secured to the cone-shaped top 29 immediately above the partitions 19, the said segmental plate being further supported by a flanged plate 36 which constitutes part of a supporting bracket 37 suitably attached to said cone-shaped top 29. In this connection it will be observed that the flanged plate 36 is curved in agreement with the curvature of the cylindrical member 18 and that the flange 38 of said plate serves as sealing means for preventing the steam from entering the protected compartment between the cylindrical member 18 and the segmental plate 34. By this arrangement, the steam is prevented from entering the compartment wherewith the doorway 32 is in register. 39 represents a table which is located adjacent the rotary can washer for convenience in moving the cans into and out of the compartments, the said table being furnished with a hinged leaf 40 adapted to be positioned for the ready transfer of the cans from the table to the compartment or vice versa.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A rotary can washer including a base structure, a rotatable section mounted thereon and having a plurality of radial partitions forming compartments therein, a rotatable hood surrounding said section and having a doorway formed therein which is adapted to register successively with each of said compartments, and a segmental plate secured to the hood above the doorway whereby said plate will close the top of the compartment with which the doorway is in registry.

2. A rotary can washer including a rotatable section having a plurality of radial partitions forming compartments formed therein, a rotatable hood surrounding said section and having a cone shaped extension thereabove, the hood having a doorway adapted to register successively with each of said compartments, and means above the doorway for closing the top of the compartment with which the doorway is in registry.

3. A rotary can washer including a rotatable section having a plurality of radial partitions forming compartments formed therein, a rack in each compartment forming the floor thereof, a rotatable hood surrounding said section and having a cone shaped extension thereabove, the hood having a doorway adapted to register successively with each of said compartments, and a plate above the doorway for closing the top of the compartment with which the doorway is in registry.

4. A rotary can washer including a rotatable section having a plurality of radial partitions forming compartments formed therein, a crown gear secured to the bottom of said section whereby it may be rotated, a removable rack in each compartment forming the floor thereof, a rotatable hood surrounding said section and having a cone shaped extension thereabove, the hood having a doorway adapted to register successively with each of said compartments, and a plate above the doorway for closing the top of the compartment with which the doorway is in registry.

5. A rotary can washer including a base

having a column extending upwardly through its center, a rotatable radially compartmented section disposed above the base and having a tube extending upwardly from its bottom, a crown casting on the top of the tube, a bearing in the casting engaging the top of the column whereby the section is rotatably supported, a crown gear on the bottom of the section whereby it may be rotated, and a rotatable hood having a cone-shaped extension thereabove surrounding said section and having an upwardly extending cone shaped extension and a doorway.

In testimony whereof I have signed my name to this specification.

HARRY D. LATHROP.