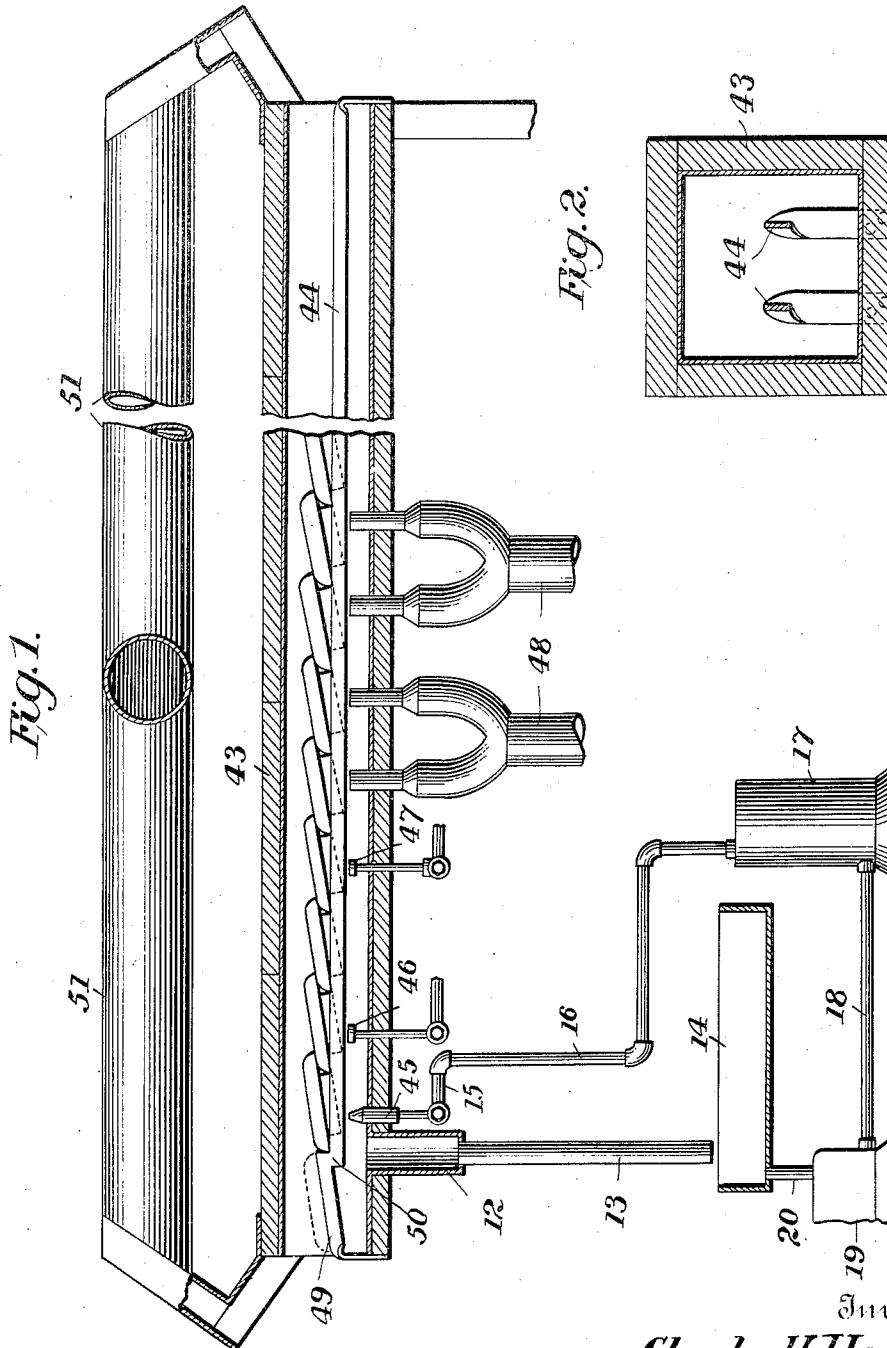


C. H. HOOD.
 APPARATUS FOR CLEANSING, STERILIZING, AND DRYING MILK CAN COVERS.
 APPLICATION FILED SEPT. 25, 1907.

934,404.

Patented Sept. 14, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES H. HOOD, OF SOMERVILLE, MASSACHUSETTS.

APPARATUS FOR CLEANSING, STERILIZING, AND DRYING MILK-CAN COVERS.

934,404.

Specification of Letters Patent. Patented Sept. 14, 1909.

Original application filed October 24, 1906, Serial No. 340,336. Divided and this application filed September 25, 1907. Serial No. 394,551.

To all whom it may concern:

Be it known that I, CHARLES H. HOOD, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented an
5 Improvement in Apparatus for Cleansing, Sterilizing, and Drying Milk-Can Covers, of which the following description, in connection with the accompanying drawings, is
10 a specification, like numerals on the drawings representing like parts.

The present subject matter was originally disclosed in my application Ser. No. 340,336 filed Oct. 24, 1906, now Patent No. 864,133
15 granted Aug. 20, 1907, and relates more particularly to means permitting the covers of the kinds of milk cans set forth in the previous case, to be treated in substantially the same way as the cans proper.

As stated in the above mentioned case, my invention depends upon the discovery that by using air and water in extremely large volume, in the manner therein set forth at length, the washing and drying of milk cans
20 is simplified in an unexpected degree.

Preferably the covers are subjected to the various operations at different points, being placed on tracks to be pushed over rinsing, washing, cleansing, sterilizing and drying
30 means in the order explained in my Patents Nos. 864,131 and 864,132.

The cover apparatus is primarily intended to be used in connection with the can washing apparatus, although not restricted
35 thereto.

The constructional details and advantages of my mechanism will be pointed out in the course of the following description.

In the drawings I have shown a preferred
40 embodiment of the apparatus, Figure 1 showing the same in longitudinal section; and Fig. 2 in transverse section.

It will be understood that my invention is not limited to transmitting a single row
45 or series of covers, being shown so arranged merely as a matter of convenient illustration; and I do not limit myself to the structural details shown as the arrangement, location and construction of the parts may be
50 varied and still come within the scope of my invention as pointed out in the claims.

In the cover passageway 43 I provide longitudinally extending tracks 44 shown as made of stiff bar iron, see Fig. 2, spaced apart sufficiently to permit the projecting horizontal
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rim of the covers to rest thereon while the depending flange slides between the tracks. The covers of the large kind of cans being considered, are heavy, and the overhanging top portions thereof are usually made double, so that the covers get battered and more or less out of shape, and I have found it difficult to devise a suitable passageway to permit them to be shoved through without pushing each other out of place, getting wedged, etc.
60 I have found however that by overlapping the covers one on the other as shown in Fig. 1, they move along smoothly on the two rails of the track, the rear edge of the flange of the cover hanging downwardly between the
65 rails and serving to guide the cover to some extent while the overlapping of the rim or top portion of one cover on the rear side of the preceding cover helps still further to hold them in place. To accomplish this arrangement of the covers automatically I provide an inclined part 49 at the beginning of the track, connected by a jog 50 with the remaining straight portion of the track, so that thereby a following cover is caused to
70 climb upwardly onto a preceding cover, and then, when it reaches the jog 50, the following cover as it drops down is directed into proper overlapped position during the remainder of its passage. The treatment of
75 the covers is substantially the same as explained and claimed in my before mentioned patents. A drip tank 14, pump 17, and heater 19 are provided the same as before, the drip tank receiving fluid from a catch
80 basin 12 and pipe 13 and being connected by a pipe 20 with a heater which connects by a pipe 18 to the pump, the latter delivering the heated cleansing fluid by a pipe 16 to the pipe 15, whence it is forced to the discharge
85 nozzle 45 which discharges the hot cleansing fluid directly against the can covers as they pass one after the other above said nozzle. A second nozzle 46, provided with a spraying device, delivers rinsing water from the city supply or other convenient source, to cleanse and rinse the covers while
90 a sterilizing nozzle 47 delivers preferably a spray of steam or boiling water in sufficient volume and at high pressure for sterilizing purposes, so that when the covers are subsequently dried by a huge volume of air from the drying pipes and nozzles 48 the covers are thoroughly sterilized. Exhaust apparatus 51 is provided substantially the same
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as already explained in my preceding patents.

In practice the covers, notwithstanding their cumbersome, awkward and frequently battered shape, are placed in the passageway 43 on the incline 49 and pushed along one after the other, the result being that they lap over each other as shown clearly in the drawings, because of the jog 50 and the incline 49, and then pass along the track smoothly and without wedging, being successively treated to large volumes of washing fluid, cleansing water, and air. The circulation of water is maintained through the parts 14, 20, 19, 18, 17, 16, 15, 45, 12, 13, the latter, as the water flows back from the passageway, discharging said water into the tank with sufficient force to keep the soda, soap or the like stirred up and in proper solution.

The apparatus is so constructed that it needs practically no attention, as it keeps itself clean, the constant down-flow of water down the walls and along the passageway keeping the apparatus continually washed, the washing fluid being renewed properly as the apparatus continues in use, in the manner already explained and covered by my previous patents.

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

1. In an apparatus of the kind described, a cover-receiving passageway, provided with guiding means for facilitating the passage of the covers, including means for directing the covers into successively overlapped arrangement, said facilitating guiding means being arranged to cooperate in maintaining

said covers in said overlapped position as they pass through the passageway.

2. In an apparatus of the kind described, a cover-receiving passageway, provided with cover-receiving means, including mechanism for causing the covers to move into successively overlapped arrangement, as the covers are moved along the passageway, said means being shaped to receive the covers and aid in maintaining said covers in said overlapped position as they pass through the passageway, means operating in said passageway for washing said covers as they pass along, means for sterilizing the covers, and means for subsequently drying the sterilized covers.

3. In an apparatus of the kind described, means for receiving the individual covers at the ingoing end of the apparatus, means for maintaining the contiguous covers in undisturbed position with relation to each other as they pass along through the apparatus, and cleansing and sterilizing means to cleanse and sterilize the covers as they pass along.

4. In an apparatus of the kind described, a cover-receiving passageway provided with a longitudinal track having at its front end an approximately vertical jog extending upwardly therefrom and a short portion inclining downwardly from said jog, for cooperating with the covers, as they are shoved along, overlapping succeeding covers on preceding covers.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

CHARLES H. HOOD.

Witnesses:

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