

No. 881,575.

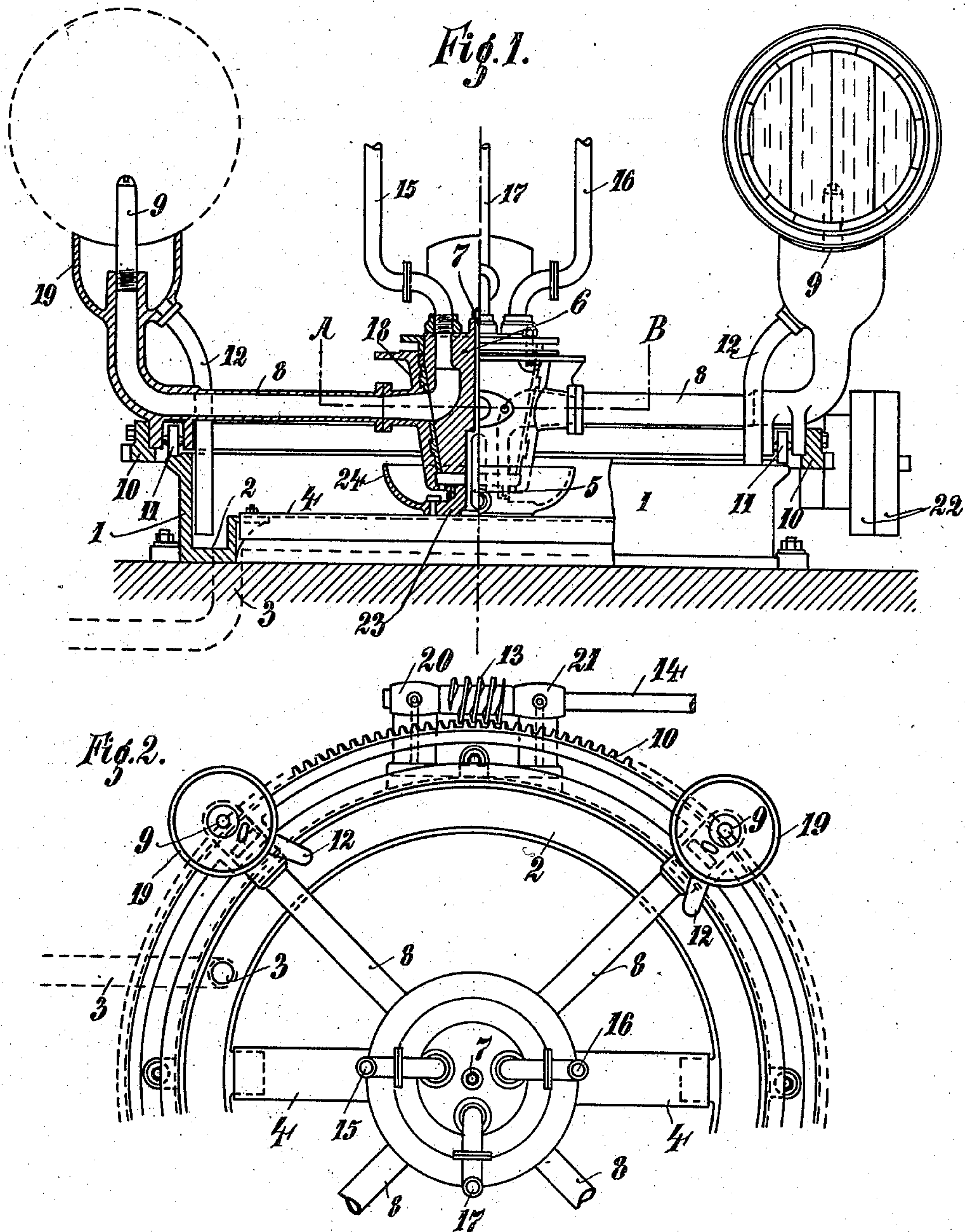
PATENTED MAR. 10, 1908.

C. GÜLKE.

APPARATUS FOR RINSING AND AIRING CASKS.

APPLICATION FILED MAY 26, 1906.

2 SHEETS—SHEET 1.



Witnesses:

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W. Reynolds

Inventor:

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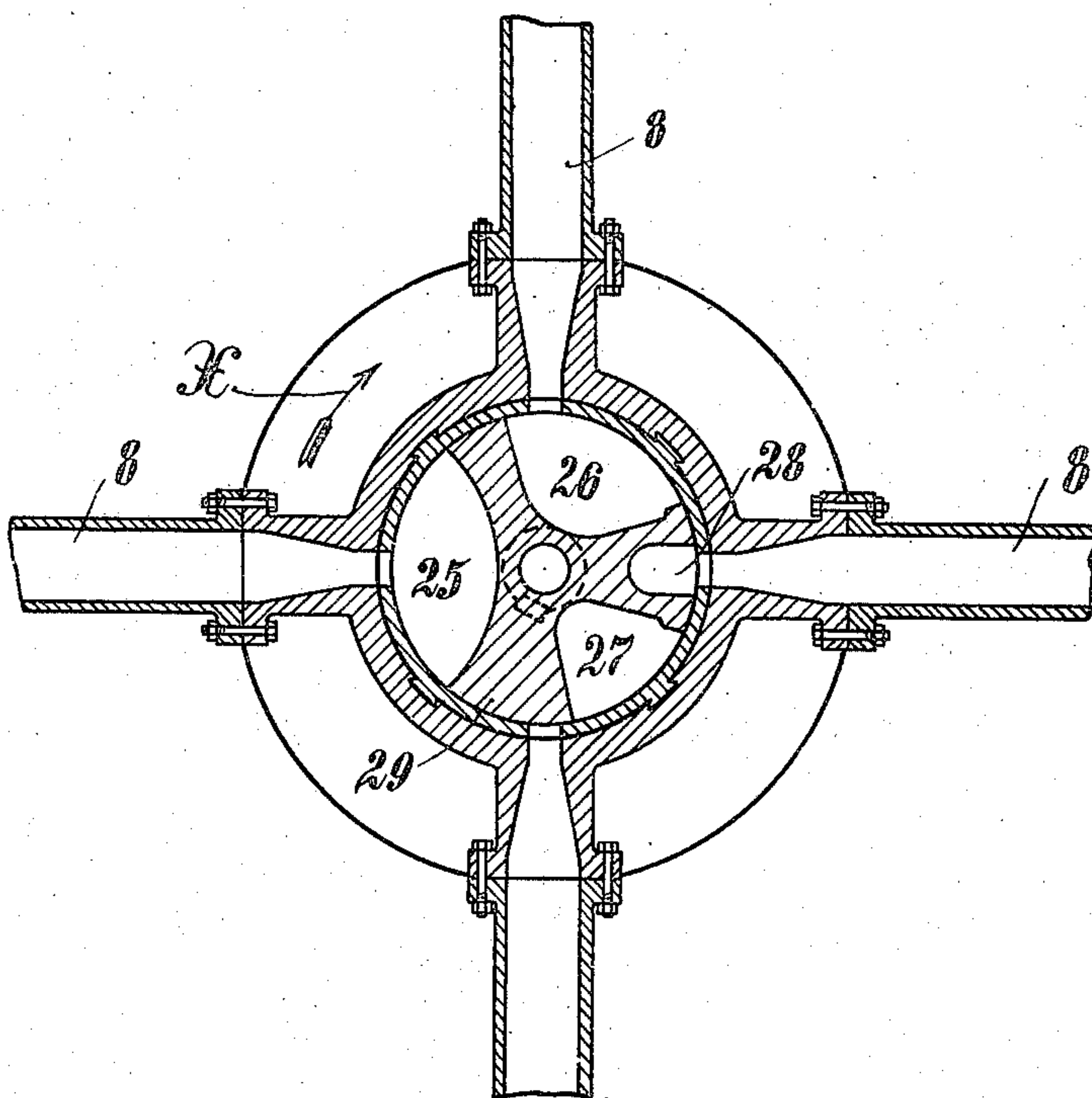
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2 SHEETS—SHEET 2.

Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR RINSING AND AIRING CASKS.

No. 881,575.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed May 26, 1906. Serial No. 318,965.

*To all whom it may concern:*

Be it known that I, CARL GÜLKE, engineer, residing at Chemnitz, Germany, Fabrikstrasse 7, have invented certain new and useful Improvements in Apparatus for Rinsing and Airing Casks; 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.

This invention relates to an apparatus for treating casks and particularly for rinsing the same, first, with hot and then with cold water and thereafter drying by blowing air through the same.

The invention, as hereinafter more fully described and as particularly set out in the claims, will be understood from an inspection of the accompanying drawing in which a preferred embodiment of the same is shown and in which;

Figure 1 is a view partly in vertical section and partly in elevation of the apparatus with a cask in position, Fig. 2 is a plan view, and, Fig. 3 is a horizontal section through the central portion of the apparatus on the line A—B of Fig. 1.

Upon a suitable foundation is arranged a circular guide rail 1, forming the outer boundary of a water channel 2 provided with an outlet 3. To the inner wall of the water channel is secured a girder 4 which extends diametrically across the space included within said inner wall. To this girder at a central point of the water channel is arranged a fixed bearing bolt 5 which serves to hold in fixed relation to the girder, a stationary multi-chambered or multi-way valve plug 6, a screw 7 holding these parts in fixed position. As shown, this valve plug is provided with three ways, 25, 26 and 27 fed respectively by a hot water pipe 15, a cold water pipe 16 and an air pipe 17.

A rotary valve casing 18 surrounding the stationary valve plug is provided with four ports, each leading by way of a distributing pipe 8 to a nozzle 9 arranged centrally of a bearing cup 19 upon which the cask is to be placed with the nozzle 9 projecting into its interior. A drain pipe 12 leads from the bearing cup 19 to a position above the circular water channel 2.

About the bearing bolt 5 upon the girder is arranged a cup 23 having an outer rim 24

and an inner elevated portion 30, the latter serving as a foot step bearing for the rotary valve casing 18. The stationary valve plug 6 is provided with a fourth chamber 28 which drains into the cup 23.

A circular rack 10 connects the several distributing pipes 8 near their outer extremities and within this rack and preferably beneath the distributing pipes are arranged anti-friction members such as wheels 11 which run upon the guide rail 1 as the distributing pipes and the casks carried thereby revolve with the rack 10 driven by the worm 13 on the drive shaft 14 running in bearings 20 and 21, power being supplied through the pulleys 22.

The operation of the device is as follows: The rack with its adjuncts being driven in the direction indicated by the arrow X of Fig. 3, a cask is placed upon the bearing cup 19 of the pipe 8 shown at the lower edge of said Fig. 3, said pipe being at the time out of communication with the ways of the valve plug. As the apparatus revolves, the said pipe comes into communication with the plug chamber 25 and during its passage through about 100 degrees remains in communication therewith and receives hot water fed by the pipe 15, the water being sprayed upon the interior of the cask by the nozzle 9 and running off through the bearing cup 19 and the drain pipe 12. Thereafter the pipe and its cask reach a position at the top of the figure, coming into communication with the plug chamber 26 supplied with cold water from the pipe 16, the water being introduced to and drained from the cask in the same manner as was the hot water, but during a shorter period being approximately 80 degrees of travel. Thereafter the cask through its distributing pipe 8 is brought into communication with the chamber 28 and any water collected therein is drained off into the central cup 23, the cask being at this time in the position shown at the right of said Fig. 3. Next the distributing pipe and its cask is brought into communication with the chamber 27 supplied with compressed air from the pipe 17 and here, during approximately 45 degrees of its travel, is subjected to an air blast by which it is dried. Next the distributing pipe reaches the dead space 29 first referred to and indicated at the bottom of the figure during which time the cask may be removed and another placed in position.



With the apparatus shown, four casks are treated at the same time, being placed in position and removed in succession, one being removed while the one immediately following is draining and the other two are being treated with hot and cold water respectively.

The arrangement of the circular water channel and the central drain cup with the rotary valve casing bearing thereon and inclosing a stationary multi-way valve plug having certain of its ways or chambers communicating with the revolving distributing pipes and certain other of its chambers draining into the central cup is a construction which has every advantage from the view point of simplicity, efficiency, cheapness and compactness.

Having thus fully described my invention, what I claim as new is:

1. In an apparatus for treating casks, the combination with a stationary multi-chambered valve plug, of a rotary valve casing provided with ports corresponding in number to the plug chambers, distributing pipes connected with the ports, bearing cups arranged on the outer pipe ends to support the casks, drain pipes leading from the bearing cups, and means to rotate the valve casing.

2. In an apparatus for treating casks, the combination, with a stationary multi-chambered valve plug, and feeding pipes leading to certain of the plug chambers and a drain pipe leading from certain of the plug chambers, of a rotary valve casing provided with ports corresponding in number to the plug chambers, distributing pipes connected with the ports, bearing cups arranged on the outer pipe ends to support the casks, drain pipes leading from the bearing cups, and means to rotate the valve casing.

3. In an apparatus for treating casks, the combination, with a circular guide rail, a girder bridging the space inclosed by the guide rail, a drain cup formed on the girder centrally of said space, a stationary multi-chambered valve plug mounted centrally of the cup upon the girder, feeding pipes leading to certain of the plug chambers and a drain pipe leading from certain of the plug chambers to the drain cup, of a rotary valve casing mounted around the valve plug and centrally of the drain cup, said valve casing provided with ports, distributing pipes connected with the ports and revolving with the valve casing, bearing cups arranged on the outer pipe ends to support casks, drain pipes leading from the bearing cups, a circular rack connecting the distributing pipes, and

means to drive the rack and wheels carrying the rack and traveling on the guide rail.

4. In an apparatus for treating casks, the combination, with a circular guide rail, a water channel bounded thereby, a girder bridging the space inclosed by the guide rail, a drain cup formed on the girder centrally of the said space, said cup having a central elevated portion, a stationary multi-chambered valve plug mounted centrally of the cup, feeding pipes leading to certain of the plug chambers and a drain pipe leading from certain of the plug chambers to the drain cup, of a rotary valve casing mounted around the valve plug upon the elevated drain cup portion as a foot step bearing and provided with ports, distributing pipes connected with the ports and revolving with the valve casing, bearing cups arranged on the outer pipe ends to support the casks, drain pipes leading from the bearing cups to points above the water channel, a circular rack connecting the distributing pipes, a worm to drive the rack, and wheels carrying the rack and traveling on the guide rail.

5. In an apparatus for treating casks, the combination, with a circular guide rail, a water channel bounded thereby, a girder bridging the space inclosed by the guide rail, a drain cup formed on the girder centrally of the said space, said cup having a central elevated portion, a stationary multi-chambered valve plug mounted centrally of the cup, feeding pipes respectively for warm and cold water and air leading to three of the plug chambers and a drain pipe leading from another of the plug chambers to the drain cup, of a rotary valve casing mounted around the valve plug upon the elevated drain cup portion as a foot step bearing and provided with ports corresponding in number to the plug chambers, distributing pipes connected with the ports and revolving with the valve casing, said distributing pipes terminating in nozzles, bearing cups arranged about the outer pipe ends to support casks with the nozzles therein, drain pipes leading from the bearing cups to points above the water channel, a circular rack connecting the distributing pipes to drive the rack, and wheels carrying the rack and traveling on the guide rail.

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

CARL GÜLKE.

Witnesses:

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BRUNO WALZ.