

No. 637,344.

Patented Nov. 21, 1899.

A. KRADISCH.

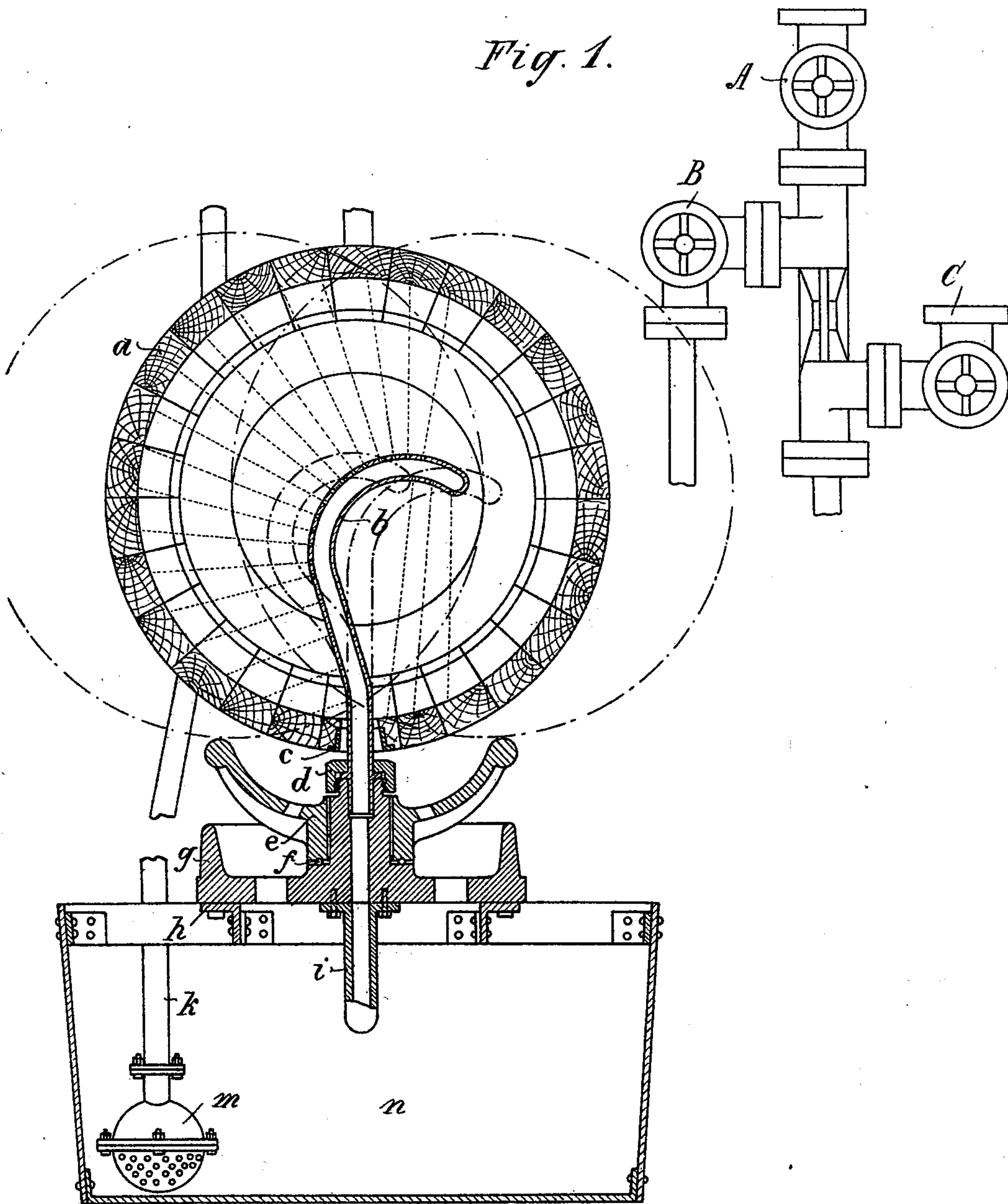
APPARATUS FOR WASHING AND RINSING BARRELS.

(Application filed Sept. 10, 1898.)

(No Model.)

2. Sheets—Sheet 1.

Fig. 1.



Witnesses
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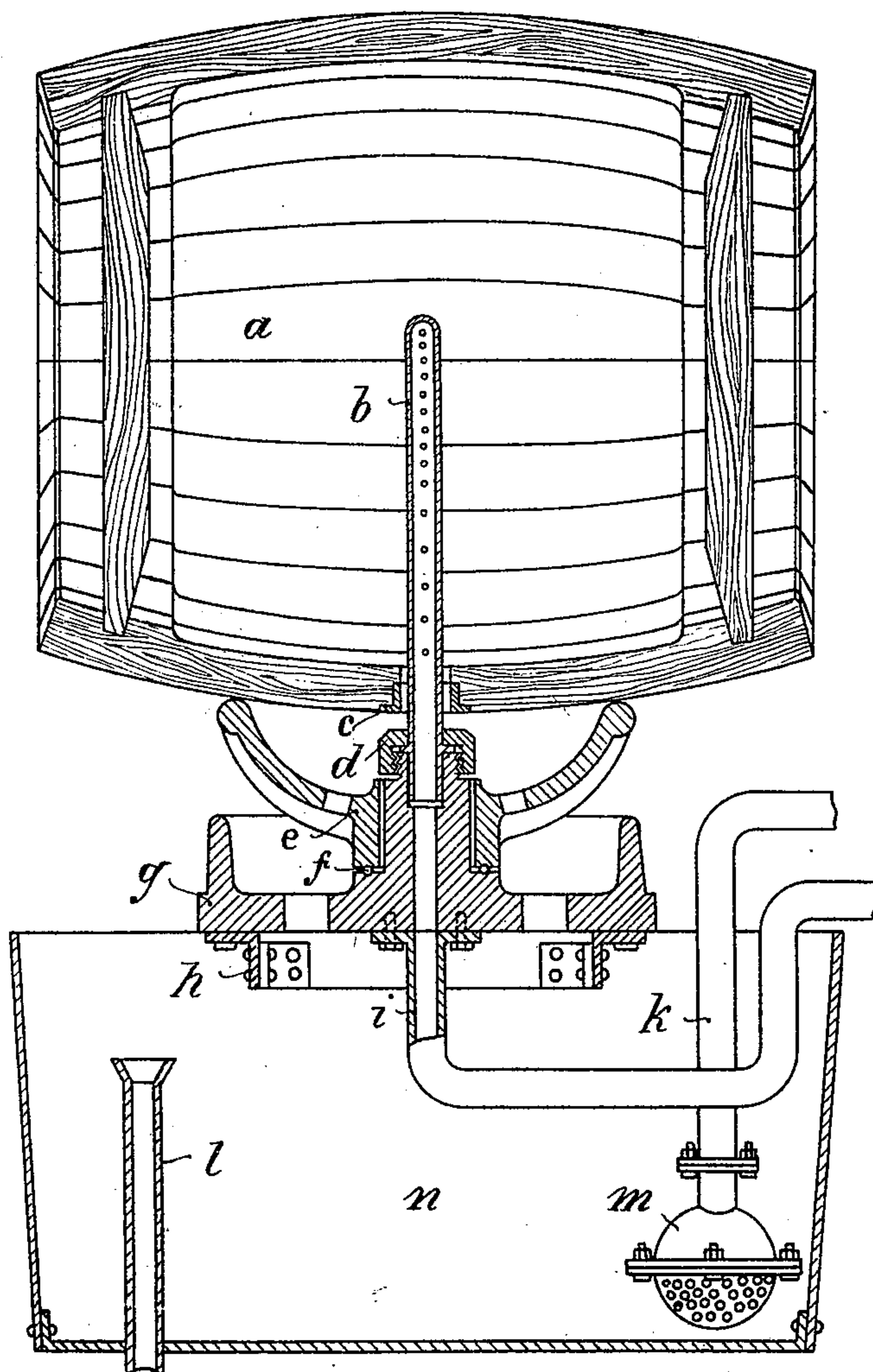
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2 Sheets—Sheet 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

ALBRECHT KRADISCH, OF MARIASCHEIN, AUSTRIA-HUNGARY.

APPARATUS FOR WASHING AND RINSING BARRELS.

SPECIFICATION forming part of Letters Patent No. 637,344, dated November 21, 1899.

Application filed September 10, 1898. Serial No. 690,623. (No model.)

To all whom it may concern:

Be it known that I, ALBRECHT KRADISCH, a subject of the Emperor of Austria-Hungary, residing at Mariaschein, near Teplitz, Bohemia, Austria-Hungary, have invented certain new and useful Improvements in Apparatus for Washing and Rinsing Barrels, (for which I have applied for a patent in Germany, filed February 15, 1898,) of which the following is a specification.

This invention relates to an apparatus for washing and rinsing barrels, consisting, essentially, of a bent pipe provided on opposite sides with ejection-openings, which is introduced into the barrel to be cleaned, the latter being supported by a bed-plate rotatable in the horizontal direction. By means of an ejector or a forcing-pump the rinsing liquid is forced through the said pipe into the barrel, and the arrangement of the device is such that the temperature of this rising liquid can gradually be increased for the purpose of avoiding any damage of the inner walls of the barrel—say glaze—which may be produced by the considerable difference of temperature. The support of the barrel is constructed in such a manner that the barrel can be moved in any direction, so that a rational and complete rinsing of the barrel can take place.

The new apparatus is shown in the accompanying drawings.

Figure 1 is a longitudinal section, and Fig. 2 a cross-section thereof.

The apparatus consists of a water-tank *n*, of any suitable shape, and preferably it is made of wood, copper, or tinned iron plates, because it is exposed to a rapid change of temperature. The tank *n* has a discharge-opening provided with a column-pipe *l*. To bearings *h*, provided on the upper border of the tank, there is screwed the support of the barrel. This support consists of a square bed-plate *g*, preferably made of cast-iron and having in its center a nave-like extension, over which a dish-shaped head-piece is placed in such a manner that it can easily turn. This capability of revolving is still increased by embedding steel balls between the piece *e* and the bed-plate *g*. The nave-like extension above mentioned is provided with a boring, which at top is conically shaped. Into this conical part there is screwed the injection-pipe *b*, which consists of a strong drawn-

iron pipe and is bent corresponding to the shape of the barrel. On the outer side of the bent portion of the pipe there are arranged several ejection-openings *b'* and on the inner side also a few openings only at the end of the pipe. The ejection-openings are so disposed that the directions of the jets are radial relative to the bend of the tube and do not cross each other, but diverge and are all situated in the same plane. The bed-plate *g* is connected with the water-conduits or supply-pipes *i*, belonging to a cold-water or steam-conveying apparatus in which a steam-jet pump (not shown) is inserted, or if there is no steam employed a forcing-pump is inserted. The greater the water or steam pressure the more rapidly and thoroughly the cleaning takes place.

The apparatus works as follows: The apparatus before it is put into operation is sunk into the bottom of the wash-room, so that the upper border of the vessel *n* is flush therewith. This arrangement has for its purpose to raise the barrels or vessels to be cleaned more easily upon their supports. The barrel *a* to be washed is rolled upward, so that the bung-hole *c* is turned toward the injection-pipe. As in this construction of the injection-pipe the bung-hole is sidewise, the opening of the barrel is always visible, and in consequence thereof the pipe may very easily be introduced. With a small amount of power the barrel is then raised upon its support, whereupon the valve *C* of the cold-water conduit is opened and water is caused to flow through the injection-pipe into the barrel, then drained through drain-openings *e' g'* in the piece *e* and support *g*, respectively, and thence into the tank *n*, arranged under the apparatus, until the said tank is filled up to the height of the column-pipe *l*. This manipulation is, however, necessary only when the apparatus is put into operation or in the beginning of the washing when the tank *n* had previously been emptied. The valve *B* of the suction-pipe *k*, which on its lower end is provided with a finely-meshed suction-basket *m* and with a foot-valve, is then opened. After the steam-valve *A* has still been opened the ejector sucks the water from the tank *n*, the entering steam heats the water to a

temperature of about from 70° to 80° centigrade, and forces it into the injection-pipe. While the heated water is sprayed into the barrel the latter is turned, with its support, which owing to the ball-bearing is easily done with a very small expense of force. As the barrel is normally supported at two points only on the rotatable dish-shaped part, it may easily be moved thereon to impart a rolling motion to the barrel, as indicated by dotted lines in Fig. 1, in addition to its rotary movement about the injection-pipe. By this displacement and revolution I attain that any point of the inner barrel-wall is rinsed by the water and a thorough cleaning is obtained with certainty. After the washing has been finished the steam-valve A is shut off and the cold-water valve C opened, so that cold water is introduced into the barrel for rinsing the latter anew. The water necessary for washing the vessels may be used repeatedly and made up or freshened up by the rinsing-water.

I claim—

1. In an apparatus for washing barrels or casks, the combination with a dish-shaped rotatable support upon the edge of which the barrel may have a rolling movement, said support having drainage-openings, of an injection-pipe projecting above said support and about which the latter may turn, substantially as set forth.

2. In an apparatus for washing barrels or casks, the combination of a water-tank, a rotatable dish-shaped support carried by the

tank and upon the edge of which the barrel may have a rolling movement, said support having drainage-openings leading to the tank, an injection-pipe projecting above said support, and means to supply fluid under pressure to said pipe, substantially as set forth.

3. In an apparatus for washing barrels or casks, the combination of a water-tank, a rotatable dish-shaped barrel-support carried by the tank, said support having drainage-openings to discharge into said tank, an injection-pipe projecting above the support and about which the latter may turn, and means to deliver water from the tank into said pipe under pressure, substantially as set forth.

4. In an apparatus for washing barrels or casks, the combination of a water-tank, a barrel-support rotatably mounted on the tank, an injection-pipe projecting above the support and about which the latter may turn, said pipe being bent or curved at its upper end and provided with discharge-perforations in its bent portion arranged to discharge radially therefrom, means to supply fluid under pressure through said pipe into the barrel, and means to drain it from the barrel into the tank, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ALBRECHT KRADISCH.

Witnesses:

ROBERT STAUS,
ERNST STAUS.