No. 749,583. PATENTED JAN. 12, 1904.

F. SCHMIDT.

BEER KEG WASHING APPARATUS.

APPLICATION FILED SEPT. 22, 1903.

NO MODEL.

Fig. 1.

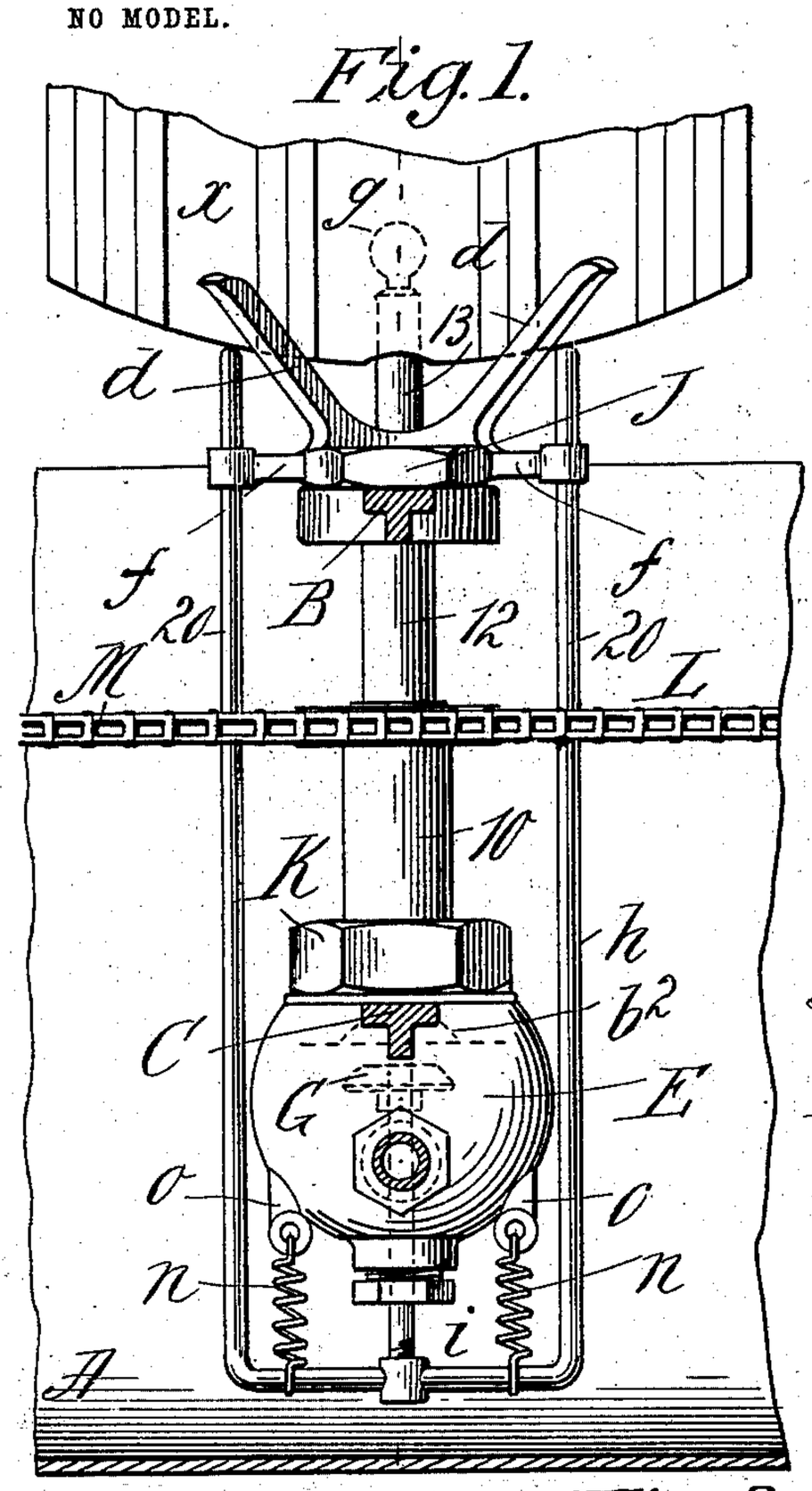


Fig. 2.

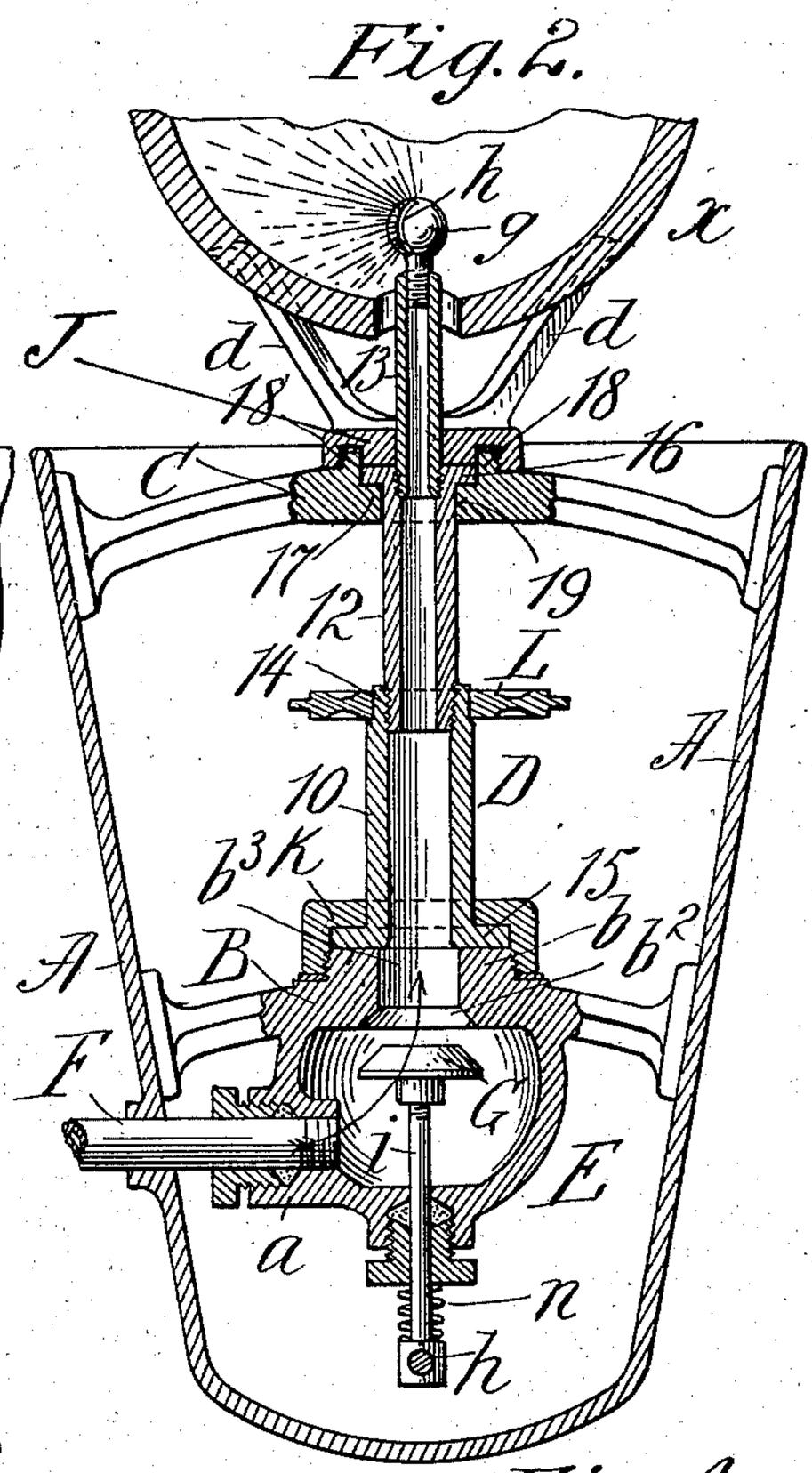


Fig. 3.

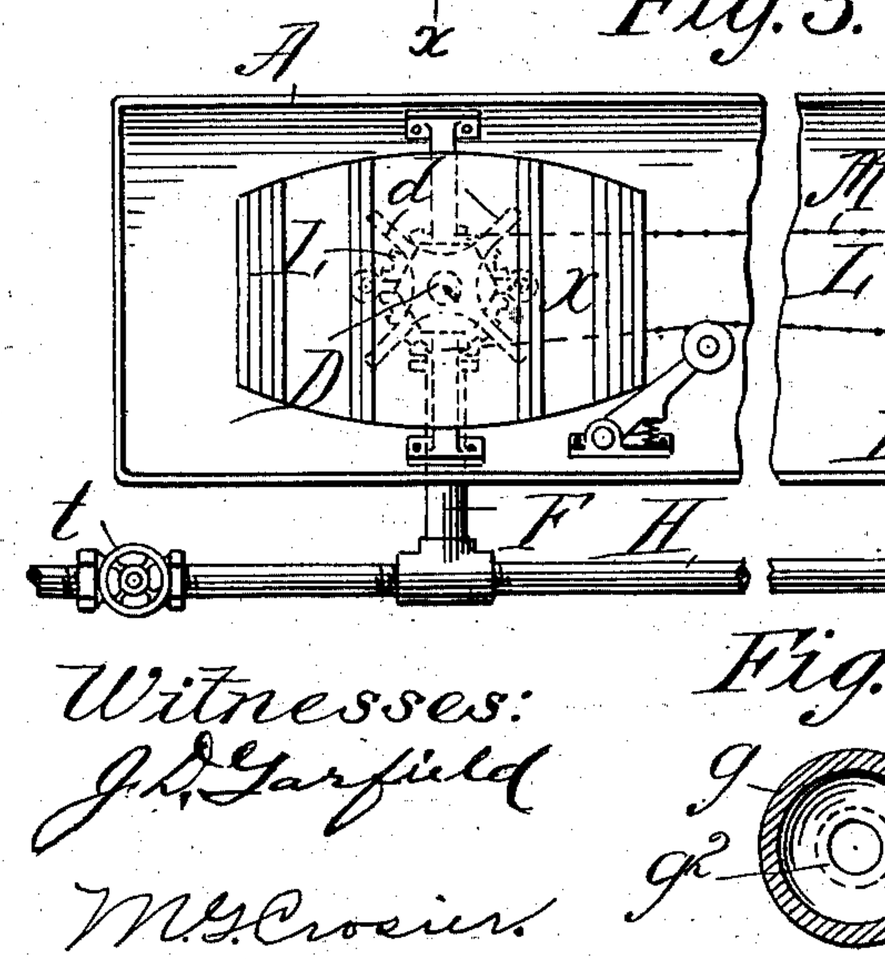


Fig. 4.

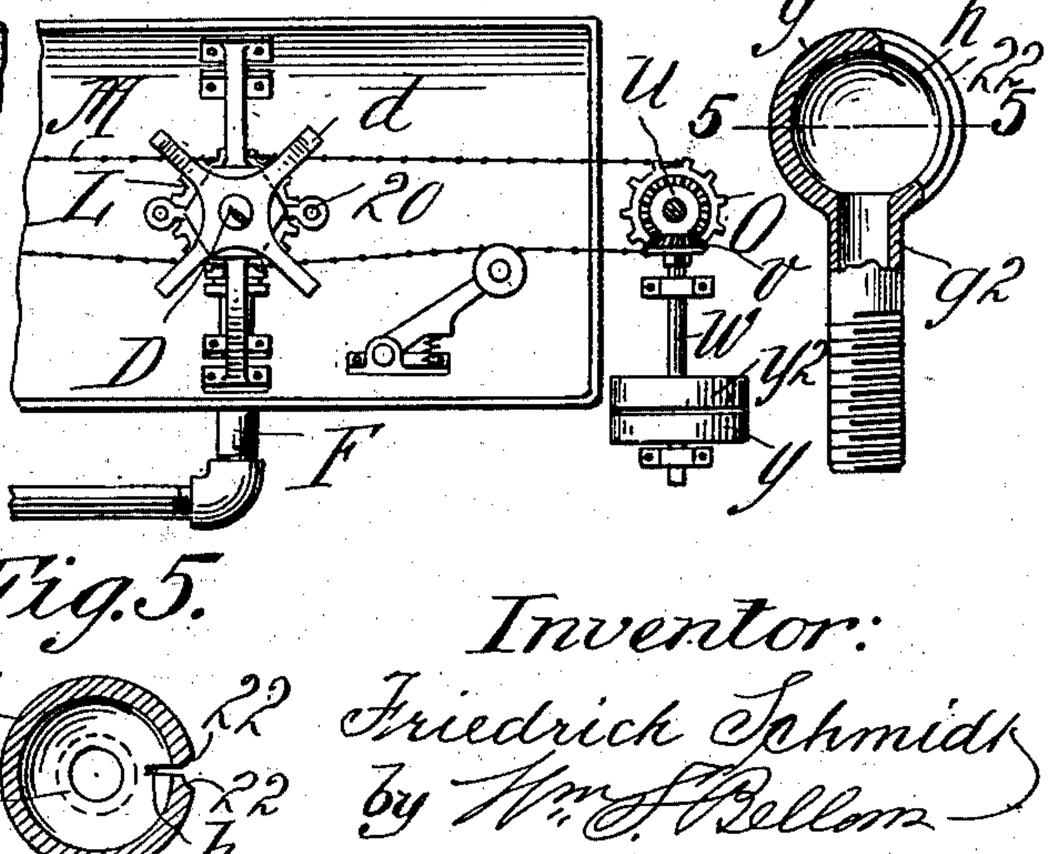


Fig. 5.




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# UNITED STATES PATENT OFFICE.

FRIEDRICH SCHMIDT, OF SPRINGFIELD, MASSACHUSETTS.

## BEER-KEG-WASHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 749,583, dated January 12, 1904.

Application filed September 22, 1903. Serial No. 174,191. (No model.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH SCHMIDT, a citizen of the United States of America, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Beer-Keg-Washing Apparatus, of which the following is a full, clear, and exact description.

This invention relates to improvements in apparatus for washing or flushing beer-kegs internally with hot or cold water.

The object of the invention is to provide an apparatus by the employment of which beer-kegs may be conveniently and expeditiously cleansed.

The invention consists in arrangements or combinations and constructions of parts, all substantially as hereinafter fully described, and set forth in the claims.

In the accompanying drawings, Figure 1 is substantially a side elevation of one of the keg-cleansing devices, of which in practice the plurality are usually employed in a brewery. Fig. 2 is a vertical sectional view centrally through the parts shown in Fig. 1 on a plane at right angles from that in which said Fig. 1 is seen, and as indicated by the lines *x x*. Fig. 3 is a plan view, on a somewhat smaller scale, of a complete pluralized apparatus. Fig. 4 is a sectional view of a preferred form of tip for the water-discharging pipe. Fig. 5 is a horizontal section on line 5 5, Fig. 4.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents a trough having arranged crosswise therein upper and lower brackets B and C. The lower bracket supports, by having the same integrally cast thereon or otherwise, a valve-body E, having a sidewise-located boss *a* for the connection thereat of a water-supply pipe F. The said valve-body has also the upwardly-extending boss *b*, which is externally screw-threaded and within which and through the same is a valve-seat $b^2$ and waterway $b^3$.

G represents the valve, closing in an upward direction against the valve-seat $b^2$, said valve having the downwardly-projecting valve-stem *i*, adapted to move with closed yet free fit through the opening and stuffing-box at the bottom of the valve-body.

D represents an upstanding pipe which is rotatable relatively to the bracket-supported valve-body, said pipe being made in sections 10 and 12, screw-united at their joining portions, as seen at 14, Fig. 2. The lower pipe-section 10 is provided with the lower end flange 15, while the upper pipe-section 12 is provided with the upper end flange 16.

The upper bracket B, which is directly over the bracket C, being sustained by connection with the walls of the trough, has its middle portion vertically apertured at 19, provided with the ledge 17 and the upstanding annular rib 18, surrounding said ledge, and in the assemblage of the parts the upwardly end-flanged pipe-section 12 is slipped down through the aperture 19 and brought to the screw connection at 14 with section 10, the flange 16 resting on the ledge and is retained by the annular part J, which comprises a nut, the upward and divergently extended keg-supporting arms *d d*, and the oppositely and horizontally extended lugs *f f*, which are vertically apertured and form guides for the U-shaped appliance *h*, hereinafter referred to.

The base-flange 15 of the lower pipe-section 10, resting against or in proximity to the top of the valve-body boss *b*, is connected by the annular and internally-flanged coupling-nut K, the threads of which engage the boss *b*.

The pipe extension 13 has by its lower end portion a screw-thread engagement within the upper extremity of the pipe-section 12, such pipe extension having its location centrally within the several upwardly and outwardly extending keg-supporting arms *d*, and is provided at its upper end with a hollow bulb-shaped tip *g*, which has a water-delivery slit *h* therethrough, such slit being preferably located at the side thereof, as shown.

The upstanding pipe has affixed on the lower section 10 thereof the sprocket-wheel L, whereby through means of the chain M to insure the rotation of the upstanding pipe D relatively to the stationary valve-body and the stationary keg *x* on the supports *d* therefor.

When the keg is placed upon the support-

ing-arms *d* with its bung-hole lowermost and permitting the protrusion therethrough and within the keg of the extension and tip of the upstanding pipe, the keg comes to contact against and depresses the vertical rods 20 20 of the aforementioned appliance *h*, the lower uniting cross member of which appliance, shown as of **U** form, has connection with the depending valve-stem *i*, and hence the mere act of placing the keg in position to be internally washed opens the valve and insures that the water supplied through the upstanding pipe under the properly high pressure will be discharged in a sheet, or more or less so, by reason of the water-delivery slot in the tip, as shown, and the tip rotating with the upstanding pipe will cause a revoluble movement of the delivered sheet of water for impingement against every side of the interior of the keg.

The springs *n n*, applied between depending lugs *o* at the under side of the valve-body, and the horizontal member of the **U**-shaped appliance *h* serve to normally close the valve, the closure thereof being instantly and automatically accomplished on the removal of the keg from the keg-support.

In order that the forcible contact of the keg against the delivery-tip *g*, which in the use of the apparatus is practically unavoidable, may not cause an inward deflection and closing of the walls of the slit *h*, such walls at their outer corners are beveled, as indicated at 22, it being understood that the tip will therefore withstand more or less battering at its portion adjacent the slit without having the proper delivery impaired.

As indicated in Fig. 3, the trough is to be comparatively long and a plurality of the keg-supporting and water supplying and controlling arrangements provided therein, each of the supplying-pipes F, connected with a bracket-supported valve-body E, being a branch of a water-main H, in which is a shut-off valve *t*.

A single endless sprocket-chain M may have driving connection with the sprocket-wheels L of the several devices, said sprocket-chain being primarily driven by a sprocket-wheel O, on the shaft of which is a bevel-gear *u* in mesh with a bevel-gear *v* on a driving-shaft *w*, for which fixed and loose pulleys *y* and $y^2$ are provided.

The water introduced into the keg and flowing through the bung-hole thereof will be received into the trough A.

The tips *g* have screw-threaded tubular stems $g^2$ for detachable connection in the upper extremity of the extension pipe-section 13.

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

1. In a beer-keg-washing apparatus, the combination with a chambered valve-body having a waterway and valve-seat therein, and having a water-supply pipe connected therewith, of an upstanding pipe provided with a base-flange having bearing for rotation on the top of said valve-body, an annular nut-screw engaging the valve-body and coupling the said upstanding pipe thereto, a beer-keg support arranged adjacent and about said upstanding pipe, means for rotating said upstanding pipe, a valve for closing said valve-seat, and means for opening and closing said valve.

2. In a beer-keg-washing apparatus, the combination with a trough having therein upper and lower supporting-brackets, a valve-body sustained by the lower supporting-bracket, and having a waterway and valve-seat therein, and a water-supplying pipe connected with said valve-body, of an upstanding pipe having a delivery-opening at its upper end, having its lower end in connection with the waterway of said valve-body, and arranged for rotation relatively thereto, the beer-keg support sustained by the upper bracket, a valve coacting with the valve-seat in the valve-body, means for opening and closing said valve, and means for rotating said upstanding pipe.

3. In a beer-keg-washing apparatus, the combination with a valve-body having a waterway and valve-seat therein, and having a water-supply pipe therewith connected, of an upstanding pipe connected with the said valve-body and having a water-discharge opening at its upper end, a beer-keg support arranged about the upper portion of the upstanding pipe, a valve in said valve-body, movable to open and close against the valve-seat therein, and having a valve-stem, a spring operative to force the valve closed, and a device coöperative with the valve-stem, and having a portion located adjacent the beer-keg support, and adapted by the weight of a keg on said support, to impart a valve-opening movement to said device against the stress of the valve-closing spring.

4. In a beer-keg-washing apparatus, in combination, a trough, a valve-body having a waterway and valve-seat therein, and having an upstanding externally-threaded boss, a water-supplying pipe, connected with said valve-body, a support located above the valve-body, and centrally apertured and screw-threaded, an upstanding pipe comprising the pipe-sections 10 and 12, the section 10 having a base-flange in bearing against the top of the valve-body and the section 12 having an upper end flange located within said apertured support, said pipe-sections being screw-united, an annular and internally-flanged coupling-nut screw-engaging the threaded boss of the valve-body, and engaging the base-flange of the pipe-section 10, a coupling-nut screw-engaging the said apertured support, and engaging with the upper end flange of pipe-section 12, a pipe continuation 13 screw-engaging into the

upper end portion of pipe-section 12 and having a water-discharge tip at its upper end, means for rotating the screw-connected pipe-sections, the valve in said body, and means for opening and closing the same relatively to the valve-seat.

5. In a beer-keg-washing apparatus, the combination with the valve-body having a water-supplying pipe therewith connected, and having the upstanding pipe, of a valve in said valve-body vertically movable to open and close the valve-seat therein, and having a valve-stem extending downwardly through the bottom of the valve-body, an elongated U-shaped device connected with the valve-stem and projected upwardly adjacent the upper end of the said upstanding pipe, springs for exerting an elevating force against said U-shaped device, and a beer-keg support arranged about the upper extremity of said upstanding pipe, and all adapted for operation, substantially as described.

6. In a beer-keg-washing apparatus, the combination with a supply-pipe and an upstanding pipe in communication therewith and rotatable relatively thereto and means for rotating the upstanding pipe, a valve, operative to open and close the water-passage through the upstanding pipe, having a stem, the elongated U-shaped device, the lower uniting portion of which is connected with the valve-stem, a bracket upwardly through which the upper portion of the upstanding pipe extends and is fitted, having a screw-threaded portion, and an annular nut threading on said screw-threaded portion of the bracket and provided with oppositely-extended lugs which have vertical apertures through which the upper extremities of the U-shaped device are guided, a keg-support arranged adjacent the upper discharge end of the pipe and the said extremities of the U-shaped device and a spring operative to normally maintain the valve closed against the water-passage through the upstanding pipe.

7. In a beer-keg-washing apparatus, the combination with a trough, having therein a lower bracket and supported by said bracket the chambered valve-body having a valve-seat therein, and an upstanding externally-screw-threaded boss and having connected therewith a water-supply pipe, of an upper bracket supported within the trough, centrally apertured and constructed with an inwardly-located ledge and an upstanding threaded annular rib, the upstanding pipe having upper and lower end flanges, the latter having its location next above the valve-body boss and the upper end flange in engagement with said ledge, the coupling-nut of annular form engaging the lower end flange in the threaded valve-body boss and an annular nut screwing on the aforesaid annular rib and engaging with the upper end flange of said pipe and provided with keg-supporting arms and the oppositely-extending lugs which are vertically apertured, an extension of said pipe protruding upwardly above the upper bracket, a valve in said valve-body having an externally-extending stem, a horizontal part connected with said stem and having upward projections extending and guided through and above said oppositely-located vertically-apertured lugs, means for rotating the upstanding pipe and means for imparting normally a closing force to said valve, substantially as and for the purposes set forth.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

FRIEDRICH SCHMIDT.

Witnesses:

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A. V. LEAHY.