P. SEIBEL, Jr.
Barrel-Washer.

No. 198,160. Patented Dec. 11, 1877.

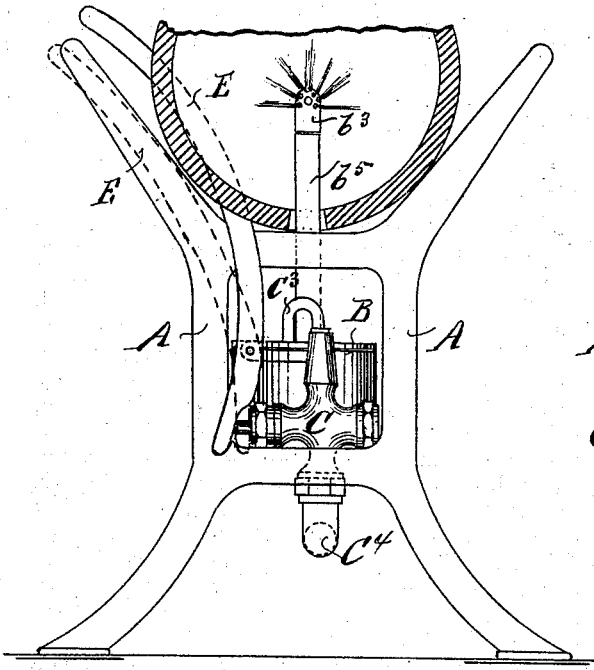

Fig. 1.

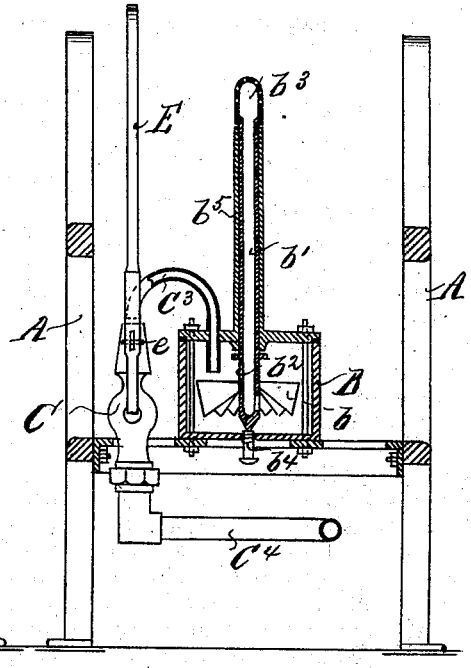

Fig. 2.

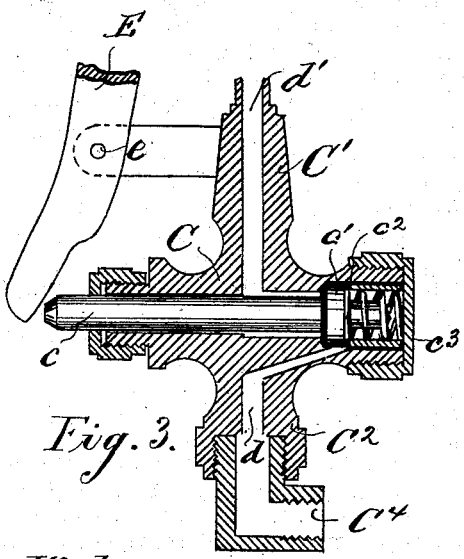

Fig. 3.

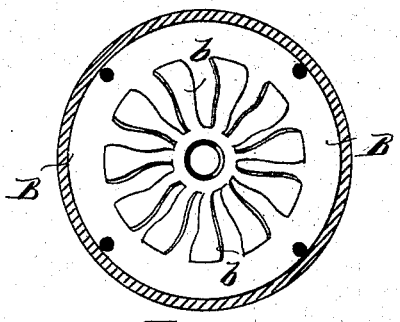

Fig. 4.

Witnesses;
J. W. Kerthel.
Chas Kerthel.

Inventor;
Phillip Seibel Jr.
per Kerthel & Co

UNITED STATES PATENT OFFICE.

PHILLIP SEIBEL, JR., OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN BARREL-WASHERS.

Specification forming part of Letters Patent No. **198,160**, dated December 11, 1877; application filed June 27, 1877.

To all whom it may concern:

Be it known that I, PHILLIP SEIBEL, Jr., of St. Louis, Missouri, have invented an Improved Barrel-Washer, of which the following is a specification:

It is my object to achieve a more perfect spreading and swashing of the water, so as to reach all points of the interior of the barrel, and thereby obtain a more perfect cleansing of the same.

My invention will first be fully described, and the novel combination of parts thereof hereinafter pointed out in the claims.

Of the drawing, Figure 1 is a front elevation, representing my apparatus in operation. Fig. 2 is a side elevation of the lever, valve, and inlet-pipe, and a section of a part of the cylinder and its connections. Fig. 3 is an enlarged section of the valve, Fig. 4 being a plan of the water-wheel.

A represents the frame, upon which the operating parts are mounted. B is a water-tight cylinder, firmly secured to the frame. (See Figs. 1, 2.) Within the cylinder B, I provide a turbine, b, provided with an upright hollow shaft, b^1. (See Fig. 2.) The lower end of the shaft b^1 has one or more holes, b^2, (see Fig. 2,) to permit the water to pass into said shaft. The upper end of the hollow shaft is made a perforated nozzle, b^3, (see Figs. 1 and 2,) through which the water issues to wash the barrel. The wheel b and its shaft b^1 are supported on an adjustable screw-step, b^4, which passes through the bottom of the cylinder. (See Fig. 2.) The screw-step b^4 is screwed higher in accordance with the wear of its bearing to support the turbine wheel. Surrounding the hollow shaft, above the cylinder, I provide a tube, b^5, the upper end of which forms a bearing for the nozzle, while the lower end of said tube is secured to the cylinder. (See Figs. 1, 2.) This tube prevents the barrel coming in contact with the revolving parts. C represents the valve-casing. This has the upper and lower branches C^1 C^2. (See Figs. 1, 2, 3.) To the upper branch (see Fig. 2) one end of the pipe C^3 connects, the other end of said pipe being passed through the top of the cylinder, and directed in a tangential line to the turbine, so that the water discharging through said pipe shall act with the greatest force upon said turbine. To the lower branch C^2 the connection with the inlet-pipe C^4 is made. (See Figs. 1, 2, 3.) The valve parts are as ordinarily constructed, and as clearly shown in Fig. 3. c is the stem. This at one end projects through a stuffing-box, while the opposite end of said stem has the valve c^1 fitted in a chamber, c^2. The spring c^3 is to return or close the valve. The water-passage consists of the port d, communicating with inlet-pipe c^2, and from thence, by port d^1, (see Fig. 3,) to the discharge-pipe C^3, that empties into the cylinder. The valve, in action, opens and closes the communication between the ports in the upper and lower branches of the valve-casing, so as to let on or shut off the water.

The valve is operated, as stated, by the weight of the barrel. I however provide a lever, E, curved, as shown in Fig. 1, instead of the usual combination of parts that require adjustment to suit the barrels. The lever E has its fulcrum at e, its lower end acting on the valve-stem, (see Fig. 3,) while the upper end of said lever reaches to the top of the frame. (See Figs. 1, 2.) The original position of the lever is shown by the full lines in Fig. 1, the valve then being closed, and when said valve is open the lever assumes the position shown by the dotted lines. (See Fig. 1.)

All requisite sizes of barrels are accommodated by my lever, for the same, by its curvature, presents a bearing to suit the diameter of the barrel.

The parts being thus constructed, the operation is as follows: The barrel is mounted on the frame A, as shown in Fig. 1. The barrel bearing upon the lever E causes this to assume the position shown in Fig. 1—viz., opens the valve, which permits the water to enter the ports, and up and through the pipe C^3, and, issuing from the same, to operate the turbine wheel. The revolution of the turbine also revolves the hollow shaft and its nozzle, and, hence, as the water escapes from the latter it is directed and spread over the complete inside surface of the barrel. The washing is thus done with less waste, less time, expense, and labor than can be done by machines which cause the water to jet straight. The simplicity

of the lever arrangement to suit different sizes of barrels is also a saving in time, labor, and expense.

What I claim is—

1. The combination of the cylinder B, turbine wheel b, its discharge-shaft b^1, having orifices b^2 below, and nozzle b^3 at top, and the inlet-pipe C^3, all said parts being constructed and arranged substantially as set forth.

2. In combination with a cylinder, B, containing a turbine wheel, b, having hollow shaft b^1, the tube b^5, arranged substantially as shown, and by means whereof said hollow shaft b^1 is protected, in the manner and for the purpose set forth.

3. The cylinder B, the turbine b, its hollow shaft b^1, having nozzle b^3, the pipe C^3, the casing C, formed with the passages d c^2 d^1, the valve-stem c, valve c^1, spring c^3, lever E, and inlet-pipe C^4, all said parts being combined and constructed to operate in the manner and for the purpose set forth.

In testimony of said invention I have hereunto set my hand.

PHILLIP SEIBEL, JR.

Witnesses:
WILLIAM M. HERTHEL,
JOHN W. HERTHEL.