A. FISHER.

BOTTLE-WASHER

No. 188,882. Patented March 27, 1877.

Fig. 1.

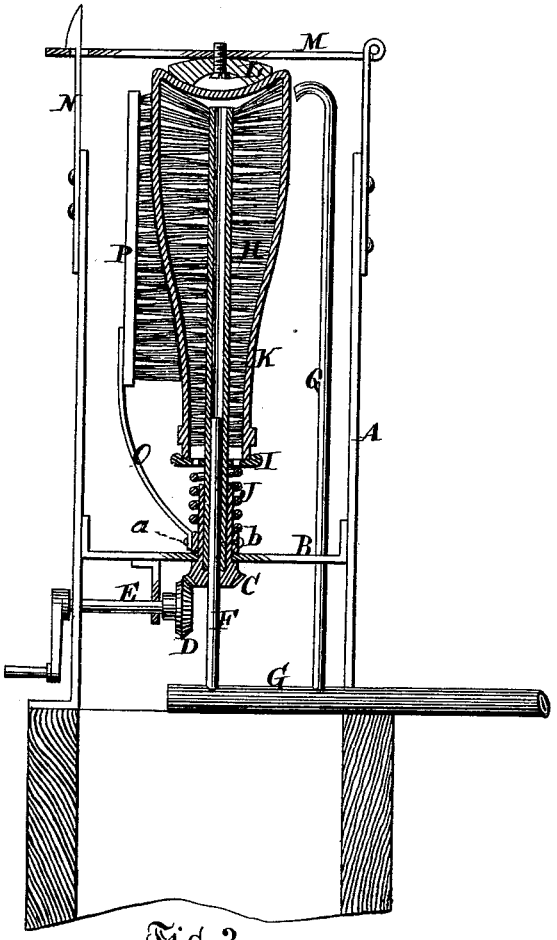
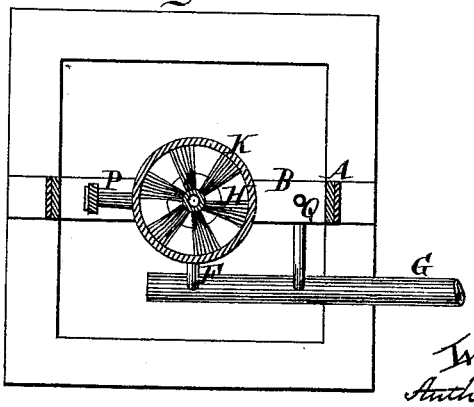


Fig. 2.



Witnesses.
Otto Stupeland
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Inventor.
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UNITED STATES PATENT OFFICE.

ANTHONY FISHER, OF NEW YORK, N. Y.

IMPROVEMENT IN BOTTLE-WASHERS.

Specification forming part of Letters Patent No. **188,882**, dated March 27, 1877; application filed December 26, 1876.

To all whom it may concern:

Be it known that I, ANTHONY FISHER, of the city, county, and State of New York, have invented a new and Improved Bottle-Washer, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical section. Fig. 2 is a horizontal section.

Similar letters indicate corresponding parts.

This invention consists in the combination, with a water-supply pipe, and with a brush revolving thereon, of a bottle-supporting disk, which slides on the hollow stem of the brush, of a spring which acts on said disk, and of a frame with a hinged cross-bar, which carries a pad of india-rubber or other elastic material, and which, when turned down, engages with a spring-latch, so that when the bottle is introduced over the brush, and the cross-bar of the frame is turned down, said bottle is firmly retained between the pad of the cross-bar and the spring-supported disk, the latter being capable of accommodating itself to bottles of different length, and by opening the supply-pipe and revolving the brush the interior of the bottle is rapidly cleaned, the brush being fitted into a socket formed in the hub of a pinion, which has its bearing in a traverse of the frame, so that it can be readily withdrawn, and a brush of different shape can be substituted.

In the drawing, the letter A designates a frame, into the lower part of which is secured a traverse, B, that forms the bearing for a bevel-pinion, C, which is retained in position by means of a collar, *a*, secured to its tubular hub by a set-screw, *b*. The pinion C gears into a similar pinion, D, mounted on the driving-shaft E, which has its bearings in the frame A, and to which a revolving motion is imparted by hand or by any other suitable power.

Through the center of the pinion C extends a vertical pipe, F, which connects with a water-supply pipe, G, and over said pipe F is placed the tubular head of a brush, H, said head being fitted into the tubular hub of the pinion C, so that the brush will revolve with said pinion round the pipe F, and that said brush can be readily taken out and replaced by another of different shape, to correspond to the shape and size of the bottles to be cleaned.

On the tubular head of the brush H is fitted loosely a disk, I, which rests upon a spring, J, and is intended to support the bottle K, as shown. Said disk is perforated, so that the water injected into the bottle during the operation of cleaning will discharge freely.

The bottle is placed over the brush in an inverted position, and it is retained in position by a pad, L, of india-rubber, or other elastic material, secured to a cross-bar, M, which is hinged to the top part of the frame A, so that it can be swung back to admit the bottle to be cleaned. When the cross-bar is turned down it engages with a spring-latch, N, whereby the same is locked, and as the pad L is brought to bear down upon the bottom of the bottle, the disk I is depressed against its spring J, and the bottle is firmly retained between said pad and the spring-supported disk.

By admitting water through the pipe F, and imparting to the brush H a revolving motion, the interior of the bottle is rapidly cleaned, and, since the water runs off freely from the mouth of the bottle during the operation of cleaning, no further rinsing is required when the bottle is taken out of the frame A. On the collar *a*, which is secured to the tubular hub of the pinion C, is secured an arm, O, which carries a brush, P. The arm O is elastic, and the face of the brush P is made to correspond to the outside surface of the bottle, against which the same is held by the arm O. From the water-supply pipe G rises a pipe, Q, the upper end of which is bent inward, so that the water discharging from it is thrown against the outside surface of the bottle, said pipe being in such a position that it does not interfere with the motion of the brush P. When a revolving motion is imparted to the pinion C, the brush P sweeps over the outside surface of the bottle, while at the same time a jet of water is thrown over said brush against the bottle, and the latter is cleaned on its outside at the same time as it is cleaned inside, by the action of the brush H.

The top cross-bar M and the latch N are so arranged that they can be adjusted up or down on the frame A for bottles of different sizes.

In the example shown in the drawing my machine is placed in a vertical position, which I consider to be the best, but it may also be used in a horizontal position.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the water-supply pipe F, of the pinion C, having a tubular shank, the revolving brush H, having a tubular head secured on said shank, the spring J arranged around the shank, the disk I arranged upon and supported in a yielding manner by the spring, and the pad L secured to the cross-bar or lever M, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 20th day of December, 1876.

ANTHONY FISHER. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.