

(No Model.)

C. PEASE.
BOTTLE WASHER.

No. 498,725.

Patented May 30, 1893.

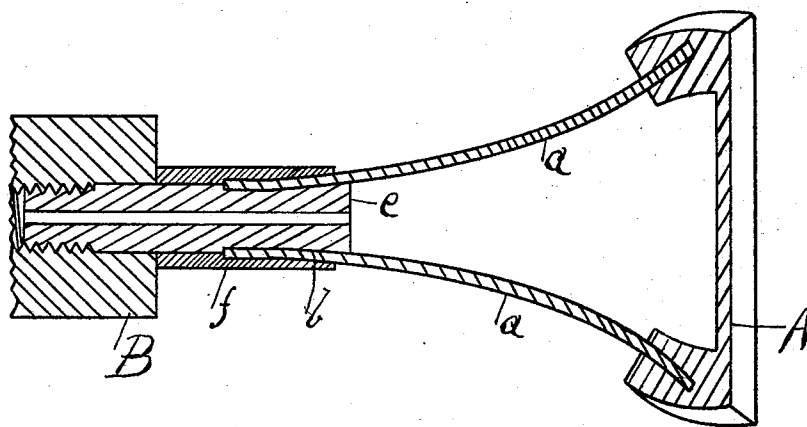


Fig. 1.

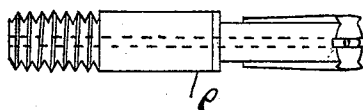


Fig. 2.

Witnesses.

A. M. Tuttle
E. E. Hamill

Inventor.

Charles Pease

By C. B. Tuttle
Att'y

UNITED STATES PATENT OFFICE.

CHARLES PEASE, OF HILLSBOROUGH, NEW HAMPSHIRE, ASSIGNOR TO HOYT BROTHERS & CO., OF LYNN, MASSACHUSETTS.

BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 498,725, dated May 30, 1893.

Application filed November 12, 1892. Serial No. 451,741. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PEASE, of Hillsborough, in the State of New Hampshire, have invented certain Improvements in Brush-
5 Holders for Bottle-Washing Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the construction of brush-holders for bottle-washers.

10 The nature thereof is hereinafter fully described and then specifically pointed out in the claims.

Of the drawings Figure 1 is a longitudinal, central section of a mechanism embodying
15 this invention, combined with a revoluble operating shaft and brush-supporting springs. Fig. 2 is a perspective view of the clamping core, detached.

The rubber brush, A, is applied to the outer
20 expanded ends of the springs, *a, a*, substantially as shown and described in the patent granted to Miles and Lovett, March 25, 1879, No. 213,583. These spring arms, *a, a*, are made of sheet steel and a portion of the length
25 of each, at the end opposite the rubber brush, A, is swaged, so as to curve it transversely and give it the shape, in cross-section, of a segment of a tube. These curved ends of the spring arms, *a, a*, are inserted in correspond-
30 ingly shaped grooves, *b*, formed in the core, *e*, their concave faces bearing against the bottom face of the groove and their convex faces being projected above the side walls of the groove sufficiently to bear upon and be
35 clamped against the shell, *f*, as shown in Fig. 1. The outer tube, *f*, is provided with a central bore extending through the shell longitudinally to permit passage through for the clamping core, *e*, as shown in Fig. 1. For a portion
40 of its length the said bore is of a conical form, adapted to receive the frusto-conical end of core, *e*, and the clamping operation is effected by pinching the spring arms *a, a*, between the shell, *f*, and said frusto-conical end of clamping core, *e*. To bring the core and outer shell
45 into relative positions for suitably clamping and holding the spring arms the core is moved backwardly through the shell and it is highly important that this backward or longitudinal

movement of the clamping core, through the
50 shell, shall be effected without twisting or turning the parts spirally. To this end the spindle or body portion of core, *e*, is projected entirely through the outer shell, *f*, and on the
55 tang end of said core is a screw-thread adapted to engage in a suitably formed threaded socket in the revoluble shaft, B. With this construction the spring arms, *a, a*, having
60 been suitably placed in the grooves, *b*, of the clamping core and the outer shell being pushed forward on the core, contacting its inner face with the top faces of said spring
65 arms, the clamping is effected by turning the shaft, B, while the shell and clamping core remain stationary, thereby causing the clamping core to penetrate the socket in said shaft, B, until the end of said shaft B, bears against
70 the rear end face of the outer shell, *f*, and thereby forces said shell into clamping contact with the inner frusto-conical end of the clamping core and spring arms.

I have described and represented the clamping core, *e*, as provided with sockets, *b*, and I prefer this construction as it is thereby better
75 adapted for holding the spring arms, *a, a*, in proper position on opposite sides of the core and prevents them from getting twisted, although I am aware that the core may be formed without the grooves and still embody the main characteristics of my invention.

80 On March 1, 1881, Letters Patent of the United States, No. 238,306, were issued to Joseph N. Hoyt, my assignor, for an improvement in chucks composed of an outer tube and an inner bifurcated tube and a conically-
85 shouldered screw whereby the inner tube was expanded, at one end, to impinge the supporting arms of bottle-washer brushes and hold the same between said outer and inner
90 tubes. In that invention the conically-shouldered screw effects no longitudinal movement of the clamping tubes, but simply expands the inner member. When wet and rusted, which is a condition incident to its normal use, the parts are liable to become set and
95 difficult to operate. This invention is distinguishable from that one in that there is no expanding member and the clamping operation

is effected by moving one member longitudinally in relation to the other and thereby forcing their respective tapering or conically formed surfaces to approach and grip the brush-arms.

What I claim is—

1. The combination of the outer shell or member, *f*, having a central bore extending longitudinally therethrough, the inner core or member, *e*, having a portion of its length of frusto-conical formation, substantially as described, arranged within the bore of said outer member and longitudinally movable in a direct line therethrough, the brush-supporting arms, *a*, interposed between said outer and inner members and a clamping connection having screw-thread-connection with said inner member and bearing against said outer member and movable to operate said members longitudinally, one in relation to the other, as and for the purposes described.

2. The combination of the outer shell or member, *f*, having a central bore extending longitudinally therethrough, the inner core or member, *e*, having a portion of its length of frusto-conical formation, substantially as described, arranged within the bore of said outer member and longitudinally movable in a direct line therethrough and a clamping connection, composed of the revoluble shaft, *B*, having engagement with said members and movable to operate the members longitudinally, one in relation to the other, for the purposes described.

3. The outer shell or member, *f*, having a central bore extending longitudinally there-

through, its inner surface walls being beveled, a portion of its length, as shown in longitudinal cross-section and the inner core or member, *e*, having a portion of its length of frusto-conical formation, substantially as described, arranged within the bore of said outer member and longitudinally movable in a direct line therethrough, combined with the revoluble shaft, *B*, said shaft being provided with a screw-threaded socket engaging a screw-threaded formation on said inner member, *e*, and movable to operate it longitudinally and also engaging the outer member to restrain it against such movement, substantially as described.

4. A clamping device for holding the brush-supporting arms of bottle-washing machines, comprising the outer shell or member, *f*, having a central bore extending longitudinally therethrough, the inner core or member, *e*, having a portion of its length of frusto-conical formation, substantially as described, arranged within the bore of said outer member and longitudinally movable in a direct line therethrough and independent means engaging said outer and inner members and movable to operate said members longitudinally, one in relation to the other, substantially as and for the purposes described.

Signed at Lynn, Massachusetts, this 29th day of March, A. D. 1892.

CHARLES PEASE.

Witnesses:

E. E. HAMILL,
A. M. TUTTLE.