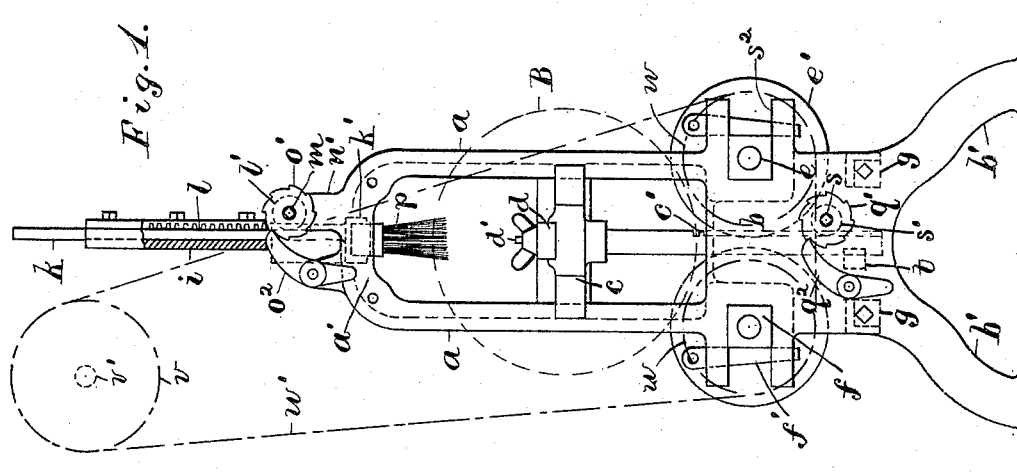
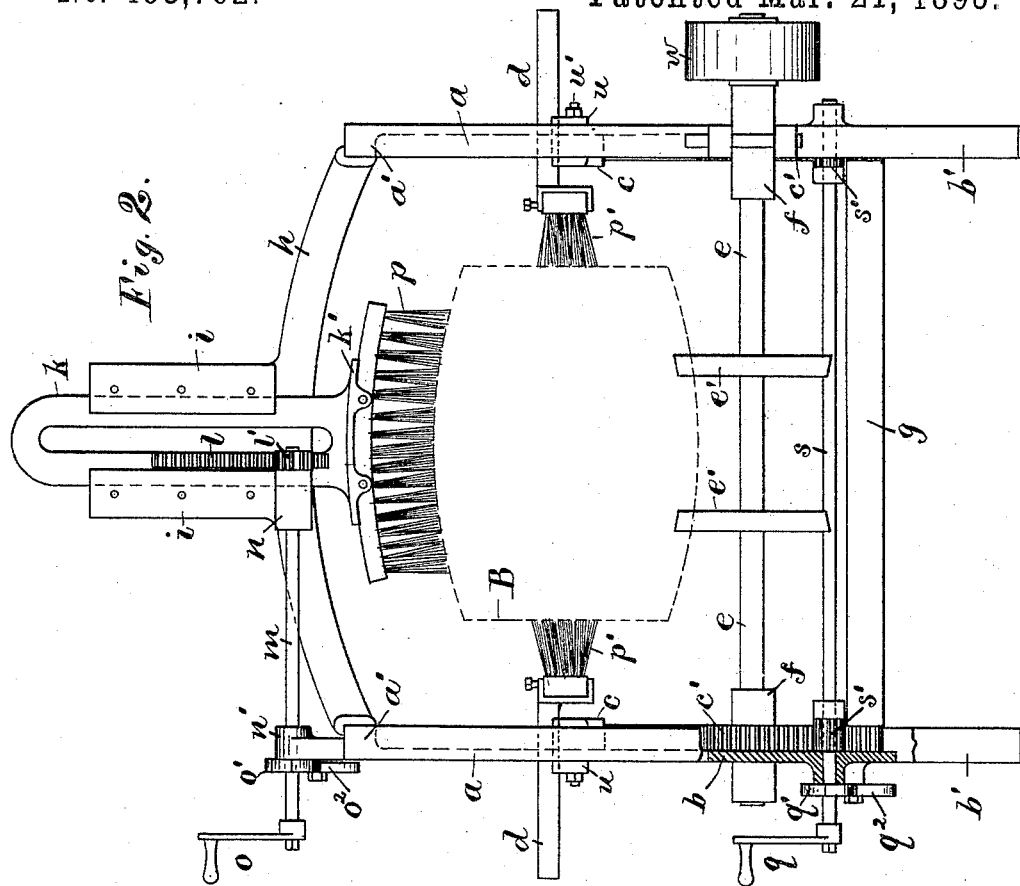


U. EBERHARDT.
BARREL WASHER.

No. 493,762.

Patented Mar. 21, 1893.



Attest:
L. Lee,
Edw. P. Kinsley

Inventor.
Ulrich Eberhardt, per
Crane & Miller, attys.

U. EBERHARDT.
BARREL WASHER.

No. 493,762.

Patented Mar. 21, 1893.

Fig. 3.

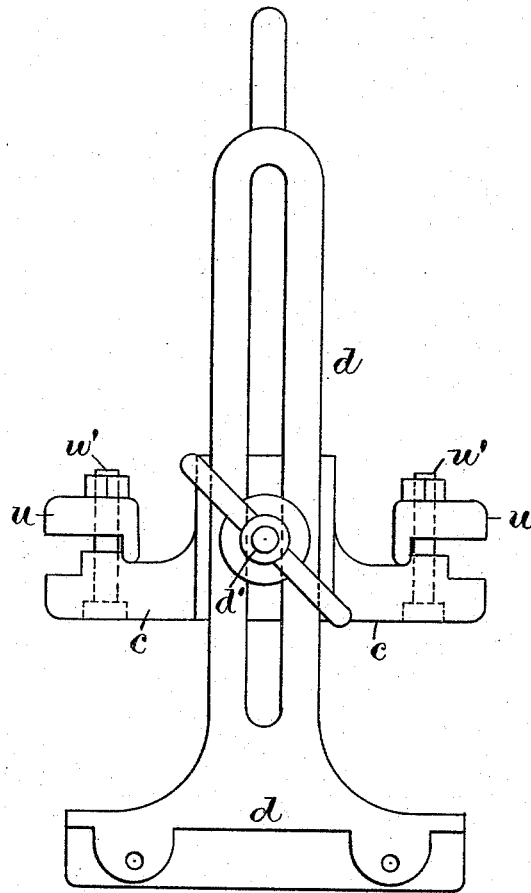
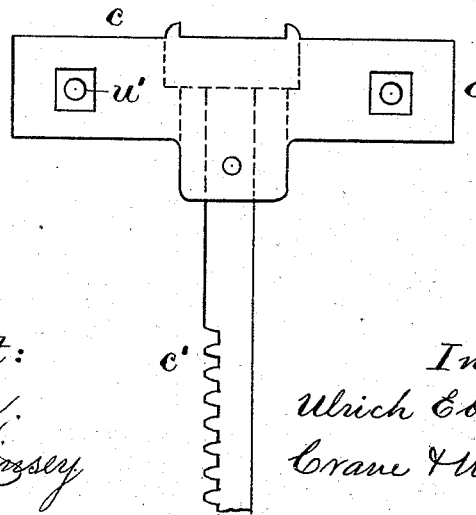


Fig. 4.



Attest:
L. Lee.
Edw. P. Kinsey

Inventor.
Ulrich Eberhardt, per
Crane & Miller, atty.

UNITED STATES PATENT OFFICE.

ULRICH EBERHARDT, OF NEWARK, NEW JERSEY.

BARREL-WASHER.

SPECIFICATION forming part of Letters Patent No. 493,762, dated March 21, 1893.

Application filed August 3, 1892. Serial No. 442,026. (No model.)

To all whom it may concern:

Be it known that I, ULRICH EBERHARDT, a citizen of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Barrel-Washing Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 The object of this invention is to provide a simple and efficient machine for washing barrels; and the invention consists in the construction herein shown and described for such machine.

15 In the annexed drawings, Figure 1 is an end elevation partly in section where hatched, and Fig. 2 a side elevation of the apparatus, a portion of the frame being broken away at the left end of Fig. 2, to show the rack and 20 pinion for one of the end brushes. Fig. 3 is a plan of one of the cross heads and end brush holders, and Fig. 4 shows the inner side of the cross head with a part of its elevating rack.

The end stanchions consist in parallel bars 25 *a* connected at the top by an arch *a'*, and provided at the bottom with sockets for the roller shaft bearings below which the stanchion is formed of a plate *b* with legs *b'* projected outward and downward therefrom.

30 In Fig. 1, the cross head is lettered *c* and the end brush holder *d*, and the roller shafts *e* are shown mounted in boxes *f* secured in the sockets by keys *f'*, and provided with the elastic rollers *e'* upon which a barrel *B* is 35 shown supported as usual. Ties *g* connect the legs *b'*, and a single arched tie *h* connects the arches *a'* at the top of the stanchions, and supports vertical guides *i* to which the shank *k* for the top brush holder is fitted movably.

40 A brush *p* is shown in the top brush holder *k'* attached to the shank *k*. A rack *l* is attached to the face of the shank, and a hand-shaft *m* is mounted adjacent to the rack in a bearing *n* upon the arch *h* and a 45 bearing *n'* upon the arch *a'*. At its inner end the shaft *m* is provided with a pinion *l'* meshing with the rack *l* to actuate the top brush holder, and the outer end of the shaft is provided with a crank *o* and with a ratchet 50 wheel *o'* and pawl *o''* to sustain the brush holder when adjusted. Racks *c'* are extended downward from the under side of the cross

head *c* adjacent to the stanchions, and a single shaft *s* is extended through the two stanchions adjacent to such racks and provided with 55 pinions *s'* to actuate them simultaneously, an abutment *t* being provided behind the rack to hold it against the pinion. The shaft *s* is provided like the shaft *m* with a hand-crank *q* and a ratchet wheel *q'* controlled by pawl 60 *q''* to sustain the cross heads when lifted. The cross heads as shown in Figs. 3 and 4 are formed of bars fitted to the inner side of the stanchions and provided with gibs *u* having bolts *u'* to clamp the cross head to the stanchion when ad- 65 justed. The brush holder *d* is slotted to move to and from the barrel, and is clamped to the top of the cross head by a screw and thumb-nut *d'*. End brushes *p'* are shown secured in the brush holders at the opposite end of 70 the barrel *B*. With this construction both the cross heads *c* may, by slackening the bolts *u'* be raised and lowered simultaneously through the agency of the racks and the pinion shaft *s*, and held in the adjusted position 75 by the pawl *q''* until the bolts *u'* are tightened which holds the cross heads and end brushes rigidly. By extending the shaft *s* the entire length of the machine, it actuates both the racks *c'* simultaneously, and thus secures an 80 adjustment of both in much less time than is required to adjust the end brushes separately by means of slow working screws. It is obvious that the pinion shafts may be sustained when adjusted by other means than the ratch- 85 ets and pawls, shown in the drawings. By forming the stanchions with feet, the tops of the rolls *e'* are raised to a level with the rinsing tank, and the barrels may thus be much more readily handled; while the expense and 90 delay of preparing a bed or foundation when the machine is erected, is wholly avoided.

To save the expense of the gearing which has been heretofore used to connect the roll shafts *e* to drive them both at the same speed, 95 I provide similar pulleys *w*, in line with one another, upon both the roll shafts, and apply a single driving belt to the surface of both the pulleys, thus necessarily rotating them in the same direction at the same surface speed. 100 In Fig. 1, the driving pulley *v* is shown upon a countershaft *v'*, and the driving belt *w'* is shown carried from the pulley *v* to both the pulleys *w*. The pulley *v* and belt *w'* are

shown in dotted lines, to avoid confusing the other features of the drawings. The pulleys *w* are obviously made of the same relative diameter as the rolls *e'* to rotate them at the same surface speed, and if the rolls be made of different diameters the pulleys would be correspondingly proportioned, and the simplicity and cheapness of my construction may thus be secured whether the rolls *e'* be of the same dimensions or not. With these improvements the cost of the machine is materially reduced, while its efficiency is maintained, and the convenience of erecting and operating the same is materially increased.

15 What is claimed herein is—

1. In a barrel washer, the combination, with suitable stanchions having bearings for the roller shafts *e*, of the cross heads *c* carrying the end brush holders *d* and provided with the racks *c'* adjacent to the stanchions, the shaft *s* extended between the stanchions and provided with the pinions *s'*, and with means for holding the shaft from turning when adjusted, as and for the purpose set forth.

2. In a barrel washer, the combination, with suitable stanchions having bearings for the roller shafts *e*, of the cross heads *c* carrying the end brush holders *d* and provided with the racks *c'* extended downward adjacent to the stanchions, the shaft *s* extended between the stanchions and projected outside of the same and provided with the pinions *s'*, the crank *o*, the ratchet wheel *o'*, and the pawl *o²* to actuate and support both the cross heads simultaneously, as set forth.

3. In a barrel washer, the combination, with

the stanchions having the bars *a*, the plate *b*, and the legs *b'*, of bearings for the roller shafts *e*, cross heads fitted movably to the bars *a*, racks *c'* projected downward from the cross head, the shaft *s* with pinions *s'* to actuate both racks, the upper brush holder having shank *k* fitted to guides *i* and provided with the rack *l*, and the shaft *m* provided with the pinion *l'* and projected outside of one of the stanchions, and both the shafts being provided with means to actuate and hold the same when adjusted, substantially as set forth.

4. In a barrel washer, the combination, with the stanchions having the bars *a*, the plate *b*, and the legs *b'*, of bearings for the roller shafts *e*, cross heads fitted movably to the bars *a*, racks *c'* projected downward from the cross head, the shaft *s* with pinions *s'* to actuate both racks, the arch *h* having the guides *i*, the upper brush holder having shank *k* fitted to such guides and provided with rack *l*, and the shaft *m* provided with the pinion *l'* and projected outside of the same stanchion with the shaft *s*, and the shafts *m* and *s* being provided with the ratchet wheels *o'*, pawls *o²*, and means for turning the shafts, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ULRICH EBERHARDT.

Witnesses:

JOSEPH B. PIERSON,
THOMAS S. CRANE.