W. Robinson,

Barrel Cleaner,

No. 40,797. Patented Dec. 1, 1863.

Fig. 2.

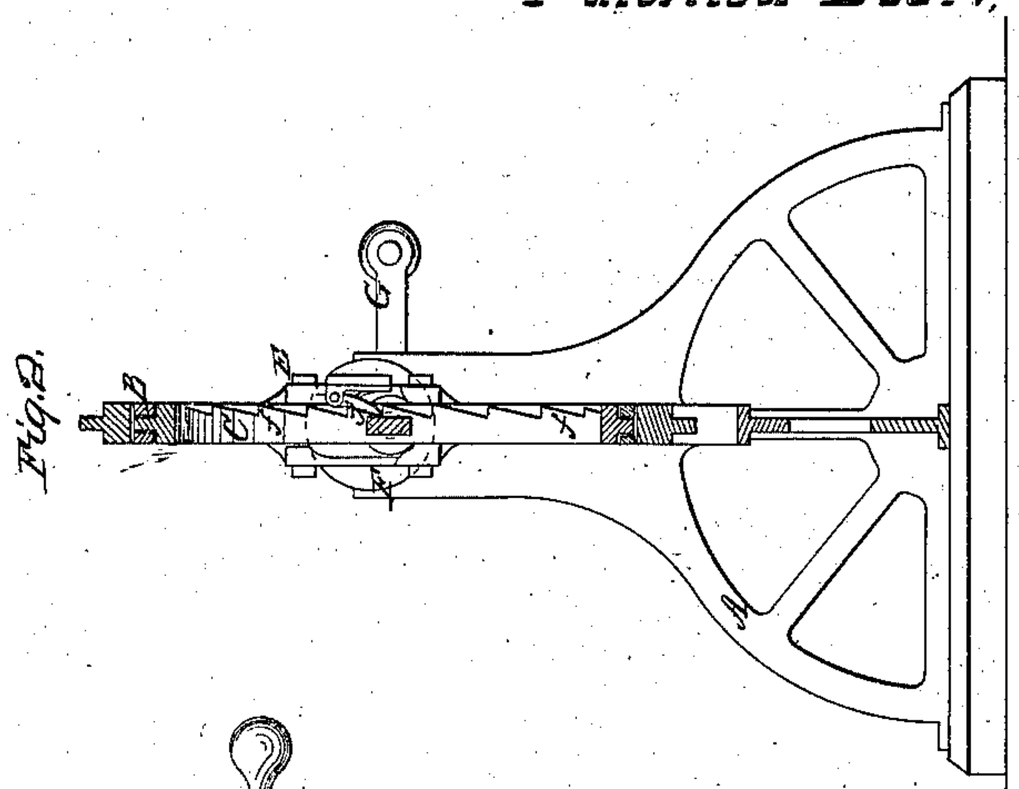
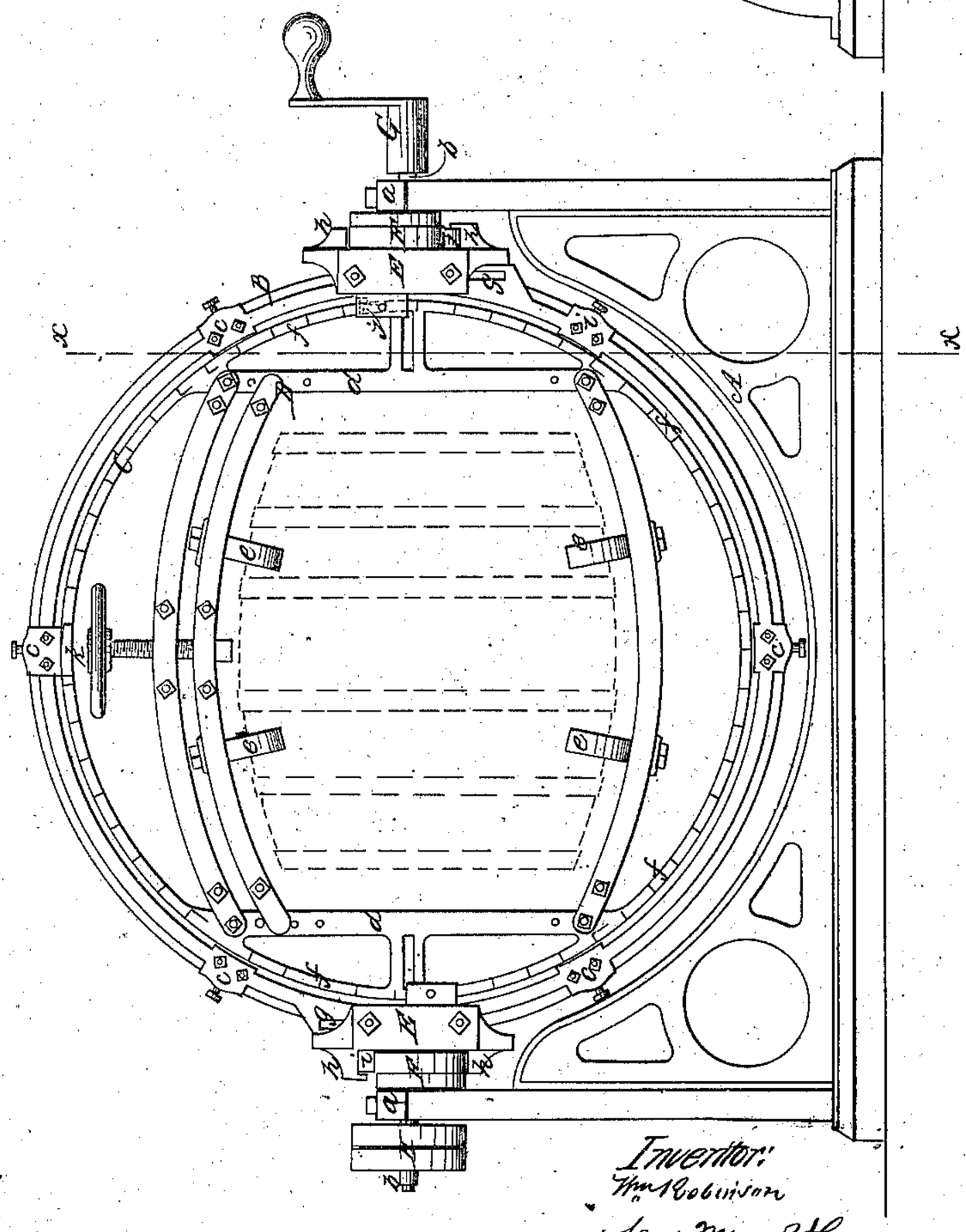


Fig. 1.



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UNITED STATES PATENT OFFICE.

WILLIAM ROBINSON, OF WEMBDON BRIDGEWATER, ENGLAND, ASSIGNOR TO GEORGE B. TURRELL, OF NEW YORK, N. Y.

IMPROVED CASK-WASHING MACHINE.

Specification forming part of Letters Patent No. **40,797**, dated December 1, 1863.

To all whom it may concern:

Be it known that I, WILLIAM ROBINSON, of Wembdon Bridgewater, in the county of Somerset, in England, have invented certain new and useful Improvements in Machines for Washing and Tumbling Casks, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a front elevation of my invention. Fig. 2 is a transverse vertical section of the same, the line *x x*, Fig. 1, indicating the plane of section.

Similar letters in both figures indicate corresponding parts.

The apparatus which forms the subject-matter of this invention is particularly intended for washing casks, barrels, and other vessels of a similar description; but it can also be used with advantage for tumbling-barrels intended for cleaning small castings or for polishing or scouring articles of various descriptions.

The invention consists in an apparatus capable of containing and holding one or more casks, barrels, or other vessels of a similar description, and imparting to the same a compound motion simultaneously in two or more directions, in such a manner that the ever-changing position of the cask or barrel subjects every part of the interior of the same to the action of the cleansing medium—viz., chain, or gravel and water—or that by said continually-changing position of the barrel the articles to be cleansed or scoured are effectually tumbled, and thereby the labor of washing casks, &c., or of tumbling articles in barrels is considerably facilitated.

To enable those skilled in the art to make and use my invention, I will proceed to describe it.

A represents a frame, made of metal or any other suitable material, and provided with two journal-boxes, *a a*, which form the bearings for the trunnions *b b* of a frame, B. This frame is made of metal or any other suitable material, and it may be made round or square, or in any other desirable shape. For an apparatus such as represented in the drawings it is desirable, however, to have the frame B circular, so that the same adapts itself readily to the inner frame or ring, C. This ring fits nicely into the frame B, and it is held in place by guides *c*, which allow the same to rotate freely within the frame B. Said ring is furnished with a screw-clamp, D, which can be adjusted by means of different holes in the arms *d* to suit casks or barrels of different size, and the casks or barrels are retained in the clamp by segmental arms or shoes *e*, as clearly shown in Fig. 1 of the drawings, where the barrel is shown in red outlines.

In order to produce an automatic motion of the ring C within the frame B, said ring is provided with ratchet-teeth *f*, extending all round on one or both sides, and two carriages, E, are attached to the frame B, as clearly shown in Fig. 1 of the drawings. Each of these carriages slides backward and forward in a slot, *g*, in said frame, and it is provided with two lugs, *h*, projecting over an eccentric disk, F, which is firmly secured to the main frame A. As the frame B is rotated the lugs *h* sweep over the surfaces of said eccentric disks and a reciprocating motion is imparted to the carriages E in the slots *g*. In order to lessen the friction of the lugs *h* on the surfaces of the eccentrics, said lugs are furnished with friction-rollers *i*.

Each of the carriages E is provided with a pawl, *j*, which engages with the [illegible]-teeth *f* of the ring C, and as the frame B is rotated the reciprocating motion imparted to the carriages E causes the pawls to take hold of new teeth and to impart to the ring an intermittent rotary motion within the frame B. A retrograde motion of the ring C is prevented by a pawl, *k*, secured to one of the guides *c*.

The rotary motion of the frame B with the ring C may be produced by hand or by steam-power, and in order to be able to apply the power the trunnions *b* of the frame B are extended beyond the journal-boxes *a*, to afford room for a winch, G, or for a fast and loose pulley, H.

By rotating the frame B a compound motion is imparted to the cask or barrel in the ring C, and the position of the barrel in relation to the axis of rotation is continually changing.

In cleansing casks or barrels the cleansing medium, be it a chain, or gravel and water, or any other material, is brought in contact with

every part of the inner surface of said cask or barrel, and every particle of dirt can effectually be removed, causing the unheading of even the foulest cask totally unnecessary.

This apparatus is also of great advantage in tumbling small castings or other articles in barrels. By the continually-changing position of the barrel the articles in the barrel are compelled to change their relative position at every revolution of the barrel, and the cleaning or scouring is effected in less time and more perfect than with a tumbling-barrel of the ordinary construction.

It must be remarked that the rotary motion of the ring C may be produced by other means besides the reciprocating carriages and ratchet-teeth; and I do not wish to confine myself to this particular construction.

The ring C might be hung in the frame B by means of trunnions, similar to a gimbal, and rotated by an endless screw and worm-wheel, and both frames B and C might be made square instead of round.

A third motion might also be imparted to the cask or barrel by securing it in the ring C at the centers of its heads, instead of by means of the shoes *e*, and applying a pinion to the axis thus formed, which would be made to gear in a toothed rim attached to the ring B. In most cases, however, the double motion will be sufficient for all practical purposes.

Having described the nature of my invention and the manner of performing the same, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus, substantially such as herein described, whereby a compound motion can be imparted to the cask, barrels, or other vessels simultaneously in two or more directions.

2. The combination of the rotating frame B, serrated ring C, screw-clamp D, carriages E, and eccentrics F, constructed and operating in the manner and for the purpose substantially as herein shown and described.

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