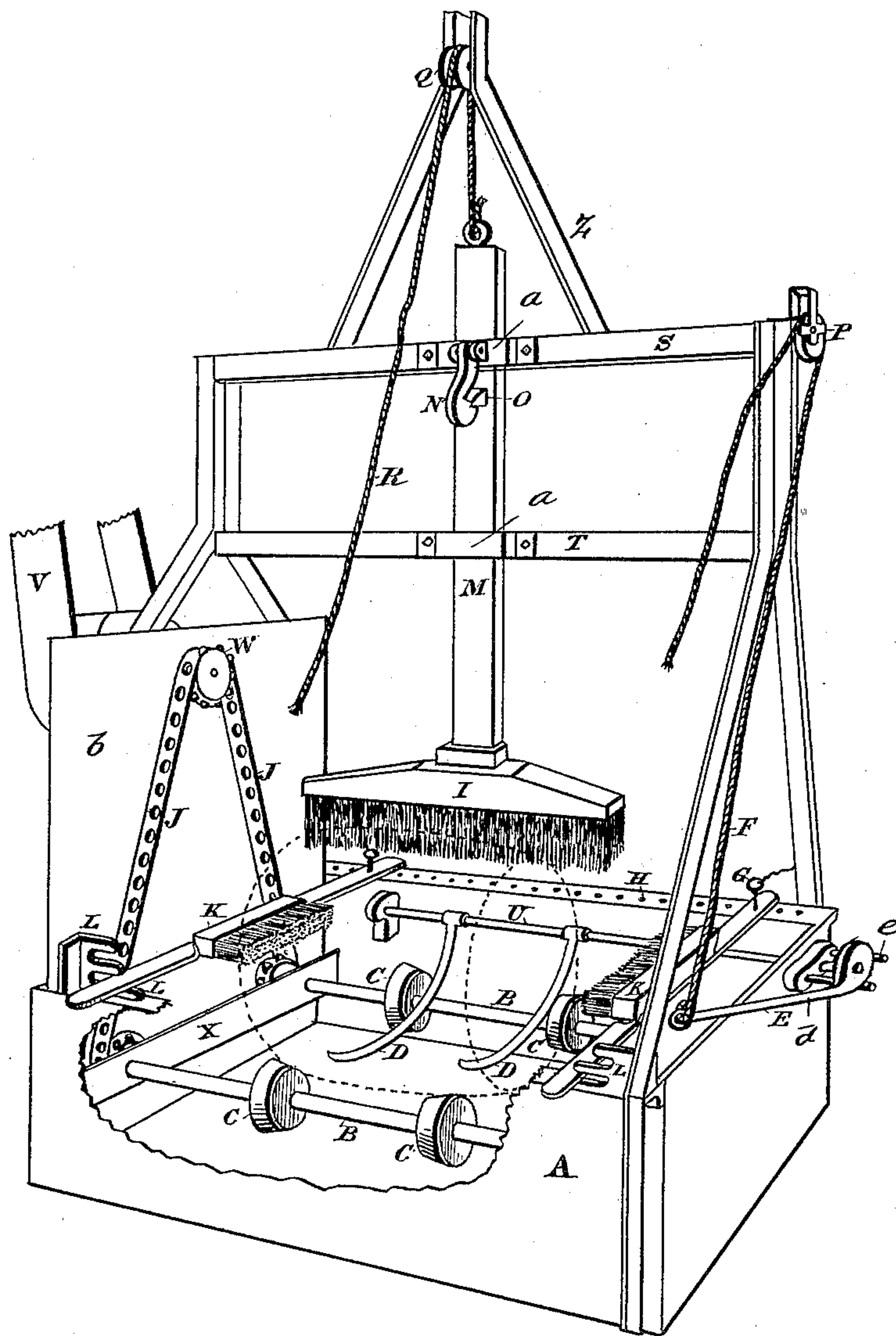


(No Model.)

H. NADORFF.  
WASHING MACHINE.

No. 411,349.

Patented Sept. 17, 1889.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

HENRY NADORFF, OF LOUISVILLE, KENTUCKY.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 411,349, dated September 17, 1889.

Application filed May 11, 1889. Serial No. 310,423. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY NADORFF, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines for washing barrels, casks, and the like, and is designed as an improvement upon the devices shown and described in the Letters Patent granted to me November 3, 1885, No. 329,847.

The invention will be fully understood from the following description and claims, when taken in connection with the accompanying drawing, in which the figure illustrates my improved apparatus in perspective with the front wall of the trough partly broken away to show the barrel-supporting shafts and their rollers and the barrel-throwing device.

Referring by letter to the said drawing, A indicates a trough, which may be of any suitable size, and is designed to contain water. Rising from this trough or tank is a suitably-braced frame, provided with horizontal cross-bars S and T, which are adapted to serve as guides for the vertically-movable brush-handle. These bars are each provided with a slideway *a*, through which the handle M of the brush I passes. This brush I, which may be of steel wire or other suitable material, has its handle or bar provided at a suitable point with a beveled lug O, and the cross-bar S carries a pivoted catch N, which is adapted by gravity to automatically engage the lug O of the brush-handle when the latter has been raised to the desired position to allow a barrel to be discharged from the tank.

Rising from the cross-bar S is a frame Z, carrying at its upper end a loosely-journaled roller Q, over which a hand-rope R passes, and is connected at one end with the upper end of the brush-bar M, the opposite end extending within convenient reach of the operator. It will thus be seen that by pulling upon the rope R the brush I may be raised out of operation, so that a barrel may be discharged from the tank, and by the operator

loosening his grasp upon said rope the brush will drop to the proper position and be stayed therein by the action of the catch N co-operating with the lug O on the handle-bar.

Journaled longitudinally within the tank, and at a suitable distance below the water-line, are parallel shafts B. These shafts are provided with barrel-supporting rollers C, which have their peripheries beveled, as shown, so as to obviate any lateral displacement of the barrel while being washed. One end of each of these shafts is provided with a sprocket or chain wheel, and receives an endless sprocket-chain J, which communicates motion thereto.

Rising from one of the side walls of the tank is a suitable upright or standard *b*, in which is journaled the power-shaft, carrying at one end a pulley or pulleys to receive a drive-belt V, and at its opposite end a chain or sprocket wheel W, to receive the endless drive-chain J. It will thus be seen that as motion is given to the belt V through any suitable motive power, such motion will be communicated to the power-shaft and from thence through the medium of the endless belt J to the roller-bearing shafts in the tank, which support the barrel being washed, and imparts to the same a rotary motion.

K indicates the lateral brushes for operating upon the ends or heads of a barrel. These brushes are supported upon the upper edges of the side walls of the tank, as shown.

One of the side walls is provided in its upper end with perforations H, and the adjacent ends of the lateral brush-bars have a perforation whereby they may be secured adjustably with a pin G, or other suitable fastening device. The opposite longitudinal edge of the tank is provided near opposite ends with short racks L, which are adapted to receive in their notched portions one end of the brush-bars K. By this means it will be seen that the brushes for the ends may be adjusted longitudinally, and, by the slotted racks L, may be adjusted vertically, so as to adapt them for kegs or casks of various sizes.

U indicates a rock-shaft, which is journaled in suitable bearings on the inner side of one of the longitudinal walls of the tank. This rock-shaft has one end passing through one of the end walls of the tank, and is provided



with an arm or lever E, which is connected at its outer end with a rope F, passing over a guide-pulley P in the upright frame, and its opposite end extending within convenient reach of the operator. This rock-shaft is provided with a suitable number of curved arms or levers, there being but two shown in the present illustration. These arms or levers D are of a curvature so as to fit beneath the barrel or cask and bear upon one or more of the shafts B, the rollers C of the shafts preventing the barrel from normally coming in contact with said arms.

In some cases a stop—such as *d*—may be provided to limit the downward movement of the arm or lever E, and a similar stop *e* to prevent the movement of the said lever from going too far in the opposite direction. By this latter device when a barrel has been washed and the vertically-movable brush I raised by simply grasping the rope F and pulling it, the barrel, in a clean condition, may be thrown from the tank by the action of the rock-shaft and its curved arms.

X indicates a shield, which is placed on the shafts B, near their ends, adjacent to the chain-wheels, and is designed to prevent corks or other matter which may be removed from the casks from coming in contact with the said wheels or endless chains.

Having described my invention, what I claim is—

1. The combination, with the tank having one of its walls provided with perforations in its upper edge, and the opposite parallel wall provided with the brackets L, of the brushes K, secured by a pin to the perforated wall of the tank, and the opposite ends of said brushes adapted to be adjusted in the brackets L, substantially as specified.

2. The improved barrel-washing machine described, consisting of a tank, shafts journaled longitudinally therein and carrying barrel-supporting rollers, chain-wheels on one end of the shafts, and a shield for said wheels, brushes arranged transversely on the tank and longitudinally and vertically adjustable, a vertical frame having guideways, a vertically-movable brush arranged in said ways, a stop on the brush-bar, a catch on the frame to engage the stop, a guide-pulley in the frame, a hand-rope passing over the pulley and secured to the brush-bar, a rock-shaft journaled in the tank and having curved arms, a lever secured to the outer end of the rock-shaft, and an operating-rope secured to the lever and passing over a pulley in the frame, all substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY NADORFF.

Witnesses:

S. W. BERNARD,

S. L. BRASHEAR.