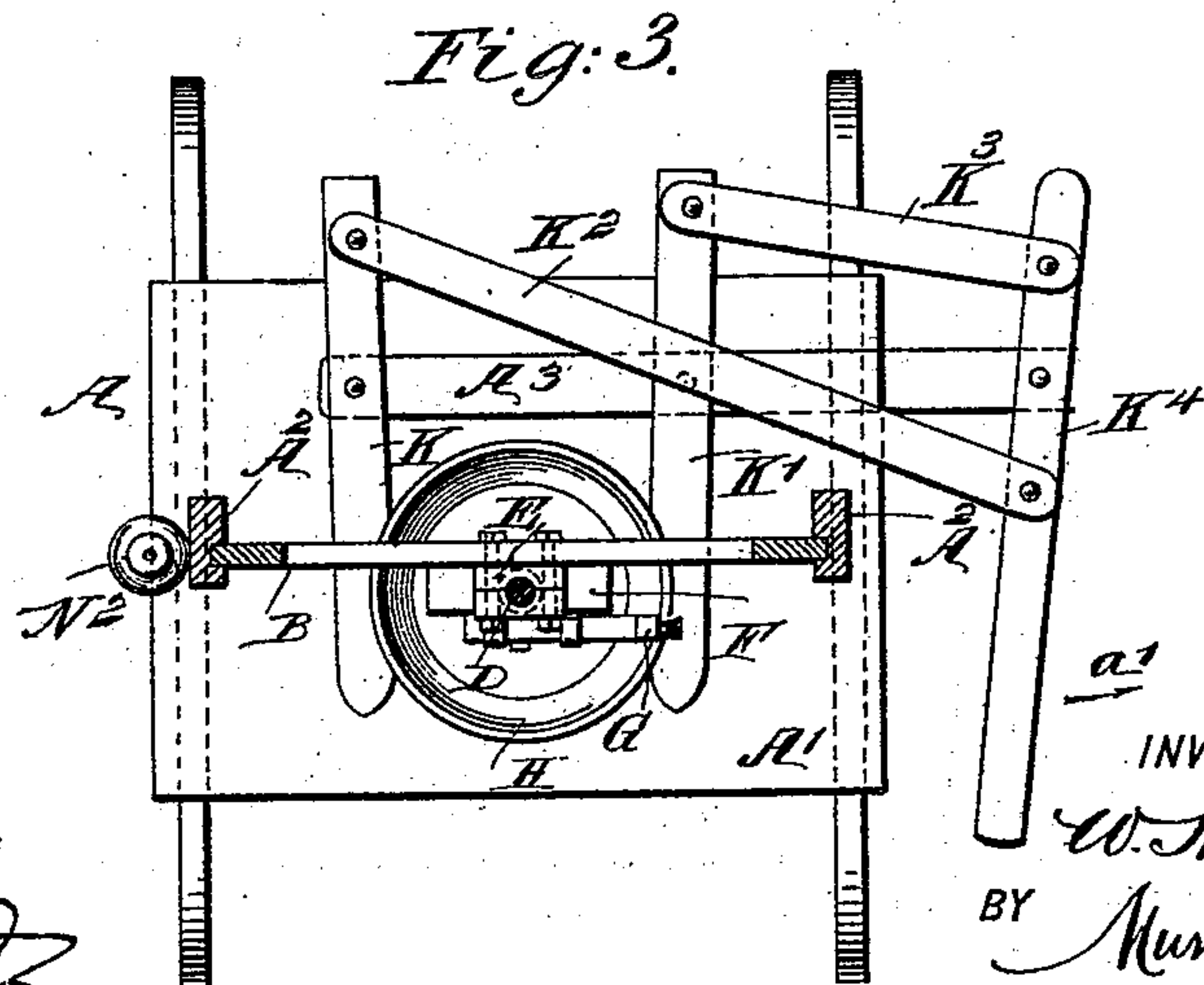
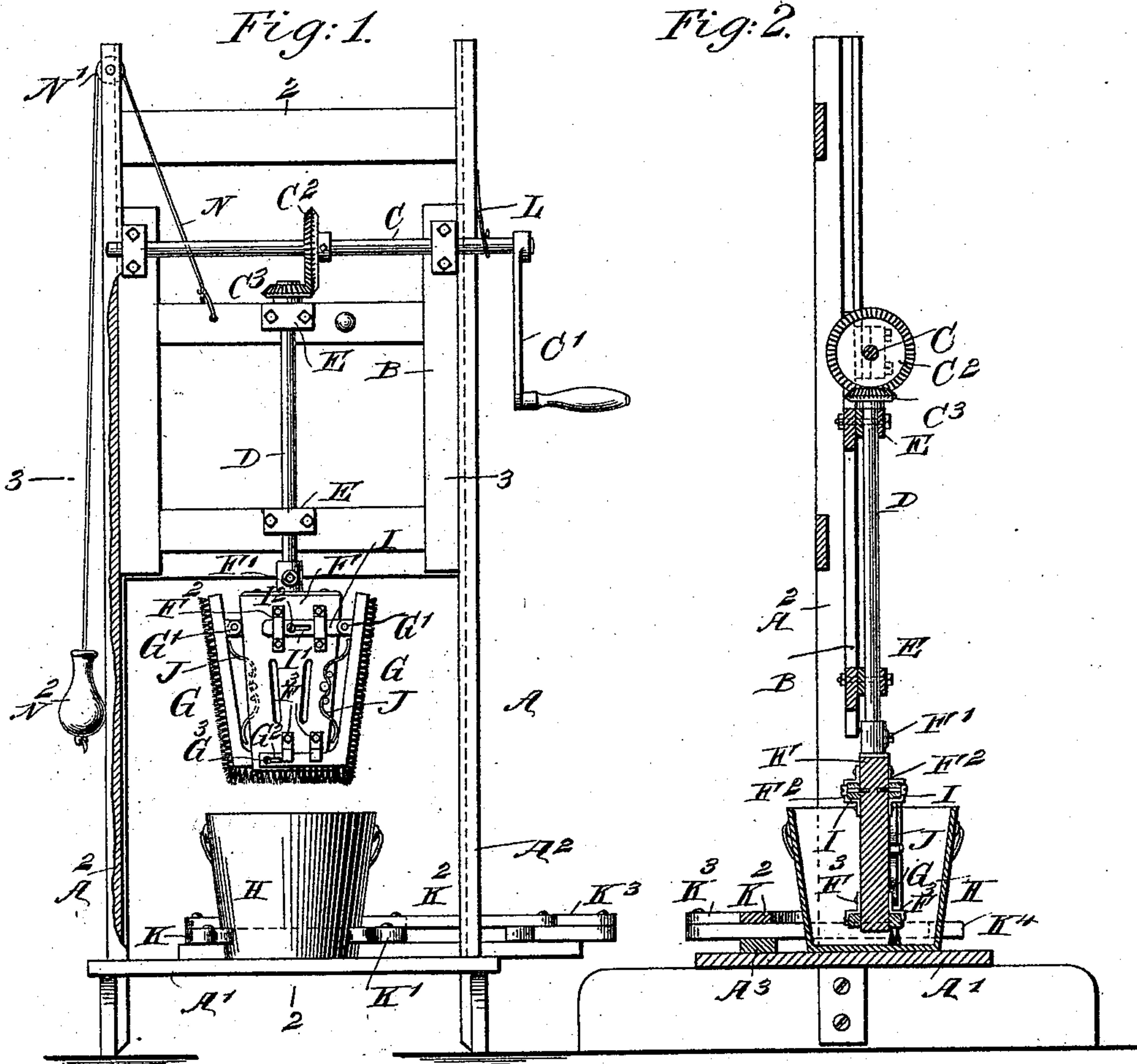


(No Model.)

W. HEBB.  
CLEANING MACHINE.

No. 526,970.

Patented Oct. 2, 1894.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM HEBB, OF CAMBRIDGE, VERMONT.

## CLEANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 526,970, dated October 2, 1894.

Application filed April 21, 1894. Serial No. 508,394. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HEBB, of Cambridge, in the county of Lamoille and State of Vermont, have invented a new and useful Improvement in Cleaning-Machines, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved cleaning machine which is simple and durable in construction, very effective in operation, and more especially designed for cleaning pails, tubs and other vessels.

The invention consists of certain parts and details, and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts in section. Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 1; and Fig. 3 is a sectional plan view of the same on the line 3—3 of Fig. 1.

The improved cleaning machine is provided with a suitably constructed frame A, having a platform A' and standards A<sup>2</sup>, in which is fitted to move vertically a slide B adapted to be raised and lowered, as hereinafter more particularly described, to move the brushes into and out of the pail, tub or other vessel to be cleaned.

In the slide B is journaled the horizontally disposed shaft C, carrying at one outer end the crank arm C' adapted to be taken hold of by the operator to impart a rotary motion to the said shaft C. On the latter is secured a bevel gear wheel C<sup>2</sup> in mesh with a bevel pinion C<sup>3</sup> fastened on the upper end of a vertically disposed shaft D journaled in suitable bearings E on the said slide B.

On the lower end of the shaft D is secured a head F by means of a set screw F' or other means, and on this head are held two L-shaped brushes G adapted to pass into the pail H or other vessel to be cleaned and seated on the platform A', as is plainly shown in the drawings.

The L-shaped brushes G extend on the sides and bottom of the head F, and each brush is

provided near its upper end and at the back with a lug G', pivotally connected with a bar I fitted to slide longitudinally in bearings F<sup>2</sup> attached to the head F, the said bar I having a limited sliding motion and being, for this purpose, provided with a longitudinal slot I' engaged by a set screw I<sup>2</sup> screwing in the head F.

The bottom or horizontal part of each brush G is formed in its back with a longitudinal slot G<sup>2</sup> engaged by a set screw G<sup>3</sup>, likewise screwing in the head F, the said bottom part of the brush being fitted to slide at its upper edge in bearings F<sup>3</sup> held on the head F. On the back of the upright part of the brush G presses a spring J, held on the head F, so that the said brushes are mounted yieldingly on the head F to readily compensate for unevenness in the vessel to be cleaned.

In order to hold the vessel H in place during the operation of cleaning it by means of the brushes G, I provide the clamping device shown in the drawings and provided with the levers K, K', adapted to engage opposite sides of the vessel H, as is plainly shown in Figs. 1 and 3. The levers K and K' are fulcrumed on a bar A<sup>3</sup> forming part of the frame, and the rear ends of the said levers are pivotally connected by links K<sup>2</sup> and K<sup>3</sup> with a foot lever K<sup>4</sup> under the control of the operator. Thus, when the lever K<sup>4</sup> is moved outward in the direction of the arrow a', then the levers K and K' open at their front ends to permit of conveniently placing the vessel H on the platform A', and when the operator then moves the lever K<sup>4</sup> in the inverse direction of the arrow a', the said clamping levers K and K' close and engage opposite sides of the vessel H, to securely hold the same in a central position relative to the vertically disposed shaft D carrying the head F and brushes G, as previously explained.

In order to lock the slide B and the parts carried thereby in an uppermost position, as shown in Fig. 1, I provide a hook L pivoted on one of the standards A<sup>2</sup> and adapted to engage the shaft C so as to hold the shaft, slide and other parts on the latter securely in an uppermost position. The slide B is also connected with a cord or rope N which extends upward and passes over a pulley N' journaled in one of the standards A<sup>2</sup>, the rope then ex-



tending downward on the outside of the corresponding standard, to carry at its lower end a counterbalancing weight  $N^2$  to enable the operator to conveniently raise or lower the slide B after the hook L is out of engagement with the shaft C.

The operation is as follows: When the several parts are in the position shown in Fig. 1, then the vessel H to be cleaned is locked in a central position by the clamping and centering device, and then in order to clean the said vessel, the operator disengages the hook L from the shaft C, and then lowers the slide B, so that the brushes G pass into the vessel H, as shown in Fig. 2. At the same time the operator turns the crank arm  $C'$ , so that a rotary motion is given to the shaft C, and this motion is transmitted by the bevel gear wheel  $C^2$  and the pinion  $C^3$  to the shaft D, whereby the head F and brushes G are revolved. As the brushes enter the pail they clean the sides thereof and finally the bottom parts of the brushes clean the bottom of the pail or vessel. Thus the entire interior of the pail is cleaned in a very short time, after which the operator raises the slide B, so as to move the brushes out of engagement with the pail, the slide being locked in an uppermost position by the hook L, as previously explained. The operator now removes the cleaned vessel H and a new one is placed on the platform  $A'$  and clamped in position and centered, and

then the above described operation is repeated; that is, the slide B is lowered and the shaft D revolved to cause the brushes to clean the interior of the vessel.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A cleaning machine comprising a suitable frame, a slide having vertical movement thereon, a revoluble head journaled in the said slide, a crank shaft journaled in the slide and operatively connected with the revoluble head, and brushes held on the said head, substantially as described.

2. A cleaning machine comprising a suitable frame, a slide having vertical movement thereon, a revoluble head journaled in the said slide, means for rotating the head and L-shaped brushes held yieldingly on the said head, substantially as shown and described.

3. A cleaning machine provided with a support for the article to be cleaned a clamping and centering device comprising two clamping levers pivoted to the said support, links connected with the said clamping levers, and a foot lever connected with the said links, substantially as shown and described.

WILLIAM HEBB.

Witnesses:

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FRED E. SMITH.