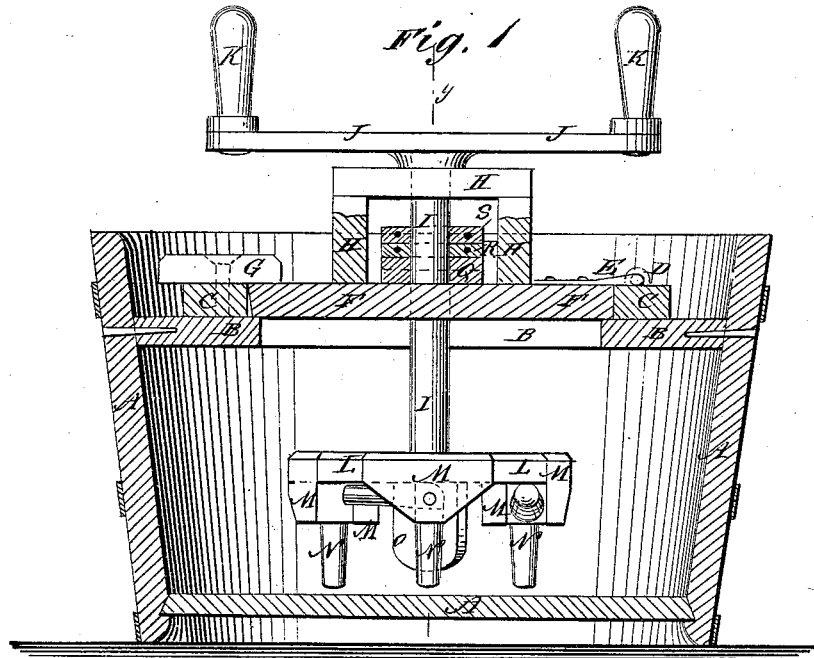


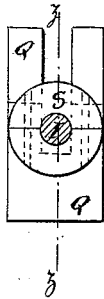
D. KUNKEL, Sr.  
Washing-Machine.

No. 217,737.

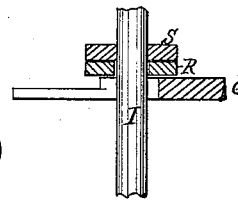
Patented July 22, 1879.



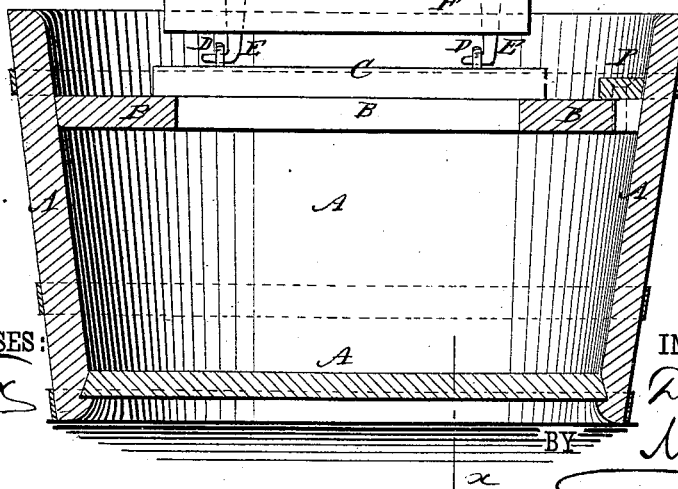
*Fig. 3*



*Fig. 4*



*Fig. 2*



WITNESSES:

*C. Verux*  
*C. Sedgwick*

INVENTOR:

*D. Kunkel, Sr.*  
*Mum Ho*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

DANIEL KUNKEL, SR., OF OREGON, MISSOURI.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **217,737**, dated July 22, 1879; application filed January 2, 1879.

*To all whom it may concern:*

Be it known that I, DANIEL KUNKEL, Sr., of Oregon, in the county of Holt and State of Missouri, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

Figure 1 is a vertical section of my improved machine, taken through the line *x x*, Fig. 2, and showing the parts in position for use. Fig. 2 is a vertical section of the same, taken through the line *y y*, Fig. 1, and showing the parts in position for putting in and taking out the clothes. Fig. 3 is a detail top view of the collar and adjusting-slide, the shaft being shown in cross-section. Fig. 4 is a detail sectional view on line *z z* of Fig. 3.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved washing-machine, which may be applied to an ordinary wash-tub, which shall be simple in construction, convenient in use, and effective in operation, washing the clothes quickly and without injuring them, and adjusting itself to the quantity of clothes to be washed, and which shall be an improvement upon the washing-machine for which Letters Patent No. 155,873 were granted to me October 13, 1874.

The invention consists in the combination of the rim, the detachable hinged cover, the bearings, the sliding shaft having a cross-bar and handles attached to its upper end and a disk attached to its lower end, the right-angled pins pivoted at their angles to the disk, and the wing attached to the center of the said disk with each other and with the tub.

A represents an ordinary wash-tub, to the inner surface of which, near its upper edge, is attached a plate, B, having a square opening through its middle part, making it a rim.

To the rim B, upon the opposite sides of its opening, are attached two cross-bars or cleats, C, to one of which are attached eyes D, to receive the hooks E, attached to the plate or cover F, to hinge the said cover F detachably to the rim B. To the other bar or cleat C is pivoted a button, G, for fastening the said cover when closed.

Through the center of the cover F and through the bearings H, attached to the said cover F, passes a shaft, I, to the upper end of which is attached a cross-bar, J, having handles K attached to its ends.

To the lower end of the shaft I is attached an octagonal or other shaped disk, L, to the lower side of which are attached four or more pairs of lugs, M.

To and between the lugs M of each pair is pivoted at its angle a right-angled pin, N, as shown in Figs. 1 and 2. With this construction the shaft I can slide up and down freely, so that the disk L can adjust itself to the thickness of clothes to be washed.

With this construction, also, when the disk L is turned in one direction by means of the cross-bar and handles J K, one arm of the pins N will take hold of the clothes and sweep them through the suds, the other arms of the said pins resting against the under side of the said disk L. As the motion of the disk L is changed the other arms of the pins N will take hold of the clothes in a new place, and the first arms will be turned up against the disk L.

To the center of the disk L is attached a wing, O, which pushes the clothes outward from the center, so as to keep them within the reach of the pins N.

If desired a hole may be formed in the rim B, which may be closed or partly closed by a button, P, pivoted to the said disk, and which is designed to allow the water to be conveniently poured from the tub A when required.

Upon the top of the cover F, beneath the bearing H, is placed a slide, Q, which is slotted from one end to allow it to be slipped around the shaft I, and which has one or more shoulders or steps formed upon its upper side. Upon the shaft I, above the slide Q, is placed a loose washer, R, and to the said shaft, above the said washer R, is attached a fast collar, S.

With this construction, when the slide Q is withdrawn, the washer R rests upon the cover F, and the collar S works upon it, allowing the pins N to work close to the bottom of the tub A. When more clothes are to be washed at a time, the slide Q is slipped in between the cover F and the loose washer R, so that

the said washer R may rest upon one of the shoulders of the said adjusting-slide, to support the pins N at any desired distance above the bottom of the tub A, as the amount of clothes to be washed may require.

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

A washing-machine consisting of the tub A, the rim B, the detachable hinged cover F, the bearings H, the sliding shaft I, having a

cross-bar and handles, J K, attached to its upper end and a disk, L, attached to its lower end, the right-angled pins N, pivoted at their angles to the disk L, and the wing O, attached to the center of the said disk L, substantially as herein shown and described.

DANIEL KUNKEL, SR.

Witnesses:

R. SCHLOTZHOVER,

A. L. NASH.