

W. H. WILLIS.  
WASHING-MACHINE.

No. 180,299.

Patented July 25, 1876

Fig. 1.

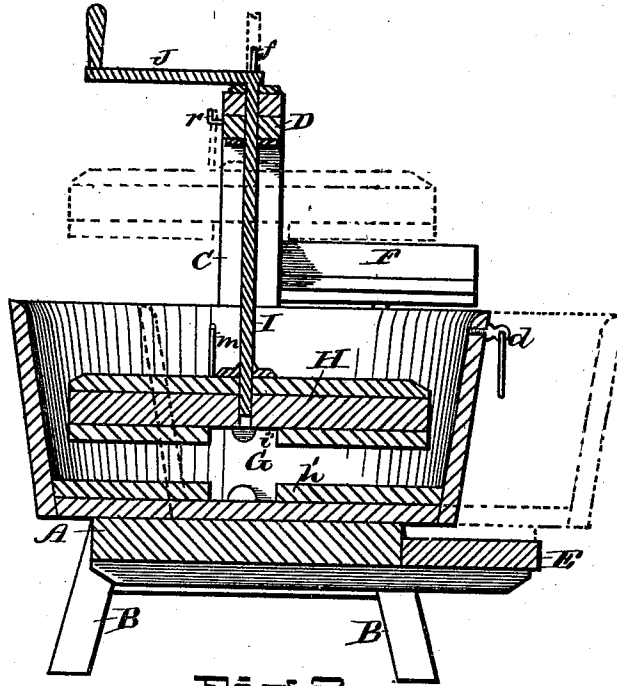
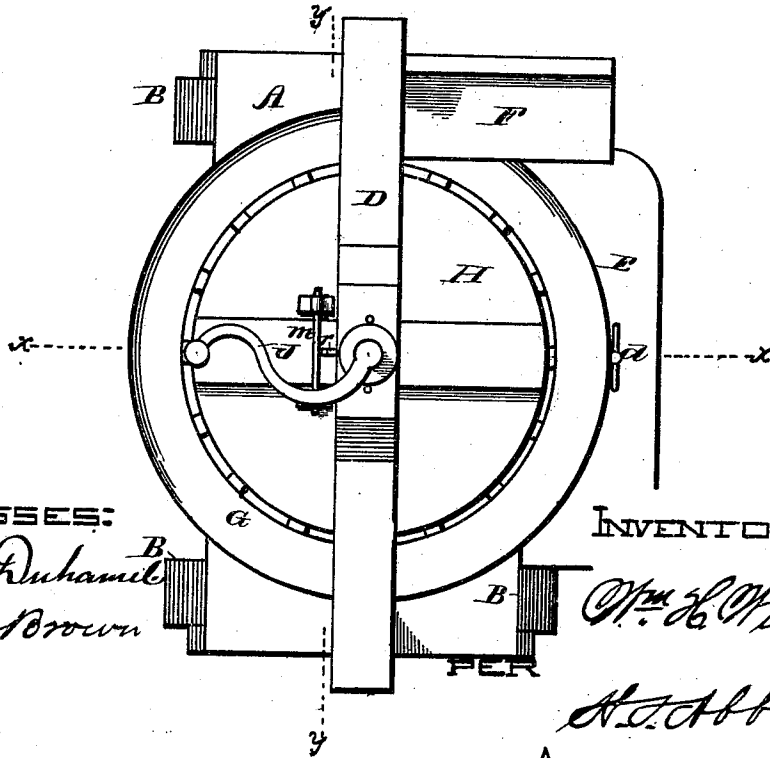


Fig. 2.



WITNESSES:

*John F. Duhamel*  
*A. B. Brown*

INVENTOR:

*W. H. Willis*

PER

*H. A. Abbot*

ATTORNEY:

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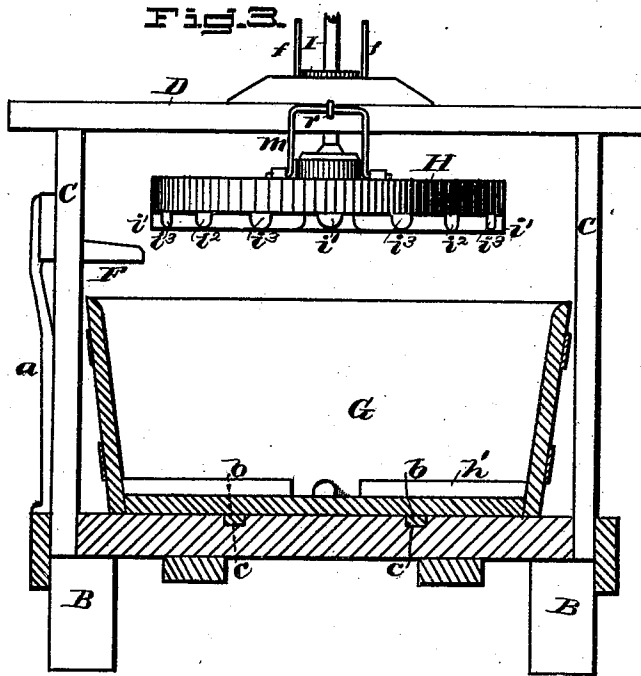
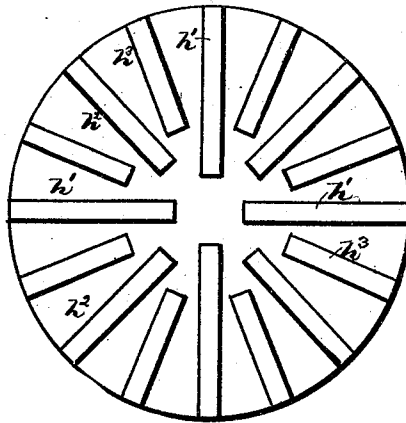


Fig. 4.



WITNESSES:

*Jas. F. Duhamel.*  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. WILLIS, OF FOREST CITY, MISSOURI.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 180,299, dated July 25, 1876; application filed May 8, 1876.

*To all whom it may concern:*

Be it known that I, WM. H. WILLIS, of Forest City, in the county of Holt and State of Missouri, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification:

The nature of my invention consists in the construction and arrangement of a washing-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a sectional view taken on the line *x x* of Fig. 2. Fig. 2 is a plan view. Fig. 3 is a sectional view on the line *y y* of Fig. 2. Fig. 4 is a plan view of the rubber.

A represents the platform or bed of my machine, supported upon legs B B, and provided at each end with an upright standard; C, said standards being connected at the top by a cross-bar, D. Along the front side of the frame thus constructed is a platform, E, for the support of the tub when brought out from beneath the rubber while the clothes are being passed through the wringer. At one end of the frame I attach a wringer-board, F, to one of the standards C, the outer end of which is supported by the brace *a*. This board supports a wringer to be used after the clothes have been thoroughly rubbed.

Across the bed or platform A are two parallel transverse grooves, *c*, extending from the front edge to near the rear edge, to receive corresponding cleats *b b*, fastened under the bottom of the tub G, so that the tub will always be retained in proper position, and at the same time may be easily moved out or in, for which latter purpose it is provided on the front side with a handle, *d*.

On the bottom of the tub G are arranged ribs *h*<sup>1</sup>, *h*<sup>2</sup>, and *h*<sup>3</sup>, in the following manner: Four ribs, *h*<sup>1</sup>, are secured radially at equal distances apart, and extending from the sides of the tub to a suitable distance from the cen-

ter, as shown. Between these ribs, midway, are secured four ribs, *h*<sup>2</sup>, also radially, and from the sides inward; but these ribs are shorter than the ribs *h*<sup>1</sup>. Eight still shorter ribs, *h*<sup>3</sup>, are secured midway between the ribs *h*<sup>1</sup> and *h*<sup>2</sup>, as shown.

Within the tub G works the circular rubber H, which is, on its under side, provided with ribs *i*<sup>1</sup> *i*<sup>2</sup> *i*<sup>3</sup>, corresponding with and arranged in precisely the same manner as the ribs on the bottom of the tub. By this arrangement of the ribs the clothes, as the rubber turns first to one side and then to the other, are held just as if between the fingers of the hand, and rubbed first to one side and then to the other without any tearing or straining action.

The rubber H is secured to a vertical shaft, I, which passes up through the center of the top bar D, and has a crank, J, on its upper end. On each side of the shaft in the bar D is a pin, *f*, which limits the movement of the crank and of the rubber. On top of the rubber is a hinged bail, *m*, which is to catch on a hook, *r*, in the bar D when the rubber is elevated, so as to suspend the same while the tub is being moved out and in.

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

1. The combination of the bed A, having transverse grooves *c c*, and the tub G, provided with the cleats *b b*, the rubber H, crank-shaft J, bar D, hinged bail *m*, and hook *r*, substantially as and for the purposes herein set forth.

2. The combination of the rubber H, crank-shaft I, bar D, hinged bail *m*, and hook *r*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WM. H. WILLIS.

Witnesses:

JAS. F. DU HAMEL,  
DANIEL JOHNSON.