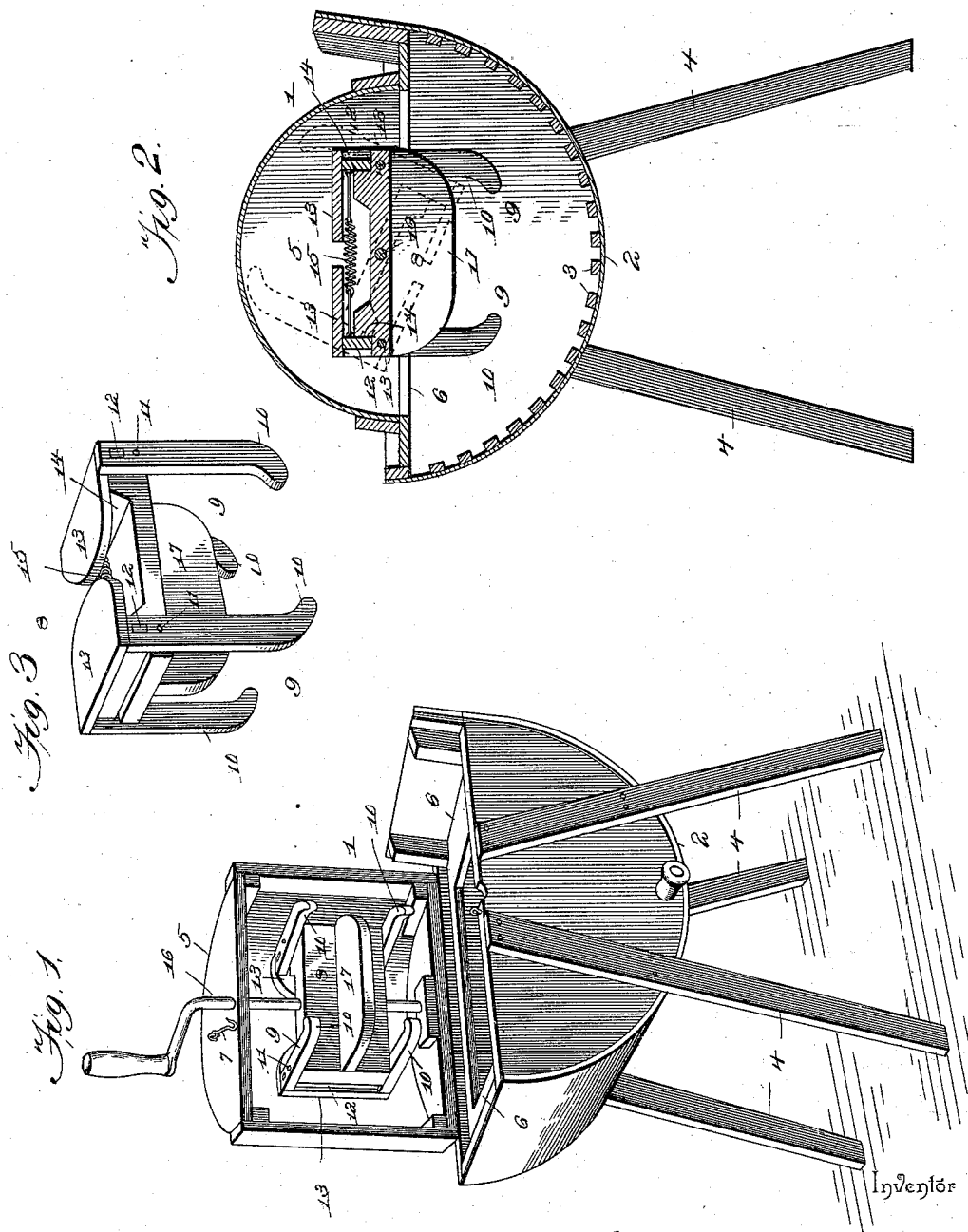


(No Model.)

N. KUNKEL.
WASHING MACHINE.

No. 547,269.

Patented Oct. 1, 1895.



Witnesses

John C. Shaw.
J. H. Riley

By *W. S. Attorneys.*

Neil Kunkel,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

NEIL KUNKEL, OF OREGON, MISSOURI.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 547,269, dated October 1, 1895.

Application filed March 20, 1895. Serial No. 542,534. (No model.)

To all whom it may concern:

Be it known that I, NEIL KUNKEL, a citizen of the United States, residing at Oregon, in the county of Holt and State of Missouri, have
5 invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

10 The object of the present invention is to improve the construction of washing-machines, and to provide one capable of effectively rubbing clothes and of quickly and thoroughly removing the dirt and stains without wearing,
15 tearing, or otherwise injuring the fabrics.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed
20 out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention, the cover being swung back. Fig. 2 is a vertical longitudinal
25 sectional view of the same. Fig. 3 is a detail perspective view of the washing mechanism.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

30 1 designates a washing-machine body having a curved bottom 2 and provided on the inner or upper face thereof with a rubbing-surface 3, preferably formed by transverse slats. The body 1 is supported by legs 4 and
35 has hinged to it a semicylindrical cover 5, adapted to be swung to one side of the body, as illustrated in Fig. 1 of the accompanying drawings.

The cover 5 is supported within the upper
40 edges of the body on a horizontal ledge 6 and is secured when closed by a fastening device 7, such as hook and eye or the like. It has journaled within it washing mechanism consisting of an oscillating body 8 and a pair of
45 agitator bars or arms 10, hinged or pivoted to each end of the oscillating body. Each pair of depending bars or arms 10 is pivoted by means of a transverse pintle 11 and is connected by a transverse bar 12 and carries a
50 cap-board 13, extending inward over the top of the oscillating body 8. The oscillating body 8 is provided on its upper face, at each end,

with a transverse rib or enlargement 14, forming a shoulder or stop against which the agitator arms or bars abut, and which maintains
55 the same rigid with the body in the forward movement of the agitator when the same is operating on the clothes to carry the same over the rubbing-surface of the washing-machine body.

60 The oscillating body and the agitators mounted thereon are during the operation of the washing-machine given nearly a complete revolution and are carried upward to the extent illustrated in dotted lines in Fig. 2 of
65 the accompanying drawings, and the clothes engaged by the forwardly-moving arms are lifted out of the water, and when the movement is reversed are engaged by the other set of arms and pounded and carried or forced
70 under the water within the body and again moved over the rubbing-surface of the washing-machine body, and thereby thoroughly rubbed. The clothes are then carried upward above the water at the other end of
75 the washing-machine body and the operation is repeated, and the clothes are thoroughly subjected to the action of the agitator-arms.

Any number of the depending arms may be provided, according to the capacity of the
80 washing-machine body, and the lower ends of the arms are slightly hook-shaped or inwardly bent to enable them to engage the clothes, carry the same forward, and lift them out of the water and above the latter. In a reverse
85 movement the arms carrying the clothes release them, owing to the curved ends presenting their outer edges of the clothes, which fall upon the water and are then engaged by the hooks of the other set of arms.

90 The agitators are connected by a spiral spring 15, which operates to return them to their normal position. The oscillating body is mounted on the shaft 16 and is provided with a depending semicircular or segmental
95 guard or shield 17, which is arranged centrally of the washing-machine body and is disposed longitudinally thereof. The segmental guard or shield operates to maintain the clothes evenly distributed and prevents them
100 from collecting or bunching at the center of the washing-machine body and not being operated on by the arms.

The shaft 16 is journaled in suitable bear-

ings of the cover of the washing-machine body and is provided at one end with a crank or operating handle, and when the cover is swung upward, as illustrated in Fig. 1 of the accompanying drawings, it carries with it the washing mechanism, affording free access to the tub.

It will be seen that the washing-machine is exceedingly simple and inexpensive in construction, and that it is capable of carrying clothes back and forth over the rubbing-surface of the washing-machine body and of raising the clothes out of the water at the termination of each oscillation or stroke of the oscillating body, leaving the clothes lying on the top of the water to be stamped, forced under the water, and again rubbed over the surface of the washing-machine body by the next stroke or oscillation of the washing mechanism. It will also be seen that the washing mechanism operates on the clothes at each stroke or oscillation, and that when one set of arms moves forward the other set moves rearward, and is in position to operate on the clothes at the next stroke or oscillation of the mechanism, whereby clothes may be rapidly and thoroughly cleaned without injuring the fabrics.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a washing machine, the combination of a body, an oscillating body mounted therein, the agitator arms pivotally mounted on the oscillating body at the ends thereof and yieldingly connected and depending from the oscillating body and adapted to carry clothes

back and forth over the washing machine body, and means for operating the oscillating body, substantially as described.

2. In a washing machine, the combination of a washing machine body, an oscillating body mounted therein, the agitator bars or arms pivotally mounted on the ends of the oscillating body and depending therefrom and having their lower terminals bent inward or partially hook-shaped, and a spring connecting the agitator bars or arms at a point above the pivots, substantially as described.

3. In a washing machine, the combination of a washing machine body, an oscillating body mounted therein and provided at its ends with stops, the depending agitator bars or arms pivotally mounted at the ends of the oscillating body and engaging the stops thereof, the cap boards mounted on the upper ends of the agitator bars or arms and extending inward over the oscillating body, and a spring connecting the agitator bars or arms and holding them normally in engagement with the stops, substantially as described.

4. In a washing machine, the combination of a washing machine body, an oscillating body mounted therein, the yieldingly connected agitator arms pivotally mounted on the ends of the oscillating body and depending therefrom, and a rigid centrally arranged longitudinally disposed shield carried by the oscillating body, substantially as described.

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

NEIL KUNKEL.

Witnesses:

WILLIAM RANSHER,
GEO. LEHMER.