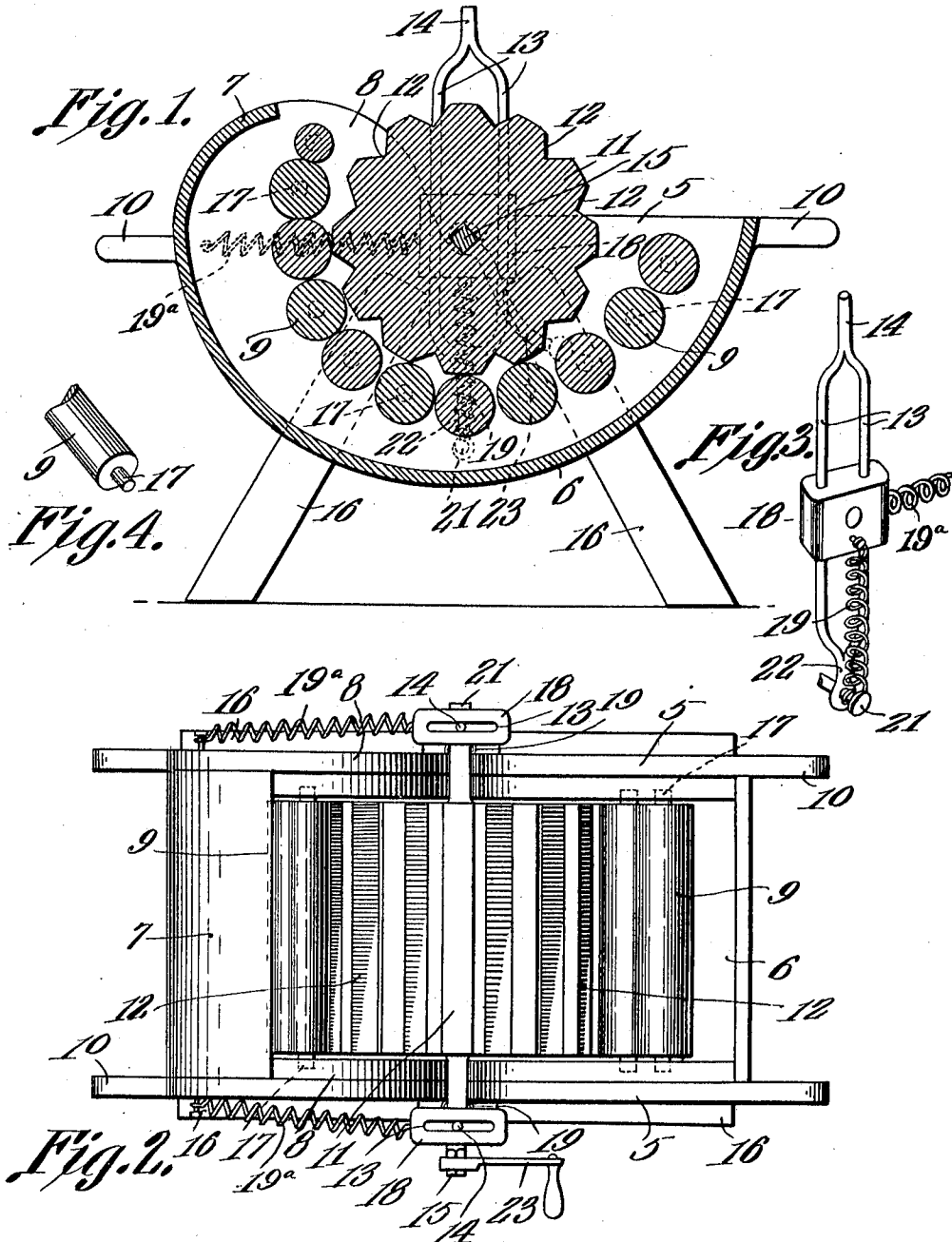


S. A. BIGGERS.
WASHING MACHINE.
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1,035,520.

Patented Aug. 13, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL A. BIGGERS, OF McLEAN, TEXAS, ASSIGNOR OF ONE-HALF TO ANDREW B. GARDENHIRE, OF McLEAN, TEXAS.

WASHING-MACHINE.

1,035,520.

Specification of Letters Patent.

Patented Aug. 13, 1912.

Application filed October 16, 1911. Serial No. 654,923.

To all whom it may concern:

Be it known that I, SAMUEL A. BIGGERS, a citizen of the United States, residing at McLean, in the county of Gray and State of Texas, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing machines, and has for its object to provide an improved means for washing clothes.

A further object of the invention is to combine a washing machine and wringer in a novel manner.

This invention resides essentially in a washing machine comprising a tub, a concave of rollers arranged in the tub, guides pivoted to the tub, blocks slidable on the said guides, a shaft journaled to the blocks and passing over the said rollers, a cylinder mounted on the said shaft and arranged to coöperate with the concave of rollers, and springs connected to the said blocks for yieldingly forcing the cylinder toward the rollers.

The invention is illustrated in the accompanying drawings, wherein similar reference characters indicate similar parts, and wherein:—

Figure 1 is a longitudinal vertical section of the washing machine. Fig. 2 is a plan view thereof. Fig. 3 is a perspective of one of the guides and accompanying parts. Fig. 4 is a fragmental portion in perspective of one of the rollers.

Referring in detail to the drawings, the tub comprises a bottom 6 which is approximately of involute contour with the minor curved portion 7 projecting upwardly and inwardly at the rear end of the tub, and the sides 5 which have the rear ends thereof curved upwardly as designated at 8. This tub is mounted on the legs 16 and at the ends thereof is provided with handles 10 for convenience in carrying same about. Within this tub is arranged a concave of rollers 9, which rollers have the trunnions 17 on the ends thereof journaled in the sides of the tub, and this concave of rollers extends upward at the rear end between the portions 8. A guide comprising parallel rods 13 having the upper and lower ends united as designated at 14 and 22 respectively, is pivoted to each side of the tub at its lower end by means of a pin 21. On the rods 13 of the guides are slidably mounted the blocks

18 and a shaft 15 is journaled in the said blocks and extends above the concave of rollers within the tub. On the intermediate portion of the shaft 15 is mounted a cylinder 11 having the longitudinal peripheral V-shaped grooves 12. This cylinder is arranged eccentric with the concave of rollers and is yieldably forced in the bottom of the concave of rollers by means of coil springs 19 which connect the blocks 18 and the pin 21. A crank 23 is secured to one end of the shaft 15 as a means for turning the same but the shaft may be revolved in any suitable manner.

In use, the tub is partially filled with water containing suitable cleansing agents and the clothes are inserted between the rollers 9 at the front of the tub and the cylinder 11. The cylinder is then rotated by means of the crank 23 to carry the clothes into the tub, thus subjecting them to a washing action between the concave of rollers and the cylinder. If desirable or necessary, the cylinder may be rocked to carry the clothes backward and forward in the concave of rollers to continue the washing action until the clothes have been thoroughly cleansed. It will be noted that the cylinder 11 is yieldable thus permitting the same to yield to accommodate the character or amount of clothes being washed. Upon the clothes becoming cleansed the cylinder is rotated to carry the clothes upward at the rear portion of the concave of rollers and as the clothes are carried upward through the rear end of the machine they are wrung by means of the cylinder 11 and the rollers 9 at the rear end of the tub between which the clothes are compressed and the water flows back into the tub. Inasmuch as the cylinder is mounted between the guides which are swingable, the cylinder may be swung forward and backward against the ends of the concave of rollers to assist in the action of the machine.

A washing machine constructed in accordance with the present invention is inexpensive to manufacture, as well as durable and efficient in its use, and it is understood that alterations in the details of the machine may be resorted to within the scope of the appended claim without departing from the spirit of the invention.

In order to swing the cylinder rearward, coiled springs 19^a are provided, the same

being secured to the blocks 18 and the rear end of the tub.

What is claimed is:—

A washing machine comprising a tub, a
5 concave of rollers arranged therein, guides
arranged at the sides of the tub and pivoted
at their lower ends to the sides of the tub,
blocks slidable on the said guides, a shaft
10 journaled in the said blocks and passing
over the said rollers, a cylinder mounted on
the said shaft and arranged to coöperate
with the said rollers, means for rotating the

shaft, yielding means for forcing the blocks
toward the pivotal points of the guides, and
yielding means connected to the blocks for
15 swinging the cylinder toward one end of
the tub.

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

SAMUEL A. BIGGERS.

Witnesses:

JNO. C. BIGGERS,

JOHN A. GRUNDY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
