

(No Model.)

W. ACHESON.
WASHING MACHINE.

No. 570,360.

Patented Oct. 27, 1896.

Fig. 1,

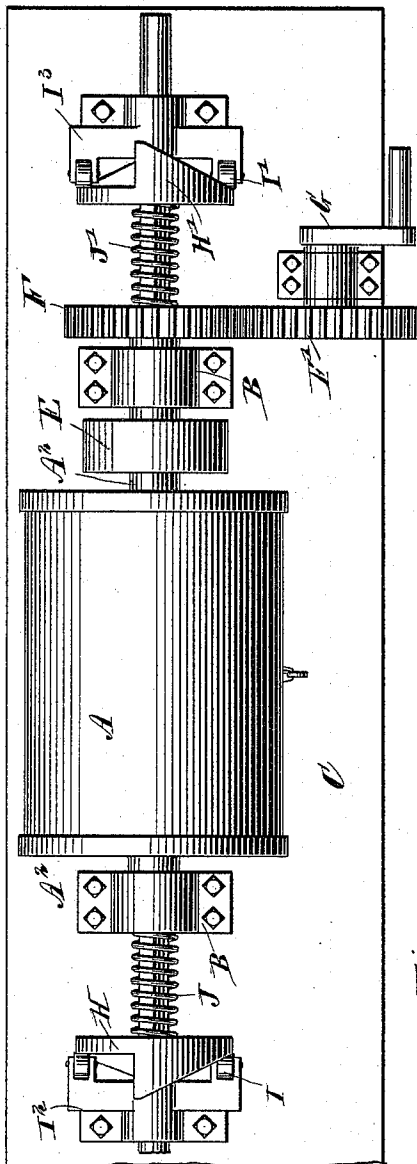


Fig. 4.

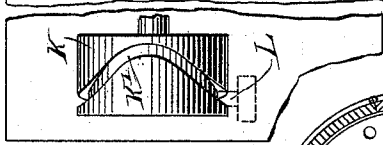


Fig. 2,

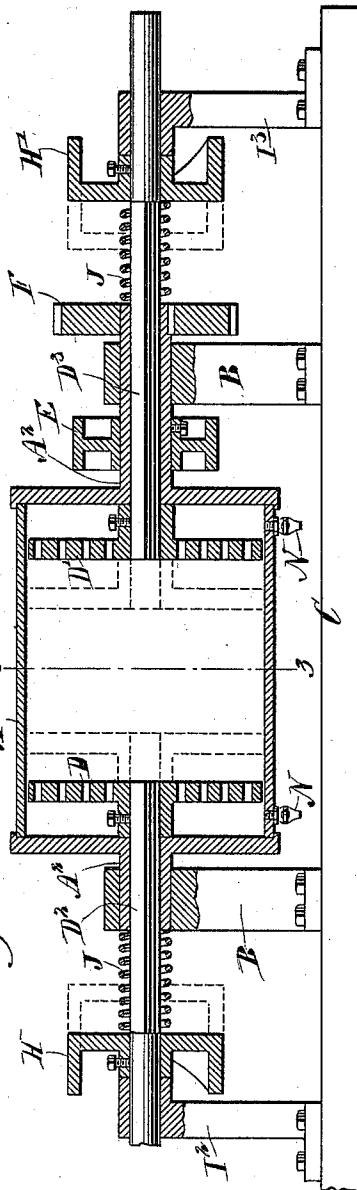
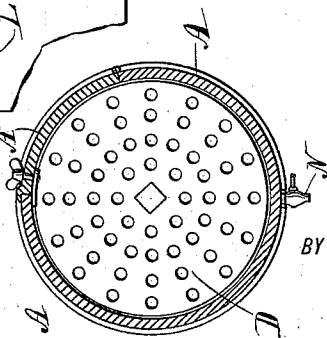


Fig. 3.



WITNESSES:

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WILLIAM ACHESON, OF PITTSBURG, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 570,360, dated October 27, 1896.

Application filed May 25, 1896. Serial No. 592,947. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ACHESON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved washing-machine which is simple and durable in construction and arranged to properly force the washing liquid through the clothes to insure a good washing without danger of injury to the clothes.

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

Figure 1 is a plan view of the improvement. Fig. 2 is a longitudinal sectional elevation of the same; Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2, and Fig. 4 is a detail view showing a modified cam mechanism for reciprocating the dashers.

The improved washing-machine is provided with a receptacle A, preferably made cylindrical and placed horizontally, the receptacle being provided in its periphery with a cover A', adapted to be removed for the purpose of introducing the washing liquid and the clothes to be washed.

The heads of the receptacle A are provided with hubs A², mounted to turn in suitable bearings formed in standards B, erected on a suitable base C, as plainly shown in the drawings.

Within the receptacle A are arranged plungers or dashers D and D', formed with perforations and adapted to reciprocate toward or from each other, so that the water is forced through the clothes held between the said plungers within the receptacle A.

The plungers D and D' are provided with shafts D² and D³, respectively, made polygonal in cross-section and fitted to slide in and to turn with the hubs A² of the receptacle A, so that when the latter is rotated the said plungers rotate with it, and at the same time

the plungers are free to slide toward and from each other for the purpose above mentioned.

On one of the hubs A² is secured a pulley E, adapted to be connected by a belt with other machinery to impart a rotary motion to the receptacle A and the plungers contained therein. If it is desired to operate the machine by hand, then a gear-wheel F is secured to one of the hubs A², and this gear-wheel is in mesh with a gear-wheel F', secured on a crank-shaft G, adapted to be turned by hand by the operator to impart the desired rotary motion to the receptacle A and the plungers contained therein.

In order to impart a reciprocating motion to the plungers D and D', I provide the same near their outer ends with double cams H and H', respectively, adapted to engage friction-rollers I and I', respectively, journaled in brackets I² and I³, respectively, secured on the base C. The double cams H and H' are so shaped as to impart an inward sliding motion to the plungers D and D', and a return motion is given to the said plungers by springs J and J', coiled on the shafts D² and D³ and interposed between the ends of the hubs A² and the said cams H H', respectively. The cams H and H' are each made double, so that on every revolution of the receptacle A two full strokes are given to each of the plungers; but it is evident that this can be varied so as to give but one or more strokes to the plungers during each revolution of the receptacle.

It is further evident that other means may be employed for imparting a reciprocating motion to the plungers. For instance, as illustrated in Fig. 4, the plunger-shaft may be provided with a cam K, having a peripheral cam-groove K', engaged by a fixed pin or a friction-roller L. As the cam-groove K' is continuous, it gives a full forward and backward stroke to the plungers, and consequently the springs J J' can be dispensed with.

The receptacle A is provided in its periphery with outlet-faucets N for discharging the wash-water whenever desired.

Now it will be seen that by the arrangement described a rotary motion is given to the receptacle and the clothes contained therein, and at the same time a reciprocating motion is given to the plungers, so that the washing liquid contained in the receptacle is

forcibly circulated through the clothes, and consequently the latter are washed without injury to the clothes.

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

1. A washing-machine, comprising a receptacle mounted to be turned, perforated plungers mounted to reciprocate toward and from
10 each other in the said receptacle, shafts carrying the said plungers and mounted to turn with and to slide in the hubs of the said receptacle, and cams fixed on the shafts and engaging suitable abutments or rollers on the
15 framework for imparting a reciprocating motion to the said shafts, substantially as shown and described.

2. A washing-machine, comprising a base,

intermediate and end standards mounted thereon, the closed receptacle having tubular
20 hubs mounted in said intermediate standards and provided with a driving means, plungers within the receptacle and having shafts extending outwardly through and rotating with
25 said hubs, cams H H' on the outer ends of said shafts, brackets mounted on the end standards and provided with antifriction-rollers engaged by the cams to force the shafts inwardly, and springs on the shafts and forcing them outwardly, substantially as de-
30 scribed.

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Witnesses:

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