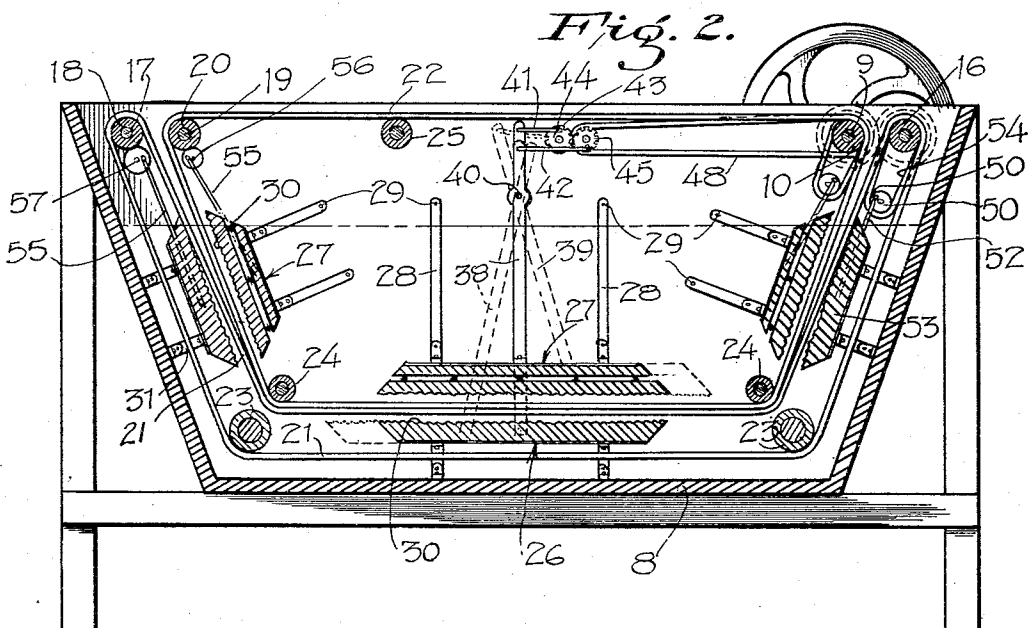
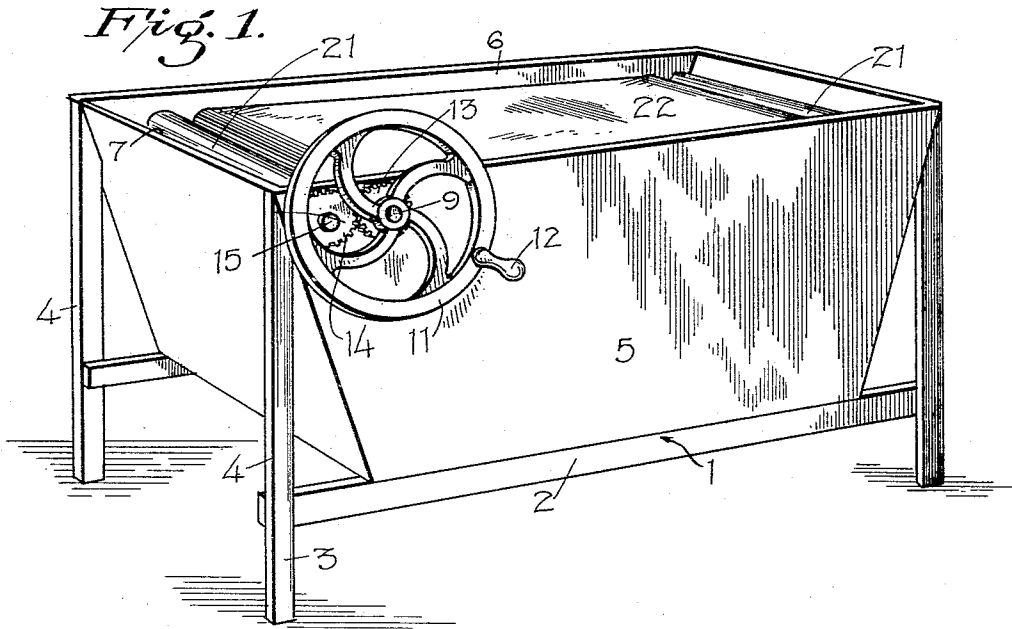


1,145,795.

W. RANDALL.
WASHING MACHINE.
APPLICATION FILED JUNE 22, 1914.

Patented July 6, 1915.
2 SHEETS—SHEET 1.



Inventor,
Wellington Randall.

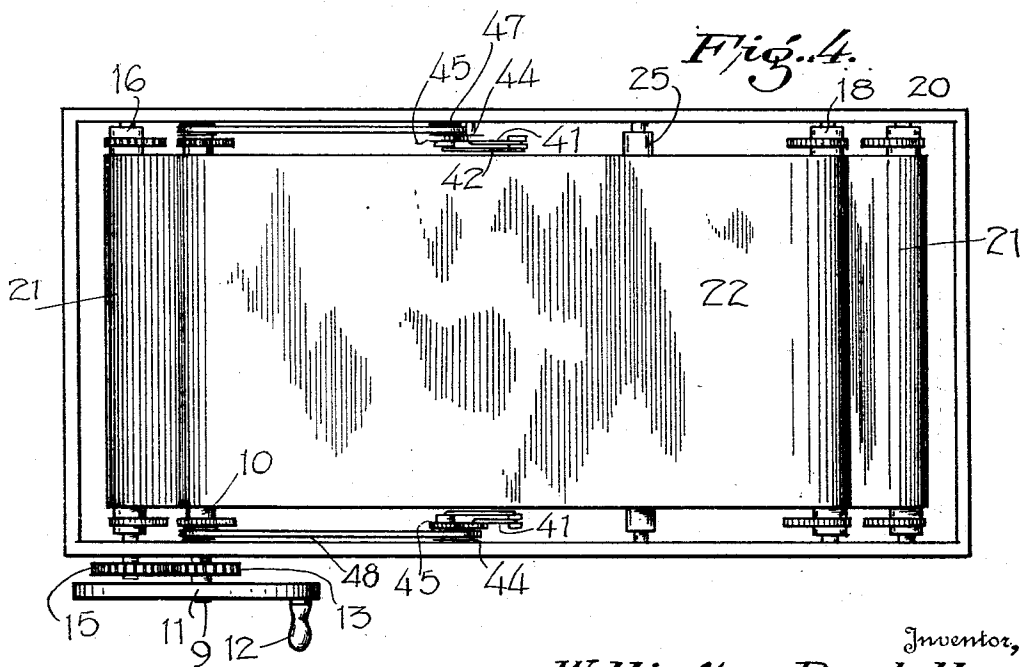
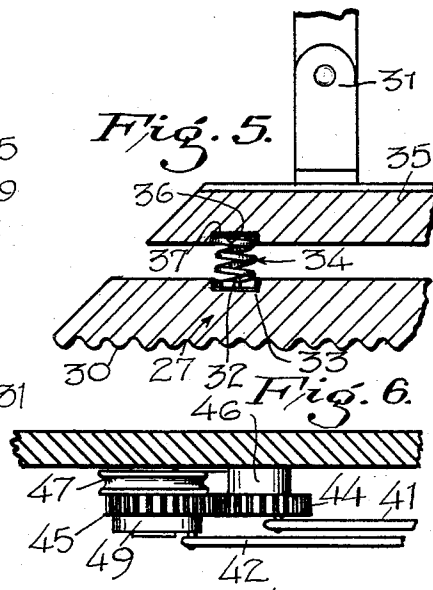
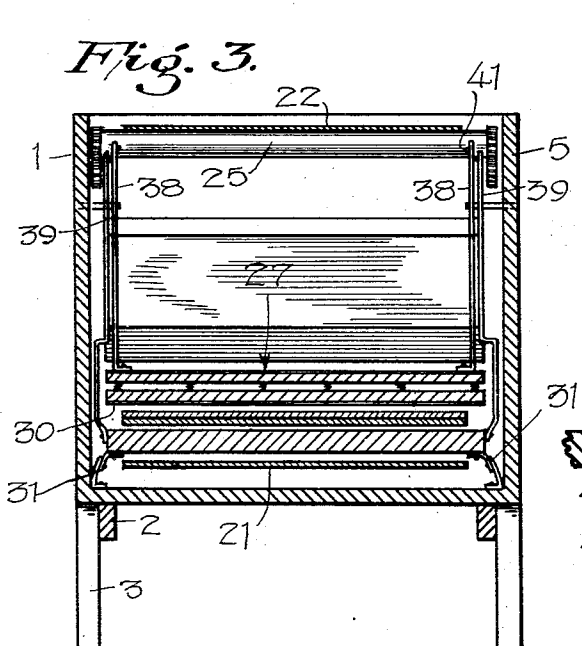
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Witnesses

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Inventor,
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UNITED STATES PATENT OFFICE.

WELLINGTON RANDALL, OF MARYSVILLE, WASHINGTON.

WASHING-MACHINE.

1,145,795.

Specification of Letters Patent.

Patented July 6, 1915.

Application filed June 22, 1914. Serial No. 846,598.

To all whom it may concern:

Be it known that I, WELLINGTON RANDALL, a citizen of the United States, residing at Marysville, in the county of Snohomish and State of Washington, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in washing machines, and has for its principal object to provide a device in which the clothes are fed in their soiled condition and from which they may be removed thoroughly clean.

Another object of the invention is to provide a device which may be operated by the turning of a wheel, and which will effectively cleanse the clothes.

A further object of the invention is to provide a machine in which the rubbers do not come into direct contact with the clothing, but in which the clothing is protected by means of a webbing so that all the wear thereon is taken up.

With these and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which,

Figure 1 is a detail perspective view of a washing machine constructed in accordance with this invention, Fig. 2 is a longitudinal sectional view thereof, illustrating the details of construction, Fig. 3 is a transverse sectional view, Fig. 4 is a top plan view, Fig. 5 is an enlarged detail sectional view of one of the upper rubbers illustrating in detail the springs for taking up the wear, and Fig. 6 is an enlarged detail view of the operating means for the rubbers.

Referring now to the drawings by characters of reference, the numeral 1 designates as an entirety the frame of the device comprising the side bars 2 which are supported on the legs 3. These legs 3 are extended upwardly as at 4 and their upper ends are secured in any suitable manner to the trough or container forming the main body portion of the washing machine. This trough or container is designated generally by the numeral 5 and comprises the side walls 6, the ends of which are angularly disposed with relation to the edges and has secured thereto

the end walls 7. A suitable bottom 8 is provided and is arranged to rest on the bars 2 hereinbefore referred to.

Journaled in the side walls of the container 5 near one end is the driving shaft 9 carrying the roller 10. This shaft 9 is extended within the side walls 6 of the container and the free end thereof is provided with a suitable hand wheel 11 carrying the crank 12 by means of which the device is set in motion. Intermediate the wheel 11 and the side walls of the container is a suitable gear wheel 13 which is arranged to mesh with the gear 14 carried on the shaft 15 which is journaled in the side walls 6 and extends parallel with the shaft 9 hereinbefore referred to. This shaft 15 carries a roller 16 which is similar to the roller 10, the use of which will appear as the description proceeds. Journaled in the opposite end of the container is a suitable shaft 17 carrying the roller 18 which corresponds in every way to the roller 16 and shaft 15 hereinbefore referred to. This shaft 17 extends parallel with the end wall of the casing and is arranged to cooperate with the roller 16 hereinbefore referred to. A similar shaft 19 carrying the roller 20 is provided, and corresponds to the shaft 9 and roller 10 hereinbefore described. These rollers and shafts which are designated by the numerals 15 and 16, 17 and 18, are arranged to carry the webbing 21 which is preferably endless and arranged to cooperate with the webbing 22 carried by the rollers 10 and 20 hereinbefore described. These webbings 21 and 22 are arranged to run over the idlers 23 and 24 respectively, thus bringing them in close proximity to the bottom of the container as clearly shown in Fig. 2. A plurality of similar idlers 25 are supported near the upper edges of the walls 6 and arranged to hold the upper portion of the webbing 22 to prevent the same from sagging in passing over the upper end of the container.

A plurality of rubbers, the lowermost of which are designated by the numeral 26 and the uppermost by the numeral 27, are provided and each rubber is provided with a pair of ears at each end, which extend outwardly from the back surface thereof and form pivotal connections for the levers 28 which are pivotally secured as at 29 to the side walls 6 of the container. Each of these rubbers is provided with a corrugated inner face 30 which is arranged to engage the

surfaces of the webs 21 and 22 between which the clothes which are to be cleansed, pass. The lowermost rubbers are constructed solid and are arranged to be pivotally held on the links 31 as clearly shown in Fig. 2.

The uppermost rubbers 27 comprise the main body portion 26 upon which the corrugated face 30 is formed, and the opposite face of the body portion is provided with a plurality of depressions 32 carrying the cups 33 in which the lower edge of the spring 34 rests. The cooperating member of these rubbers 27 are designated by the numeral 35 and is formed in its lower face with a plurality of recesses 36 in which the cup 37, forming the upper abutment for the ends of the spring 34, rests. It will thus be seen that the lower portion of the rubber 27 will be yieldably held in relation to the upper portion to which the links 28 are secured, and thus much of the wear is absorbed.

In order to operate the central rubbers which extend in parallel relation to the bottom of the receptacle 5, are provided a pair of levers 38 and 39 which are pivoted as at 40 and their free ends are connected respectively to the rubbers 27 and 26. The upper ends of the levers are provided with the links 41 and 42 respectively which are respectively connected as at 43 to the wheels 44 and 45. The wheel 44 is rotatably mounted on the side of the receptacle and spaced from the wall thereof by means of the cylindrical extension 46. Formed integral with the wheel 45, which is arranged to mesh with the wheel 44, is a suitable pulley wheel or sprocket 47 which is arranged to receive the belt or chain 48 which runs over a grooved or toothed extension of the roller 10 as will be clearly seen upon referring to Fig. 2. An enlarged cylindrical extension 49 is formed on the opposite side of the wheel 45 and is arranged to hold the links 41 and 42 in spaced relation as illustrated in Fig. 6. It will thus be seen that when the roller 10 is operated, power will be transmitted to the pulley 47 through the belt 48 and thus cause the wheel 45 to rotate, thereby rotating the wheel 44 and setting the links 41 and 42 in operation, which in turn will act on their respective levers 38 and 39 and cause the rubbers 26 and 27 to be swung on the links 31 and pivots 29 respectively in opposite directions. In this way it will be apparent that the central rubbers are driven and positive cleansing of the clothes is insured. The method of driving the rubbers which are carried by the end walls in parallel relation thereto will be more fully described in the following paragraph.

The rubbers 26 and 27 which are carried by the end wall adjacent to the rollers 10 and 16, are driven by means of the disks or pulley wheels 50 having eccentrically se-

cured thereto as at 51 the connecting rod 52, the opposite terminal of which is pivotally secured as at 53 to each respective rubber. This pulley wheel or sprocket 50 is driven by means of a suitable belt or chain 54 which in turn passes around a grooved or toothed portion of either of the rollers 10 or 16. It will thus be seen that when the rollers are set in operation the rubbers will also be set in motion, thereby performing the first operation of cleansing the clothes.

The rubbers which are mounted on the opposite end of the receptacle 5 are provided with the usual connecting rods which are designated by the numeral 55. The opposite terminals of the connecting rods are eccentrically connected as at 56 to the disks 57, the peripheries of which are arranged to frictionally engage the rollers 18 and 20, and thus when the rollers are set in motion, will be driven, thus setting the last rubbers in motion when the machine is operated.

It will be apparent from the foregoing that in use the clothing is first fed into the machine between the rollers 10 and 16 and upon revolving the drive wheel 11, it will be apparent that the motion will be imparted to the shaft 9, which through the medium of the gear wheels 13 and 14, will also drive the shaft 15. In driving these shafts 9 and 15, it will be evident that the webbing 21 and 22 will be set in motion, thereby starting the idler rolls 23, 24, and 25 to revolve and when the webbing passes over the rollers 18 and 20, it will also be evident that said rollers will be set in motion. The motion thus imparted to the rollers will cause their respective rubber operating mechanisms to be set in motion which will cause the rubbers to operate and frictionally engage the webbing, thus oscillating the water within the receptacle and forcing the dirt from the clothing. When the clothing has passed entirely through the machine it will be emitted from the webbing between the rollers 18 and 20 in a comparatively clean condition.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the invention as defined in the appended claims.

Having thus described my invention, I claim:

1. In a device of the character described comprising a receptacle, rollers mounted in said receptacle, belts to pass over said rollers and means for rotating said rollers and belts, a plurality of rubbers pivotally mounted in each end of said receptacle and opposed to one another, said rubbers being pivoted to the side and end walls by links, a second pair of rubbers being larger in diameter than the first mentioned rubbers pivotally mounted

centrally within the receptacle by levers and links, to the sides and bottom of the receptacle, all of said rubbers being eccentrically secured to disks carried by the pulleys
5 whereby upon the rotation of said rollers and belts, said rubbers are put in motion.

2. In a device of the character described, a receptacle, rollers mounted in said receptacle, belts to pass over said rollers and
10 means for rotating said rollers and belts, a plurality of rubbers pivoted at opposite ends of said receptacle and opposed to one another, a second pair of rubbers larger in diameter than the first mentioned rubbers centrally disposed within said receptacle and
15 pivotally mounted therein, said centrally disposed rubbers being pivoted to the side

walls and bottom of said receptacle by links, levers extending upwardly from said rubbers and being eccentrically connected at
20 their upper terminals to the aforesaid rollers, said rubbers being eccentrically connected to said rollers whereby upon rotation of said rollers, the rubbers will be given an oscillating motion pivoted by their pivoted con-
25 nections and each of said rubbers being disposed between said belts.

In testimony whereof I affix my signature in presence of two witnesses.

WELLINGTON RANDALL.

Witnesses:

E. E. COLVIN,
ELON UTLEY.

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