W. RIPLEY.

WASHING MACHINE.

APPLICATION FILED FEB. 7, 1913.

1,136,835.

Patented Apr. 20, 1915.

2 SHEETS—SHEET 1.

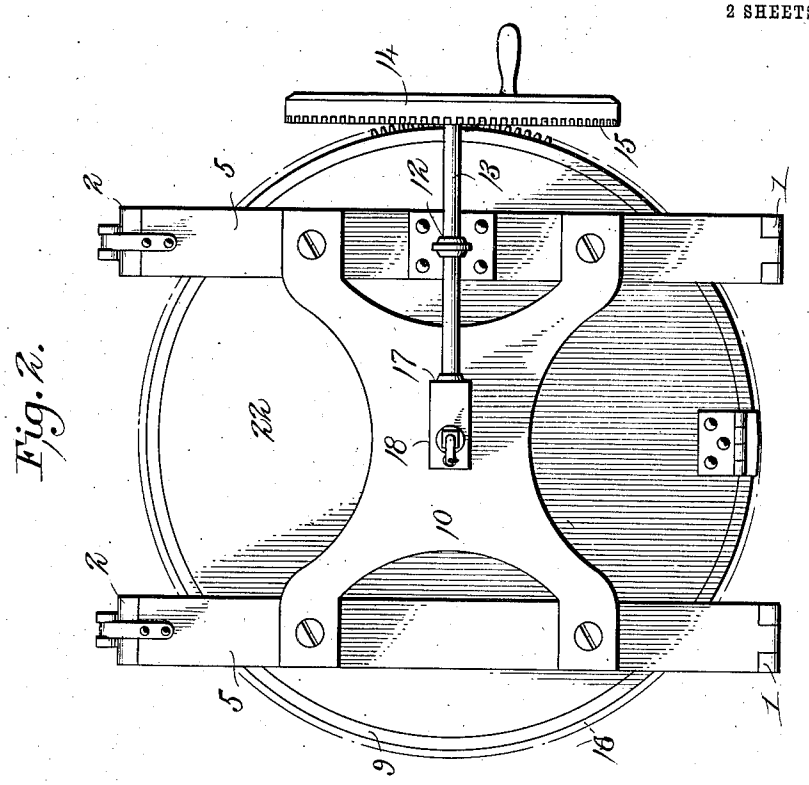

Fig. 2.

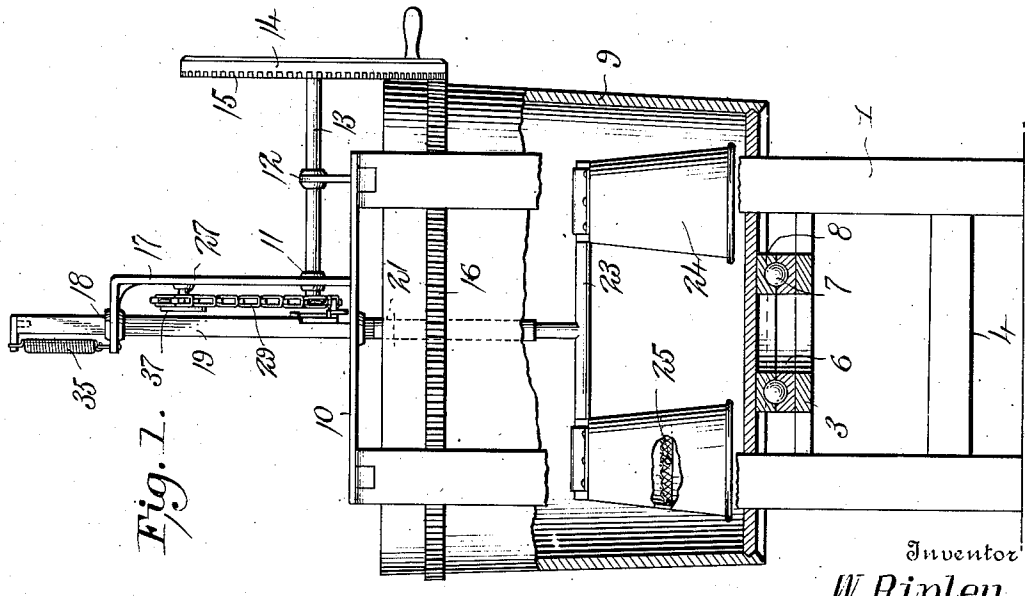

Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

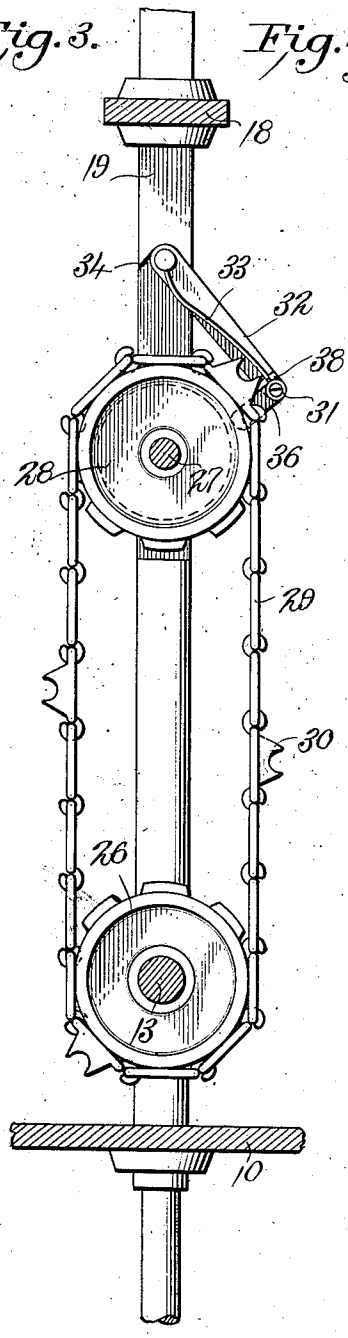


Fig. 4

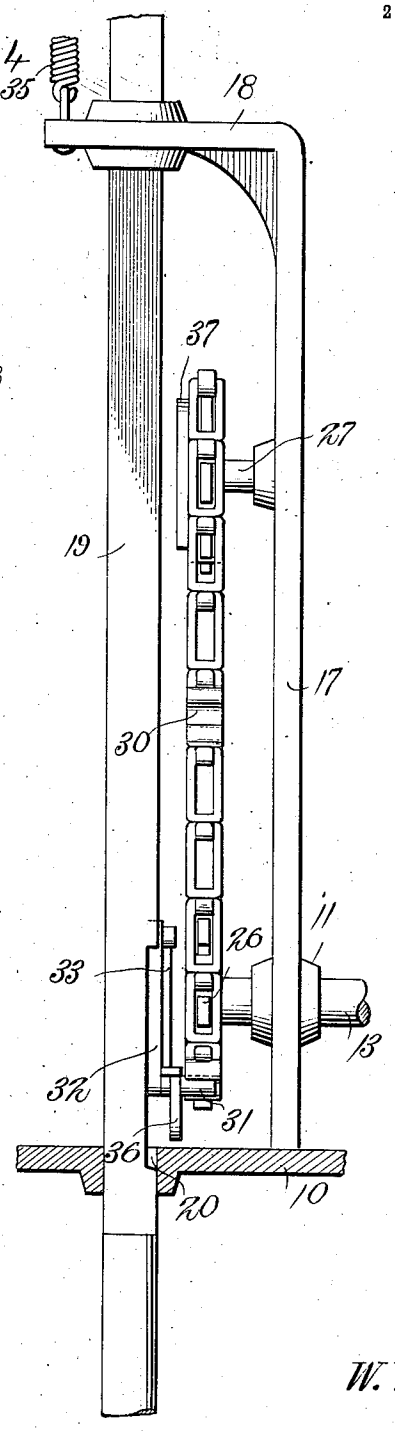
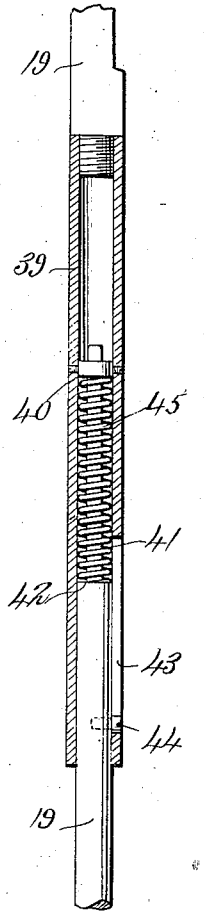


Fig. 5



Witnesses

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UNITED STATES PATENT OFFICE.

WINFIELD RIPLEY, OF BRECKENRIDGE, COLORADO.

WASHING-MACHINE.

1,136,835. Specification of Letters Patent. Patented Apr. 20, 1915.

Application filed February 7, 1913. Serial No. 746,917.

To all whom it may concern:

Be it known that I, WINFIELD RIPLEY, a citizen of the United States, residing at Breckenridge, in the county of Summit and State of Colorado, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to washing machines and one of the principal objects of the invention is to provide a simple and inexpensive device which embodies mechanism for simultaneously pounding the clothes and rotating the tub and which will effectually cleanse the clothes.

Another object of the invention is the provision of mechanism for intermittently and gradually raising the pounders and forcibly and rapidly throwing them into engagement with the clothes.

Further objects of this invention will appear as the following specific description is read in connection with the accompanying drawings, which form a part of this application, and in which:—

Figure 1 is a side elevation with parts broken away. Fig. 2 is a top plan view. Fig. 3 is an enlarged detail elevation of the pounder operating mechanism. Fig. 4 is a similar view taken at right angles to Fig. 1, showing the pounder shaft depressed. Fig. 5 is a detail longitudinal section of the pounder shaft.

Referring more particularly to the drawings, 1 and 2 represent the separate pairs of supporting legs, all of which are connected together intermediate their ends by a platform 3 and adjacent their lower end by braces 4. The upper ends of the legs are connected together by frame supports 5 which are hinged one to each leg 1 and have removable connections with each of the legs 2.

Arranged on the platform is a bearing member 6 having a ball race to receive the anti-friction balls 7 which are also engaged in a similar race formed in a bearing member 8 carried by the bottom of the tub 9.

Secured upon the top of the supports 5 is a frame 10 having a bearing 11 secured thereto which coacts with a similar bearing 12 on one of the supports 5 to hold a shaft 13 thereon. The outer end of the shaft is provided with a crank wheel 14 having a gear 15 secured to its inner face and in position to mesh with an annular rack or gear 16 extending around and secured to the tub.

Extending vertically from the frame 10 is a standard 17 having a lateral offset upper end 18 in which is slidably mounted a pounder shaft 19 squared at its upper end where it passes through the end 18 so as to prevent rotation of the pounder for a purpose to be hereinafter described. The shaft 19 passes through an aperture 20 in the frame 10 and a similar aperture 21 in the top 22 of the tub and has its lower end connected to a transverse arm 23 secured to the outer ends of which are the pounders 24. Each pounder consists of a frusto-conical body closed at its upper end and having a foraminous partition 25 extending across the same midway of its length.

Secured to the inner end of the shaft 13 is a sprocket wheel 26 and journaled upon a stub shaft 27 secured in the standard 17 is a similar sprocket wheel 28. These sprocket wheels carry thereon an operating sprocket chain 29 which carries a plurality of recessed lugs 30 arranged in the path of the lateral extension 31 formed on an arm 32 pivoted to the shaft 19 and normally held in alinement with the same by the spring 33 and limited in its movement to either side of the shaft by the shoulders 34. As the chain 29 rotates one of the projections or lugs 30 engages the lateral extension 31 and moves the arm 32 laterally from the position shown in Fig. 4 until it is brought into engagement with one of the shoulders 34 at which time the shaft 19 will be raised carrying with it the pounders 24. When the projection 30 passes over the sprocket wheel 28 the spring 35 which has been put under tension in the raising of the shaft 19 will forcibly depress the pounders when the arm is released as will now be described. Pivotally attached to the extension 31 is a tripping dog 36 which is adapted to engage a flange 37 formed on the sprocket wheel 28 so as to force the extension 31 out of the recess of the lug 30 with which it was engaged in passing over the sprocket wheel 28. This dog is free to move in either direction for a predetermined distance and is limited by the shoulders 38. When the arm 32 is carried to vertical position over the sprocket wheel 28 the incline of the dog in wiping over the flange 37 will be such that the engagement of the lug with the extension will not be disrupted until the dog 36 gets at an approximate right angle to the arm 32. When this occurs the dog pushes the extension 31 out of the recess of the lug and the

spring 35 will act to depress the shaft or plunger 19 until the extension 31 engages in the next lowest lug. The dog 36 will then stand in vertical position until it again strikes the flange 37. The dog will serve to carry the plunger downwardly and cause the pounders to forcibly engage the clothes. In order to do this it is necessary that the pounder shaft 19 be constructed in two parts, the upper part has secured thereto a sleeve 39 in which is secured an apertured collar 40. The lower part is of somewhat smaller diameter so as to slide in the sleeve as shown. The end of the lower part is reduced as shown at 41 and surrounding this reduced portion and lying between the shoulder 42 formed thereby and the collar 40 is a spring 45 so that upon upward movement of the lower portion of the shaft the spring will be compressed. In order to guide the lower portion and prevent the same from turning the sleeve 39 is slotted as shown at 43 and the lower portion of the shaft carries a removable stud 44 which engages the slot.

It will be noticed that if the pounder shaft cannot rotate owing to its squared upper portion passing through a similar opening in the offset 18 that the pounders will hold the clothes against rotation. The tub which is rotated continuously will therefore rub the clothes intermittently as they are held by the pounder whose action is also intermittent.

What is claimed is:—

In a washing machine, a frame, a standard mounted upon the frame, having the upper end extending at right angles to the vertical portion provided with a square opening, a shaft mounted in said opening carrying at its lower end pounder heads, sprocket wheel mounted on the standard, an endless sprocket chain operatively mounted on said sprocket wheels, provided with lugs having recessed faces, an arm pivoted to the pounder shaft provided with a lateral extension to engage the recessed faces in the lugs, a tripping dog, a spring to depress the pounder shaft when the arm is released from the lugs, a rotatable tub mounted in the frame and means to rotate the tub and operate the pounder mechanism.

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

WINFIELD RIPLEY.

Witnesses:
GEORGE ROBINSON,
W. T. KEOGH.