

941,304.

2 SHEETS—SHEET 1.

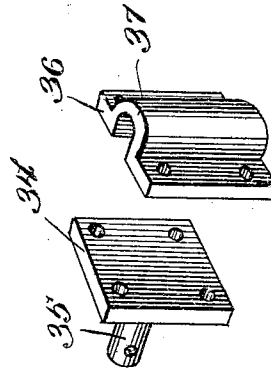
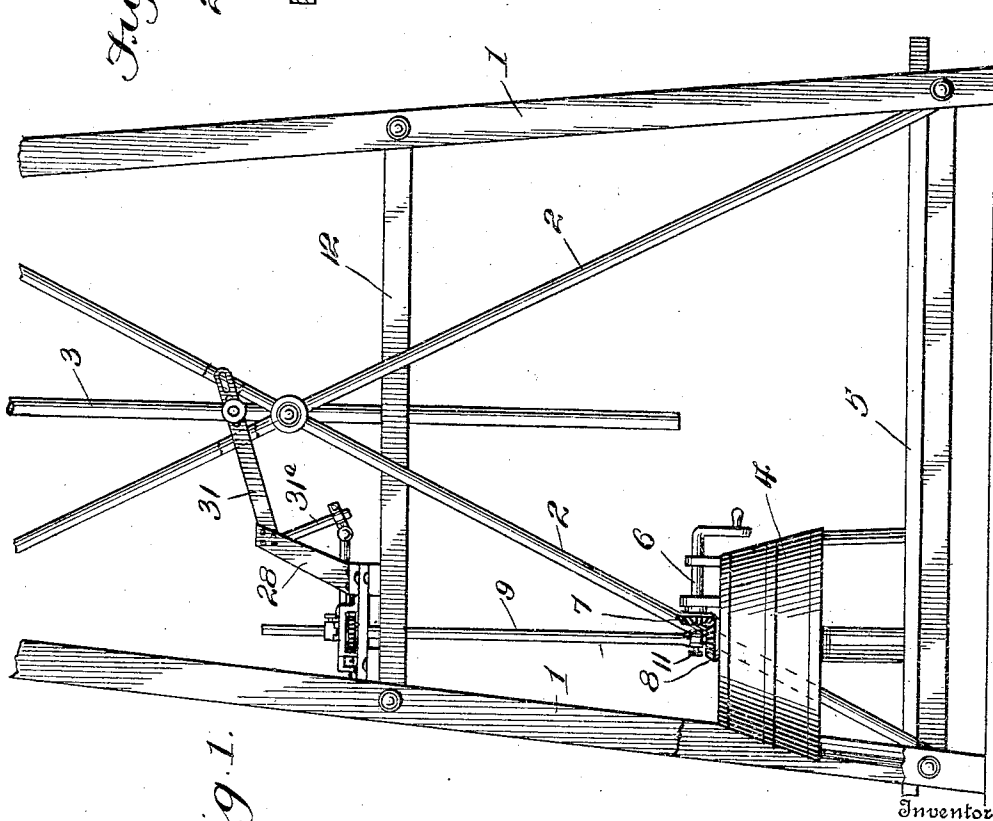


Fig. 6.



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Witnesses

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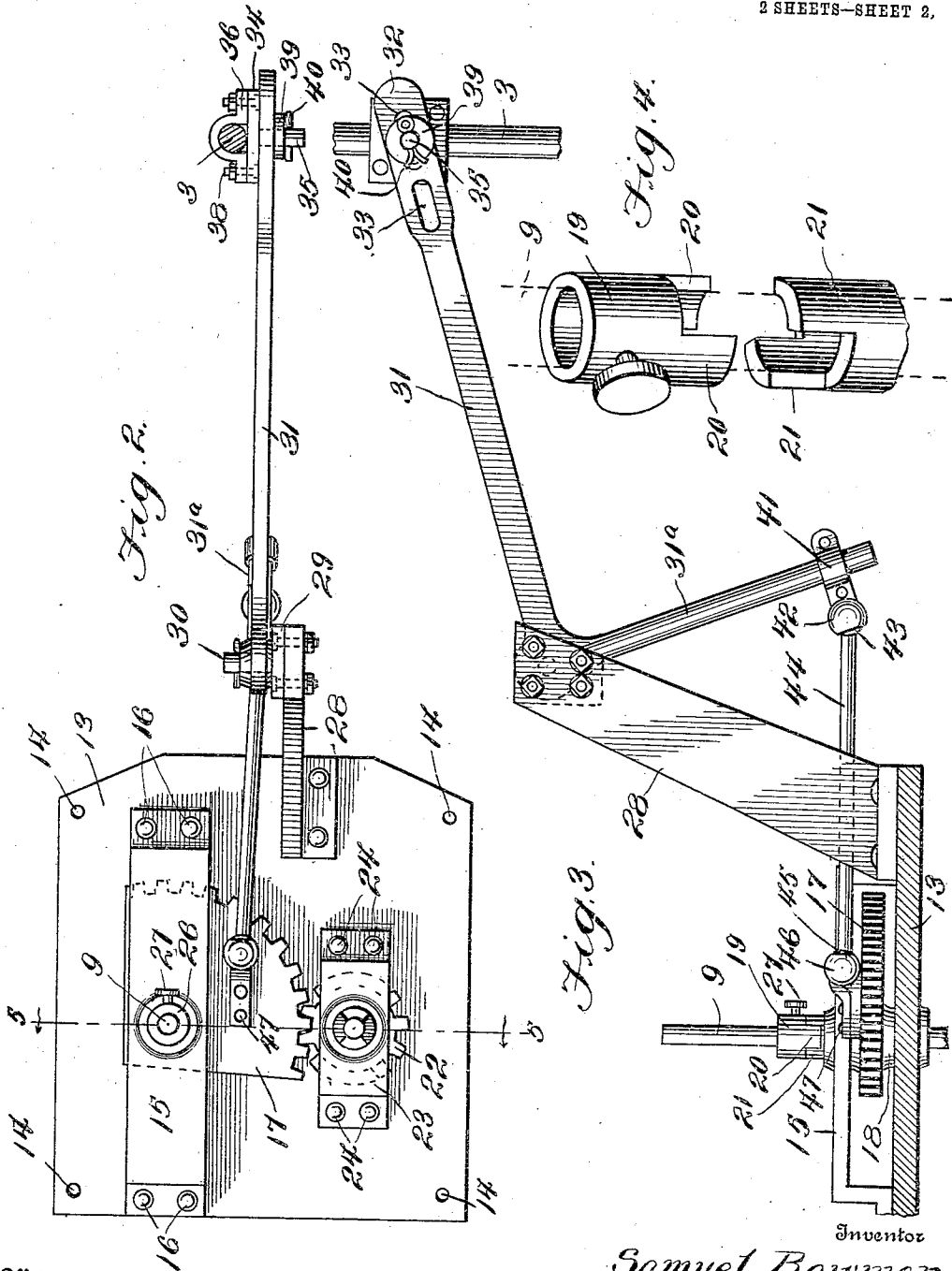
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WASHING MACHINE ATTACHMENT.
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Patented Nov. 23, 1909.
2 SHEETS—SHEET 2,



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UNITED STATES PATENT OFFICE.

SAMUEL BOWMAN, OF CHICAGO, ILLINOIS.

WASHING-MACHINE ATTACHMENT.

941,304.

Specification of Letters Patent.

Patented Nov. 23, 1909.

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To all whom it may concern:

Be it known that I, SAMUEL BOWMAN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Washing-Machine Attachments, of which the following is a specification.

This invention relates to washing machine attachments, and one of the principal objects of the same is to provide simple, reliable and efficient means for connecting up the plunger rod of a wind mill to the operative mechanism of a washing machine.

Another object of the invention is to provide an attachment to be connected to the plunger rod of a wind mill and to the main shaft of a washing machine and to provide means whereby the speed may be varied.

Some of the washing machines in present use are designed to carry the clothes to be washed once around the tub or receptacle and to then reverse and carry the clothes back again alternately.

Other machines are designed to rotate the main shaft two, three or more revolutions and then reverse.

In order to render my attachment available for various kinds of washing machines I have provided simple and efficient means for varying the speed of the main shaft of the washing machine.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which,—

Figure 1 is a view in elevation of a washing machine with my attachment connected thereto and showing the manner of mounting my invention and connecting it to the plunger rod of a wind mill. Fig. 2 is a plan view of the operative mechanism. Fig. 3 is a side elevation of the same. Fig. 4 is a detail perspective view of a clutch for attachment to the connecting rod. Fig. 5 is a detail sectional view on the line 5—5 of Fig. 2, looking in the direction indicated by the arrows. Fig. 6 is a detail perspective view of the clamp for connection to the wind mill plunger and to the main lever of my attachment.

Referring particularly to the drawing, the numeral 1, Fig. 1, designates a wind mill tower provided with usual braces 2, and 3 is the plunger rod of the wind mill.

The washing machine 4 is supported upon the base 5 of the tower and is provided with

the usual crank-operating shaft 6 having a beveled gear 7 upon the inner end thereof which meshes with a similar gear 8 connected to the main shaft of the rotary rubber. Detachably fitted to the projecting end of the main shaft of the washing machine is a connecting rod 9, said rod being provided at its lower end with a suitable socket 10 for receiving the end of the shaft and a suitable set screw 11 for holding the connecting rod in fixed relation to said shaft. The connecting rod 9 extends up through a platform 12 supported upon the tower 1.

My attachment consists of a base plate 13 supported upon the platform 12 and secured in place by screws extending through the holes 14. A bearing strap 15 is firmly connected by bolts 16 to the base plate 13, and mounted to rotate between the bearing plate 15 and the base plate 13 is a toothed sector 17 provided with a hub 18 which occupies a space between the bearing plate 15 and the base plate, and the connecting rod 9 extends through said hub and through the plate 15. To attach the connecting rod 9 to the sector 17, a clutch comprising the sliding member 19 provided with clutch projections 20 is connected to the member 21 firmly secured to the connecting rod 9. The sector 17 meshes with a pinion 22 supported upon the base 13 and journaled in a bearing strap 23 secured by bolts 24 to the base plate. The pinion 22 is mounted upon a sleeve 25 which extends through the base plate, the pinion and the strap, as shown more particularly in Fig. 5. The upper end of the sleeve 25 is provided with clutch projections designed to be engaged by the clutch member 26 having a set screw 27 for securing it firmly to the connecting rod 9.

Connected to the base plate 13 is an inclined standard 28, and firmly connected to the upper end of said standard upon one side thereof is a block 29 provided with a laterally projecting stub shaft or pin 30. Pivoted upon the pin 30 is a two-armed lever, the upper arm 31 of which is substantially rectangular in cross section and provided with an enlarged end 32 having slots therein. A clamp consisting of a plate 34 having a projecting stub shaft or pin 35 is secured to the bearing member 36 having a housing 37 to clamp the plunger rod 3 to said lever arm 31, the plate 34 and the member 36 being connected together by bolts 38. The pin 35 projects through one of the slots

33 in the arm 31 and is held in pivotal relation therewith by means of the washer 39 and the cotter pin 40. The arm 31^a of the lever is preferably circular in cross section, and adjustably mounted upon said arm is a clamp 41 provided with a ball socket 42 in which is mounted the ball 43 of a connecting rod 44, the opposite end of which is also provided with a ball 45 pivotally mounted in a ball socket 46 secured by bolts 47 to the sector 17.

The operation of my invention may be briefly described as follows:—When the connecting rod 9 is extended through the sector 17 and the latter is reciprocated by means of the plunger rod 3 of the wind mill, the rotary rubber in the washing machine is made to move around and back in the tub, making nearly a half revolution at each stroke. In other types of washing machines the rotary rubber is designed to rotate one or two times before being reversed. In machines of this type the connecting rod 9 is extended through the pinion 22, and hence the speed of rotation is very much accelerated, and at the same time the connecting rod and rotary rubber are rotated one or two times before reversal and rotation in the opposite direction. Hence it is only necessary to shift the washing machine so that the connecting rod 9 will extend through either the sector 17 or the pinion 22 in order to secure the required variation in speed.

From the foregoing it will be obvious that an attachment made in accordance with my invention is comparatively simple in construction, can be readily connected up to a wind mill and to a washing machine, can be quickly adjusted and will operate smoothly and efficiently for the purpose.

I claim:—

1. A washing machine attachment comprising a base plate, a toothed sector mounted on said base plate, a pinion mounted on

the base plate and meshing with said sector, a main shaft of a washing machine, a connecting rod adapted to be interchangeably connected to said sector or pinion, and means including a two-armed lever for rotating said sector, a reciprocating rod, said lever being connected to said rod.

2. An attachment for washing machines comprising a base plate, a toothed sector mounted on said base plate, a pinion in mesh with said sector, a connecting rod adapted to be interchangeably connected to said sector or pinion a main shaft of a washing machine to which said connecting rod is attached, a reciprocating rod, a two-armed lever adjustably connected to said rod, a standard, said lever being pivoted to said standard and provided with a depending arm, a ball-socket adjustably mounted on said arm, a ball-socket mounted on said sector, and a connecting rod having ball ends connected to the ball sockets.

3. In an attachment for washing machines, a base plate, a toothed sector mounted to rotate thereon, a pinion in mesh with said sector, a connecting rod adapted to be interchangeably connected to said sector or pinion, a shaft to which said connecting rod is attached, means for holding said connecting rod in fixed relation to said sector or pinion, a reciprocating rod, a standard, a two-armed lever pivoted to said standard and adjustably connected to said reciprocating rod, an arm depending from said lever, a ball-socket adjustably mounted on said arm, a ball-socket connected to said sector, and a connecting rod provided with balls at the opposite ends seated in said sockets.

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

SAMUEL BOWMAN.

Witnesses:

CLYDE C. MADISON,
ALVIN GIRARD FAUST.