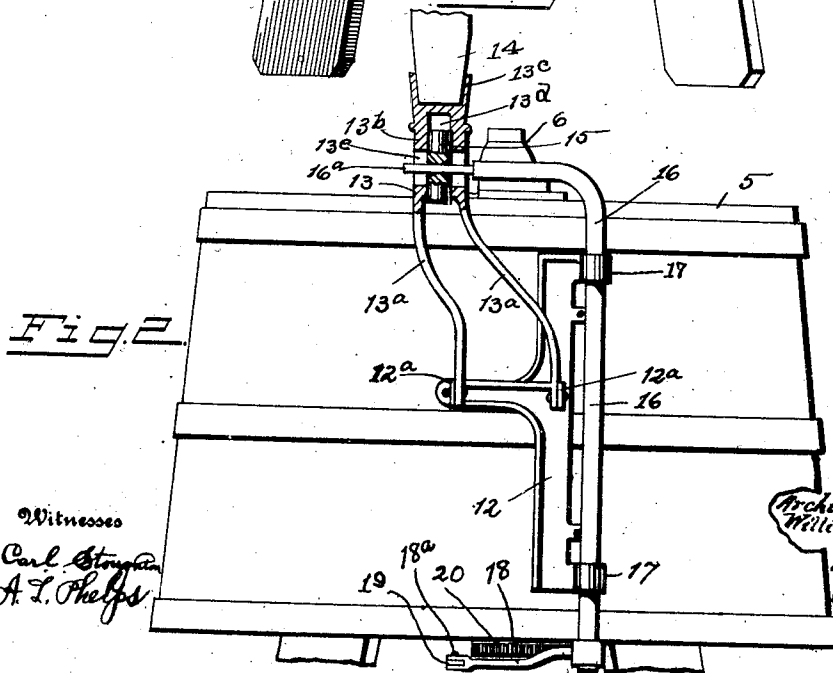
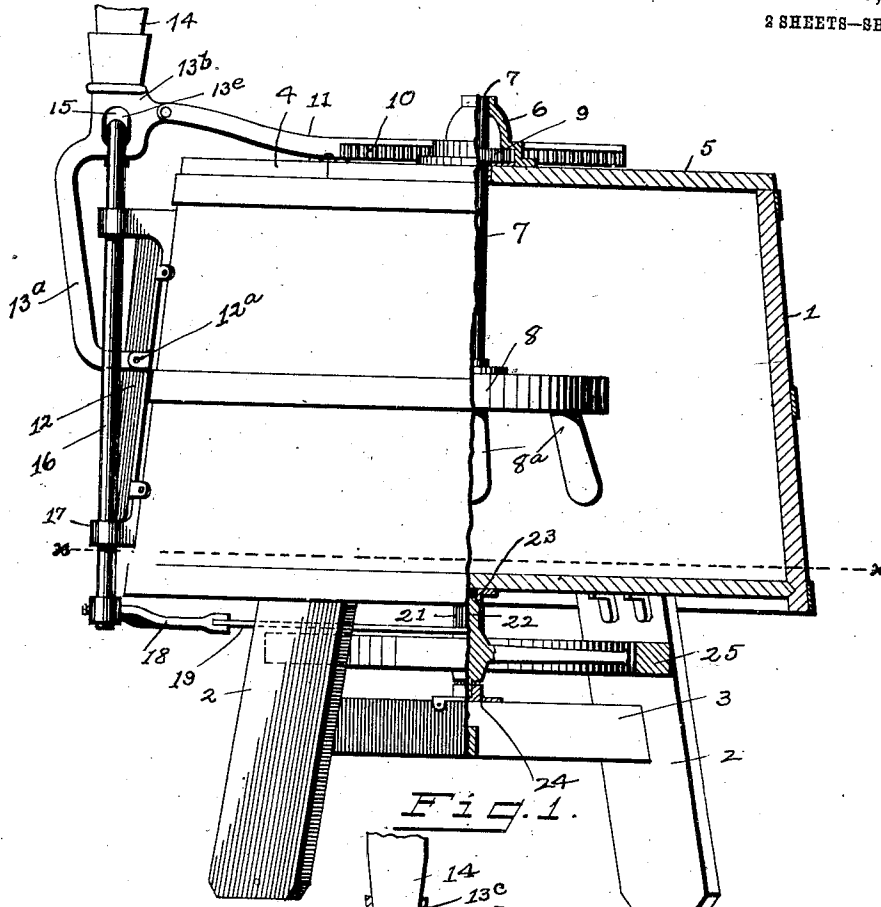


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GEARING.
APPLICATION FILED MAR. 22, 1909.

951,995.

Patented Mar. 15, 1910.
2 SHEETS—SHEET 1.



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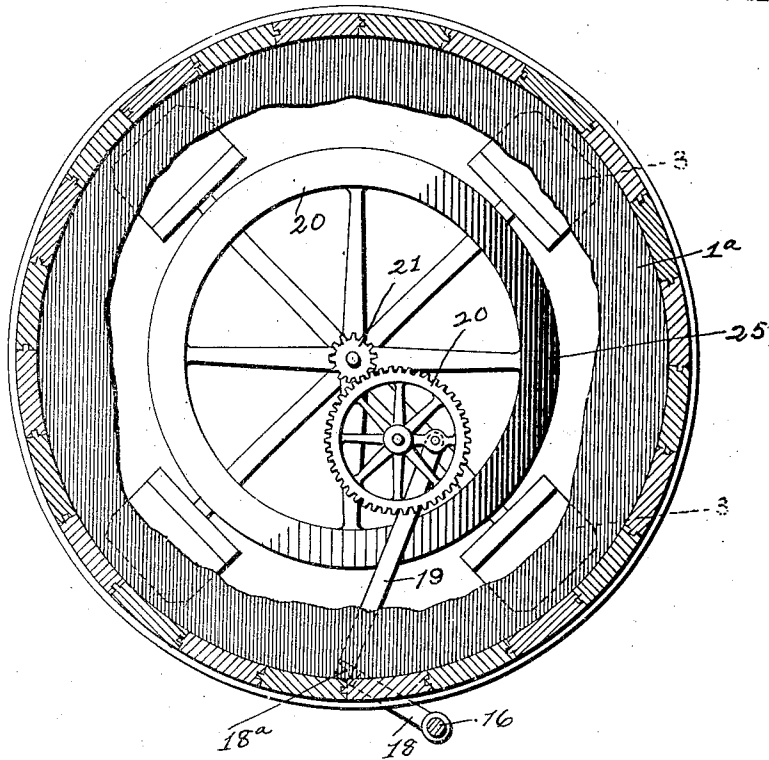


Fig. 3.

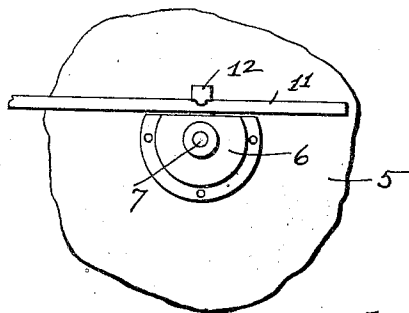


Fig. 4.

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UNITED STATES PATENT OFFICE.

ARCHIBALD RODGERS AND WILLIAM C. WHITE, OF COLUMBUS, OHIO.

GEARING.

951,995.

Specification of Letters Patent.

Patented Mar. 15, 1910.

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To all whom it may concern:

Be it known that we, ARCHIBALD RODGERS and WILLIAM C. WHITE, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Gearing, of which the following is a specification.

Our invention relates to washing machines of that class in which an oscillatory shaft carrying a washing or agitating device is mounted in a clothes receptacle, and the objects of our invention are to provide an improved washing machine of this class embodying in connection with the means for imparting an oscillatory movement to the agitator shaft, improved connections with fly-wheel operating means, and to produce other improvements the details of construction and arrangement of parts of which will be more fully pointed out hereinafter. These objects we accomplish in the manner illustrated in the accompanying drawings, in which:

Figure 1 is a partial vertical section and partial side elevation of our improved washing machine. Fig. 2 is a view in elevation of the washing receptacle at right angles with that shown in Fig. 1, and showing for the sake of clearness the socketed portion of the operating lever in section. Fig. 3 is a transverse section on line *x-x* of Fig. 1 and showing for the sake of clearness, the greater portion of the tub or receptacle bottom, broken away, and, Fig. 4 is a plan view of the central portion of the upper side of the tub or clothes receptacle.

Similar numerals refer to similar parts throughout the several views.

In carrying out our invention, we employ a tub-like receptacle 1, which is supported upon suitable legs or standards 2, the latter being connected by cross frame bars 3. The upper side of the tub or receptacle, is provided with a fixed top section 4, to which is hinged a lid or cover section 5. The cover section 5 has affixed to its upper side above the center of the tub, the base of an upright bearing body 6, in the upper end portion of which is journaled the upper end of a vertical shaft 7, said shaft passing downward through an opening in the cover 5 and carrying on its lower end a closed agitating and washing device commonly known as a dolly and which preferably consists of a disk-like body 8 from the underside of the marginal

portion of which extends downwardly and outwardly the inclined pins or beaters 8^a. As will be obvious, however, other forms of clothes washing and agitating members may be substituted for that herein shown.

Upon the shaft 7 within the enlarged base portion of the bearing body 6, is carried a pinion wheel 9 and this pinion wheel, which projects without the base of the bearing member, engages teeth 10 formed in one side of the horizontal portion of an operating rack bar 11, said bar being prevented from moving outward away from the pinion, by a guide bracket 12 which projects upwardly from the cover section 5. The outer portion of the operating rack bar 11 is extended over and beyond the marginal portion of the cover section 4 being slightly inclined upward, as shown.

12 represents a metallic bracket which is affixed to the side of the tub 1, said bracket being provided at or near the center of its height, with outwardly projecting lugs 12^a with the lower ends of which are pivoted the diverging arms 13^a of a lever 13. The inturned upper end portion of this lever is formed with an upright head 13^b in the upper end of which is formed a handle receiving socket 13^c, which is adapted to receive detachably the lower end of an operating handle 14. With the head 13^b is pivotally connected the outer end of the rack bar 11. Leading into the lower end of the head 13^b is a rounded socket 13^d, which extends in the direction of the length of the head and which is intersected in the lower portion of said head by an opening 13^e which is of substantially oval outline. Within the socket 13^d is movably mounted a bearing plunger 15 which is round in cross section and which has formed therethrough diametrically an opening which receives loosely the pin termination 16^a of the upper horizontal arm of an angular shaft 16. The vertical arm of this shaft is journaled in bearing projections 17 of the upper and lower end portions of the bracket 12. The lower end portion of the shaft 16 has connected therewith an arm 18 which extends beneath the tub body and which has its outer end pivotally connected at 18^a with a driving arm 19. This driving arm has its remaining end pivotally connected eccentrically with a gear wheel 20 which is pivotally supported from the bottom 1^a of the tub at one side of the center thereof. The teeth of the gear wheel 20 mesh

with those of a pinion 21 which is carried on a vertical shaft 22, the ends of which are journaled in bearing members 23 and 24 which are secured respectively to the underside of the tub body 1 and to the upper sides of the cross frame members 3 at their junction. The shaft 22 has a central hub member which carries a comparatively large fly wheel 25.

The operation of the herein described washing machine is substantially as follows: By rocking or moving outward and inward, the handle 14, a backward and forward or reciprocating motion of the operating rack bar 11 is produced which through the engagement of its teeth with the pinion 9 imparts the usual oscillatory movement to the shaft 7 and the agitator or washing device 8. In this inward and outward movement of the lever 13, it is obvious that a sufficient oscillatory movement is imparted to the shaft 16 to provide through the connections described, a rotary motion of the gear wheel 20, pinion 21 and fly wheel 25. In this operation, it will readily be understood that a slight oscillatory movement is contributed to the bearing plunger 15 which is permitted by the fact that said plunger is loosely contained in the socket 13^a. As will be seen, a sufficient space extends between the upper ends of the bearing plunger 15 and the socket 13^a when the lever is in its vertical position, to permit of a sliding movement of the head on said bearing plunger in the outward and inward movements of the lever. From this operation, it will readily be understood that a comparatively simple flexible connection is provided between the operating lever and the fly wheel operating shaft, which will result when the handle 14 is moved outward and inward, in imparting a rapid motion to the comparatively heavy fly wheel, the impetus of which will serve to greatly lessen the work of operating the lever.

It will be observed that by our construction, the fly wheel and gear wheels are so arranged beneath the tub as to avoid the

danger of clothing being caught thereby and all other accidents which may occur when the gearing or any part thereof is arranged at the side of the tub or projected from beneath the latter.

It will be observed that the improved connection herein described between the fly wheel operating shaft and the operating lever presents a neat and substantial appearance and is of such construction as to insure its positive operation without tendency toward getting out of order.

What we claim, is:

1. The combination with a fulcrumed lever having a head provided with an elongated socket therein, said socket being intersected by a transverse opening in said head, and a bearing plunger free to rotate and move longitudinally in said socket, of a pivoted fly wheel, gear wheels for imparting a rotary motion to said fly wheel, a journaled shaft having one of its ends engaging an opening in said bearing plunger and its remaining end connected eccentrically with one of said gear wheels.

2. The combination of an oscillatory driven shaft, a pinion carried by said driven shaft, a rack member, meshing with said pinion, a fulcrumed lever having a head provided with an elongated socket therein, said socket being intersected by a transverse opening in said head, a bearing plunger free to rotate and move longitudinally in said socket, a rotative fly wheel, a shaft, one end of said shaft being disposed at an angle to the remainder of the shaft and engaging an opening in said bearing plunger, an arm mounted upon the opposite end of said shaft, and connections between the last named arm and the fly wheel.

In testimony whereof we affix our signatures in presence of two witnesses.

ARCHIBALD RODGERS.
WILLIAM C. WHITE.

Witnesses:

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