J. G. SEELIG.

WASHING MACHINE MECHANISM.

APPLICATION FILED NOV. 30, 1914.

1,239,046.

Patented Sept. 4, 1917.

Fig. 1.

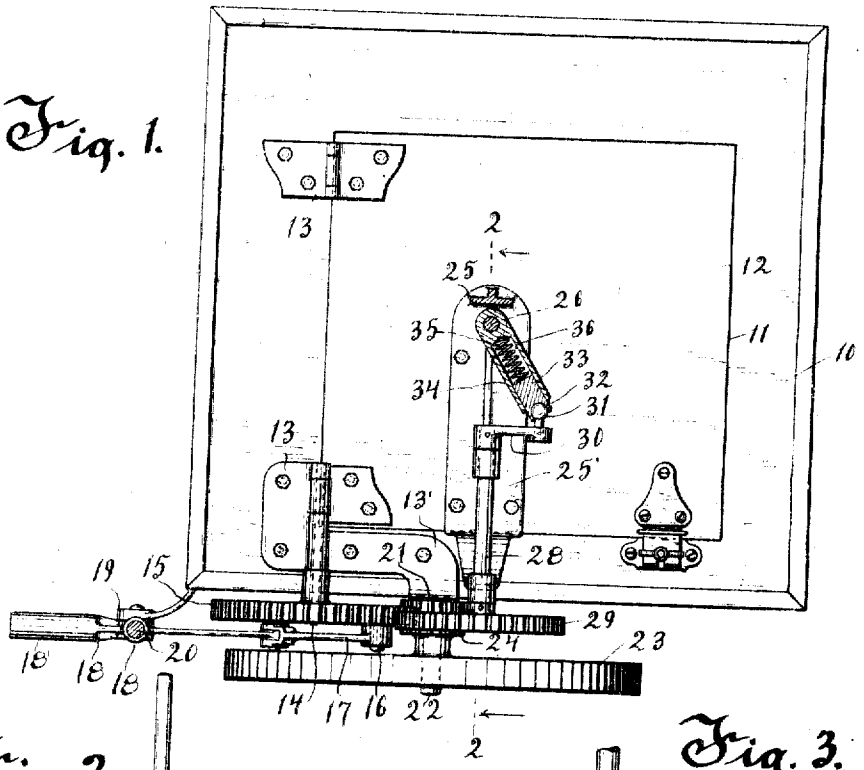


Fig. 2

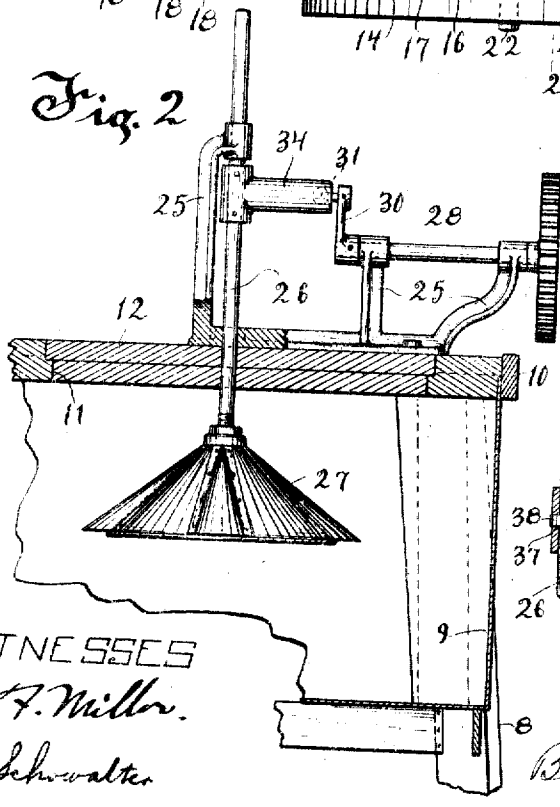


Fig. 3.

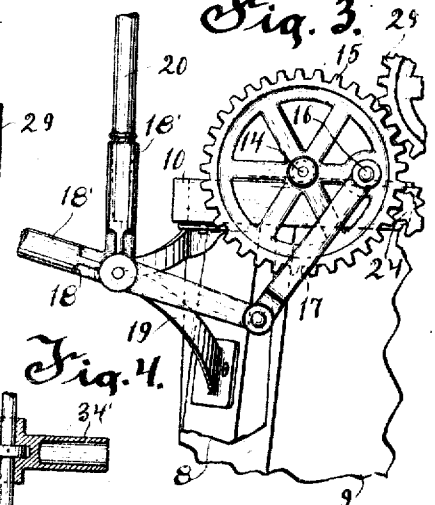
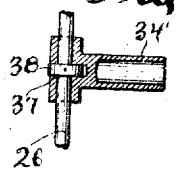


Fig. 4.



WITNESSES

C. F. Miller.

E Schwalter

INVENTOR

John G. Seelig.

By Morsell, Keeney & French

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN G. SEELIG, OF RIPON, WISCONSIN.

WASHING-MACHINE MECHANISM.

1,239,046. Specification of Letters Patent. Patented Sept. 4, 1917.

Application filed November 30, 1914. Serial No. 874,577.

To all whom it may concern:

Be it known that I, JOHN G. SEELIG, a citizen of the United States, and resident of Ripon, in the county of Fond du Lac and State of Wisconsin, have invented new and useful Improvements in Washing-Machine Mechanism, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to improvements in washing machine mechanism.

It is one of the objects of the present invention to provide a washing machine mechanism more particularly adapted for transmitting the rotary movement of a horizontally extending shaft to a reciprocating and rocking movement of a vertically extending dasher shaft.

A further object of the invention is to provide a washing machine mechanism in which only a reciprocal movement may be given to the dasher shaft if desired.

A further object of the invention is to provide a washing machine mechanism which is of simple construction, is strong and durable and is well adapted for the purpose described.

With the above and other objects in view the invention consists of the improved washing machine mechanism and its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawings in which the same reference characters indicate the same parts in all of the views:

Figure 1 is a top view of a washing machine provided with the improved mechanism;

Fig. 2 is a vertical sectional view of the washing machine taken on line 2—2 of Fig. 1;

Fig. 3 is a front detail view of the driving mechanism; and

Fig. 4 is a detail side view of a modified form of mechanism.

Referring to the drawing the numeral 8 indicates the frame or support upon which the washing tub or receptacle 9 is mounted. The receptacle 9 is preferably formed of metal of rectangular shape and is provided with an open top which is connected to and covered by a wooden top 10 of the frame. The top 10 is also of rectangular form and has a rectangular opening 11 provided with a hinged cover 12 which may be opened to remove or place clothes within the tub. One of the hinges 13 which connect the cover 12 to the top is provided with a pintle 14 which projects outwardly from the front side of the machine and has journaled thereon a driving gear wheel 15. This gear wheel has a wrist pin 16 projecting therefrom to which is connected a link 17, and the opposite end of the link is pivoted to an operating oscillating lever 18 fulcrumed on a bracket 19 projecting from the frame 8. The operating lever is of the bell crank type and is provided with three arms, two of which are of tubular socketed form, as indicated by 18′, to receive the inner end of the operating hand lever 20 which may be used in either a vertical position as shown or in a horizontal position if desired. As the hand lever is rocked back and forth the gear wheel will be rotated by the wrist pin and link connection.

One portion 13′ of the hinge with the projecting pintle is of angular or L-shaped form and is bolted to the rectangular top portion of the frame and is provided with a downwardly extending portion 21 having a horizontally projecting stud shaft 22 upon which a fly wheel 23 is journaled. A pinion 24 also journaled on the stud shaft 22 and forming part of or turning with the fly wheel, meshes with the gear wheel 15 and is driven thereby.

The cover 12 has mounted thereon a journal bearing and bracket member 25 through one part of which extends and is journaled a vertically extending dasher or work shaft 26. This work shaft carries a dasher 27 on its lower end of any desirable form for engaging the clothes within the tub.

A portion 25′ of the bracket member 25 has extending therethrough and journaled therein a horizontally extending shaft 28. The horizontal shaft is in radial alinement with the dasher shaft 26 and on its outer end has mounted a gear wheel 29 which is in constant mesh with the gear wheel 15 journaled on the pintle stud 14. This construction and positioning of the gears provides for the gear 29 revolving around the gear 15 when the cover 12 is swung to open or closed position and without separating the gears, and also without supporting the weight of the fly wheel on the cover. This arrangement also provides for gearing up the speed of the fly wheel to a rapid rate and for operating the dasher shaft at the desired speed of movement.

The inner end of the horizontal shaft terminates a short distance from the vertical shaft and has mounted thereon a cranked arm 30 having its cranked end portion 31 in the form of a ball which enters the socketed end 32 of a plunger 33 carried by the vertical shaft 26. The plunger 33 is reciprocally mounted in the outer end of the horizontally extending tubular arm 34 which is mounted on and is pinned to the vertical shaft 26. A coiled spring 35 positioned within the tubular portion 36 of the arm 34 and interposed between the inner end of the plunger and the inner end portion of the arm is adapted to hold the said plunger yieldingly in engagement with the rounded end of the cranked arm so that said plunger will compensate for the varying distance between the end of the arm and the end of the bell crank lever during the movement of the parts.

From the description thus far given it will be seen that as the cranked arm is rotated the connection between the said arm and the vertical shaft will cause the said vertical shaft to be reciprocated by said rotation and at the same time the lateral swing of the cranked arm will rock the vertical shaft while it is being reciprocated.

In the modified form shown in Fig. 4 the arm 34' is loosely journaled on the vertical shaft 26 and at its inner end is provided with a recess 37 to receive a collar 38 which surrounds and is pinned or otherwise fastened to the vertical shaft. This construction provides for reciprocating the vertical shaft without positively rocking the same although the frictional engagement between the members imparts a rocking tendency to the vertical shaft.

From the foregoing description it will be seen that the washing machine mechanism is of simple construction, is strong and durable and is well adapted for the purpose described.

What I claim as my invention is:

1. A washing machine mechanism, comprising a work shaft, a driving shaft extending at an angle with relation thereto, and having a cranked portion, and a resilient connection between the cranked portion and the work shaft for reciprocating and rocking the work shaft.

2. A washing machine mechanism, comprising a work shaft, a driving shaft extending at an angle with relation thereto, and a resilient and a cranked connection between the two shafts for reciprocating and rocking the work shaft by a rotary movement of the drive shaft.

3. A washing machine mechanism, comprising a work shaft, a driving shaft extending at an angle with relation thereto, a cranked member mounted on one of the shafts, an arm mounted on the other shaft, and a resilient connection between the arm and the cranked member whereby the rotary movement of the driving member is transmitted into a reciprocal and a rocking movement of the work shaft.

4. A washing machine mechanism, comprising a work shaft, a driving shaft extending at an angle with relation thereto, and a cranked and resilient connection between the two shafts for reciprocating the work shaft and to impart a rocking tendency thereto.

5. A washing machine mechanism, comprising a work shaft, an arm projecting therefrom, a driving shaft extending at an angle with relation thereto, a cranked member mounted on the driving shaft adjacent to the arm, and a resilient and slidable means connecting the cranked member to the arm for transmitting the rotary movement of the driving shaft into a reciprocal movement of the work shaft, said connection also imparting a rocking tendency to the work shaft.

6. A washing machine mechanism, comprising a work shaft, an arm projecting therefrom, a member slidably and resiliently connected to the arm, a driving member positioned adjacent the arm, and a cranked arm carried by the driving member and connected to the slidable member for reciprocating and rocking the work shaft.

7. A washing machine mechanism, comprising a work shaft, an arm projecting therefrom, a member slidably and resiliently connected to the arm, a driving member positioned adjacent the arm, and a cranked arm carried by the driving member and having a ball and socket connection with the slidable member for transmitting the rotary movement of the driving member into a reciprocal movement of the work member, said connection also imparting a rocking tendency to the work member.

8. A washing machine mechanism, comprising a work shaft, a tubular arm projecting therefrom, a plunger slidably extending into the tubular portion of the arm, a resilient means exerting a tendency to push the plunger outwardly from said arm, a driving shaft extending at an angle to the work shaft, and a cranked member mounted on the driving shaft and engaging the plunger for reciprocating the work shaft and imparting a rotary tendency thereto, there being a ball and socket connection between the crank and the plunger.

9. A washing machine mechanism, comprising a vertically extending work shaft, a tubular arm projecting therefrom, a plunger slidably extending into the tubular portion of the arm and having a socket in its outer end portion, a coiled spring positioned within the tubular portion of the tubular arm and engaging the plunger, a horizontal extending driving shaft mounted adjacent

the vertical shaft, and a cranked arm mounted on the horizontal shaft and having a rounded end which enters the socket of the plunger.

10. A washing machine mechanism, comprising a receptacle provided with an open top and a hinged cover, a vertically extending work shaft carried by the cover, a horizontal shaft carried by the cover and having a cranked arm mounted on its inner end and a gear wheel on its outer end, an arm carried by the work shaft and slidably and resiliently engaged by the crank portion of the cranked arm, said engagement reciprocating the work shaft and imparting a rocking tendency thereto, a driving gear wheel mounted in a position to revolve concentrically with relation to the hinge pintles of the cover and being in constant mesh with the cover gear wheel, a fly wheel mounted on the receptacle and having a gear connection with the driving gear wheel, and means for rotating one of said wheels.

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

JOHN G. SEELIG.

Witnesses:
G. MILLER,
E. HOFFMANN.