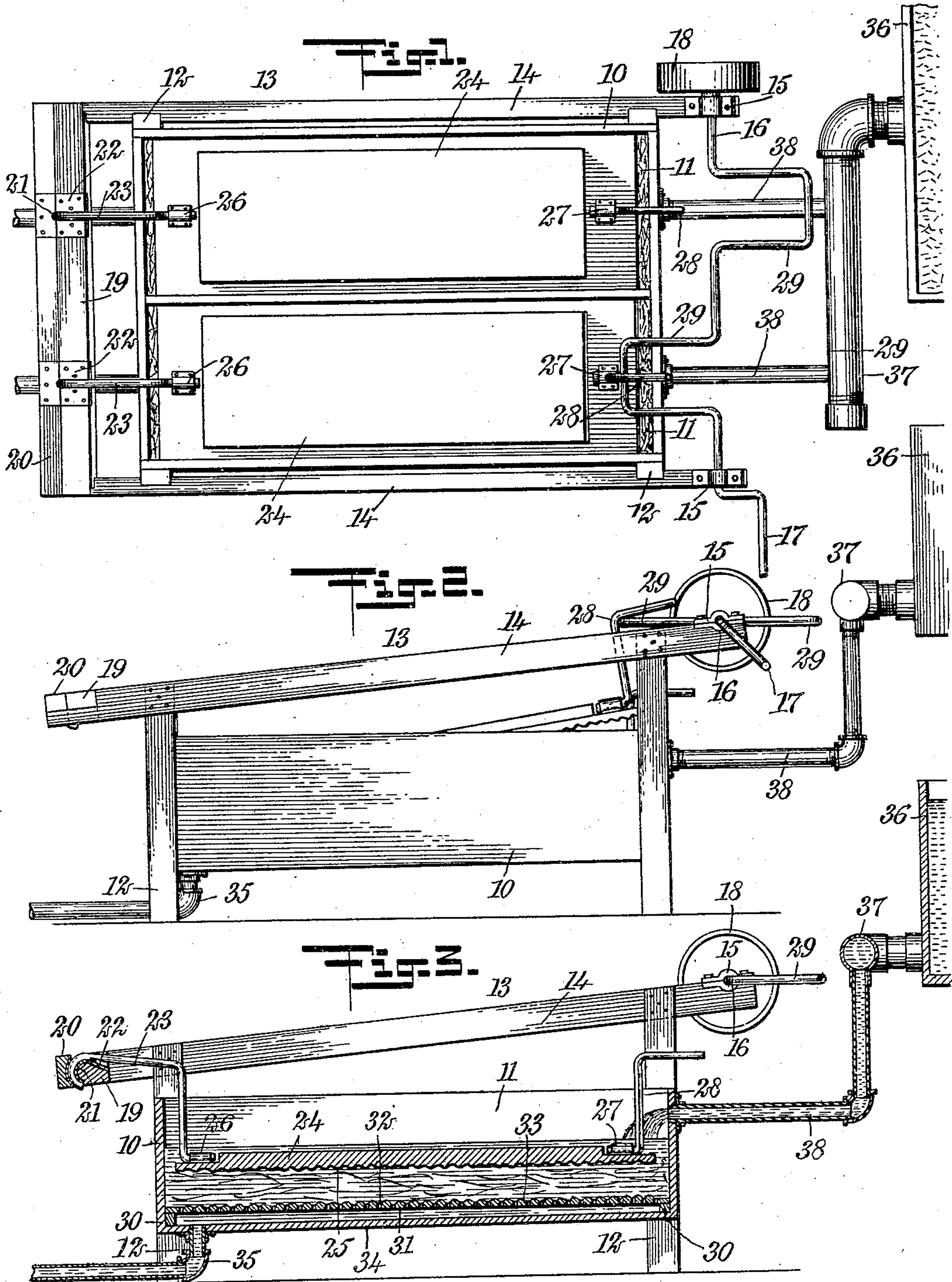


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R. TWOHIG.
WASHING MACHINE.
APPLICATION FILED JAN. 9, 1909.

Patented Aug. 3, 1909.

2 SHEETS—SHEET 1.



WITNESSES
F. G. Hackmeyer,
John K. Brachvogel

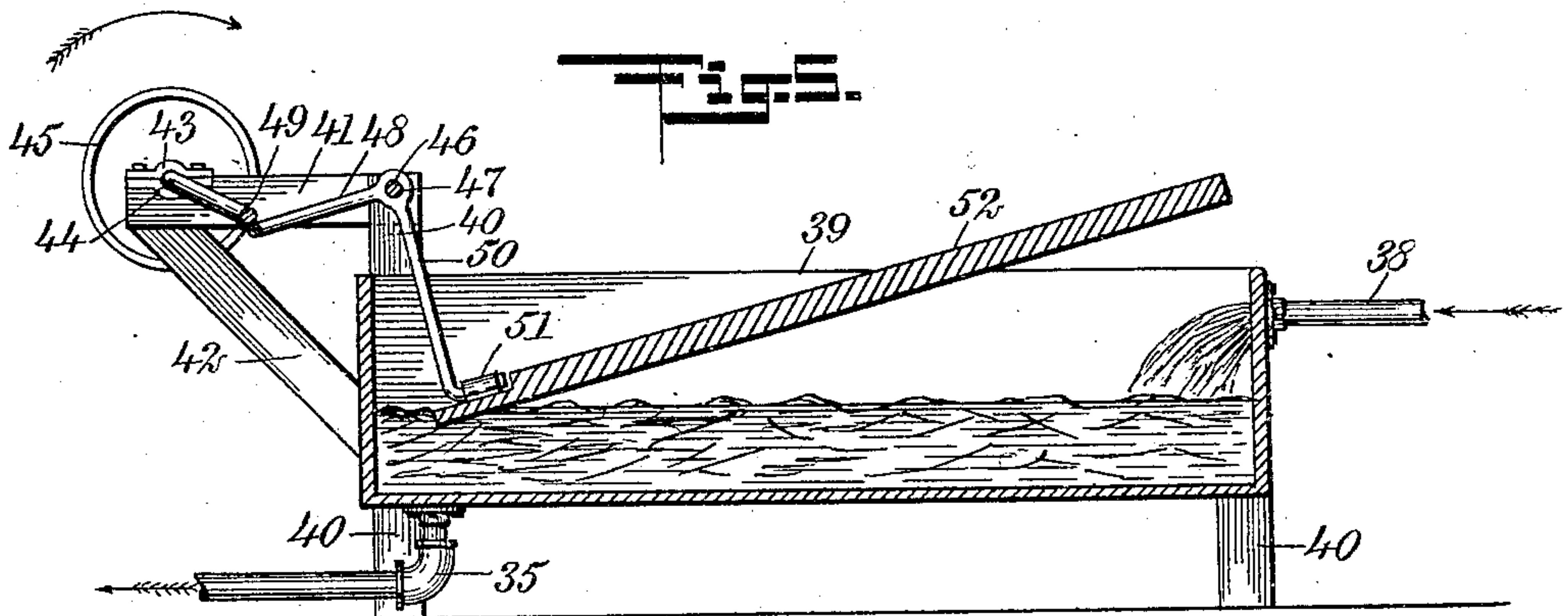
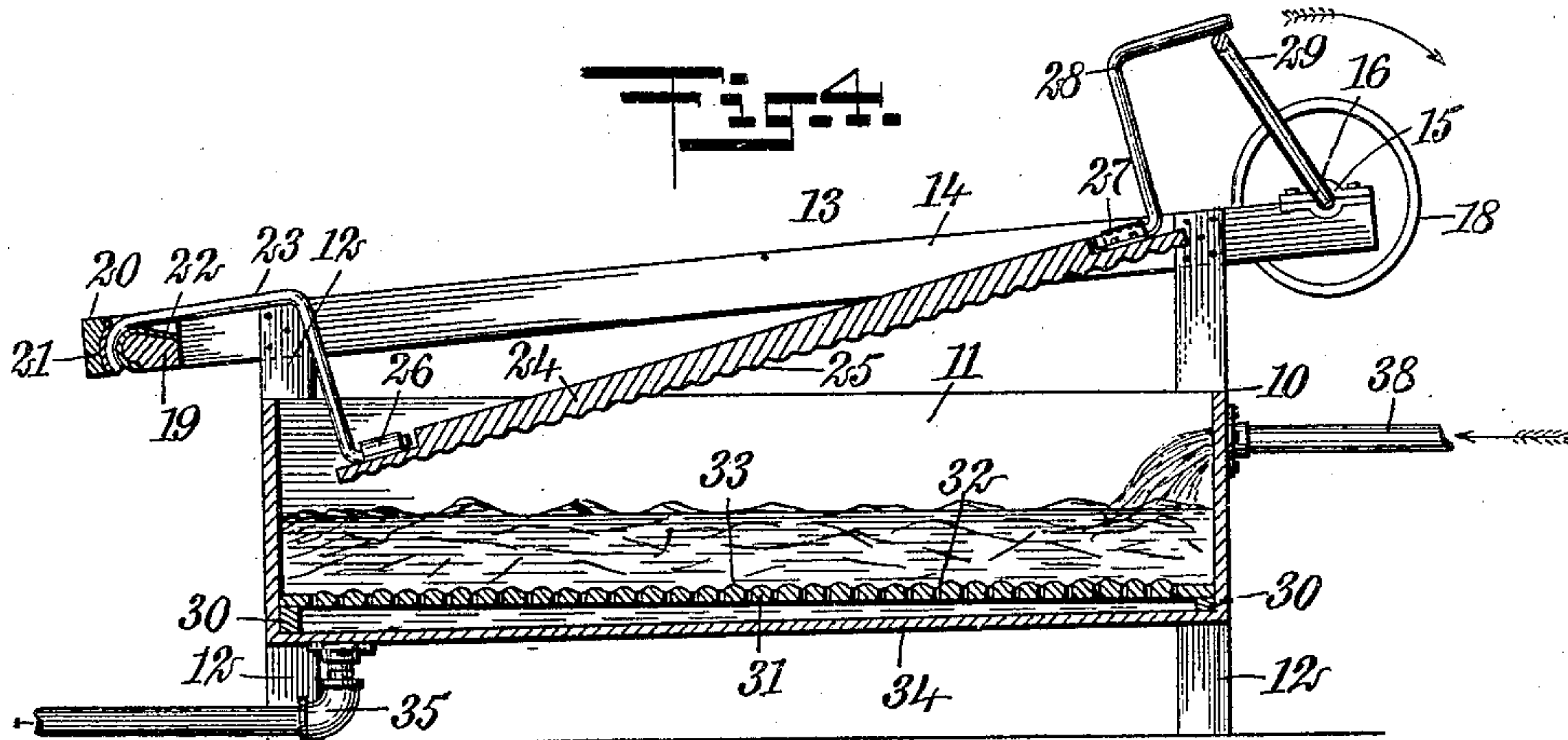
INVENTOR
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ATTORNEYS

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F. G. Hackenberg.
John K. Brachvogel

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UNITED STATES PATENT OFFICE.

REDMOND TWOHIG, OF SALINA, KANSAS.

WASHING-MACHINE.

No. 929,999.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed January 9, 1909. Serial No. 471,430.

To all whom it may concern:

Be it known that I, REDMOND TWOHIG, a citizen of the United States, and a resident of Salina, in the county of Saline and State of Kansas, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

This invention relates to machines for washing clothes and like articles, and relates more particularly to a machine of this class which comprises a tub, preferably divided into compartments, a movable beater arranged in each of the compartments, and an actuating member adapted to be continuously operated intermittently to engage the beaters to raise the same, whereupon the beaters are gravitationally returned to their depressed positions and in so doing, pound upon the clothes in the tub, which is partly filled with soapy water or other suitable washing fluid.

The object of the invention is to provide a simple, inexpensive and durable washing machine, which can be driven either by hand or from a suitable source of power, in which clothes, household linen and like articles can be laundered efficiently and thoroughly, in which the cleansing of the articles is effected by the pounding action of a beater upon the articles, which are immersed in a suitable washing fluid such as soapy water, and in which the articles are positioned preferably upon a perforated, false bottom.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view of an embodiment of my invention; Fig. 2 is a side elevation of the same; Fig. 3 is a longitudinal section of the same; Fig. 4 is a view similar to Fig. 3 showing certain of the parts in different positions; and Fig. 5 is a similar view showing a modified form of the machine.

Before proceeding to a more detailed description of my invention, it should be clearly understood that the same preferably comprises a number of units in each of which is arranged a swinging beater, and that the number of units, shown for example in the drawings as two, can be varied in

accordance with different conditions, or with the desired capacity of the machine. I have found that an efficient cleansing action is effected by causing a beater to pound upon or impact against clothes or like articles immersed in soapy water, as the blows of the beater tend to drive the dirt from the articles. To accomplish an action of this kind I provide beaters which are arranged to swing up and down and which are intermittently raised and released by a continuously rotatable crank. The beaters thus fall of their own weight upon the articles in the machine, and in this way operate to wash the articles. I prefer to use the machine in combination with a supply of soapy water or the like, and I also employ means for continuously drawing off the used fluid from the bottom of the washing machine tub. Preferably I employ a false bottom in the tub so that the articles do not rest directly upon the real bottom of the tub. The false bottom is positioned above the real bottom and a space is thus formed from which the used fluid can be withdrawn, a constant supply of fresh fluid entering at the surface.

Referring more particularly to the drawings, I provide a tub 10 having a plurality of compartments 11 shown in the accompanying drawings as two in number, for an example. The tub, at the corners, has uprights 12 which form supporting legs for the tub and at the same time have the upper ends projecting above the tub and carrying a frame 13. The frame has longitudinal frame members 14 which are preferably inclined with respect to the horizontal, owing to the fact that the uprights 12 at one end of the tub are higher than those at the other end. The longitudinal members 14 at the higher end have bearings 15 in which is journaled a shaft 16. The latter projects at the extremities beyond the bearings and has one of the extremities formed into a hand crank 17, so that it can be manually operated and at the other end has a driving pulley 18, by means of which it can be connected with a suitable source of power. At the lower end the longitudinal members 14 are connected by a cross support 19, adjacent to which is secured a transverse member 20. The cross support has curved sockets 21 formed partly by the member 20 and provided with mountings 22 of sheet metal or the like. Hangers 23 have curved ends

movably arranged in said sockets and are downwardly and forwardly offset.

The beaters 24 may be of any suitable form and are preferably flat and elongated, having at the undersides corrugations 25. The beaters may, as shown for example in the drawings, be cut away at the edges, the additional material in the middle, affording the necessary weight so that the beater can operate efficiently. If desired, the beaters can be weighted in any other manner. Each beater at one end has a bracket 26 adapted to receive the free ends of the hangers 23, so that the beaters can be movably supported within the tub compartments. At the ends remote from the hangers, the beaters have further brackets 27 which receive the ends of arms 28. These arms are upwardly and outwardly disposed so that the free ends project beyond the tub.

The shaft 16 is offset to form cranks 29, which are adjacent to the arms 28, and so arranged that as the shaft is rotated the cranks intermittently engage the arms to raise the beaters and then to release the same so that they can gravitationally return to their original positions within the compartments. It is to be understood of course, that the shaft operates in an outward direction so that the cranks engage underneath the arms to lift the beaters.

In each compartment at the opposite ends are cleats 30 which support a false bottom 31. The false bottoms are provided with perforations 32 and at the upper surface have corrugations 33. The bottoms 31 are horizontal, while the real bottoms 34 of the tub compartments are inclined. A space is formed between each false bottom and the corresponding real bottom, and at the lower end of the latter is a drain 35 by means of which the used washing fluid can be withdrawn. The inclination of the real bottom facilitates the passage of fluid into the drain. I prefer to employ with my washing machine an auxiliary tank for containing a supply of the washing fluid, consisting for example, of soap and water. The tank 36 has an outlet 37 which is connected by means of pipes 38 with the compartments near the upper rims thereof, so that a constant supply of fresh washing fluid can be introduced into the compartments.

In Fig. 5 is shown a modified form in which a tub 39 is supported by uprights 40. The uprights at one end extend above the tub and have lateral members 41 strengthened by braces 42. The members 41 carry bearings 43 in which is journaled a shaft 44 having a driving pulley 45 or other means for actuating it. A shaft 46 is mounted between the upper ends of the extended uprights 40 and has bell crank levers 47 pivotally mounted thereon. The arms 48 of the le-

vers extend beyond the tub and are arranged to be depressed by cranks 49 of the shaft 44. The arms 50 of the bell cranks have laterally disposed ends secured in brackets 51 of the beater 52. It will be understood that the operation of the beater in this form of the device is similar to the operation of the other beaters described above. It is swung upwardly when the arm 48 of the bell crank is depressed by the crank 49 and as the latter passes out of engagement with the arm 48 the beater gravitationally descends upon the articles within the tub.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:

1. A washing machine, comprising a tub, a movably held hanger, a beater within said tub and secured to said hanger, and a continuously rotatable member adapted intermittently to engage said beater to operate the same, said member being independent of said beater.

2. A washing machine, comprising a tub, a movably held hanger, a beater within said tub and secured to said hanger, said beater having an arm projecting beyond said tub, and a continuously rotatable shaft having a crank adapted intermittently to engage said arm, said shaft being independent of said arm.

3. A washing machine, comprising a tub having a plurality of compartments, a support having sockets, hangers movably arranged in said sockets and extending into said compartments, beaters in said compartments and secured to said hangers, said beaters having arms projecting beyond said compartments, and a continuously rotatable shaft having cranks adapted to engage said arms intermittently to raise said beaters.

4. A washing machine, comprising a tub having a plurality of compartments, uprights, a frame carried by said uprights, a cross support included in said frame and having curved sockets, hangers having curved parts movably arranged in said sockets and each extending into one of said compartments, a beater arranged in each of said compartments and having a bracket receiving one of said hangers, said beaters at the ends remote from said hangers having arms extending beyond said tub, and a shaft journaled upon said frame and having cranks adapted to engage said arms intermittently to raise said beaters, said beaters having corrugations at the under sides.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

REDMOND TWOHIG.

Witnesses:

R. P. CRAVENS,
R. H. CRAVENS.