

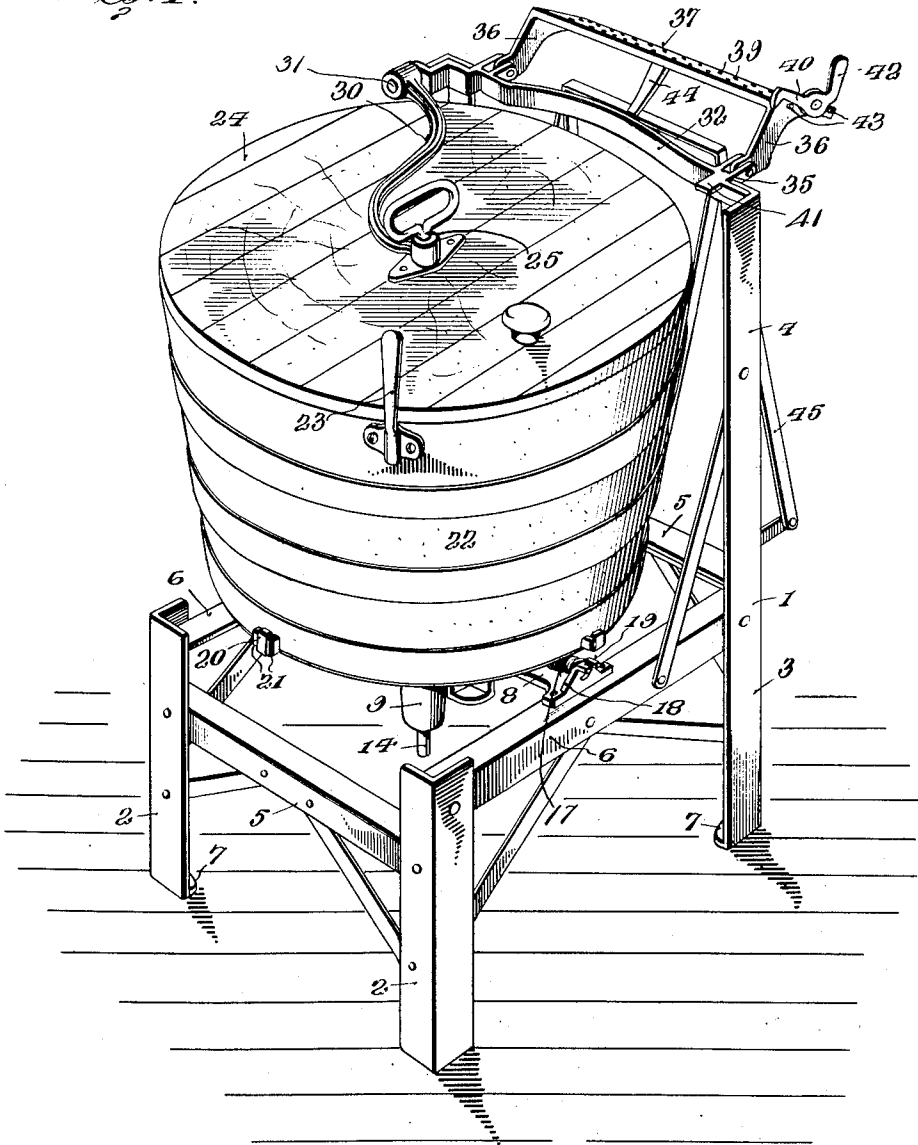
J. H. GLASENER.
 WASHING MACHINE.
 APPLICATION FILED MAR. 9, 1911.

1,053,379.

Patented Feb. 18, 1913.

3 SHEETS—SHEET 1.

Fig. 1.



Inventor

John H. Glasener

Witnesses

H. H. H. H. H.
W. H. H. H. H.

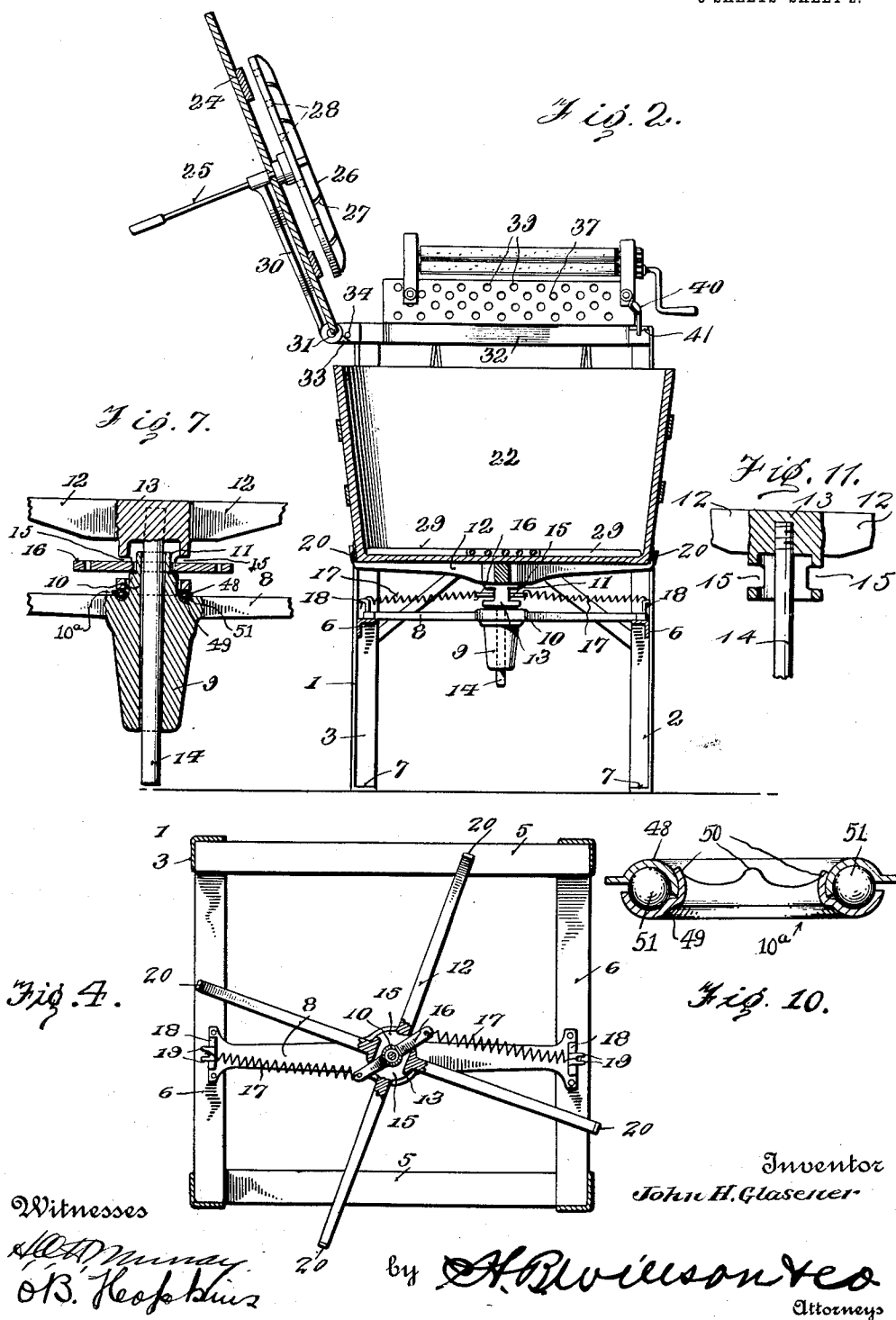
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

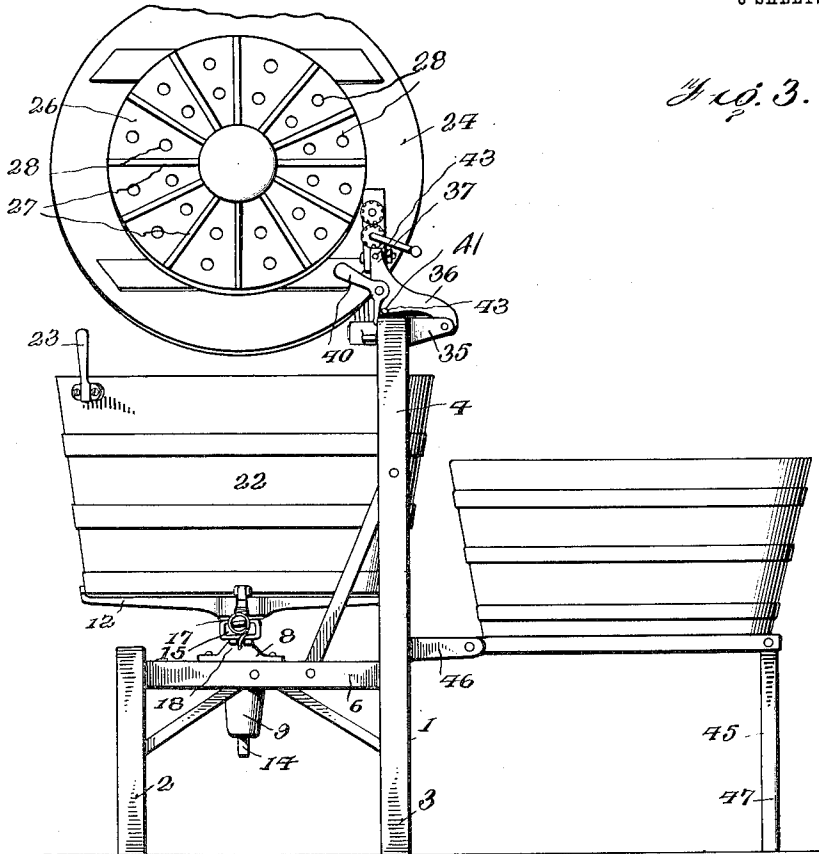
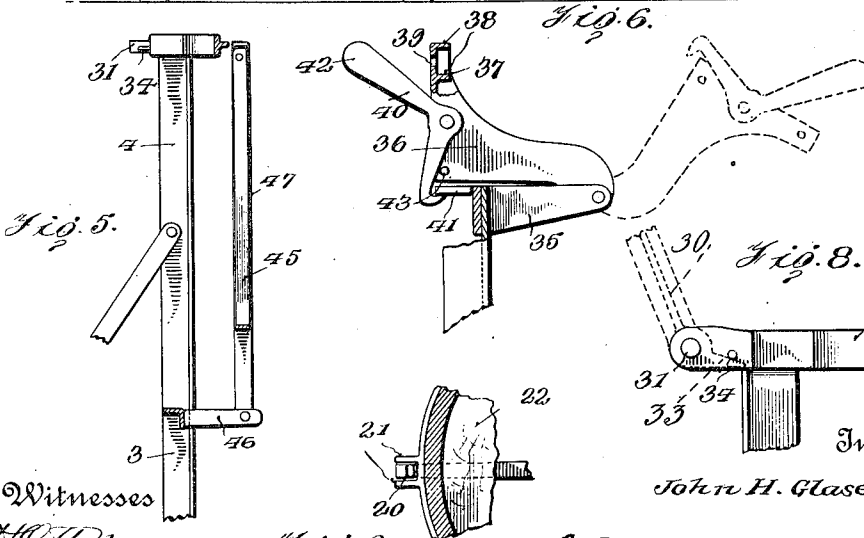


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. GLASENER, OF MANSFIELD, OHIO.

WASHING-MACHINE.

1,053,379.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed March 9, 1911. Serial No. 613,252.

To all whom it may concern:

Be it known that I, JOHN H. GLASENER, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in washing machines.

The invention consists in the construction and arrangement of parts, as will be hereinafter described and particularly pointed out in the claim.

In the accompanying drawings: Figure 1 is a perspective view of my improved washing machine with parts in position for washing; Fig. 2 is a vertical cross sectional view with the cover of the machine open and a wringer arranged thereon for wringing the washed clothes; Fig. 3 is a side elevation of the machine with the cover in an open position; Fig. 4 is a horizontal sectional view through the upper portion of the frame with the tub removed showing a plan view of the tub supporting and operating mechanism; Fig. 5 is a vertical longitudinal sectional view through the frame with the supplemental tub supporting frame in a raised and folded position; Fig. 6 is an enlarged detail sectional view of the upper portion of one side of the frame showing an end view of the wringer supporting mechanism in operative position in full lines and in inoperative position in dotted lines; Fig. 7 is an enlarged central vertical sectional view of the tub supporting mechanism; Fig. 8 is an enlarged front view of the end of the cross bar to which the cover supporting arm is pivotally connected showing a portion of the arm thereon in dotted lines; Fig. 9 is an enlarged detail horizontal sectional view through a portion of one side of the tub and the connecting end of one of the arms of the tub supporting spider showing the manner in which said arm is operatively connected to the tub. Fig. 10 is an enlarged vertical sectional view of the ball bearing for the tub supporting frame. Fig. 11 is a detail view of the hub 13.

Referring more particularly to the drawings, 1 denotes the main supporting frame of the machine. Said frame may be formed

of any suitable material but is here shown and is preferably constructed of angle iron bars and comprises front and rear pairs of supporting legs 2 and 3 said rear legs 3 being extended upwardly to form supporting standards 4 the purpose of which will be hereinafter described. The legs 2 and 3 are connected by front and rear cross bars 5 and side bars 6, said bars and legs being suitably braced as shown. On the lower ends of the angle iron legs 2 and 3 are secured end plates 7 whereby said ends are prevented from scratching or marring the floor or surface on which the machine rests.

Connected to the opposite side bars 6 of the frame is a supporting bar 8 having formed therein a centrally disposed depending hub 9. On the upper side of the bar is formed an upwardly projecting bearing boss or extension 10 the upper end of which is reduced and forms a second bearing boss 11. Revolvably mounted on the boss 10 is a tub supporting frame or spider 12 comprising a central downwardly extending hollow hub 13 which fits loosely over the boss 10 and engages a ball bearing 10^a arranged in the upper end of the hub 9 as shown in Fig. 7 of the drawings. The hub 13 has secured therein a centrally disposed downwardly projecting pivot pin or shaft 14 which projects through and is revolvably engaged with the bosses 10 and 11 and the downwardly projecting socket 9 of the cross bar 8 as shown.

In the opposite sides of the hollow hub 13 are formed transverse or horizontally disposed slots 15 through which project the opposite ends of a cross head 16 which is revolvably mounted on the boss 11. To the outer ends of the cross head 16 are connected the inner ends of tub retracting springs 17 the outer ends of which are secured to lugs 18 formed on the outer ends of the supporting bar 8, said lugs having on their upper ends outwardly extending notched ears 19 by means of which the ends of the springs are firmly secured to the lugs. By thus arranging the tub supporting spider and the cross head and spring, said spider is limited in its rotary or oscillating movement by the springs 17 which are stretched when the spider and tub are turned or oscillated in either direction thereby retracting or assisting in turning the tub and spider back to the reverse direction.

On the outer ends of the arms of the

spider or tub supporting frame are formed upwardly projecting tub holding lugs 20 which, when the tub is arranged on the arms of the spider are adapted to engage tub holding devices which are here shown and preferably consist of pairs of lugs 21 secured to the lower hoop or otherwise firmly secured to the side of the tub 22. By thus connecting the upturned ends of the arms of the spider with the tub the latter will be oscillated by the springs 17 in a reverse direction from which it is turned by hand, said hand turning motion being produced through the medium of a handle 23 secured to one side of the tub and projecting above the same as shown.

On the tub is arranged a removable cover 24 having formed therein a centrally disposed passage through which is arranged a rubber supporting and operating rod 25 on the lower end of which is secured a rubber 26 which is here shown and preferably comprises a flat board having on its under side a series of radially disposed rubbing ribs 27 between which are formed a series of water circulating holes 28. The ribs 27 are preferably provided with rounded outer edges and are adapted to coact with similarly formed ribs 29 arranged on the bottom of the tub as shown. The upper end of the rubber supporting and operating rod is slidably engaged with a rectangular passage formed in the inner end of a curved rubber holding cover supporting arm 30 the outer end of which is pivotally engaged with a bearing stud 31 formed on and projecting laterally from one end of the cross bar 32 connecting the upper end of the standards 4 as shown. On the pivoted outer end of the arm 30 is formed a radially projecting stop finger 33 which when the arm and cover of the tub are swung upwardly to hold the cover in an open position, will be engaged with a stop stud 34 formed on the adjacent portion of the bracket of the cross bar as shown. On the upper end of the rubber supporting rod 25 is formed a handle by means of which the rubber is held down in engagement with the clothes while the tub is being oscillated in the manner described.

On the rear side of the cross bar 32 are formed rearwardly projecting pairs of apertured ears 35 with which are pivotally engaged the rearwardly projecting arms 36 of a wringer supporting plate 37, said plate being preferably formed of thin metal and braced on its rear side by a series of longitudinally disposed ribs 38 between which are formed rows of apertures 39 whereby the plate is further lightened. The pivoted outer ends of the arms 36 are offset as shown whereby the plate may be swung downwardly and inwardly to a vertical position to receive the lower ends of the wringer which are engaged therewith and secured

thereto in the usual manner of fastening the wringer. In order to hold the plate 37 in a vertical or operative position, I preferably provide a catch hook 40 which is pivotally secured to one end of the plate and is adapted to be swung into engagement with a catch lug 41 formed on the adjacent portion of the upper cross bar 32 thereby securely holding the plate in position to support the wringer. The catch hook 40 is provided on its pivoted end with an operating handle 42 and on the adjacent end of the plate are formed stop studs 43 which limit the swinging movement of the catch and handle so that the latter is always held in position to drop into engagement with the catch lug when the plate is swung down to an operative position. The handle 42 is so arranged on the hook that by its weight the hook will be caused to swing by gravity into engagement with the lug 41. On the rear side of the plate 37 substantially midway between its ends is formed a rearwardly projecting stop arm 44 which, when the plate is swung back to support the wringer in an inoperative position, is adapted to engage the rear side of the cross bar 32 and thus limit the downward or rearward movement of the plate. By thus hingedly connecting the wringer supporting plate the latter together with the wringer secured thereto may be swung back thus permitting the cover of the tub to be swung upwardly to an open position when the washing operation is completed after which the supporting plate and wringer may be swung back to hold the wringer in position for wringing out the washed clothes from the tub.

In order to provide a suitable support for a tub or other receptacle for the clothes being passed through the wringer I preferably provide a supplemental tub supporting frame 45 comprising side and end bars, said side bars being hingedly connected at their inner ends to brackets 46 formed on and projecting rearwardly from the main frame of the machine. To the outer ends of the side bars of the frame 45 are secured the upper ends of a supporting standard 47 the lower end of which when the frame is swung down to an operative position will engage the ground thus forming a firm support for the tub which is placed on the frame in position to receive the clothes from the wringer. When not in use the side bars of the frame 45 may be swung upwardly on the brackets 46 and the supporting standards swung downwardly between the side bars as shown.

In Fig. 10 of the drawings is shown a special form of ball bearing 10^a which is preferably employed to receive the tub supporting frame or spider 12 as shown in Fig. 7 of the drawing whereby said frame or spider will turn freely on the socket 9 of the sup-

porting bar 8. The ball bearing 10^a comprises upper and lower annular transversely curved plates or rings 48 and 49 the upper plate 48 having its outer edge projecting beyond the outer edge of the lower plate. The lower plate 49 has its inner edge turned upwardly against the inner edge of the upper plate and has formed thereon upwardly projecting outwardly curved lugs 50 which fit around the adjacent side of the upper plate and thus hold said plates in revoluble engagement to form between themselves a ball race in which is arranged a series of bearing balls 51.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

Having thus described my invention what I claim is:

A washing machine comprising a main supporting frame with a supporting bar

connected to the opposite side bars of the frame and having a centrally disposed depending hub, said hub having on its upper surface an upwardly bearing boss provided with a reduced upper end to provide a second bearing boss, the first mentioned boss having a revolving spider thereon consisting of a central hollow hub which fits loosely on said second boss, said hub having secured therein a centrally disposed downwardly projecting pin which projects through and is revolubly engaged with both of said bosses and also with the downwardly projecting hub of the cross bar, the opposite sides of the hub provided with transverse slots therein having the ends of a cross head detachably mounted therein which is revolubly mounted on the second boss, a plurality of retracting springs having their inner ends connected to the cross head, and their outer ends connected to the supporting bar.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN H. GLASENER.

Witnesses:

L. H. BEAM,
J. M. VEIRS.