

No. 868,129.

PATENTED OCT. 15, 1907.

D. ROWLAND.
WASHING MACHINE.
APPLICATION FILED NOV. 6, 1905.

3 SHEETS—SHEET 1.

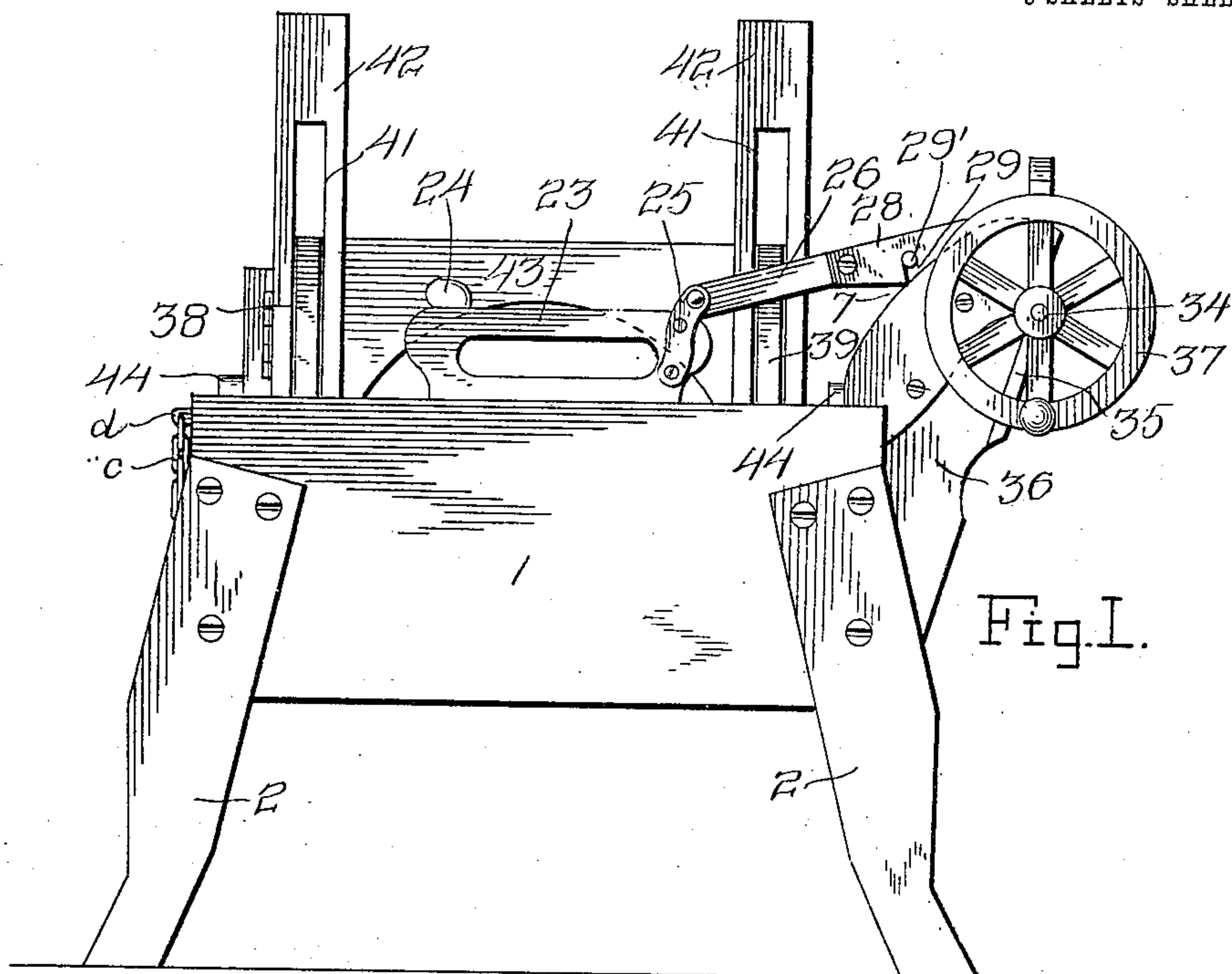


Fig. 1.

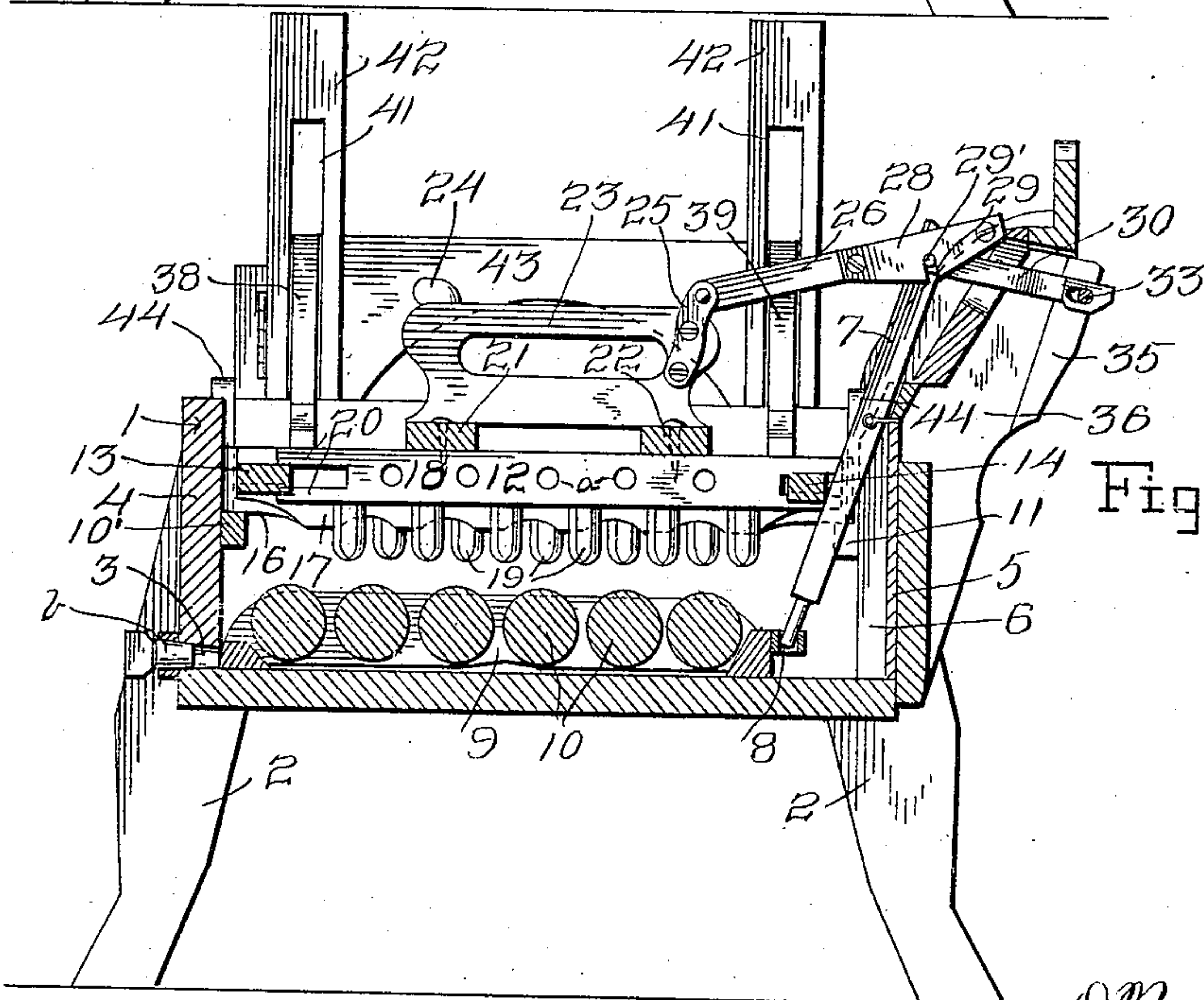


Fig. 2.

Witnesses

C. K. Reichenbach
J. C. Jones

Inventor

D. Rowland

By

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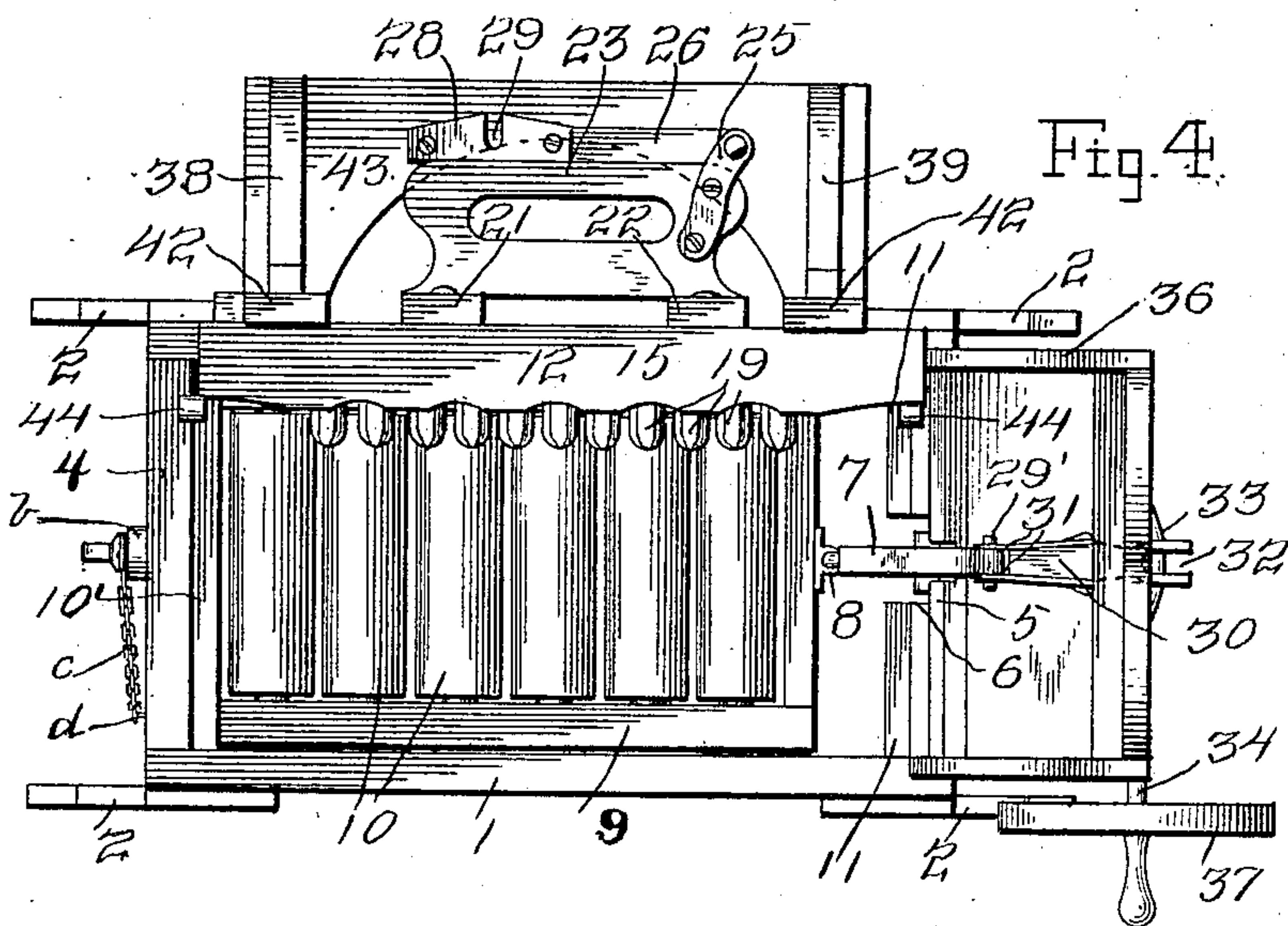
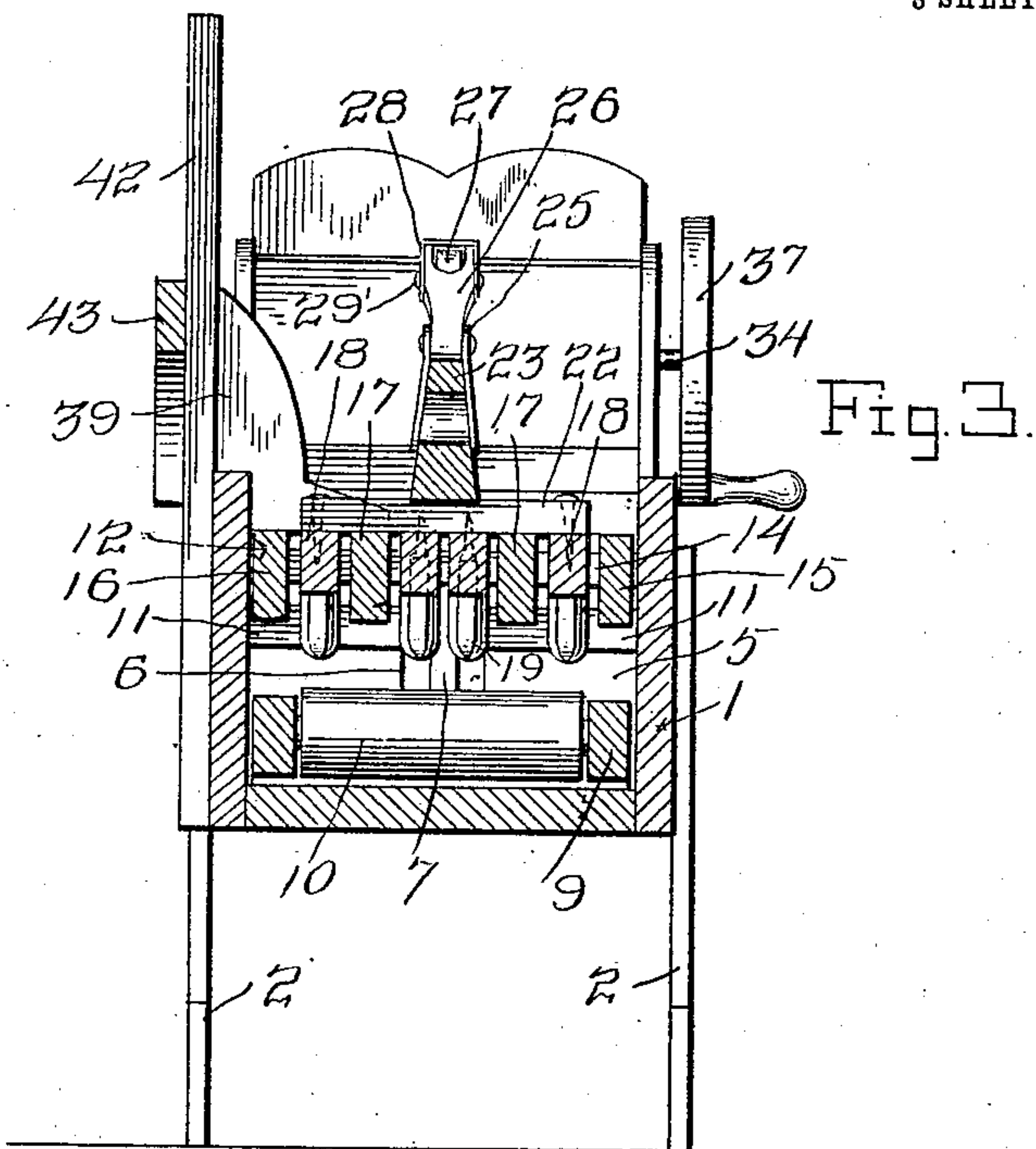
Attorneys

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3 SHEETS—SHEET 2.



Witnesses
C. K. Reinhardt
J. C. Jones

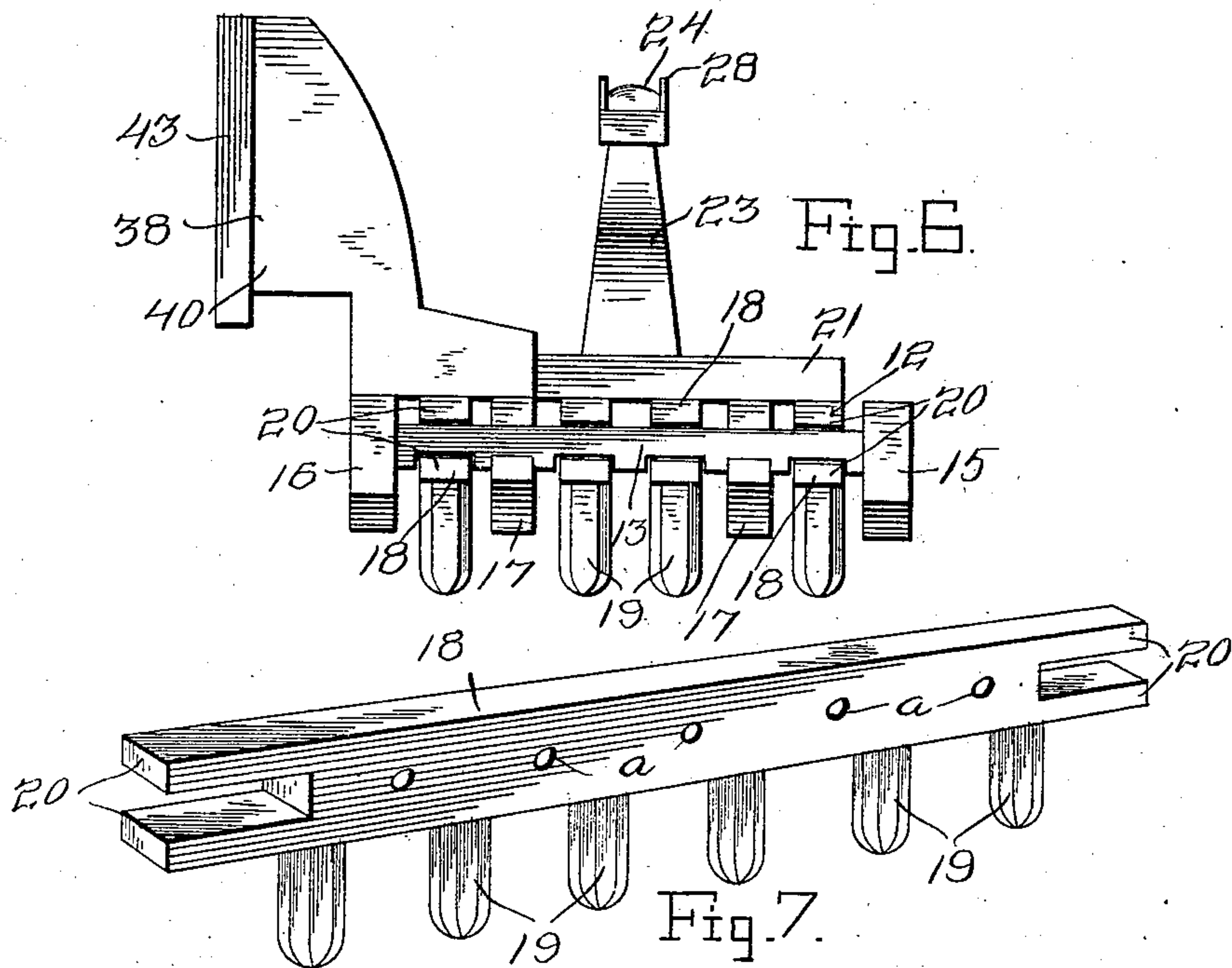
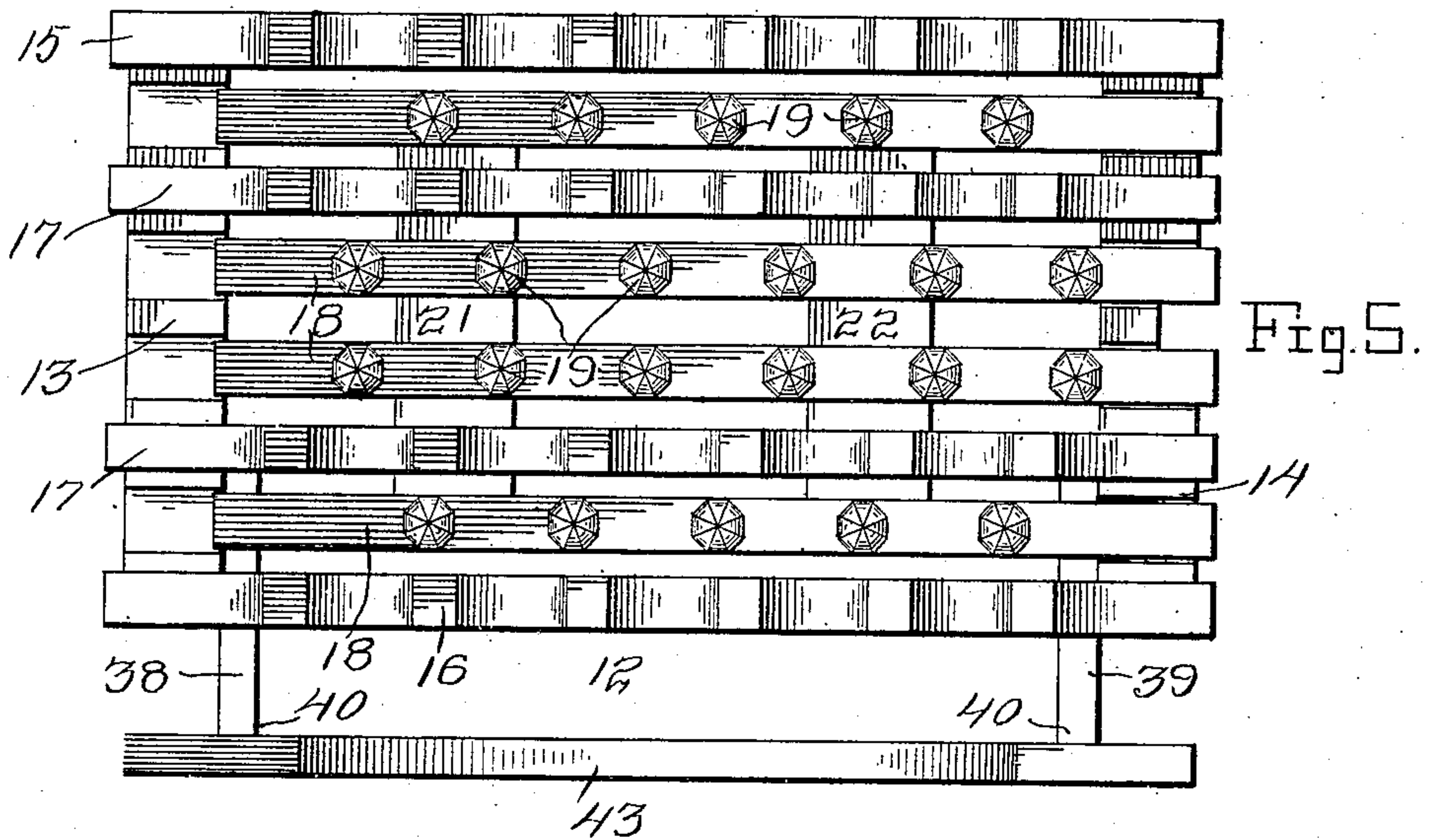
Inventor
D. Rowland.
By *Charles Chandler*
Attorneys

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3 SHEETS—SHEET 3.



Witnesses
B. H. Reichenbach.
J. C. Jones

Inventor
D. Rowland
By *Samuel Chandler*
Attorneys

UNITED STATES PATENT OFFICE.

DENTLER ROWLAND, OF LOUISVILLE, ILLINOIS.

WASHING-MACHINE.

No. 868,129.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed November 6, 1905. Serial No. 286,107.

To all whom it may concern:

Be it known that I, DENTLER ROWLAND, a citizen of the United States, residing at Louisville, in the county of Clay, State of Illinois, have invented certain new and useful Improvements in Washing-Machines; and I do hereby 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.

10 This invention relates to washing machines.

One object of the invention is to provide a comparatively simple, inexpensive durable and efficient machine for washing clothes.

15 Another object resides in the provision of a washing machine embodying such characteristics that the clothes may be rubbed between two surfaces moving in opposite directions without tearing the clothes.

20 With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size and minor details may be made, within the scope of the claims, without departing from the spirit or sacrificing any of the advantages of the invention.

25 In the drawings: Figure 1 is a side elevation of my invention in position for operating the upper and lower frames. Fig. 2 is a longitudinal sectional view. Fig. 3 is a central transverse sectional view. Fig. 4 is a top plan view illustrating the upper frame and the finger carrying bars lifted out of the box. Fig. 5 is a plan view of the upper frame. Fig. 6 is an end view of the upper frame. Fig. 7 is a detail view of one of the finger carrying bars.

30 Referring now more particularly to the accompanying drawings, the reference character 1 designates a box in which the clothes are washed and which is supported upon suitable legs 2, there being an opening 3 at the bottom of the end 4 for draining purposes. The inner face of the end 5 is provided with a vertical groove 6 in which is pivoted intermediate its ends a rocking arm 7 whose lower end is connected in the eye 8 of a sliding frame 9 which rests upon the bottom of the box 1 and which is provided with a series of rollers 10 designed to coöperate with other elements hereinafter referred to in the washing operation.

35 Mounted upon the inner face of the end 4 is a cleat 10' and upon the inner face of the end 5 are spaced cleats 11. These cleats are designed to support a second frame 12 made up of end pieces 13 and 14, side pieces 15 and 16 and intermediate strips 17, the sides 15 and 16 and intermediate strips 17 of the frame 12 being notched or concaved in series longitudinally of their length as shown. The end pieces 13 and 14 of the frame 12 have their under faces provided each with a series of alining

grooves to permit of a sliding movement of the finger carrying bars 18 provided each with a series of fingers 19 depending from its under face. Each end of each finger carrying bar 18 is bifurcated to form spaced ears 20 60 the lower of which engages in the corresponding groove in the under face of the corresponding end pieces 13 and 14 of the frame 12. It might be remarked that the aforesaid strips 17 have their ends bifurcated in the same manner as the finger carrying bars 18 and engaged with 65 corresponding grooves of the end pieces 13 and 14. However, the strips 17 are fixed while the finger carrying bars 18 have sliding movement longitudinally of the frame 12.

70 Connected to the upper faces of the finger carrying bars 18 are spaced cross braces 21 and 22 movable upon the strips 17 longitudinally thereof and arranged to bridge the cross braces and secured thereto is a handle 23 provided with an upwardly directed lug 24 at one end and spaced ears 25 at its opposite end for the pivot 75 reception of an arm 26 having a bifurcation 27 in its outer end embraced by a strip of metal or other suitable material forming depending ears 28 which are slotted as at 29 for engagement upon opposite sides of the aforesaid arm 7 and embrace the pivot pin 29' 80 projecting upon either side of the latter.

85 From the foregoing, it will be understood that the frames 9 and 12 each have connection with a vertical rocking arm 7 and consequently when this arm 7 is rocked, it is obvious that since the latter is pivoted intermediate its ends, there will result a movement of the frame 9 and the bars 18 in opposite directions. In order to accomplish such movement of the arm 7, I provide a link connection 30 having at its inner end spaced ears 31 for engagement with the aforesaid projecting pin 29' with its opposite end bifurcated at 32 90 and engaged with the crank bend 33 of the crank axle 34 which is mounted in suitable bearings 35 at the upper end of an inclined continuation 36 of the end 5 of the box 1. This crank shaft 34 is provided with a 95 suitable hand wheel 37 whereby rotation of the crank shaft 34 may result and occasion the movement of the arm 7, as described.

100 If desired, the bars 18 may be permitted to remain stationary while the lower frame 9 is moved forwardly and backwardly therebeneath. This is accomplished simply by disengaging the slotted ears at the outer end of the arm 26 from engagement with the aforesaid projecting pivot 29' and turn the said arm 29 back upon the top of the handle 23 so that its slot 27 may 105 engage over the aforesaid lug 24 of the handle. However, the disconnecting of the arm 26 from the arm 7 is mainly for the purpose of lifting the frame 12 out of the box 1.

110 It will be seen that the frame 12 is provided with spaced brackets 38 and 39 whose upward outwardly directed portions 40 project through the correspond-

ing slot 41 of uprights 42 secured to one side of the box 1, there being a member 43 bridging the said uprights 42 and secured with the outer faces of the projecting portions 40 of each of the brackets 38 and 39. Hence, 5 in order to lift the upper frame 12 out of the box 1, it is simply necessary to first disconnect the arm 26 from engagement with the rocking arm 7 and dispose said arm 26 with respect to the handle 23 as hereinbefore stated and then grasp the handle and lift the upper frame 12 even with the upper edges of the box 1 10 when the frame may be swung backwardly directing the brackets 38 and 39 through the said slots 41 of the uprights 42 and dispose the connecting member 43 in such position as to perform the function of a shelf. 15 When it is desired to place the frame 12 in its normal position in the box 1, it is simply necessary to swing the same inwardly without lifting it upwardly when the ends of the connecting member 43 will engage the corresponding uprights 42 and permit the upper 20 frame 12 to slide downwardly within the box to its normal position. It will be noted that I provide suitable vertical strips 44 secured to the inner faces of the ends 4 and 5 of the box, which together with the corresponding sides of the box 1 provide guides to 25 facilitate the proper positioning of the upper frame 12.

From the foregoing, it will be understood that by reason of the vertical sliding and swinging movement of the upper frame 12, the clothes may be readily inserted in the box for the rubbing action between the 30 frames and that the clothes may also be readily removed from the box. It will also be noted that the

finger bars 18 are each provided with a series of transverse perforations *a* to permit of circulation of water therethrough. It might be remarked, also, that a plug *b* is provided for the aforesaid drain opening 3 35 and that the plug is secured to a chain *c* secured at its opposite end to an eye *d* upon the outer face of the corresponding end of the box 1.

What is claimed is:

1. In a washing machine, the combination with a box, 40 of an arm pivoted in the box for movement in a vertical plane, a sliding frame located within the box, connections between said frame and the arm for movement of the frame when the arm is rocked, vertically slotted uprights 45 secured to the box, members slidably engaged in the uprights and extending into the box, a frame connected with said members, said members being movable in the uprights to permit of movement of the second named frame to extend vertically against the uprights, bars slidably mounted in the second frame, detachable connections between the 50 sliding bars of the second frame and the upper end of the arm for reciprocation of the bars when the arm is rocked, and means for rocking the arm.

2. In a washing machine, the combination with a box, 55 of a frame removably engaged in the box, vertically slotted uprights secured to the box, and brackets engaged in the slots and extending downwardly into the box and secured to the frame, said brackets being movable vertically in the slots to bring the frame out of the box and being movable through the slots to bring the frame 60 into vertical position against the uprights.

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

DENTLER ROWLAND

Witnesses:

H. H. CHESLEY,
H. J. COSSING.