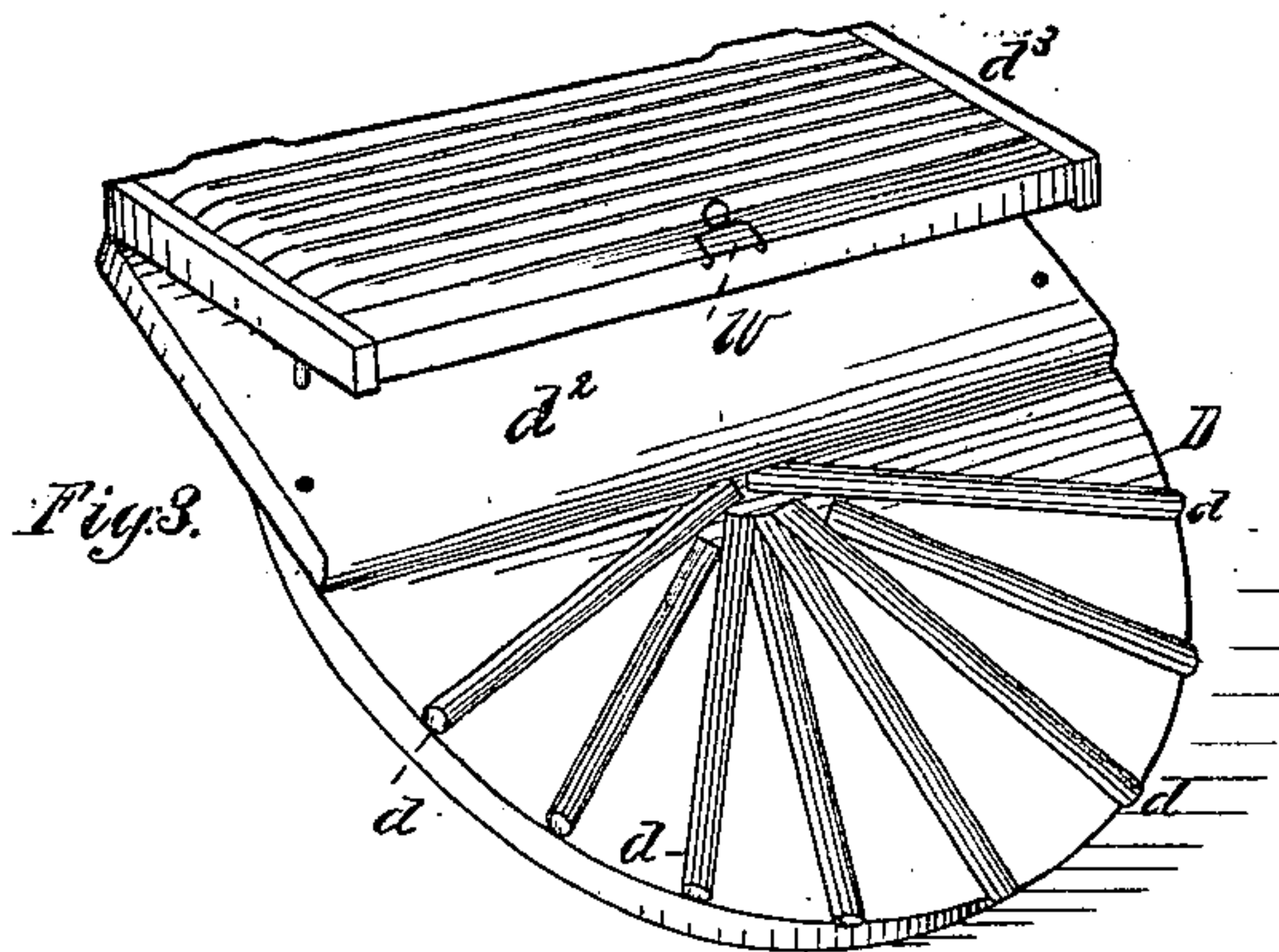
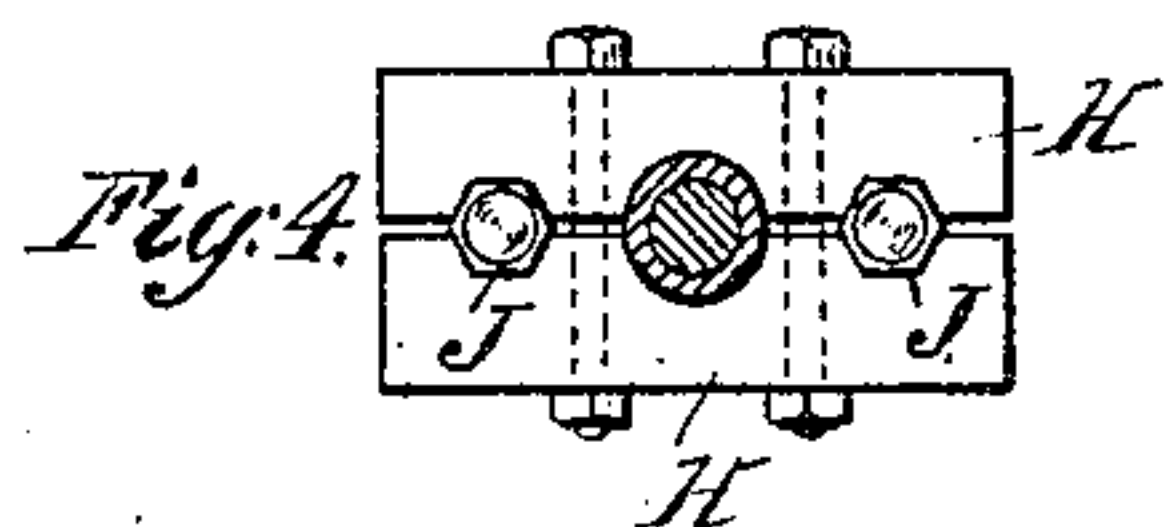
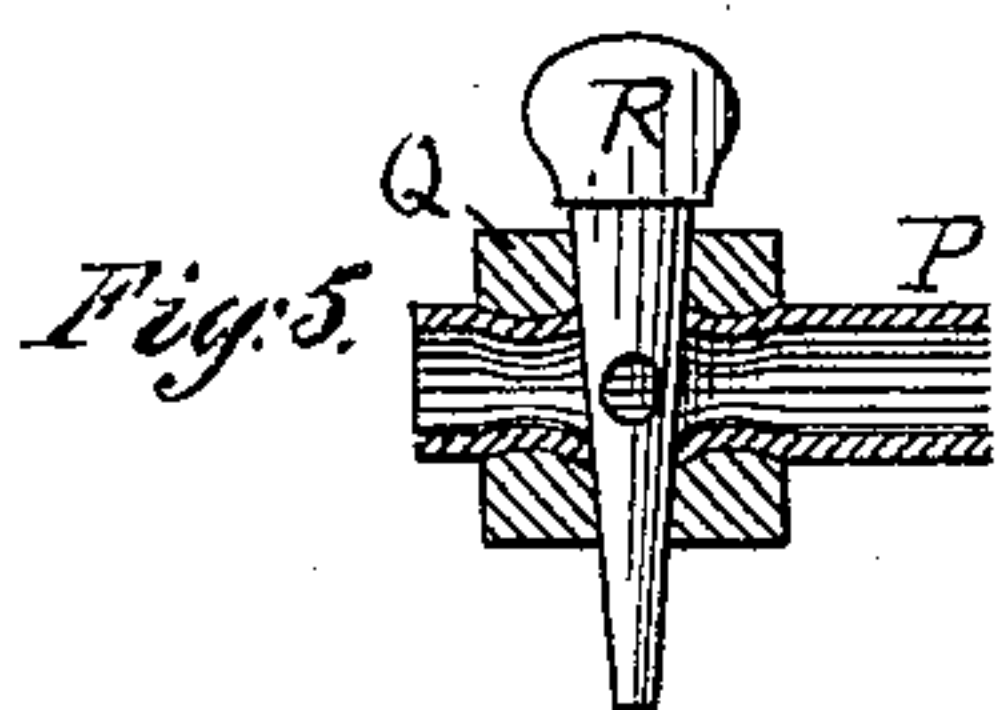
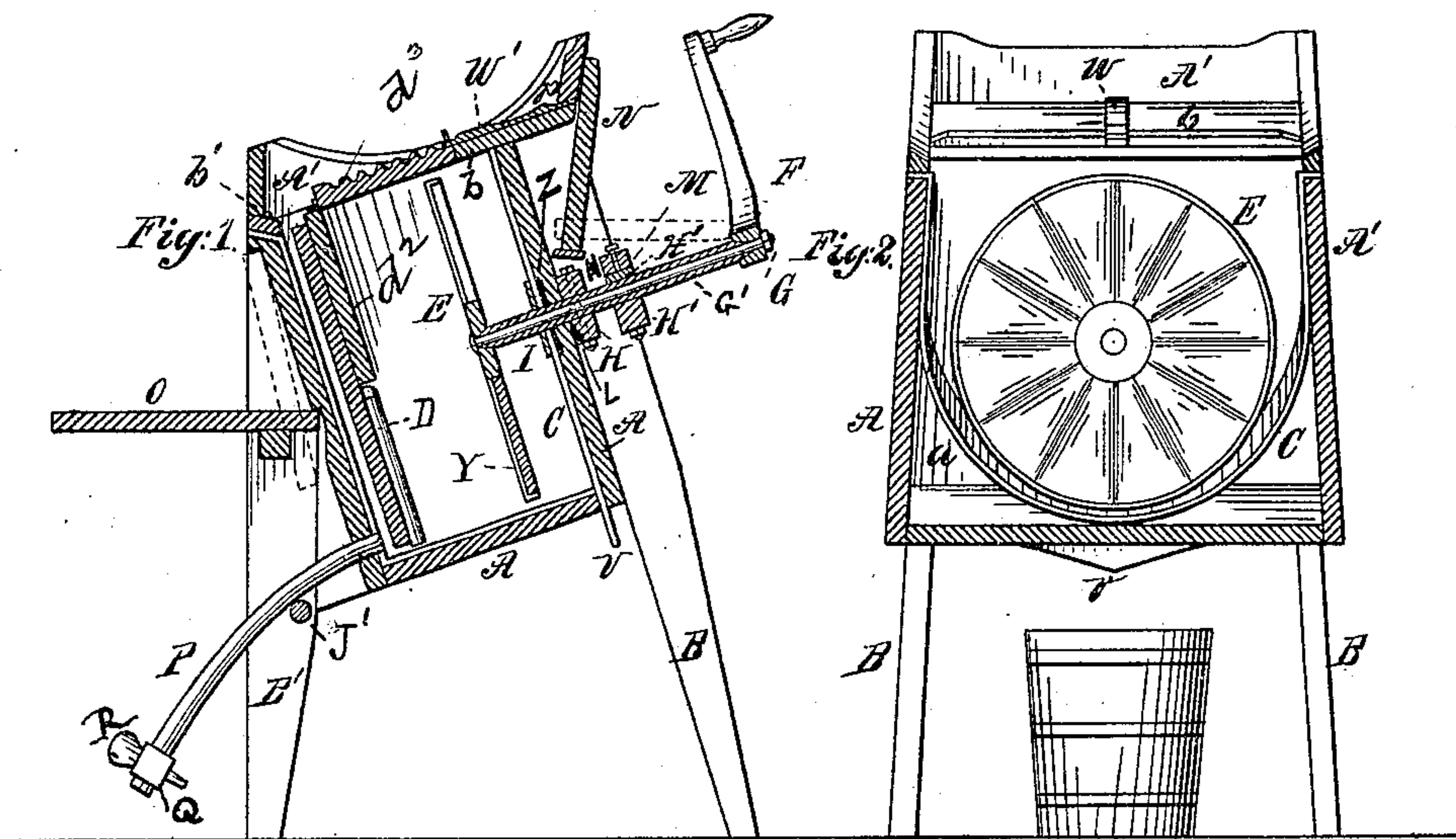


(No Model.)

B. F. FUCHS.
WASHING MACHINE.

No. 258,741.

Patented May 30, 1882.



Witnesses;
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att'y

UNITED STATES PATENT OFFICE.

BENJAMIN F. FUCHS, OF TIGER MILL, TEXAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 258,741, dated May 30, 1882.

Application filed September 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. FUCHS, of Tiger Mill, county of Burnet, and State of Texas, have invented certain new and useful
5 Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon,
10 making a part of this specification.

This invention relates to improvements in the circular-board washing-machine for which Letters Patent of the United States were granted to me, dated September 2, 1879, No.
15 219,245.

In this invention the principal effective features of my first washing-machine are retained—viz., the rotating disk or circular wash-board, faced with radial ribs and operated by
20 a crank which is supported in a plane parallel to the bottom of the box, so that the circular board shall rotate at a right angle thereto; the galvanized-sheet-iron inner box, made with a semi-cylindrical bottom to receive the circular wash-board; and the separate detachable
25 wash-board, provided with a semicircle of radial ribs, and which fits into the sheet-iron box opposite to the circular rotating board; and these are rendered more effective and useful by the
30 novel devices combined therewith as herein-after described.

In the accompanying drawings, Figure 1 is a central vertical section of the improved machine in the line of the crank-shaft. Fig. 2 is
35 a transverse sectional view; Fig. 3, a view of the detachable wash-board removed from the machine; Fig. 4, a detached elevation of the inner bearing-blocks supporting the crank-shaft, and Fig. 5 a detached view of the end
40 of the rubber discharge-tube and its block faucet.

A is the wooden box, made, as in the original machine, wider in its lower than in its upper part, and supported upon substantial legs B
45 B in such manner as that the box is inclined from front to rear, as shown in Fig. 1. This wooden box is lined with a galvanized-sheet-iron box, C, having a semi cylindrical bottom, as shown in Fig. 2. The air-space *a*, Fig. 2,
50 left between the iron and wooden boxes, owing to the difference in their configuration, serves as a non-conductor, and prevents the hot water in the inner box from cooling rapidly.

The upper edges of the inner sheet-iron box, C, are bent and folded down over the upper
55 edges of the outer wooden box, A. A top frame of wood, A', is fitted down upon these edges, and extends out front and rear beyond the outer edges of the box to the outer edges of its legs or supports, the intervening space
60 being covered by transverse inwardly-sloping ledges *b b'*. The rear ledge, *b'*, is narrow, and serves to run the water from the wringer, when placed upon the rear edge of the top frame, into the galvanized metal box; but the front ledge, *b*,
65 *b*, is made wide to extend inward over the box as well as outward, and serves to receive and hold the clothes which have been washed until they have been passed through the wringer, and while another lot is being put into the ma-
70 chine and being washed. The front and back pieces of the frame A' extend well up to facilitate the attachment of a wringer thereto, but are cut away centrally at the sides in an easy curve, as shown in Fig 1.

A detachable wash-board, D, Fig. 3, is made to fit snugly against the inner rear side of the sheet-iron box C, as shown in Fig. 1. This wash-board is constructed, as described in my
80 aforesaid patent, with a series of rounded ribs, *d d*, radiating from the center of the arc described by its lower semicircular edges to and beyond said edge. Upon the face of the upper half of the board, above the semicircle of radial
85 ribs, is secured a rectangular board, *d*², equal in length to the inside of the box, which will extend to the top thereof when in position therein, as shown in Fig. 1. To the upper edge of this board *d*² is hinged a second rectangular
90 board, *d*³, whose outer face is corrugated or ribbed to form a rubbing-surface. (See Fig. 3.)

When the semi-cylindrical wash-board D is inserted in place within the machine against its inner rear side the rubbing-board *d*³, hinged to its upper edge, may be lifted and be secured
95 by a ring or catch, W, to a wooden spring, W', on top, extending with its lower end over the edge of the ledge *b*. The rubbing-board will then form a close lid for the box to prevent an escape of steam and heat therefrom while the
100 clothes are being washed therein. The clothes may also be rubbed thereon when in this position while another lot is placed in the machine and washed. E is the circular wash-board, upon the face of which are formed a series of
105 radial ribs or corrugations, wider at their outer

than at their inner ends, as shown in Fig. 2. This circular radially-corrugated board is provided with a smooth rim, and may be made of galvanized iron or of toughened glass or of wood. It is attached to a crank, F, by means of a long bolt-rod, G. The head of this bolt-rod bears centrally against the inner face of the disk, and its outer end passes through the eye of the crank. A piece of metallic tubing, G', is slipped over the bolt. Its ends are tapered and fit into conical recesses in the outer face of the disk and crank, respectively, so that when the nut is screwed up upon the outer end of the bolt G it will draw up the disk and crank tightly and firmly upon the conical ends of the tube.

The corrugated disk or rotating wash-board E is weighted upon one side at Y sufficiently to counterbalance the weight of the crank F and the weight of the operator's arm, and the crank is so set as that when the disk is at rest it will be thrown up by the weight thereof, as shown in Fig. 1.

The crank-shaft rotates and has horizontal play in two adjustable bearings formed between the bearing-blocks H H' H' H', of which the inner pair, H H, are held against the side of the machine by means of bolts J J, projecting through the side on the same plane with the shaft from a journal face-plate, I, on the inner face of the machine. A rubber gasket, Z, is inserted around the shaft between the side of the outer box, A, and the inner iron box, C. The bolts J J pass likewise through this gasket, and a water-tight joint is secured thereby around the shaft and bolts between the two boxes to prevent the foam from running down between them. A recess, L, is cut away centrally in the lower bearing-block to prevent any water which might otherwise collect about the bearing to drip away.

The outer journal-blocks, H' H', are suspended by bolts from a transverse bar, M, secured to the outer face of the front legs of the machine, as shown in Fig. 1. Above this outer bar, M, a tilting board, N, is pivoted by means of a transverse rod, so as to admit of being swung up against the front of the machine, as shown in positive lines, Fig. 1, or to be dropped, so that its outer end will rest upon and be supported by the crank-shaft G', as shown by the dotted lines. When thus dropped the tilting board serves as a brace to prevent the crank-shaft G' and its rotating wash-board E from working or slipping inward when the clothes are being put in or taken out. It also serves to prevent the clothing from dropping upon and getting soiled by the crank-shaft G' when it is drawn out. A second tilting board, O, extending across the width of the machine is pivoted on its rear side between the two rear legs, B', to fold up against the rear side or drop down therefrom on a level, as shown in Fig. 1.

A rubber tube, P, is connected to the rear side of the machine near the bottom, the inner end of the tube being slipped over a spout sol-

dered to the lower edge of the galvanized tub, and projecting from the side, so as to make a tight joint. The outer end of this tube is carried through a wooden block, Q, and is held therein by a pin, R, fitted in a central transverse opening in the block, and which is forced through the rubber tube at right angles thereto until a hole through the pin is brought into register with the bore of the tube. The pin R thus operates as a key or valve for the tube, and the device serves as a cock to control the discharge of the water from the machine. By fitting the outer end of the tube upon the spout of a boiling kettle it may be used to carry steam into the machine, and thus facilitate the cleansing of the clothes therein. The edges of the openings through the block at the intersection of the key-seat are flared outwardly, so that the tube may, by its expansion at this point, permit the aperture through the key to be made as large as the bore of the hose.

In using this improved machine it is filled with hot water sufficient to cover the clothes which are placed therein to be washed between the revolving and stationary wash-boards, the longitudinal movement of the shaft of the revolving board permitting it to play, so it always presses against the clothes without injuring them. The machine is then closed by means of the hinged lid d^3 , and the clothes cleansed by rotating the board E back and forth through two-thirds of a revolution by means of the crank F. The counter-weight by which the crank and the weight of the operator's arms are balanced greatly facilitates this operation, as it serves to raise the crank in its upright position without effort.

When the clothes are cleansed the rotating board is drawn back by means of its shaft into the position shown in Fig. 1, and is then secured by dropping the tilting board N to engage the crank. The clothes are then hooked out with a suitable hook and placed upon the ledge b to drain and cool, while another lot may be washed. From this ledge they are led through the wringer fastened upon the rear edge of the machine, and may drop upon the rear tilting board, O.

If desired, the wringer may be attached to the front edge of the machine and the clothes wrung out upon the front tilting board, N.

The hand rubbing-board d^3 may be used either when fixed to serve as a cover, as shown in Fig. 1, or dropped into the wash-board D, as shown in Fig. 3. The tube P, when not in use, is supported upon a cross-bar, J'.

A pail may be suspended under the crank-shaft to catch any drippings from the shaft, and a metal strip, V, is arranged to lead the dripping to this central point in front.

What I claim as new, and desire to secure by Letters Patent, is—

1. An attachment for a washing-machine, consisting of the wash-board D, provided or formed with a rectangular board, d^2 , and a rectangular board, d^3 , hinged to the upper end of the board d^2 of the wash-board D, and pro-

vided with a rubbing-surface, substantially as described.

2. In a washing-machine of the class described, having a longitudinal moving disk and
5 crank-shaft, the tilting board serving a two-fold purpose—to wit, a brace to prevent the crank-shaft and its rotating disk from moving longitudinally and a guard for the dropped clothes—substantially as described.

10 3. In a washing-machine, the combination, with the wash-board D, of the endwise-moving

rotating wash-board E, provided with a crank and a balance-weight, substantially as and for the purpose stated.

In testimony whereof I have signed my name 15
to this specification in the presence of two subscribing witnesses.

B. F. FUCHS,

Witnesses:

M. J. MCSWEEN,
D. L. LUCE.