

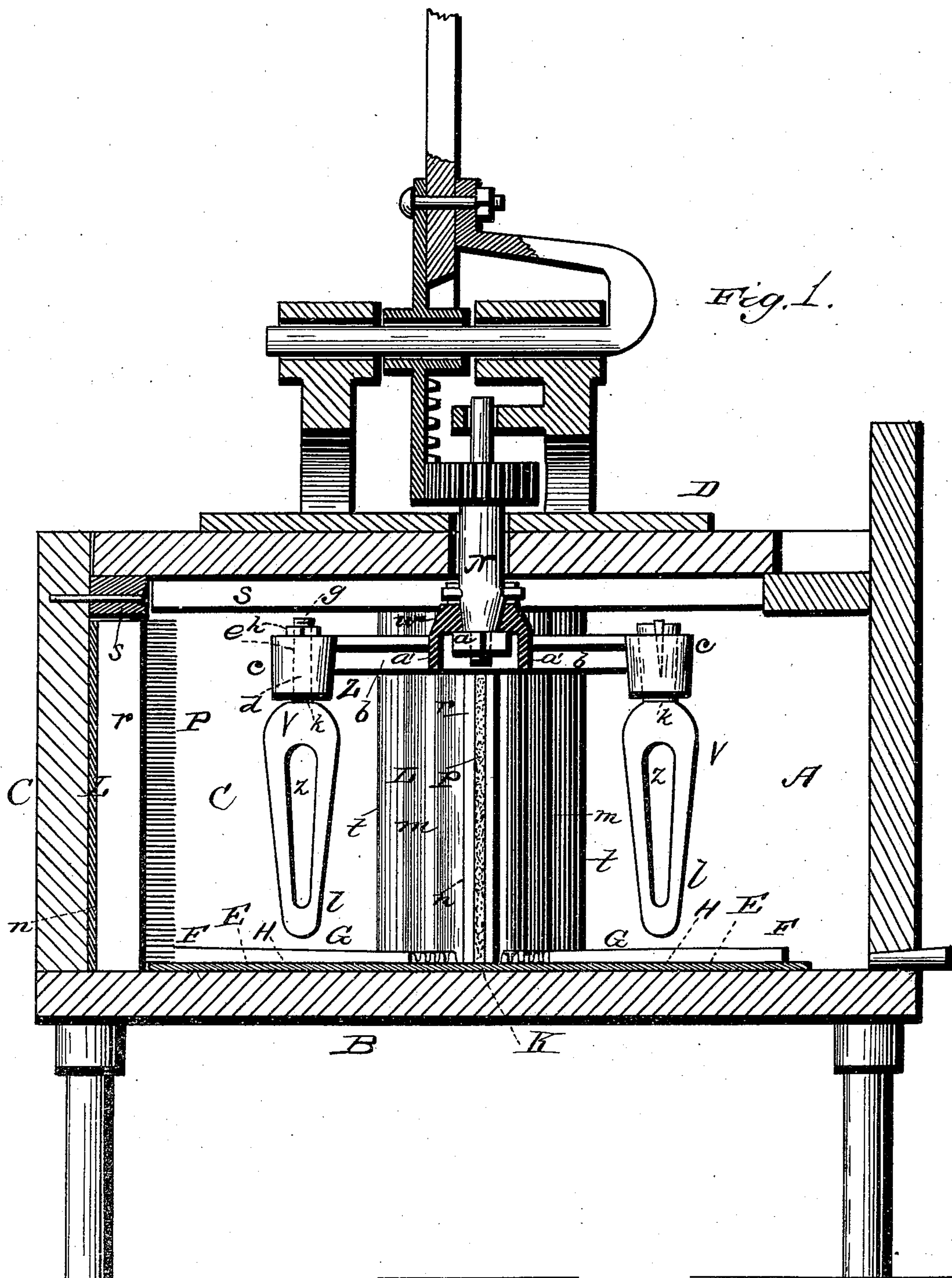
(No Model.)

2 Sheets—Sheet 1.

L. K. DUTTON.
WASHING MACHINE.

No. 313,407.

Patented Mar. 3, 1885.



WITNESSES

E. H. Bates
John F. Morrow

INVENTOR

L. K. Dutton
by Audley J. Smith
his ATTORNEYS

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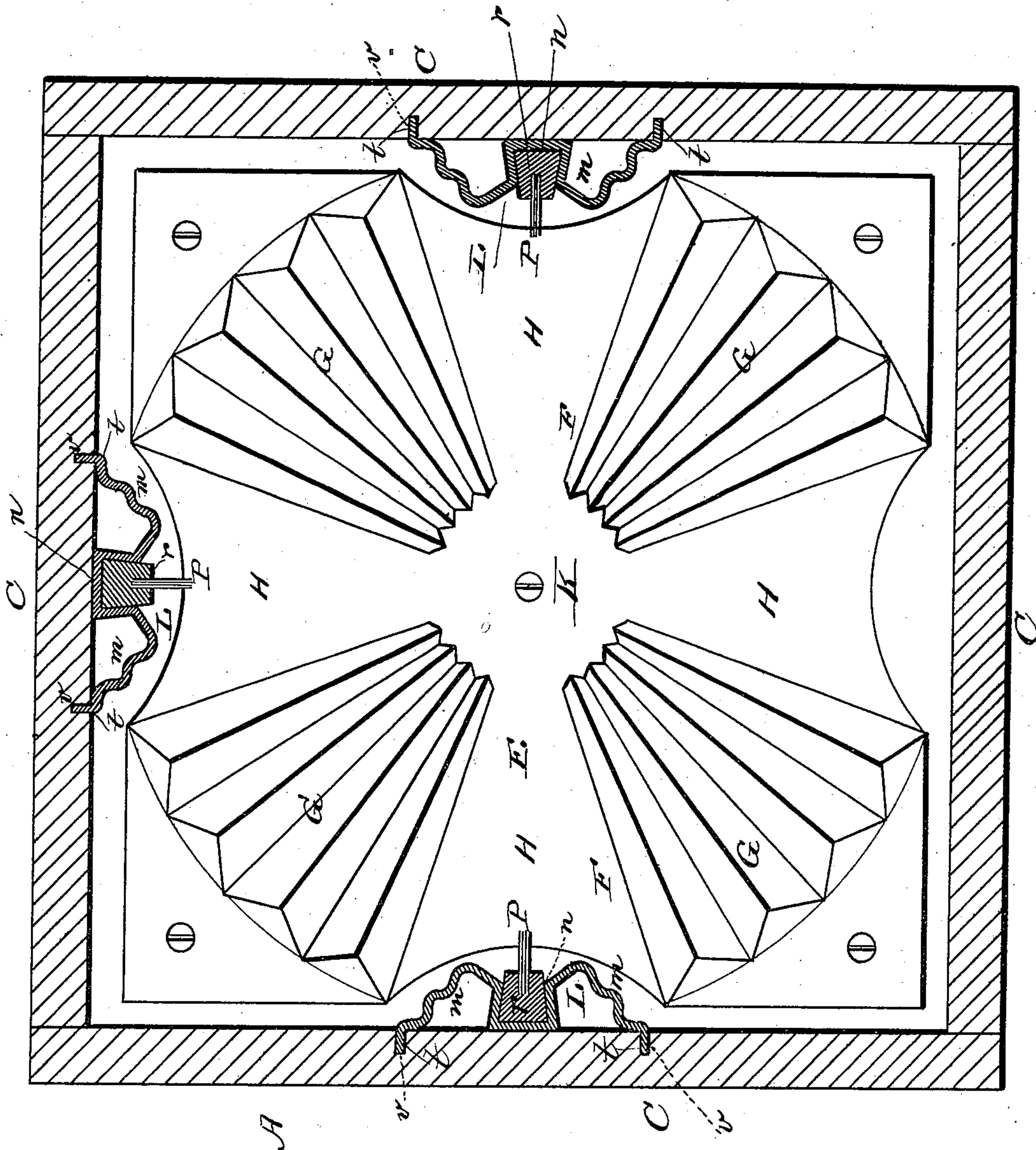


Fig. 2.

WITNESSES
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INVENTOR
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UNITED STATES PATENT OFFICE.

LEANDER K. DUTTON, OF OSKALOOSA, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 313,407, dated March 3, 1885.

Application filed January 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, LEANDER K. DUTTON, a citizen of the United States, residing at Oskaloosa, in the county of Mahaska and State of Iowa, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical sectional view of my device, and Fig. 2 is a longitudinal sectional view of the same.

This invention has relation to washing-machines; and it consists in the construction and novel arrangement of the zinc bottom-plate, stamped with alternate sector-shaped series of corrugations tapering toward the center, and smooth sector-shaped intervals; and of the corrugated zinc rubbers on the sides of the box or tub, having each a dovetail recess to receive the body of a brush located in the middle of the rubber, all as hereinafter set forth.

In the accompanying drawings, the letter A designates the box or tub, having the bottom B and side walls, C.

D is the top through which passes the vertical pinion-shaft.

E represents the zinc bottom-plate, which is designed to be cut usually a little smaller than the bottom of the tub, a marginal interval of an inch or more being left, so that the plate may be nailed or screwed to the bottom B with facility, and so that it will be perfectly flat, and without wrinkles. The plate E is pressed or stamped to provide sector-shaped series F of corrugations G, which alternate with sector-shaped smooth intervals H, these corrugated places and smooth places being radially arranged about a smooth center, K. The corrugations G are radial and taper from their outer ends toward the center, as shown. The plate is made in this form so that the clothes or articles being washed will, as they are carried around in the water by the pins of the stirrer, be alternately operated upon by the rubbers and relaxed, the loosening or relaxation being designed to allow the clothes to fall at intervals, so as to bring them into more

intimate engagement with the rubbing corrugations, and to change their position somewhat as they pass from one series of corrugations to another.

L L indicate the side rubbers, usually three in number, arranged upon three sides of the box or tub. Each rubber consists of a strip of zinc, having on each side corrugations *m*, extending vertically, and between these a central longitudinal recess, *n*, of dovetail form, adapted to receive and hold a brush, P, which projects beyond the plate. The body of this brush (indicated at *r*) is made in dovetail form, so that it can be easily passed into the dovetail channel or recess *n* of the plate, and readily withdrawn therefrom when necessary. A strip or stop-piece, *s*, nailed or screwed to the box, is sufficient to hold the brush down, and can be readily taken off when it is desired to remove the brush. The side edges, *t*, of the plate L are bent backward and engage vertical gains *v* in the tub-wall. These side flanges, *t*, and gains are usually sufficient to hold the plates, the central channel abutting against the wall.

N represents the vertical pinion-shaft, upon the lower end of which is applied the triple-armed stirrer-frame Z, which is made with a central eye or hub, *w*, and is secured to the shaft by means of a nut, *a*, applied to the threaded lower end of the shaft. Each arm *b* of the stirrer-frame is formed with a deep socket, *c*, at its end, opening downward and serving to receive the tang *d* of the pin V, which extends downward into the tub, and is designed to engage the clothes and carry them around when the shaft is turned. Usually the upper end of each socket *c* is provided with an aperture, *e*, through which a threaded extremity, *g*, of the tang *d* projects, and a nut, *h*, is applied thereon to hold the pin securely in position.

The pins V may be made smooth and tapering, or in other common form; but it is preferred to make them in flattened tapering form, and with a longitudinal opening or slot, *z*, extending from a short distance below the shoulder *k* to near the lower end, *l*. These link-form pins are designed to be very durable and very effective in their operation.

The frame Z and the pins are designed to be made of malleable iron and galvanized.

When the pins are made of wood, the arm-sockets are made open at top, and the ends of the pins are secured therein by wedging a small piece of wood in a cleft made in the top 5 of the pin.

The hub of the metallic stirrer-frame is provided with an annular flange extending downward from its under side, forming a recess deep enough to receive the nut which secures 10 the frame to the shaft. This annular flange *a'* serves as a guard to prevent the clothes in the tub from coming in contact with the nut in such a manner as to be injured.

Having described this invention, what I 15 claim, and desire to secure by Letters Patent, is—

1. The zinc bottom formed from a single plate having stamped therein alternate sector-shaped series of corrugations tapering toward 20 the center, and smooth sector-shaped intervals, substantially as specified.

2. The combination of the corrugated zinc side rubber having a central vertical dovetail

recess and adapted to be secured to a tub, and the brush having a dovetail body, substan- 25 tially as specified.

3. The combination, with a corrugated zinc side rubber having lateral marginal flanges extending backward, and a central dovetail recess, of the detachable brush having a body 30 of dovetail form, and the tub having the vertical gains, substantially as specified.

4. As an organized element of machines of the character set forth, the corrugated zinc rubber having a central dovetail recess, with 35 the vertical corrugations on opposite sides thereof, and their ends bent backwardly to be secured in the side walls of a tub, substantially as specified.

In testimony whereof I affix my signature in 40 presence of two witnesses.

LEANDER K. DUTTON.

Witnesses:

W. F. HINESLEY,
W. E. BENTON.