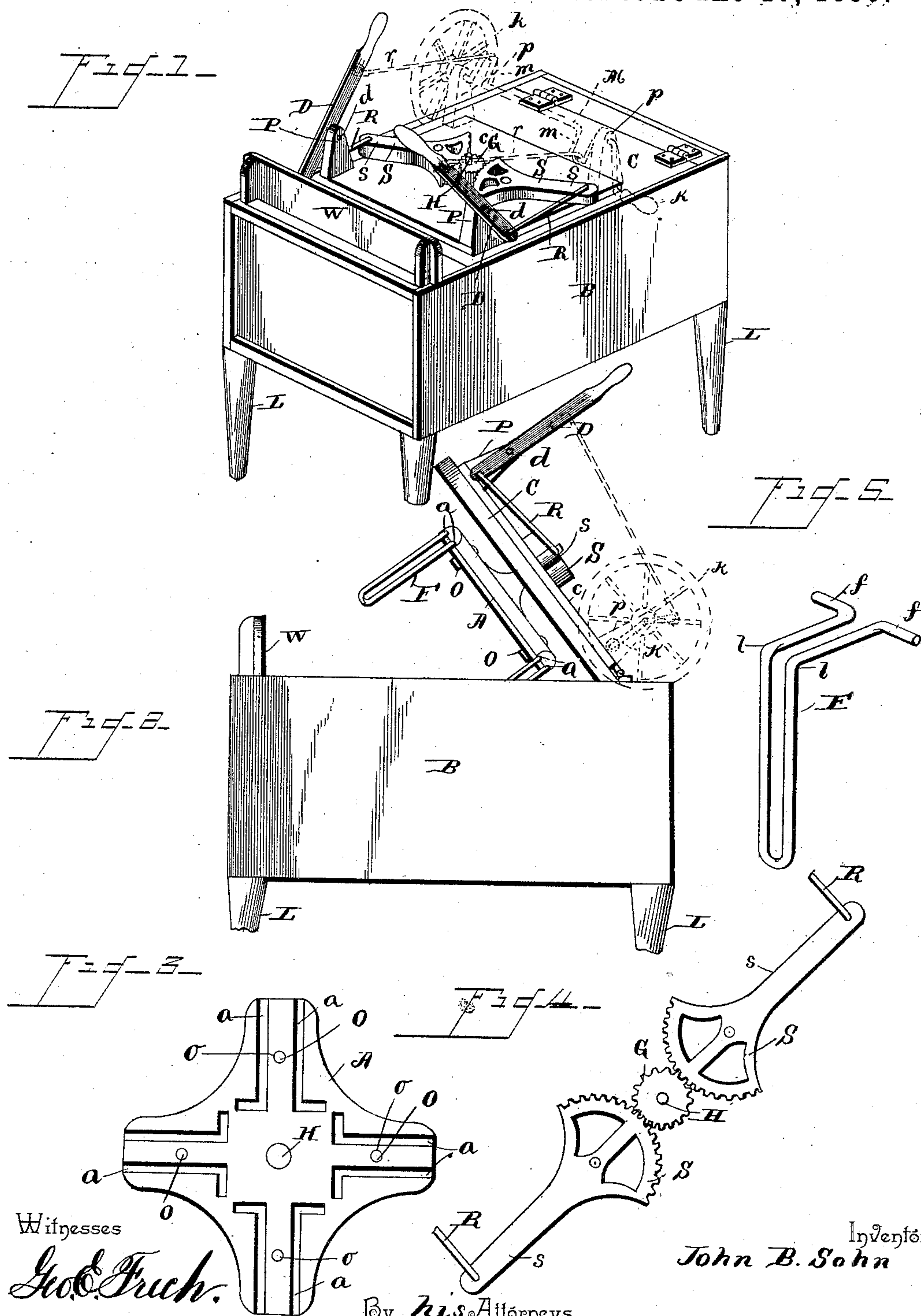


(No Model.)

J. B. SOHN.
 WASHING MACHINE.

No. 430,548.

Patented June 17, 1890.



Witnesses

Geo. C. Frick.

A. J. Collamer.

By *his* Attorneys,

Inventor
John B. Sohn

Chas. Snow & Co.

UNITED STATES PATENT OFFICE.

JOHN B. SOHN, OF FRESNO CITY, CALIFORNIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 430,548, dated June 17, 1890.

Application filed February 12, 1890. Serial No. 340,142. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. SOHN, a citizen of the United States, residing at Fresno City, in the county of Fresno and State of California, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing-machines, more particularly of that class known as "agitators;" and the invention consists of a body having a hinged lid, an agitator journaled in said lid and having a pinion on the upper edge of its shaft, toothed segments pivoted on each side of said pinion and engaging therewith, and operating-levers connected by pitman-rods with said segments, whereby a device is produced which will not only answer all the requirements of an ordinary washing-machine, but will be simple in its action, durable in use, and inexpensive in manufacture.

In carrying out the end desired the invention also consists in certain details of construction and arrangement of parts that will be hereinafter more fully described.

In the accompanying drawings, Figure 1 is a perspective view of my improved washing-machine, showing the rotary mechanism in dotted lines. Fig. 2 is a side view of the same with the cover raised. Fig. 3 is an enlarged detail of the agitator-head. Fig. 4 is an enlarged plan view of the operating mechanism. Fig. 5 is an enlarged perspective detail of one of the agitator-arms.

The letter B designates a box or body of any suitable size or shape, supported on legs L, and having at one end an upward projection W, to which a wringer may be attached, when desired. A cover C is hinged to the upper edge of the body B, preferably at the other end thereof, as shown, and upon this cover is secured the casting c, which supports the operating mechanism of the machine.

In Fig. 1 I have shown in full lines two posts P, rising from the casting c, and in dotted lines two other posts p, rising from said casting at its opposite end. It is to be understood that these posts are preferably cast integral with the casting c, and one or both pairs of them may be used according as it is desired to operate the machine by means of reciprocating levers or by means of a crank.

The full lines represent the device as operated by the former means, and the dotted lines represent the mechanism that must be added if it is desired to use the rotary form of driving-power.

The letter A designates the agitator-head, which is composed of an upper member having L-shaped outwardly-opening slots a in its under face, as shown in Fig. 3, and of a lower member which is adapted to be clamped against the lower face of the upper member by bolts O, passing through registering holes o in the two members, and when in such clamped position to close the open lower faces of said L-shaped slots.

The letter F designates the agitator-arms, which are preferably composed of quarter-inch galvanized wire bent into the form of loops, their bodies projecting downwardly, their upper ends being bent laterally as at l, and their extreme tips being provided with feet f, which fit into the lateral extensions of the L-shaped slots a, all as clearly shown in Fig. 3.

The agitator-head A is mounted on a main shaft H, which is journaled in the casting c, and extends upwardly therethrough. Keyed upon said main shaft H, on the upper side of the casting, is a gear-wheel G, as shown in Fig. 4, and pivoted at either side of said gear-wheel are the segments S, whose faces are toothed, as shown, so as to engage with the teeth on the gear G. The outer arms s of the segments S extend beyond their pivots and are connected by pitman-rods R with the lower ends of the driving-levers D. These driving-levers are pivoted, as at d, in the upper ends of the posts P, as shown in Figs. 1 and 2. By this arrangement it will be obvious that when the driving-levers are grasped by the operator and oppositely manipulated the segments will be oppositely-moved simultaneously, and the gear G will be given a reciprocatory revolution, the number of complete revolutions in either direction being governed by the relative number of teeth upon said gear and upon the segments. It will be obvious that one of said levers may be used, and the machine will be driven thereby, the opposite segment imparting a motion to the opposite lever exactly reverse to that of the lever being used; but this con-

struction is especially advantageous when a large number or a large weight of pieces of soiled clothing are to be washed, because the levers can be operated by different persons. 5 It is also advantageous in that the levers having motions in opposite directions simultaneously, their operation, especially when there is great resistance offered, will not tend to rock the machine back and forth on its 10 supporting-legs, nor to strain the body so that it will be caused to leak, because the motion of one lever in one direction and the force applied in moving it is counterbalanced by the motion of the other lever and the force 15 applied thereto.

It sometimes occurs that the operator may desire to employ a rotary movement or mechanism for driving the washing-machine, and in Fig. 1 I have shown the mechanism for accomplishing this, the same being illustrated in 20 dotted lines. In this case the casting *c* is provided with the additional post *p*, and in the upper ends of these posts is journaled the main driving-shaft *M*, having two cranks *m* 25 disposed on opposite sides of its center of rotation. The shaft is provided at one end (or at both ends, if desired) with a crank *K*, and also, if desired, with a weighted balance-wheel *k*. Connecting-rods *r* connect the cranks *m* 30 with driving-levers *D* at suitable points, all as clearly illustrated, and the operation of the entire mechanism is precisely the same, except that the force which reciprocates the driving-levers is imparted by the crank-shaft *M* 35 instead of by hand, the power of the operator being applied to the handle *K*, and in a rotary direction instead of to the driving-levers *D*.

Having described my invention, what I claim is—

40 1. In a washing-machine, the combination, with the agitator mounted on the main shaft and a gear-wheel keyed thereon, of segments pivoted at either side of said gear and simul-

taneously engaging it, driving-levers centrally pivoted in suitable supports, pitman-rods 45 connecting the lower ends of said levers with the outer ends of said segments, a rotary driving-shaft having oppositely-disposed cranks, and connecting-rods connecting the upper ends of said levers with said cranks, 50 substantially as described.

2. In a washing-machine, the combination, with the body and the hinged cover, of the casting *c*, secured on said cover and having upright posts, the agitator *A*, secured to the 55 lower end of the main shaft *H*, said shaft being journaled in said casting, the gear *G*, keyed to the upper end of said shaft, the segments *S*, pivoted in the upper face of said casting at opposite sides of said gear and simultaneously engaging the same, said seg- 60 ments having outwardly-projecting arms *s*, and the driving-levers *D*, supported by said posts and connected at their lower ends with the outer arms of the segments, all substantially as described. 65

3. In a washing-machine, the combination, with the main driving-shaft *H* and means, substantially as described, for oscillating it, of the agitator-head *A*, the same comprising an 70 upper member having in its lower face horizontal open L-shaped recesses *a*, agitator-arms *F*, comprising independent looped wires having horizontal upper ends, with feet *f* engaging said L-shaped recesses, and a lower mem- 75 ber removably clamped against the lower face of said upper member and closing said recesses, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 80 presence of two witnesses.

JOHN B. SOHN.

Witnesses:

SETH S. CULVER,
C. C. HARRIS.