

No. 652,841.

Patented July 3, 1900.

Z. GAILLARD.
CLOTHES WASHING MACHINE.

(Application filed Apr. 5, 1899.)

(No Model.)

Fig. 2.

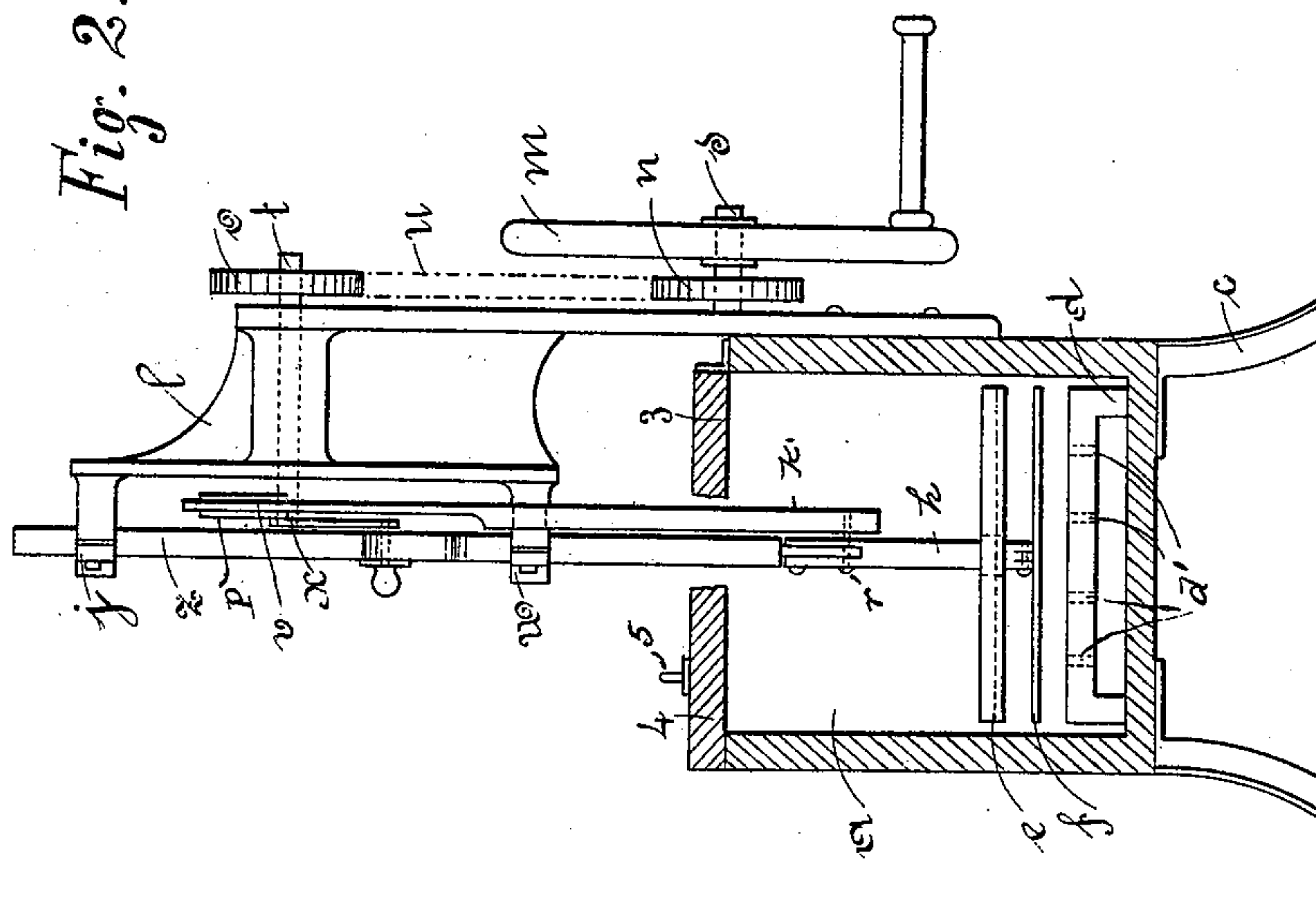
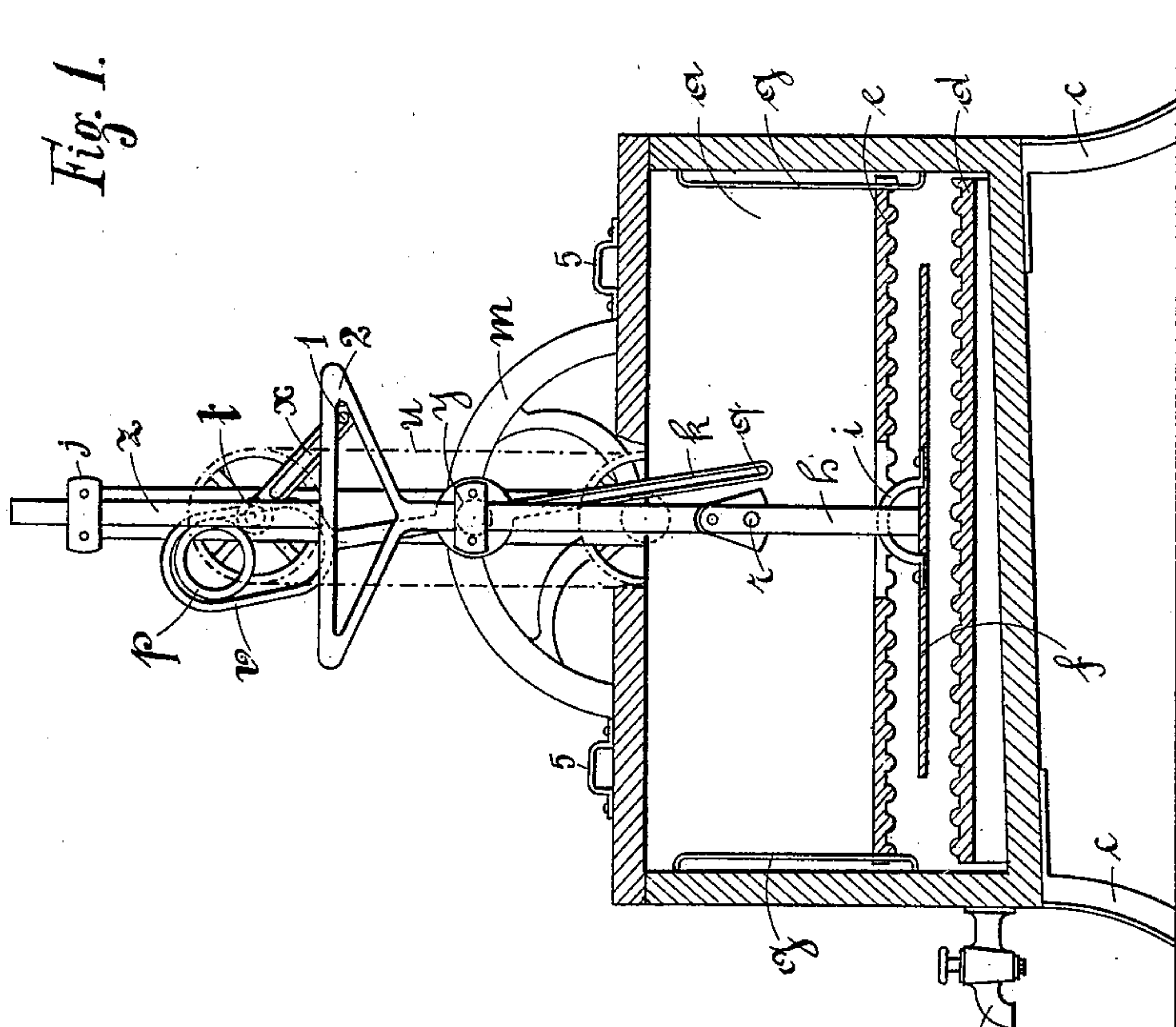


Fig. 1.



Witnesses:
Joe A. Richmond
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UNITED STATES PATENT OFFICE.

ZÉNAÏDE GAILLARD, OF LA ROCHE, FRANCE.

CLOTHES-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,841, dated July 3, 1900.

Application filed April 5, 1899. Serial No. 711,838. (No model.)

To all whom it may concern:

Be it known that I, ZÉNAÏDE GAILLARD, a citizen of the French Republic, residing at La Roche, Haute-Savoie, France, have invented certain new and useful Improvements in Clothes-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.

The present invention relates to a clothes-washing machine which comprises a washing-vat provided with an interiorly-corrugated bottom and in which a hinged plate is moving between the stationary bottom of the vat and a second horizontal movable plate which has its under side corrugated and which may be raised or lowered, as desired, with the hinged plate. Both vertical and transverse motions of the hinged plate are obtained by means of a crank and eccentric acting mechanism, so that the clothes which are attached to the hinged plate, so as to surround the same, are first rubbed between the corrugated plates, owing to the transverse motion, and then beaten between these plates, owing to the vertical motion, these two motions combined effecting finally the washing.

In the example given in the annexed drawings, Figure 1 is a front elevation of the machine with sectional view of the vat. Fig. 2 is a side view, partly in section, of the machine.

a is the vat, which rests on stands *c* and the bottom of which slopes in order to facilitate the evacuation of the water through the tap *b*. A plate *d*, corrugated on its upper side, is fixed on the bottom of the vat and is provided with holes *d'* for the passage of the water, while a second plate *e*, which is corrugated on its underside, can move vertically on guide-rods *g*.

The clothes-carrying plate *f* is located between two corrugated plates *d e* and is coupled to a swinging rod *h* by a curved rod or strap *i*.

The actuating mechanism is supported on a frame *l*, secured to one side of the vat *a* and carrying at its lower part the actuating-shaft *s*, on which is secured a fly-wheel *m*, with a crank-handle and a toothed wheel *n*. At the upper part of said frame is a sleeve, in which

turns a shaft *t*, provided with a toothed wheel *o*, which receives its motion from the pinion *n* by means of a chain *u*. The shaft *t* carries at its inner end a crank *x* and an eccentric disk *p*, having a yoke *v*, the latter supporting at its lower part a rod *k*, provided with a slot *q* and pivoted on the axle *y*. The eccentric disk communicates to the rod *k* a reciprocating motion around the said axle *y*, and this motion is transmitted to the rod *h* and to the clothes-carrying plate *f* by means of a removable pin *r*, which engages the groove *q* of the rod *k*. Furthermore, the rod *z*, which is in front of the eccentric-rod, is guided in bearings *j w* on the frame *l* and receives a reciprocating vertical motion from the crank *x*, which is provided with a stud *1*, engaging the triangular opening *2* of the rod *z*. At the lower end of the latter is pivotally connected the rod *h*, to which is attached the clothes-carrying plate.

Both the stationary plate *d* and movable plate *e* have their corrugations parallel to each other and at right angles to the direction of motion of the reciprocating clothes-carrying plate.

The washing-vat is provided with a lid formed of two parts, one of which, *3*, is hinged near the frame *l*, so as to be capable of being lifted against the said frame, while the other part *4*, which is provided with handles *5* for removal, is simply laid on the vat.

For operation the vat is filled with soap-water, and after having attached the clothes on the hinged plate a horizontal reciprocating motion is transmitted to the latter by the eccentric-rod *k*, connected to the rod *h* by means of the pin *r*. In this way the clothes are rubbed and washed between the two corrugated plates. Then by removing the pin *r* from its seat and by engaging the stud *1* into the opening *2* a vertical reciprocating motion is communicated to the clothes-carrying plate and to the movable corrugated plate, thus effecting the beating of the clothes. For finally rinsing with clear water the stud *1* is kept in the opening *2*, and the rod *h* is again set in connection by means of the pin *r*, so as to produce the two reciprocating vertical and horizontal motions simultaneously.

I claim—

1. In a washing-machine and in combina-

tion with the vat, a stationary plate, a movable plate, both having parallel and opposing corrugations, an intermediate clothes-plate, and detachable means substantially as described for reciprocating said clothes-plate 5 vertically and horizontally, as and for the purpose set forth.

2. In a clothes-washing machine and in combination with the vat, a stationary corrugated 10 plate *d*, a vertically-movable corrugated plate *e*, an intermediate clothes-plate, a vertical rod, a swinging rod, a removable pin uniting said rods, a yoke connecting the vertical rod with the clothes-plate, and means 15 operatively connected with said rods whereby the clothes-plate can be reciprocated vertically and horizontally, substantially as described.

3. In a clothes-washing machine and in combination with a vat, a stationary corrugated

plate and a movable corrugated plate, with an intermediate clothes-plate loosely connected with a central vertical shaft, said shaft, another shaft carrying a chain-wheel and the drive-wheel, a frame carried upon the vat, a 25 shaft *t* in said frame, a chain-wheel fast thereupon, a chain connecting said chain-wheels, a disk mounted upon shaft *t* and having a yoke pivoted to the frame, said yoke, a triangular opening in said vertical shaft, 30 means for engaging the lower end of said yoke with said vertical shaft, and a crank engaging said opening, as and for the purpose set forth.

In testimony whereof I affix my signature 35 in presence of two witnesses.

ZÉNAÏDE GAILLARD.

Witnesses:

EMILE GRIMONT,
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