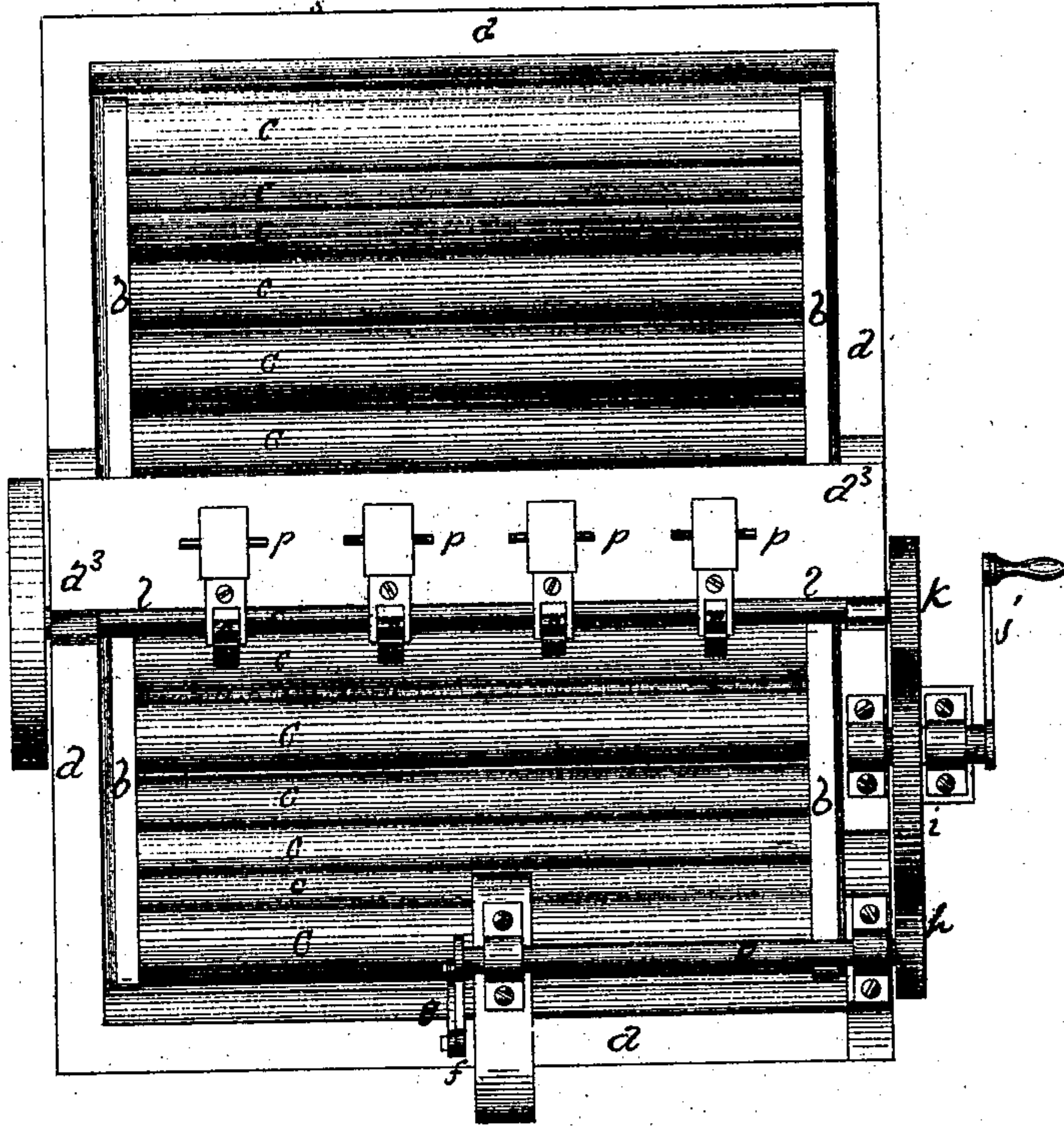


*E. L. Bullock,*  
*Washing Machine.*

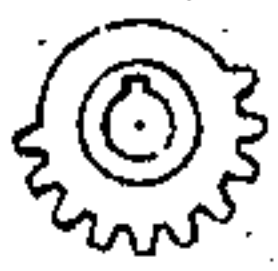
*No. 107,443.*

*Patented Sep. 20. 1870.*

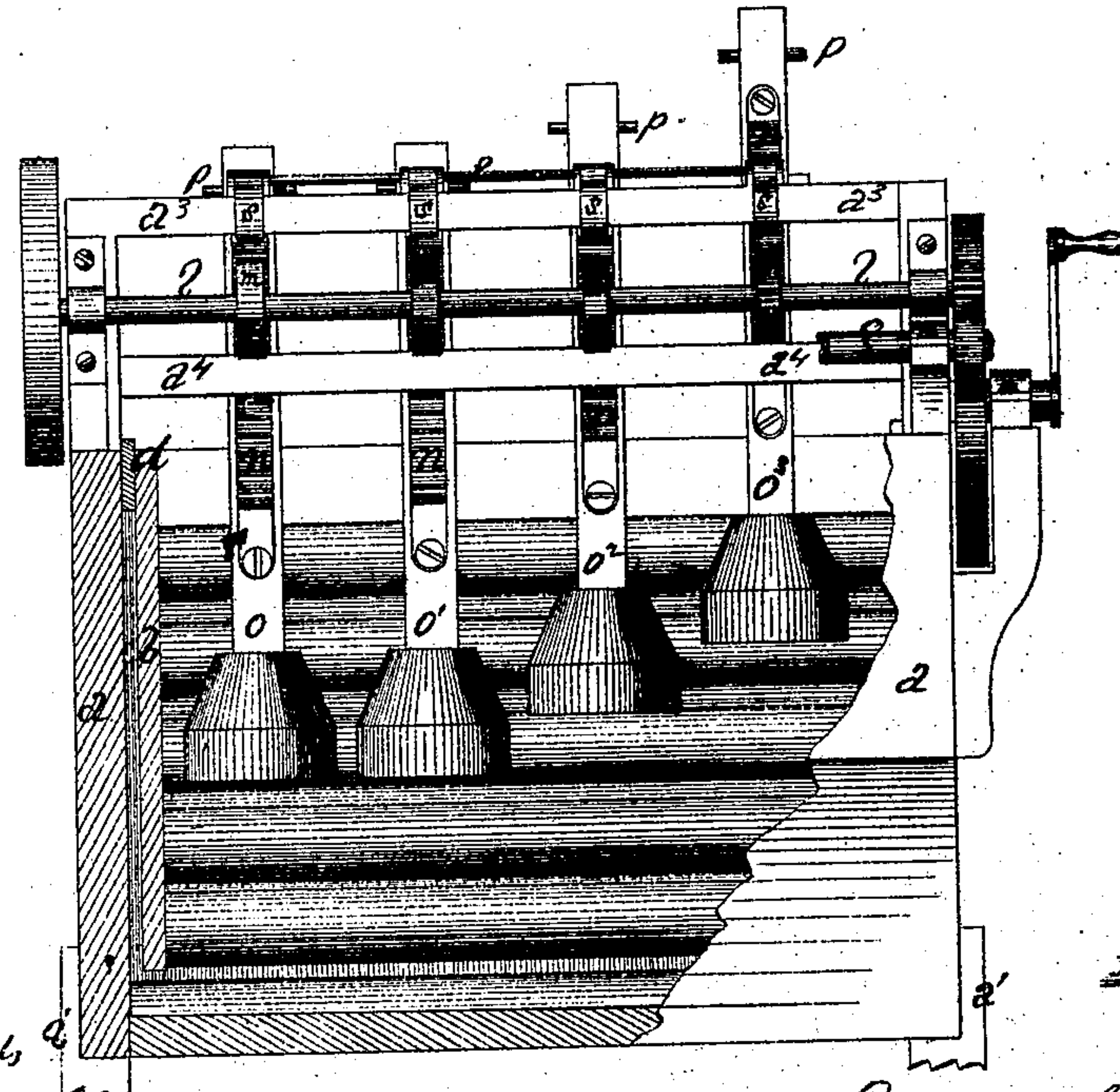
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



Witnesses

*W. E. Simonds,*  
*W. Henry Peters*

Inventor.

*Edmund L. Bullock.*



# UNITED STATES PATENT OFFICE.

EDMUND L. BULLOCK, OF HARTFORD, CONNECTICUT.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **107,443**, dated September 20, 1870.

I, EDMUND L. BULLOCK, of Hartford, county of Hartford, and State of Connecticut, have invented certain Improvements in Washing-Machines, of which the following is a specification:

### *Nature and Objects of the Invention.*

My invention is a device for use in the household, for the cleansing of soiled clothes and the like.

### *Description of the Accompanying Drawing.*

Figure 1 is a plan view. Fig. 2 is a view of the front end, the box broken away. Fig. 3 is a detached view of a cam-gear such as is used herein.

### *General Description.*

The letter *a* indicates the outside box, supported upon four or more legs, parts of two of which, *a*<sup>1</sup> *a*<sup>1</sup>, are seen in Fig. 2. Within the box *a* is the rocking frame *b*, the flat sides of which are nearly semicircular in outline. The bottom of this frame is composed of rolls *c c*, &c., fixed at either end to the flat sides. This frame is hung on centers or bearings, one of which, *d*, is seen in Fig. 2, and it is upon these bearings that the frame rocks or vibrates. The vibration is effected by means of the connecting-rod *e*, attached by one extremity to the end of the rocking frame *b*, and by the other extremity to the crank *f*, which is fixed upon and turns with the shaft *g*, which is driven by the pinion *h*, working into the gear-wheel *i*, driven by the hand-crank *j*. The gear *i* also drives the pinion *k*, and with it the shaft *l*, upon which are the cam-gears *m m m m*, which, working in the racks *n n n n*, cause the pounders *o o*<sup>1</sup> *o*<sup>2</sup> *o*<sup>3</sup> to rise, and allow them to fall at regular intervals. The downward stroke of the pounders is regulated by the pins *p p p p*. These pounders rise and fall in slots in the cross-pieces *a*<sup>3</sup> *a*<sup>4</sup>.

The construction of the cam-gears is fully shown in the detached side view of one of them in Fig. 3, and it will be readily understood how they first raise the pounders, and then, when the smooth cogless surface of the cam-gear comes round to the racks, allow them to fall.

To each rack there is a catch, *s s s s*, which is allowed to hang loose when it is desired to use the pounders; but they can be swung over, so as to catch into the racks, and thus hold the pounders, one or more, suspended.

It will be readily understood that the articles to be washed are put into the frame *b* and beaten by the pounders.

### *Claims.*

I claim as my invention—

1. In a washing-machine, the combination of the rocking frame *b*, having a rocking motion when the machine is in use, with the pounders *o o*<sup>1</sup> *o*<sup>2</sup> *o*<sup>3</sup>, one or more, having an up-and-down motion when the machine is in use, the whole constructed, arranged, and operated substantially as and for the purposes set forth.

2. The combination of the rocking frame *b*, connecting-rod *e*, shaft *g*, pinion *h*, gear-wheel *i*, pinion *k*, shaft *l*, cam-gears *m m m m*, racks *n n n n*, and pounders *o o*<sup>1</sup> *o*<sup>2</sup> *o*<sup>3</sup>, the whole constructed, arranged, and operated substantially as and for the purposes set forth.

3. In combination with the parts specified in the clause next preceding, the catches *s s s s*, the whole constructed, arranged, and operated substantially as and for the purposes set forth.

EDMUND L. BULLOCK.

Witnesses:

HENRY PETERS,  
W. E. SIMONDS.