

W. Kelly

Washing Machine.

N<sup>o</sup> 55,310.

Patented June 5, 1866.

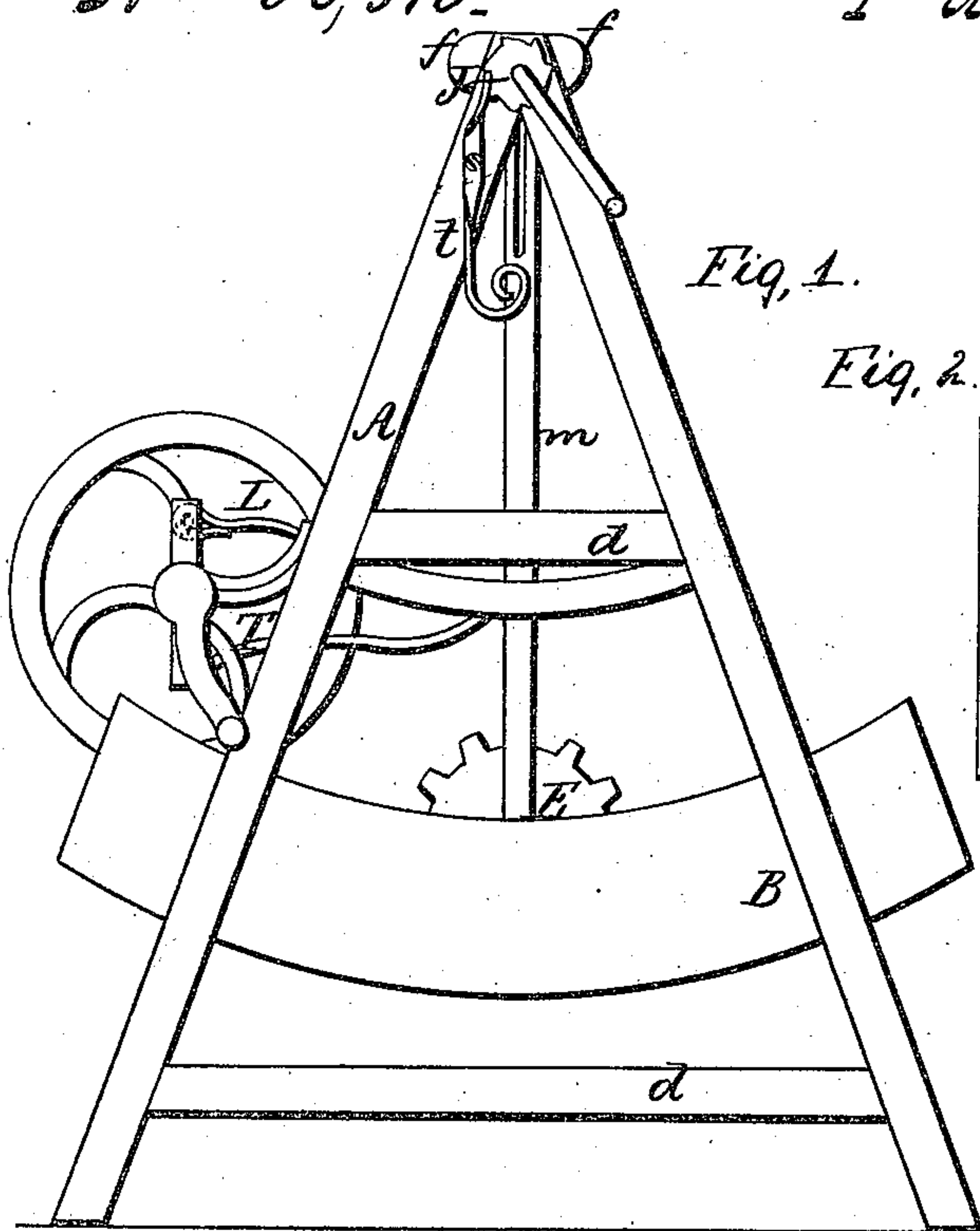


Fig. 1.

Fig. 2.

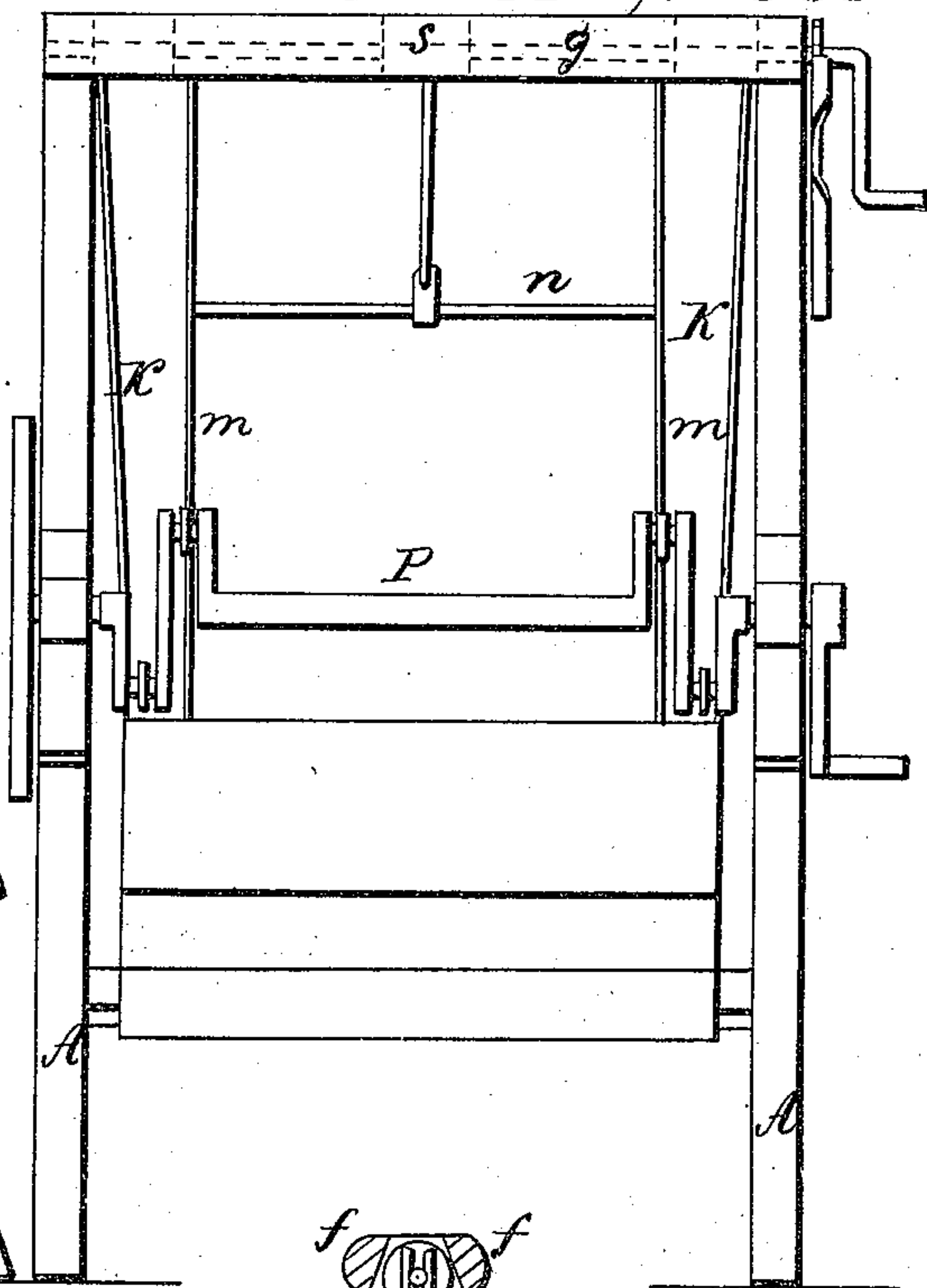


Fig. 4.

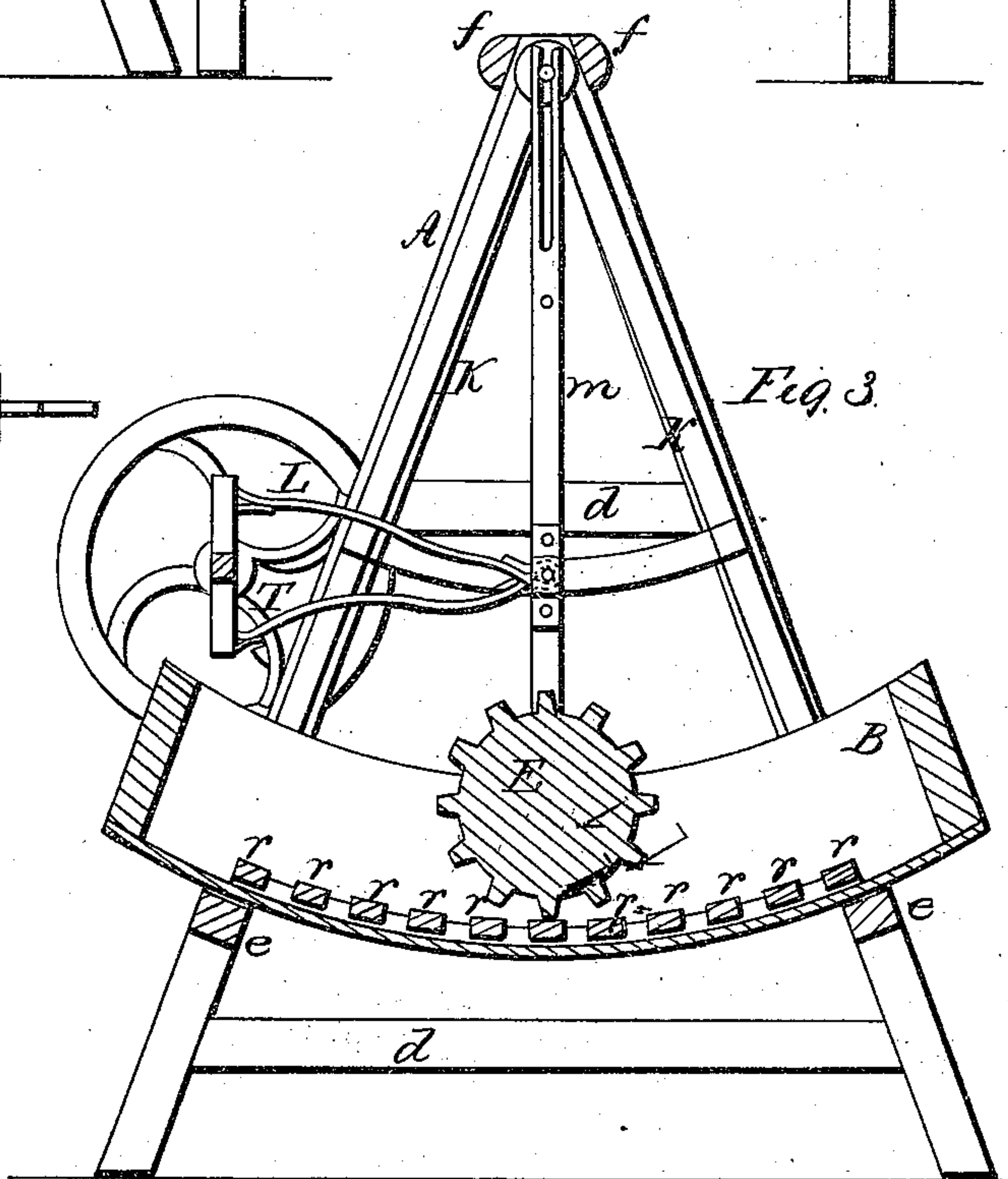
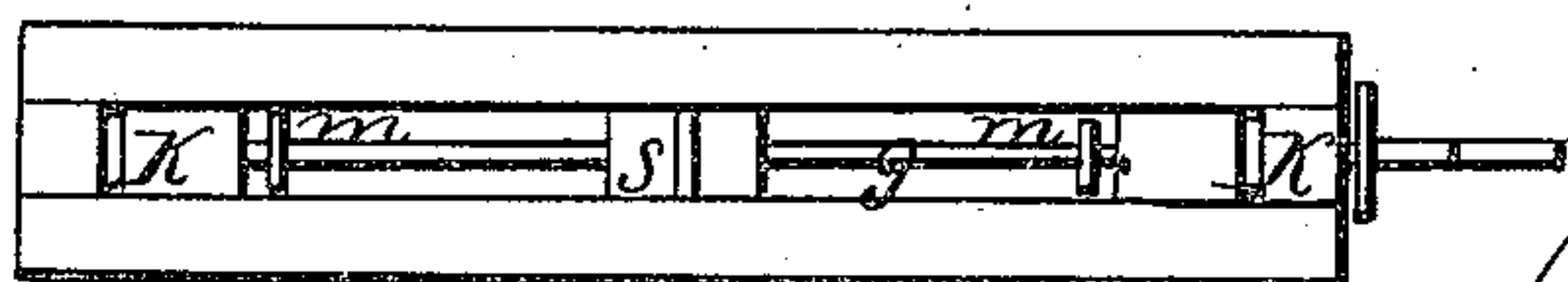


Fig. 3.

Witnesses;  
J. M. Mason  
L. M. Alexander

Inventor; Wm Kelly  
per J. H. Alexander  
Atty



# UNITED STATES PATENT OFFICE.

WILLIAM KELLY, OF SARANAC, MICHIGAN.

## IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 55,310, dated June 5, 1866.

*To all whom it may concern:*

Be it known that I, WILLIAM KELLY, of Ionia county, in the State of Michigan, have invented certain new and useful Improvements in Washing-Machines; and I hereby declare that the following is a true, full, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in constructing a washing-machine in which the tub and the friction-cylinder both have a reciprocating motion, but in opposite directions.

Figure 1 in the annexed drawings represents an end elevation of my machine. Fig. 2 is a front view of the same. Fig. 3 is a vertical section.

The letter A represents the frame of my machine, which is conical in form and strengthened by the ties *d*, and also by the ties *e* near the bottom of A and the additional ties *f* at the apex of the frame A. The ties *e* and *f* bind the two sections of frame A together.

B represents the concavo-convex tub or reservoir, which is suspended from the top of frame A in the manner hereinafter described. Near the top of the frame, and extending between the ties *f*, is the rod *g*. (Shown in dotted lines, Fig. 2.) The rod *g* is formed into a crank at one end, by which it is operated, and has its bearings in the two sections of frame A.

*m* represents two metal pendants, having oblong slots near their upper ends, through which the rod *g* is made to pass. The lower ends of the pendants *m* are pivoted to opposite ends of the fluted rubber E. The pendants *m* are united by the rod *n*, to the middle of which a cord is fastened, the upper end of said cord being made to pass over a roller, *s*, on rod *g*. By operating the crank on rod *g* the cord will wind around roller *s*, and thus raise the pendants *m* and the rubber E to the height required to suit the quantity of clothes that may be in the tub B.

It will be observed that the ratchet-wheel *j*, which is attached to the rod *g*, will be acted on by the pawl *t*, and thus keep the rubber E at any degree of elevation needed.

K represents the metal plates by which the tub or reservoir B is kept suspended. There are two of said plates on each side, their lower ends being secured to the tub and their upper ends penetrated by the rod *g*, upon which they move as upon a pivot.

P designates a shaft with a double crank at each end. The two inside wrists of the cranks are embraced by the rods L, (see Figs. 1 and 3,) the opposite ends of said rods being hinged to the sides of pendants *m*. The two outer wrists of the cranks are embraced by the rods T, the opposite ends of rods T being pivoted to the tie *o*, which binds the two plates K together. The shaft P is extended sufficiently far beyond the cranks above described to admit of the attachment of the driving-crank U at one end and the balance-wheel V at the other. The shaft P has its bearings in stanchions fastened to the sections of A. The bottom of the tub B is lined with zinc and also with a series of slats, *r*, which are raised an inch (more or less) above the zinc bottom.

In operating my machine by means of the crank on shaft P it will be observed that while the rods L are drawing the plates *m* and the rubber E in one direction the rods T, which are connected to the plates K, will drive the tub B in an opposite direction, and that the increased friction resulting from a twofold reciprocating motion must greatly facilitate the process of cleansing of garments subjected to the action of my machine. It will also be remarked that as the quantity of material to be washed is increased the rubber E will be raised by the upward pressure of the material and held in position by the action of pawl *t* on the ratchet-wheel *j*. By this arrangement there is always a perfect adaptation of rubber E to the quantity of clothes to be washed.

Having thus described my machine, what I claim, and desire to secure by Letters Patent, is—

1. The rod *g*, with ratchet *j*, in combination with the slotted plates *m* and rubber E, the whole constructed as and for the purpose herein set forth.

2. The shaft P, furnished with double cranks, in combination with rods L and T, in connection with plates K and tub B, the whole constructed and operating in the manner and for the purpose herein specified.

In testimony that I claim the foregoing as my own I hereby affix my signature in the presence of two witnesses.

WILLIAM KELLY.

Witnesses:

RICHARD VOSPER,  
R. D. HUDSON.