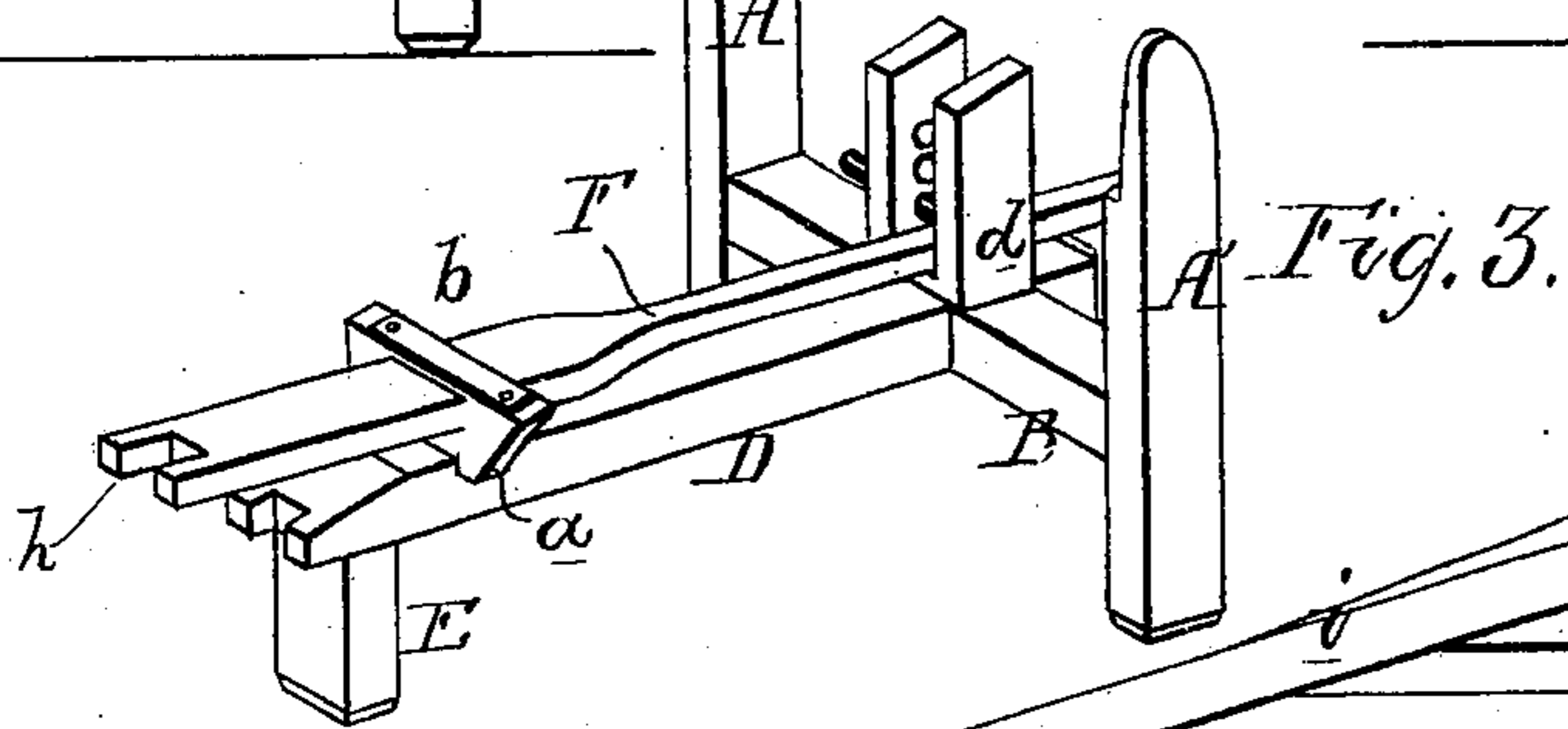
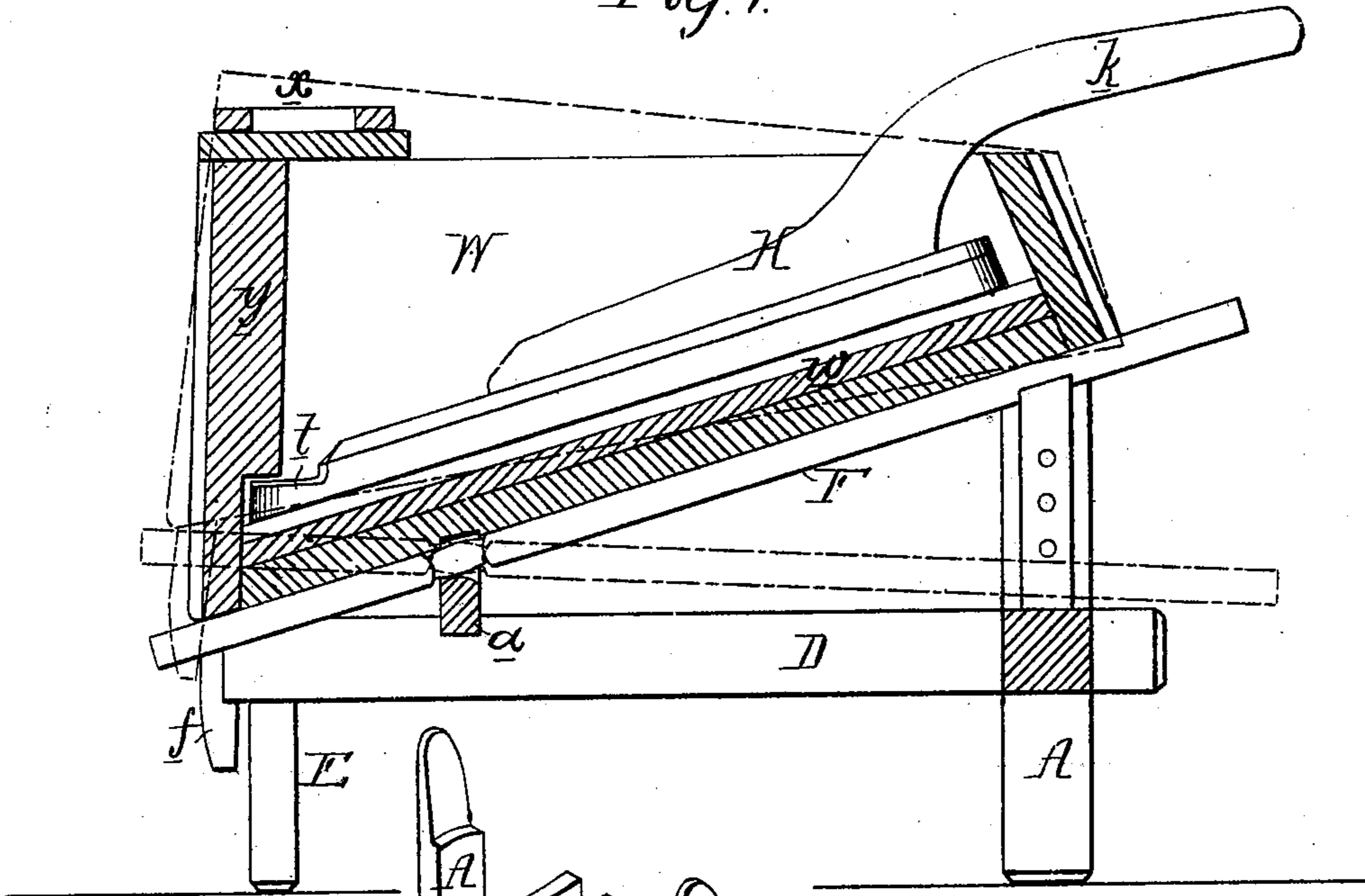


G. W. GRUBB.  
Washing-Machine.

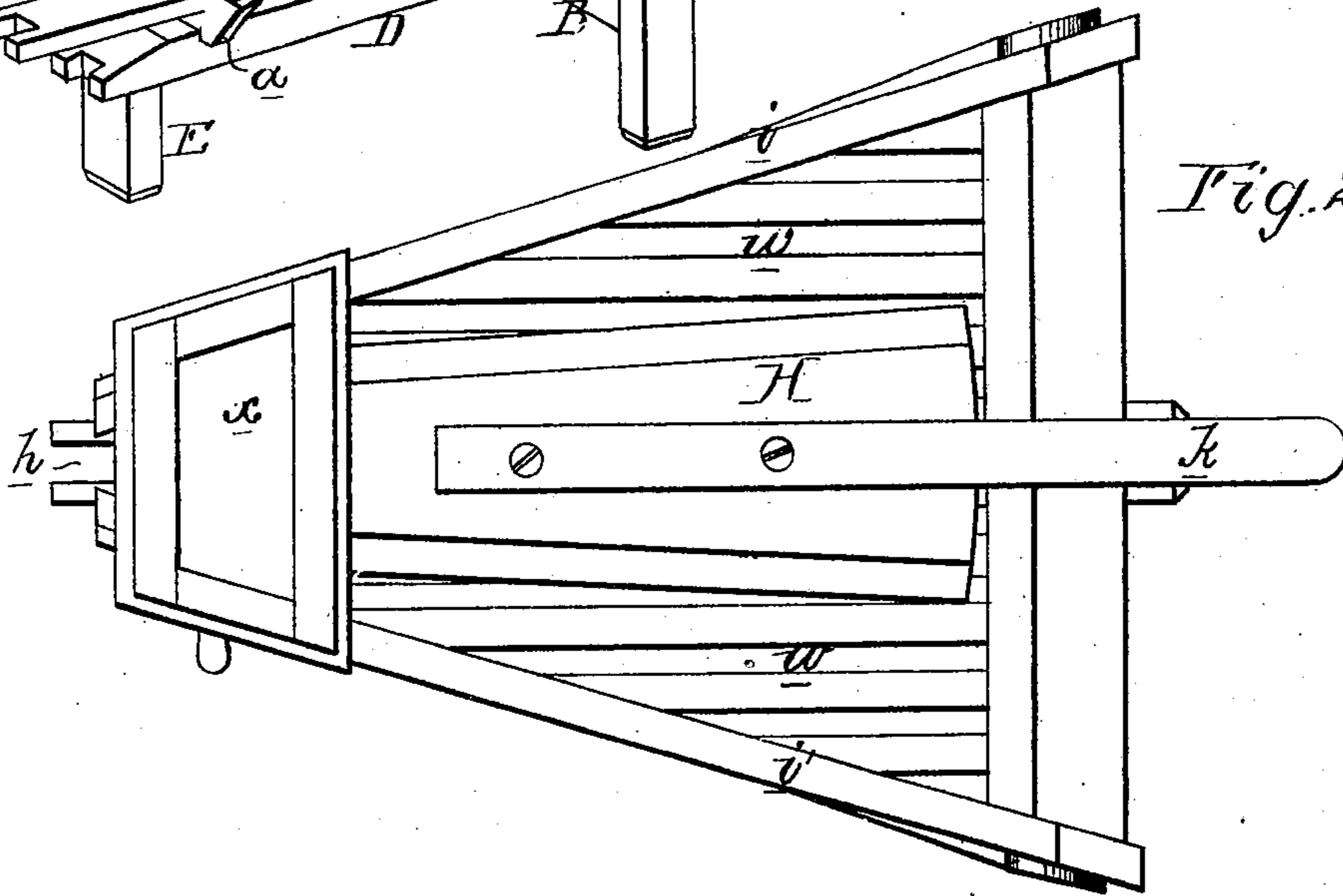
No. 167,761.

Patented Sept. 14, 1875.

*Fig. 1.*



*Fig. 2.*



Witnesses,  
Henry Smith  
Hubert Howson

George W. Grubb  
by his Attorneys,  
Howson and Son

# UNITED STATES PATENT OFFICE.

GEORGE W. GRUBB, OF EAST COVENTRY, PENNSYLVANIA.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **167,761**, dated September 14, 1875; application filed April 12, 1875.

*To all whom it may concern:*

Be it known that I, GEORGE W. GRUBB, of East Coventry, Chester county, Pennsylvania, have invented an Improved Washing-Machine, of which the following is a specification:

The main object of my invention is to construct a simple and efficient washing-machine, in which repairs to the rubbing-bed can be readily effected, and in which different quantities of water may be used to suit different quantities of clothes; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of my improved washing-machine; Fig. 2, a plan view; and Fig. 3, a perspective view of the stand or frame of the machine.

The said frame consists, in the present instance, of the posts A and A', connected together by a cross-bar, B, and a horizontal bar, D, supported at its outer end by a leg, E, and connected to the said cross-bar. A lever, F, is so confined to a fulcrum-block, a, on the bar D as to admit of being adjusted to different inclinations, but is permitted to have no other movement, the long arm of the lever being retained by a pin passing through any one of a number of holes in guides d d attached. W is the vessel for the water and clothes, and has an inclined base resting on the lever F, the rear of the vessel having a projection, f, adapted to the slot h at the end of the said lever. The sides i i' of the vessel are inclined outward from the rear to the front of the machine, and these sides are so guided by the posts A and A' of the frame that while the narrow rear end of the vessel can be raised or lowered at pleasure with the lever F, the said vessel cannot be moved longitudinally or laterally. On the bottom of the vessel rests a detachable rubbing-bed, w, provided with the usual ribs or corrugations, as also is the under side of the rubber H, which has at its outer end a rounded projection, t, adapted to a recess in the inside of the rear y of the vessel,

this recess being the center of vibration of the rubber when the latter is moved to and fro over the clothes by a suitable handle, k. The rubber can be easily withdrawn from the vessel for the introduction therein of the clothes, and as readily replaced.

Owing to the inclined sides i and i' of the vessel, the space between the said sides and the rubber is wedge-shaped, so that when the rubber is vibrated the water is forced from the front to the rear of the machine, and driven forcibly into and through the mass of clothes contained in the same. The rubber is also rocked as well as vibrated, in order to increase its effective action on the clothes.

When articles of wearing apparel of limited size or few in number have to be washed, a small quantity of water may be used with good effect if the vessel is raised, as shown in dotted lines in Fig. 1, but when a bulky mass of clothes has to be washed, the vessel may be lowered and a larger supply of water may be used.

A tray, x, for containing soap, is secured to the upper edge of the vessel, at the rear of the same.

As the rubbing-bed w is detachable from the vessel W, it can be readily repaired, when worn or injured, without disturbing the said vessel.

I claim as my invention—

1. In a washing-machine, the combination of a vessel having sides i i', inclined outward from the rear to the front, with a detachable vibrating rubber, H, as set forth.

2. The combination of the vessel W and its inclined base with a frame or stand on which the said vessel may be adjusted, substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. GRUBB.

Witnesses:

HUBERT HOWSON,  
HARRY SMITH.