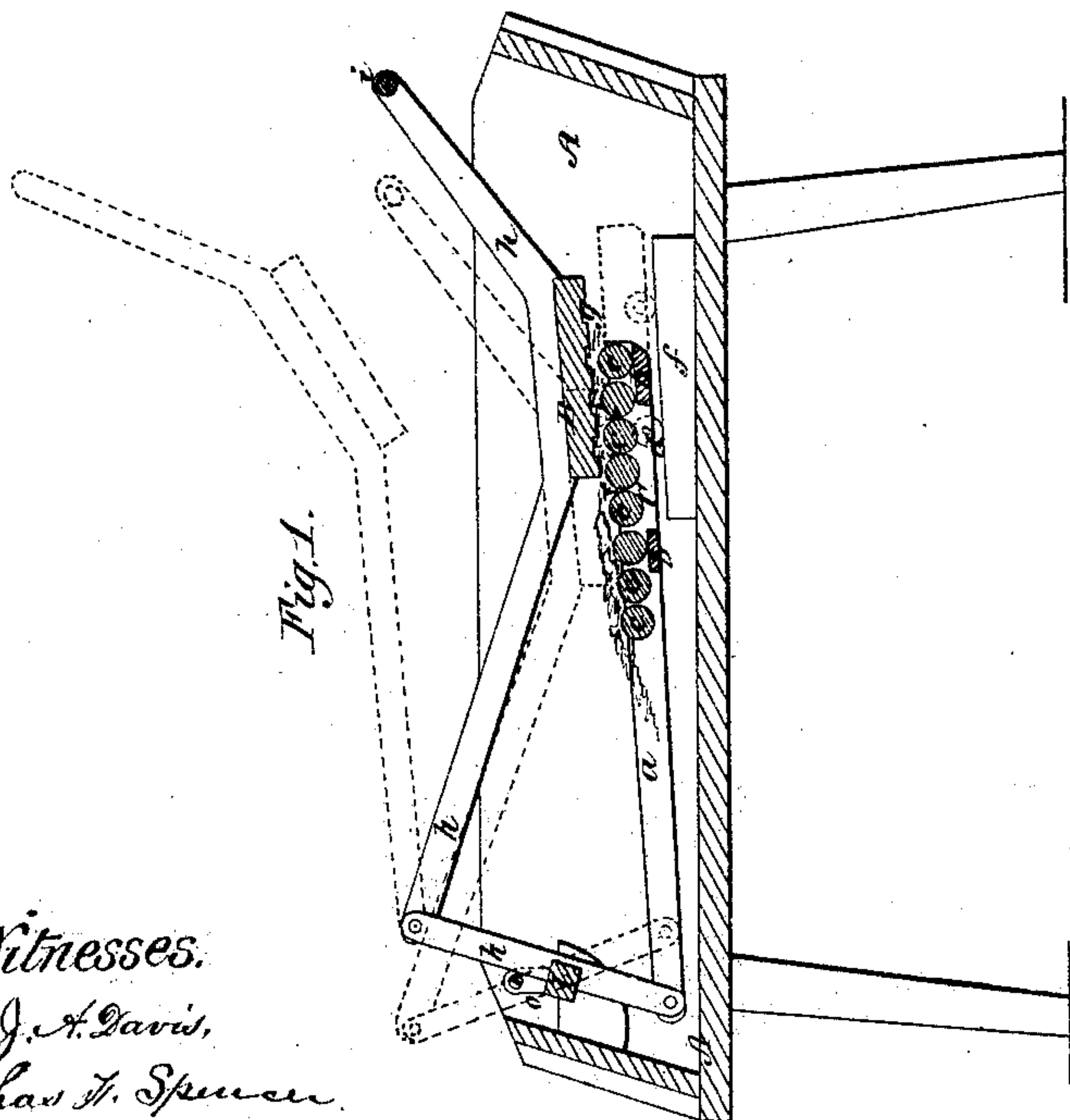
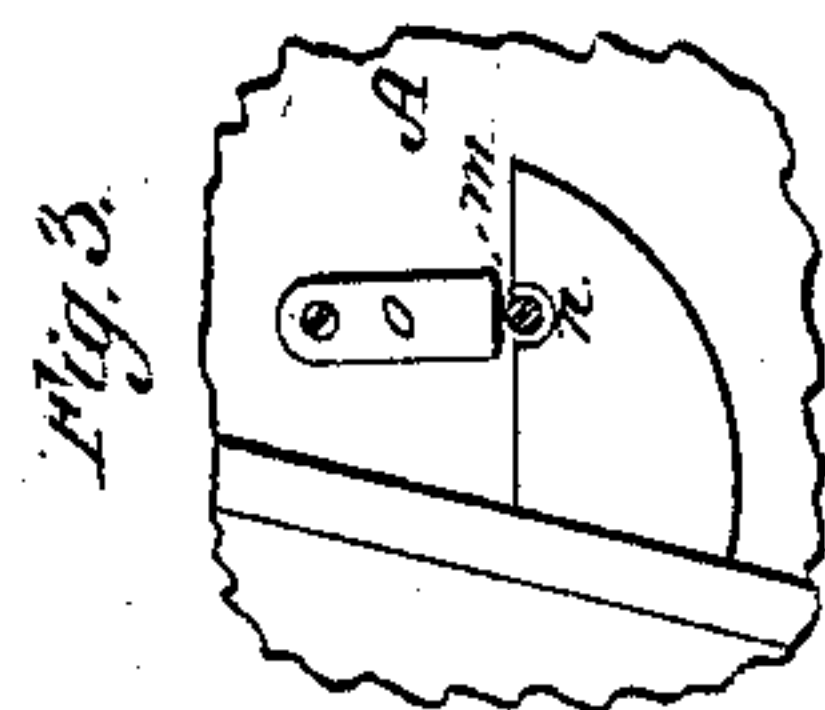
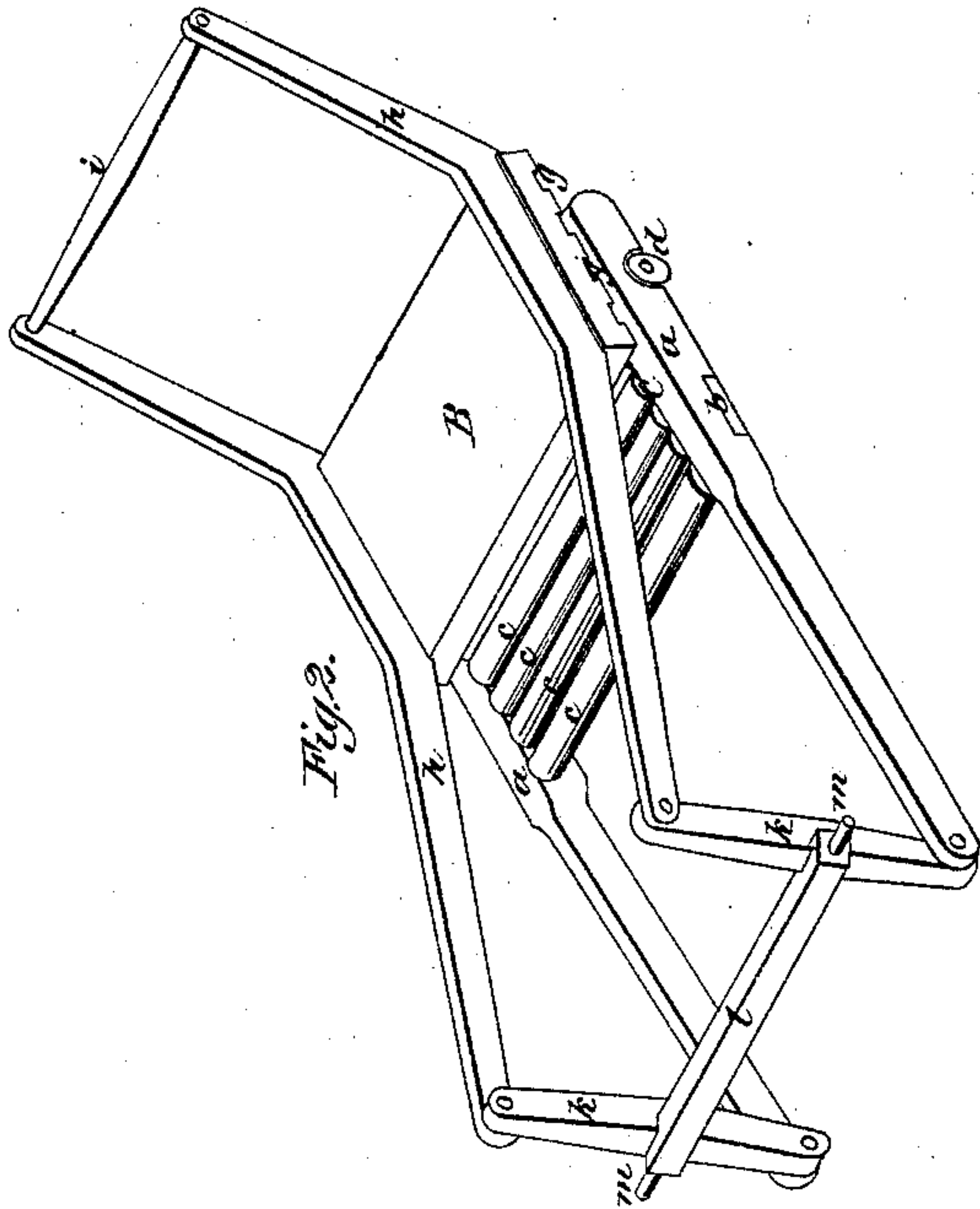


H. C. Covert,

Washing Machine,

N^o 62,529.

Patented Mar. 5, 1867.



Witnesses.
J. A. Davis,
Chas. H. Spencer.

Inventor.
H. C. Covert,
By J. Travers & Co.,
Attys.

United States Patent Office.

HENRY C. COVERT, OF FAYETTE, NEW YORK.

Letters Patent No. 62,529, dated March 5, 1867; antedated February 23, 1867.

IMPROVED WASHING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, H. C. COVERT, of Fayette, in the county of Seneca, and State of New York, have invented a new and useful Improvement in Washing Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a longitudinal vertical section of my improved machine.

Figure 2, a perspective view of the washing apparatus detached.

Figure 3, a diagram, showing the method of securing the apparatus in the box.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in the arrangement of two plane rubbers, reciprocating in opposite directions, and having an unequal movement, connected by a suitable lever arrangement, and combined in such a manner as to produce an action upon the clothes similar to rubbing by hand.

As represented in the drawing, A is the box, the ends being set angling, as shown in fig. 1. In this box are situated the rubbers B C. The rubber C, on which the clothes are placed, consists of two side-pieces *a a*, connected by cross-pieces *b b* and rollers *c c*, which latter have a free revolving motion. The side-pieces are also provided with friction-wheels *d d*, which run on ways *f f*, at the side of the box. The rubber B is simply a board, of suitable size and thickness, grooved or corrugated on the bottom, as shown at *g*; and it is secured to bent arms *h h*, which, at the rear end, have a handle, *i*, by which the apparatus is operated. The contiguous rubbing surfaces of both rubbers are made plane or horizontal. The front ends of the side-pieces and arms *a a*, *h h* are connected by upright levers *k k* jointed thereto; and these levers are connected transversely by an axis, *l*, which is situated some distance below the vertical centre of the levers, so as to give the upper rubber the greatest stroke in action. The journals *m m* of the axis rest in bearings *n n* on opposite sides of the box, and are retained in place therein by buttons *o o*, which turn down over them, as shown most clearly in fig. 3.

Thus arranged, the clothing is placed between the rubbers, and subjected to action. It will be seen that there is a double reciprocating action, but the stroke of the upper rubber is greatest, on account of the unequal leverage. Rubbers with a double reciprocating action have been before employed, but, so far as I am aware, have been connected with machinery that gives them a regular, uniform, and unvarying action, which is simply rubbing between two surfaces without capability of change or direction, or else the rubbers have been made concave and convex, which cause the clothes to collect in the bottom, and give them a tendency to roll. It is my object to obviate these difficulties, first, by constructing the apparatus in such a manner as, in action, to approximate as nearly to the action of the hands in washing as possible, and subjecting the operation to the will and judgment of the operator; and, second, by making the rubbing surfaces plane or horizontal, so that the clothes will be flat thereon, and thus be in best condition to receive the rubbing, and have no tendency to collect in a roll. In my arrangement it will be seen that the whole apparatus is flexible or jointed in such a manner that the parts can be changed to many different positions; and the whole is operated by the application of the hands to the handle *i*. Thus there is no application of mechanism, such as cranks and wheels, which gives the machine only an automatic action. I am enabled to give a long or short stroke, at pleasure. I can produce the rubbing action in both directions, or simply in one, by raising the upper rubber at each alternate stroke. By thus having a perfect control over the rubbers I am enabled to exercise judgment and discretion in manipulating the clothes to receive the best action of the rubbers. I can change them from one position to another, forward or back, as readily as if the hands were applied to them directly, and can retain them in any given position for any length of time. Where the rubbers are connected with machinery that simply gives them an unvarying action the clothes are not thus under the control of the operator, but simply remain in an unchanged position till the operation is over. The employment of the plane rubbing surfaces insures a better action upon the clothes than curved ones, by retaining them in a flat position at all times. Curved rubbers, with a double reciprocating action, could not be operated in such a manner as to change the position of the clothes, at pleasure. The unequal leverage allows the upper rubber the greatest motion, which is necessary in properly rubbing the clothes. At the same time the motion of the lower rubber is sufficient to give the neces-

sary agitation in the body of water to thoroughly rinse and remove the dirt. By making the apparatus removable, as described, the same, as well as the box, can be easily cleaned.

I do not claim broadly giving the rubbers opposite reciprocating motions, as I am aware that the same are not new; but I claim, in combination with rubbers B C, having opposite reciprocating motions, and having plane rubbing surfaces, the arrangement of the jointed arms *a h* and levers *k*, made to be inserted or removed from the box, at pleasure, by means of the bearings *n* and buttons *o*; the whole arranged and operating as herein set forth.

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

HENRY C. COVERT.

Witnesses:

R. F. OSGOOD,

J. A. DAVIS.