D. N. Allard,

Washing Machine,

No. 15,503. Patented Aug. 12, 1856.

Fig. 3.

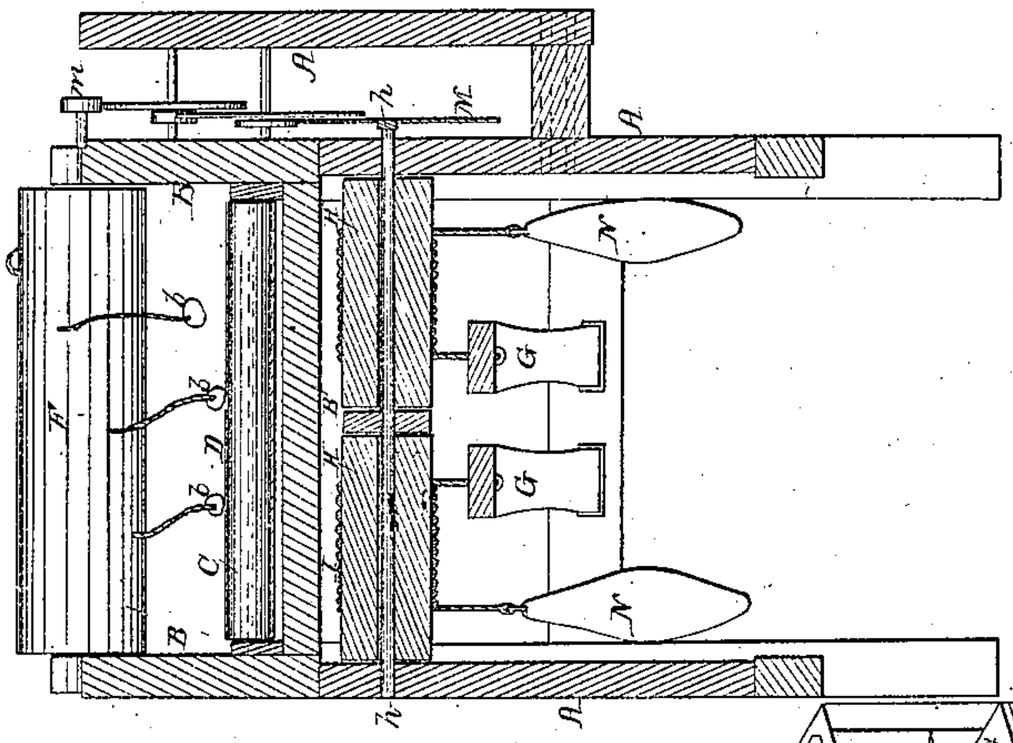


Fig. 4.

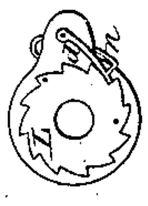


Fig. 5.

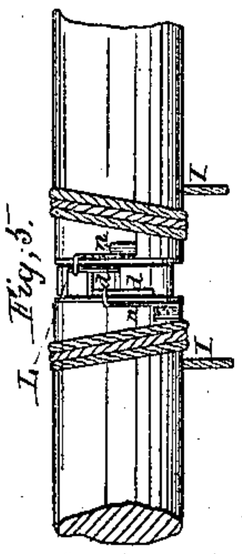


Fig. 2.

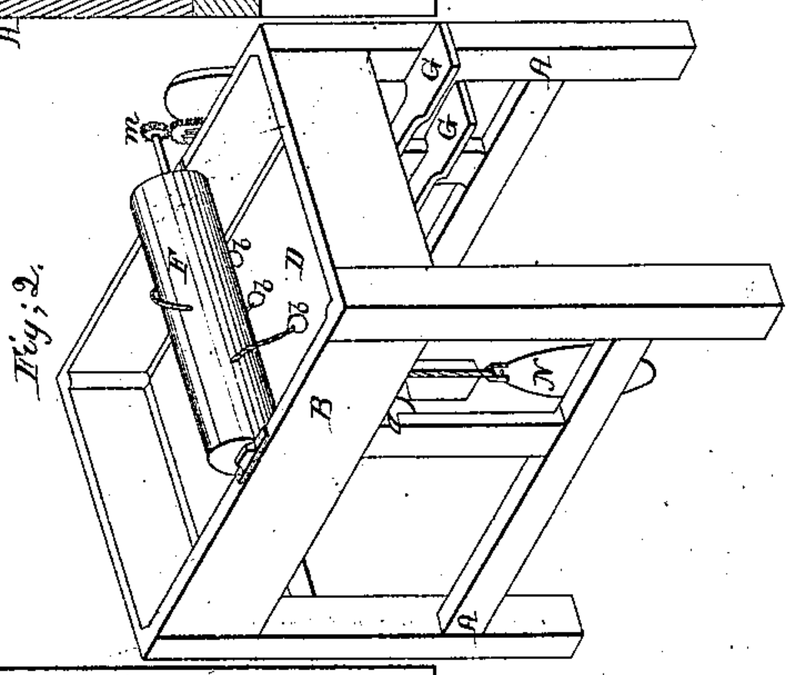
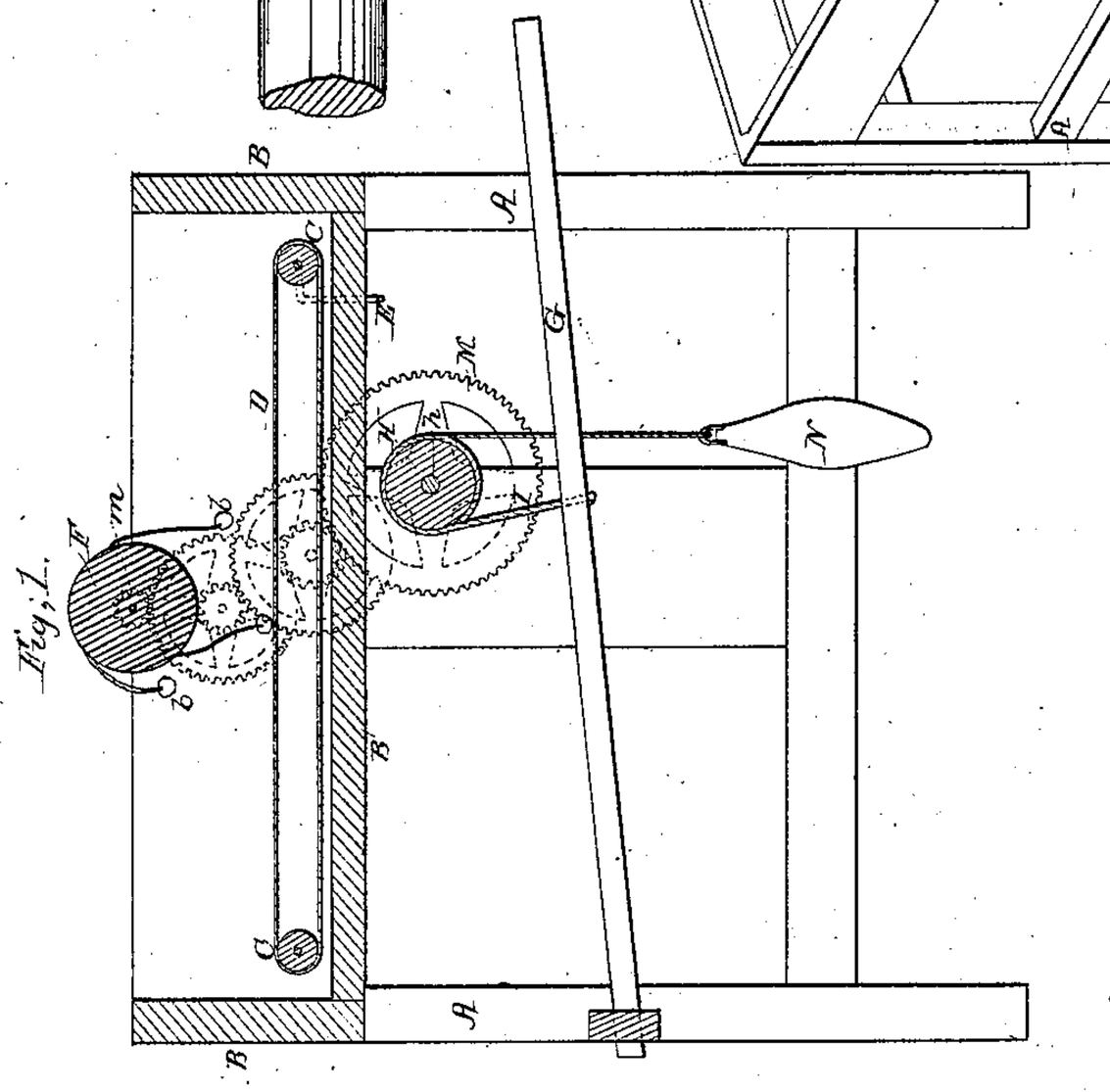


Fig. 1.



UNITED STATES PATENT OFFICE.

DANIEL N. ALLARD, OF ROKEBY, OHIO.

WASHING-MACHINE.

Specification of Letters Patent No. 15,503, dated August 12, 1856.

To all whom it may concern:

Be it known that I, DANIEL N. ALLARD, of Rokeby, in the county of Morgan and State of Ohio, have invented certain new and useful Improvements in the Construction of 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 a part thereof, in which—

Figure 1, represent a longitudinal vertical section through said machine. Fig. 2, represents a perspective view of the entire machine. Fig. 3, represents a vertical cross section through the same. Figs. 4, and 5, represent detached views to be described hereafter.

My invention relates to a series of revolving beaters, combned with a traveling apron, upon which the clothes to be washed are brought up under said beaters,—the beaters having a continuous rotary motion, derived through or from reciprocating treadles.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A represents the frame of the machine. It supports a box B, which contains the articles to be washed. Two rollers C are supported by means of journals to the sides of said box in such a manner that they can revolve freely; an endless conveyer or apron D, passes over both, and said rollers can be turned by means of the crank E. The articles to be washed are laid on said apron, and can be shifted on it by simply turning the crank E, to bring the clothes up to or past the beaters.

The washing apparatus consists of a cylinder F, which rests with its bearings on the sides of the box B; a number of cords are arranged around the circumference of said cylinder in a spiral form, each cord having fastened to its end a round solid body *b*, of wood or other light material. When the cylinder F revolves rapidly the balls *b*, by means of their centrifugal power, strike against the articles to be washed, and as the cords are arranged in a spiral order the balls *b*, do not strike simultaneously but one after the other. The endless cloth D serves also for the purpose of lessening the intensity of the blows of the balls *b*, by means of its elasticity.

The manner of operating said apparatus is as follows:—Two levers G are fastened at their ends to the frame A, in such a manner that they can be moved on their pivoted or supporting points; they are free at the other end, and can be lowered and raised at pleasure. The cylinder H, is arranged on a shaft *h*, the latter having its bearings in the frame A. A cord I is fastened at one end to the lever G, and passes around the shaft H, and to its other end is attached a counterpoise weight N, which tends to keep the lever G in its highest position. The shaft or drum H, were it not for the ratchets, would turn loosely on its center shaft *h;* to this center shaft *h* is permanently attached a ratchet wheel L, onto which the pawls *d* operate, as they are pressed toward it by means of the springs *n*. Thus when the levers G are pressed downward, they impart a revolving motion to the loose shafts H, the pawls *d* attached to said loose shafts fall into the ratchet wheel L, impart to it a revolving motion, and at the same time to the shaft *h;* this sets in motion the wheel M, and all the wheels in gear with it as shown Fig. 1, transmitting the slow motion of the wheel M until it imparts a rapid revolving motion to the pinion *m* which latter is on the same shaft as the cylinder F.

When the lever G has been depressed to its lowest point, then the weight N has arrived at its highest point. The lever G being now freed from downward pressure the weight N falls downward, and raises the lever G to its former position. But as this movement is performed in a reversed direction from the one above described, the pawls *d*, do not operate on the ratchet wheel L the cylinders H turn loosely on the shaft *h*, and as the latter remains stationary, the entire washing apparatus also remains stationary during the rising of the levers G and is only at work, when they are pressed downward. By the double treadle, weights, and ratchets and pawls, a continuous motion can be given to the cylinder F by first pressing with the foot on one treadle, and after it has gone down to the extent of its motion, then changing the foot to the other treadle—

the treadle just released rising up to its former position by its falling weight N, and so on alternately, the pawls slipping over the ratchet teeth.

Having thus fully described the nature of my invention, what I claim therein as new and desire to secure by Letters Patent is,

In combination with an endless apron D, for conveying the clothes to be washed, the series of rotating pounding balls *b*, *b*, the whole being operated substantially in the manner, and for the purpose set forth.

D. N. ALLARD.

Witnesses:

SAMUEL ALLARD,

S. M. ALLARD.