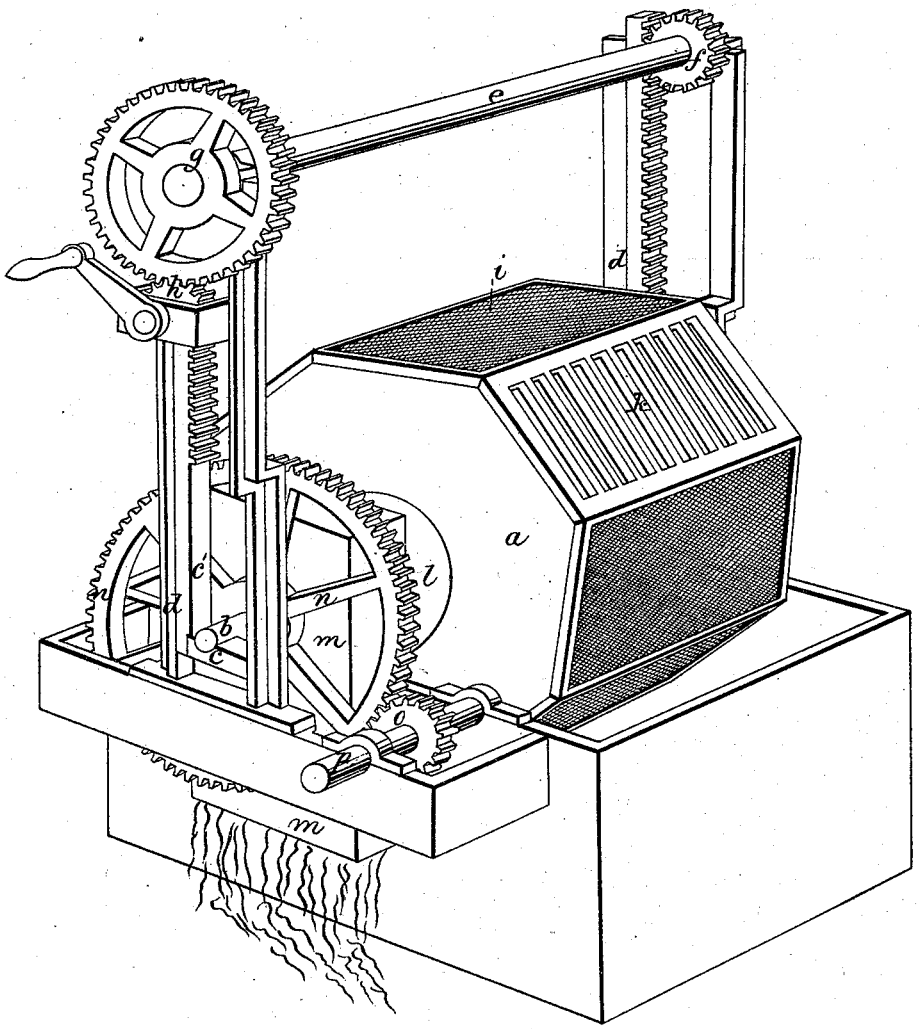
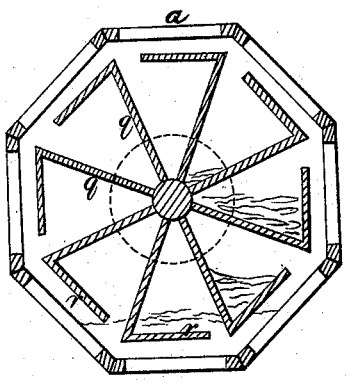
J. Phelps

Pulp Washing.

No. 3,354. Patented Nov. 24, 1843.





UNITED STATES PATENT OFFICE.

JAMES PHELPS, OF WEST SUTTON, MASSACHUSETTS.

WASHING-MACHINE FOR CLEANING RAGS.

Specification of Letters Patent No. 3,354, dated November 24, 1843.

To all whom it may concern:

Be it known that I, JAMES PHELPS, of West Sutton, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Washing and Cleaning Rags and other Material, to be denominated "Phelp's Rag Washer;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification, in which—

Figure 1 is a perspective view, Fig. 2 a section of the revolving octagonal box.

The nature of my invention consists in abstracting the impure water and dirt from the common engine, for washing and beating rags, by means of an octagonal revolving box, raising the water, and discharging the same at the center, at one end through a cylinder or otherwise, the box containing buckets for that purpose.

The construction of my machine is as follows,

Into a common engine, the lower part of an octagonal box (*a*) dips, which is sustained by a shaft (*b*) passing through its center, and working in boxes (*c*) that slide up and down in a frame (*d d*) on each side. This frame is over the engine, and consists of two upright pieces on each side, which are connected at the top by a piece that serves as a bearing for a shaft (*e*), extending across from side to side, over the box (*a*), and has a pinion (*f*), near the bearing at each end. Attached to each of the boxes (c) which support the shaft of the octagon cylinder, there is an upright rack (*c'*) which works into the pinions (*f*) above named, by which the box (*a*) can be raised or lowered; an increase of power may be gained to raise this box, by placing on shaft (*e*) a spur wheel (*g*), which works into a pinion (*h*) to which a crank is attached, to be turned by hand or otherwise. The octagonal box (*a*) has each of its sides made of grating (*k*) the bars of which run in the direction around it; over these bars there is fastened a wire cloth (*i*) all around which constitues the strainer. At one end of the box (*a*) there is a short hollow cylinder (*l*) around the shaft that opens into the interior of the revolving box (*a*). This connects with a spout (*m*) that carries off the water from the engine. Outside of this spout there is a large spur wheel (*n*) on the shaft (*b*). This works into a pinion (*o*), when it is lowered down; the shaft (*p*) of the pinion, resting in bearings, in the frame, and extending out far enough to have a pulley (not shown in the drawing) on its outer end, by which it is driven.

The inside of the box (*a*) is divided by eight radial partitions (*q*) that extend from the shaft, nearly to the grating above named; from each of these extend front boards (*r*) toward the next partition and form buckets, but leaving a space between them, and inclined inward a little, so as not to project as far as the partition at the edge which approaches nearest to it, the apertures at the center opening into the short cylinder (*i*) serving to discharge the water dipped up by these buckets.

When this machine is in operation it revolves about eight times a minute. The rags or other materials to be cleaned are placed in the engine and pass under the washer as it revolves, and the dirt which is disengaged passes, with the impure water through the strainer into the inside of the octagonal box, when it is taken by the bucket, carried up and discharged through the apertures in the end of the box at the center and conveyed over the side of the engine rendering the process of cleaning the rags more expeditious and without the great waste of stock heretofore sustained in this stage of the process of making paper. The engine must receive a constant supply of pure water; and if the supply is not quite equal the box can be elevated or depressed slightly. For filtering, pure water alone a felting or cloth covering of the box may be used, instead of the wire cloth.

What I claim as my invention and desire to secure by Letters Patent is—

The employment of a revolving box, having a covering of wire cloth or other suitable material inside of which are buckets, for filtering or straining water and elevating the same substantially in the manner and for the purposes herein set forth.

JAMES PHELPS.

Witnesses:

CYRUS FAULKNER,

IRA M. BARTON.