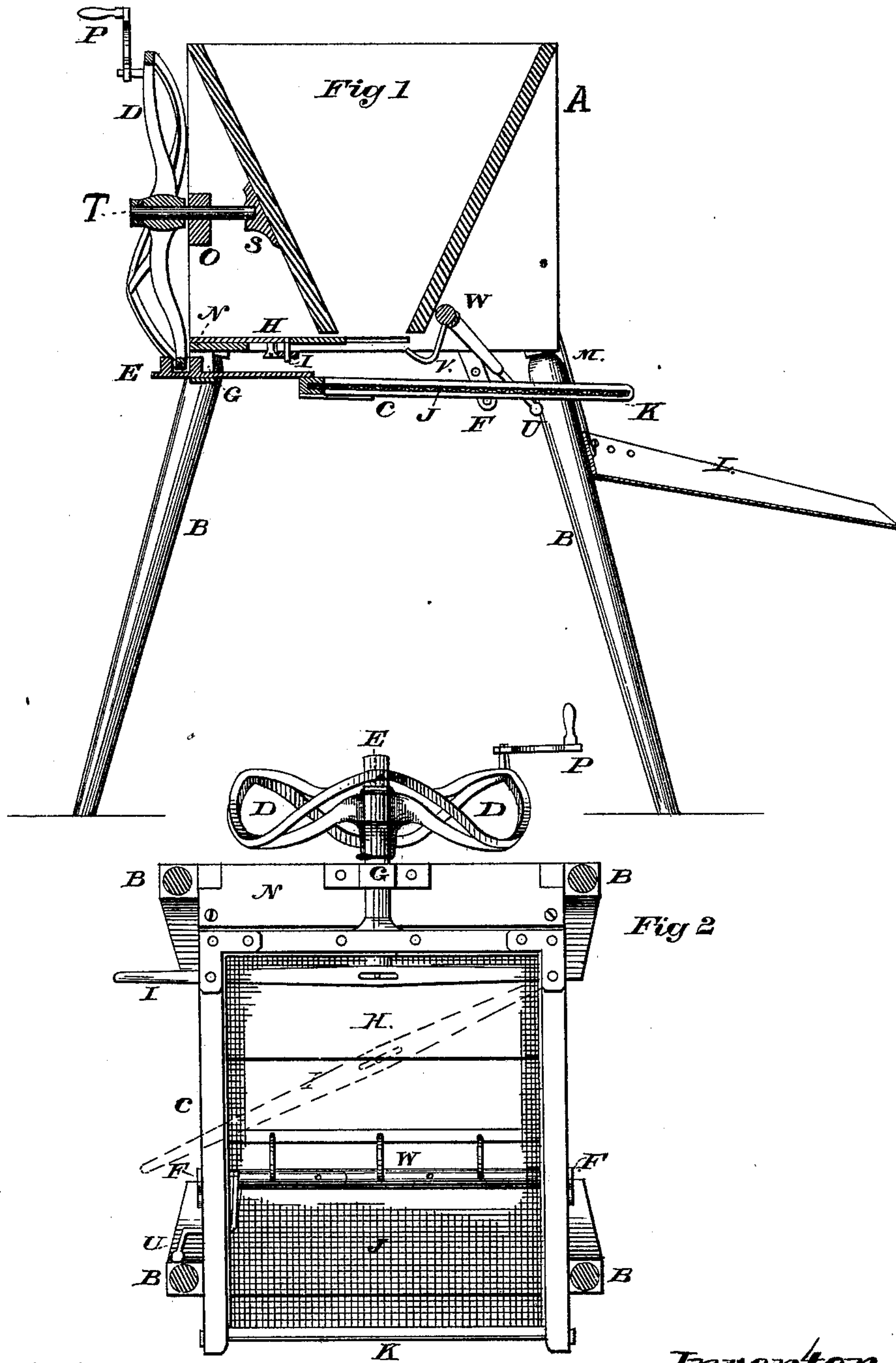


J. D. HOBBS.  
Sand-Sifting Machine.

No. 214,040.

Patented April 8, 1879.



Witnesses:

Wm. Harper  
John Corder

Inventor:

Joseph D. Hobbs.  
Attny & Co.  
Attorneys.



# UNITED STATES PATENT OFFICE.

JOSEPH D. HOBBS, OF MEDIAPOLIS, IOWA.

## IMPROVEMENT IN SAND-SIFTING MACHINES.

Specification forming part of Letters Patent No. **214,040**, dated April 8, 1879; application filed June 14, 1878.

*To all whom it may concern:*

Be it known that I, JOSEPH D. HOBBS, of Mediapolis, in the county of Des Moines, State of Iowa, have invented a new and useful Improvement in Sand-Sifting Machines, of which the following is a specification.

My invention relates to machines for sifting sand; and has for its object to provide a machine, to be operated by a crank, that will be easy of movement and thorough in its work.

It consists in a sieve and sieve-frame operated by a cam-wheel, and arranged in connection with slotted and rocking bars and an oscillating bar provided with prongs, which enter the sand in the hopper, all of which will be more fully described hereinafter.

In my drawings, Figure 1 is a vertical section. Fig. 2 is a plan view of my machine.

Similar reference letters indicate like parts in all of the figures.

Referring to drawings, A is the hopper, which is nearly square at the top, with its sides vertical and ends inclined inward toward its chute. B B are legs attached to the side pieces of the hopper.

Below the hopper A is the sieve, fixed in the frame C, which is supported by two swinging bars, F, pivoted outside of the vertical sides of the hopper. These swing-bars are provided with holes for a proper adjustment of the sieve-frame to give the required movement to the gravel or coarse sand toward the end of the sieve.

A platform, L, held in position by suitable hooks, is provided to receive the gravel and slide it out of the way of the sand which falls through the sieve J. The sieve J is fixed in the frame C, which is grooved in its inner edge.

A bolt, K, which passes through the outer ends of the frame C, serves to clamp it and hold the sieve in place.

The upper end of the sieve-frame has a rod or bar, E, which is provided with a slot in its end, fashioned to receive the rim of the crank or driving wheel D, which serves the purpose of a cam as it moves in said slot to vibrate the sieve-frame. A strip, G, passing between two of the legs of the sifter, forms a loop, through which the rod or bar E moves as it is vibrated.

The driving-wheel D is hung upon the shaft

T, which is journaled in suitable bearings O S of the hopper A. Said wheel, which is turned true on its circumferential edge, is irregular laterally with reference to the hopper, as previously described, to act as a cam and give a vibrating movement to the sieve.

A cross-bar, N, secured to the vertical sides of the hopper, serves as a support to the loop or strip G. The bars F, between which the sieve is hung, being limited in their movement by a given radius, impart to the sieve-frame as it vibrates a vertical movement, to prevent the wire of the sieve from holding the gravel which might lodge in its passage outward.

W is an oscillating bar, journaled in the sides of the hopper, which has attached to it arms, provided with balls U and prongs V, intended to penetrate the sand in the hopper, and prevent it from lodging in its throat. A slide, H, is fitted in grooves in the sides of the hopper, and has attached to it, on its under side, a lever, I, which is within reach of the hand, by which said slide may be moved to regulate the feed of the hopper.

The wheel D has fixed in its rim a gudgeon, upon which is placed an ordinary crank, P, which may be adjusted to give more or less leverage in operating said wheel D.

My machine is operated as follows: The crank P being properly fixed, the wheel D is moved, and by its rim passing through the groove in the bar E a lateral movement is given to the frame C. The bars F, having fixed axes and being attached to frame C, lift and lower said frame as it moves laterally. Pins on either side of frame C coming in contact with the arms of the oscillating bars cause them to move and drive the prongs V out of the sand and gravel in the throat of the hopper. When said pins release the arms of the oscillating bar the balls U gravitate and force the prongs V into the mass in the throat of the hopper, and loosen it, so as to assist it in falling through to the sieve. The fine sand passes through the meshes of the sieve and falls to a platform provided to receive it, while the coarser sand and gravel drop from the mouth of the sieve and into the platform L, and thence to the ground.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The sieve J and sieve-frame C, in combination with the mechanism by which their movement is obtained—viz., the slotted bar E, attached to the sieve-frame, wheel D, and rocking bar F, all arranged as described, for the purpose set forth.

2. The oscillating bar W, provided with prongs V and weighted balls U, in combination with sieve-frame, as and for the purpose set forth.

JOSEPH D. HOBBS.

Witnesses:

WM. HARPER,

JOHN CORDER.