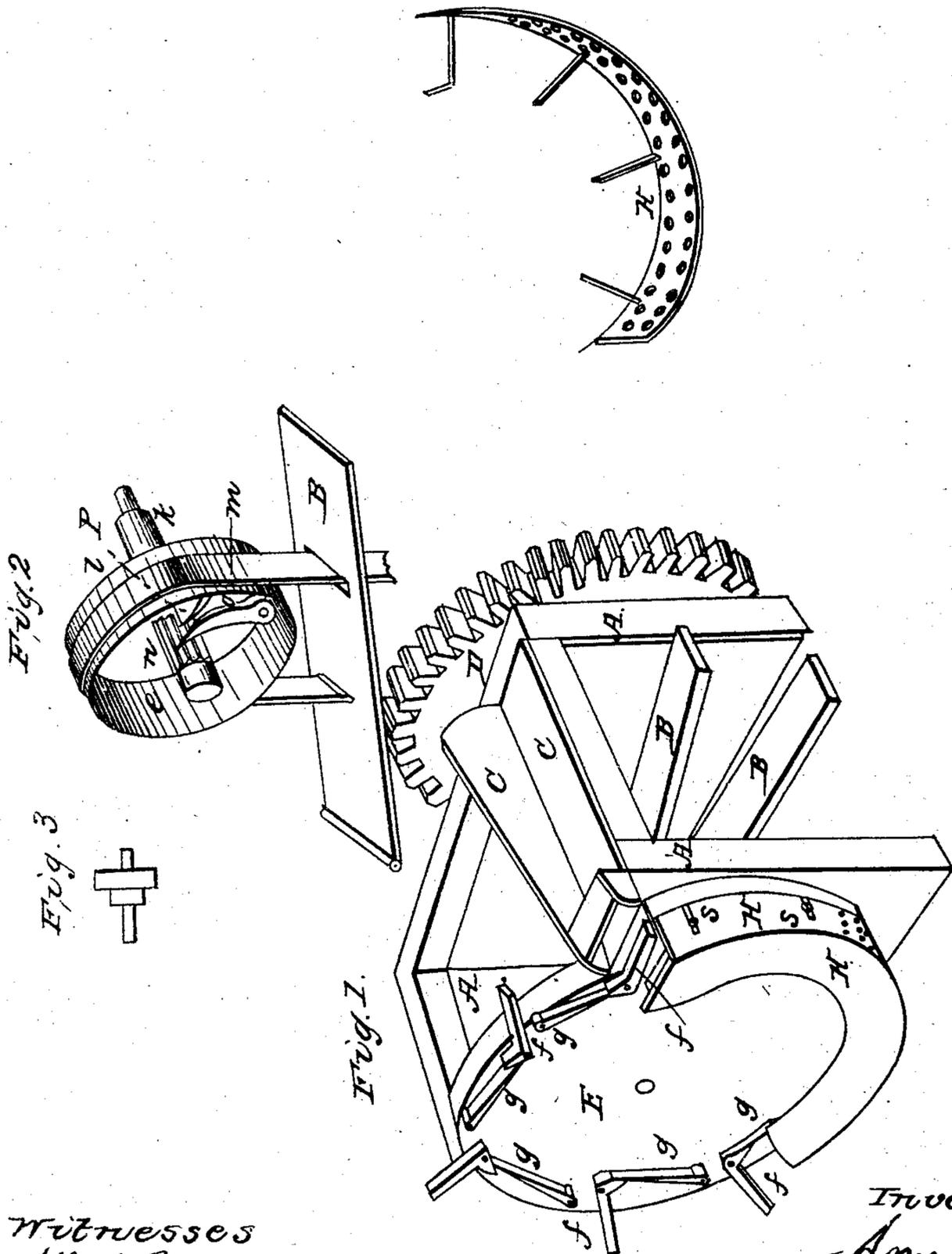


A. WEST.
Thrashing Machine.

No. 857.

Patented July 26, 1838.



Witnesses
Alfred Parce
Augustus Sprague

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UNITED STATES PATENT OFFICE.

AMMI WEST, OF GREENE, MAINE.

MACHINE FOR THRESHING GRAIN.

Specification of Letters Patent No. 857, dated July 26, 1838.

To all whom it may concern:

Be it known that I, AMMI WEST, of Greene, in the county of Kennebec and State of Maine, have invented a new Improvement in the Mode of Propelling Machinery in Threshing Grain; and I do hereby declare the following is a full and exact description, viz:

I have a shaft made of iron or other strong material, upon this shaft are placed in two different places teeth or catches like those of a ratchet wheel. Hollow cylinders are placed over these in such a manner that the shaft may turn easily without turning them too. Attached to the sides, or to one side of these cylinders or circular boxes, is a pawl which falls into and catches into the teeth of the shaft before mentioned. This pawl may be placed in any part of the box. If at the top part of it, the weight will be sufficient to keep it in contact with the teeth. If in the lower part a spring will be necessary above it, to keep it in contact with the teeth of the shaft. These teeth are made pointing all one way, so that the pawl will slide over them when they or the shaft is turned from it, but catch and hold when turned against it. On the outside of this cylinder a strap is attached, which passes over it one end of which is attached to a lever or treadle, and the other passes down through a slot in the treadle and is affixed to a spring. The action of this part of the machine is thus—A person places himself upon the treadles with a foot on each. When he bears down with one foot, say his right, it brings the pawl within the cylinder over which the strap passes against the teeth of the shaft, and the weight causes the whole cylinder and shaft to turn or revolve until the treadle is brought down to its lowest point. The weight is then thrown upon the left foot, which causes the cylinder attached to this treadle to turn with the shaft, while the spring of the bolt of the right cylinder acts upon it and draws it back—the pawl sliding over the teeth and taking new hold ready for another pressure when that of the left foot is down. By thus pressing alternately with the feet, the shaft is put in rapid motion. By this mode, as the bands or straps pass down over the cylinder, the power is always at the circumference and there is no dead point as in the crank.

For the threshing machine, I have a large cog or spur wheel attached to the right hand

end of the shaft. This plays into a pinion which is on the side of another shaft. On the left hand end of this last named shaft, I place a large wheel which may be made of wood but I prefer to have it of cast iron. This acts in the first place as a fly wheel but also as a part of the thresher. To effect this—On the outer side and near the circumference I put straight bars of iron or wood of suitable length having a foot projecting at right angles to the main part, and pressing against the bottom of this foot is a spring. Several of these bars or beaters are put upon the wheel. A concave or semicircular bedding is attached to the frame of the machine in front of the wheel or beaters. On the inside of this concave are pieces of sheet iron projecting inward at right angles to the side. This concave is made in two parts, one sliding on the other, so as to make more or less space for the beaters and the grain that may be carried down. Near the lower parts of this concave are holes or perforations for the purpose of letting the grain through and separating it from the straw. In order to prevent the straw being carried over by the beaters, I place them in such a manner that they shall not project as spokes or radii, but at an obtuse angle with the circumference. A platform is made upon the top of the framework on which to rest the grain as it is passed under the beaters.

For the better understanding of my improvement reference may be made to the accompanying drawings.

Figure 1 is a perspective view of the machine ready for threshing. A, A, A is the framework. B, B, are the levers or the treadles upon which the operator stands. C, C, is the platform on which the grain is laid when to be passed inside the beaters. D, the large cogwheel. E, the large flywheel and thresher. *f, f, f, f,* are the beaters on the side and near the circumference of the wheel. *g, g, g, g,* the springs which hold the beaters in their place when grain is passing under, but allow them to fly back completely out of the way, when any stone, stick or hard substance is passed under them. This prevents their being broke and they are put back again by pressing the springs down by the hand, and turning them forward. H, H, is the concave. This is made of wood in two parts, one lapping on the other and held in its place by screws as represented at *s, s.*

The wood is sheathed with sheet iron and is perforated at the bottom as represented.

Fig. 2 represents the interior of the cylinder together with the axis band, lever or treadle. B is the lever having the band attached to it at one end as a hole, slot, or mortise in the forward part to allow the band to pass down through it and be fastened to a spring to draw it back. *h* is the axis. *l* the cylinder or circular box. *m* the band. *n* the teeth on the axis. *o* the pawl or click. *p* the spring to keep the pawl in its place.

Fig. 3 represents the different sizes of the cylindrical box for the purpose of varying the speed.

Operation: As before stated, in order to operate this machine the operator places himself on the treadles B B and presses first

with one foot and then the other. In this manner it turns the shaft which communicates motion to whatever it may be attached.

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

Attaching the spring beaters on the face and near the periphery of the wheel when constructed and acting substantially as herein described,—and the concaves in combination therewith.

In testimony that the above is a true specification of my said improvement I have hereunto set my hand this tenth day of May, 1838.

AMMI WEST.

Witnesses:

ALFRED PIERCE,
NATHL. ROBBINS.