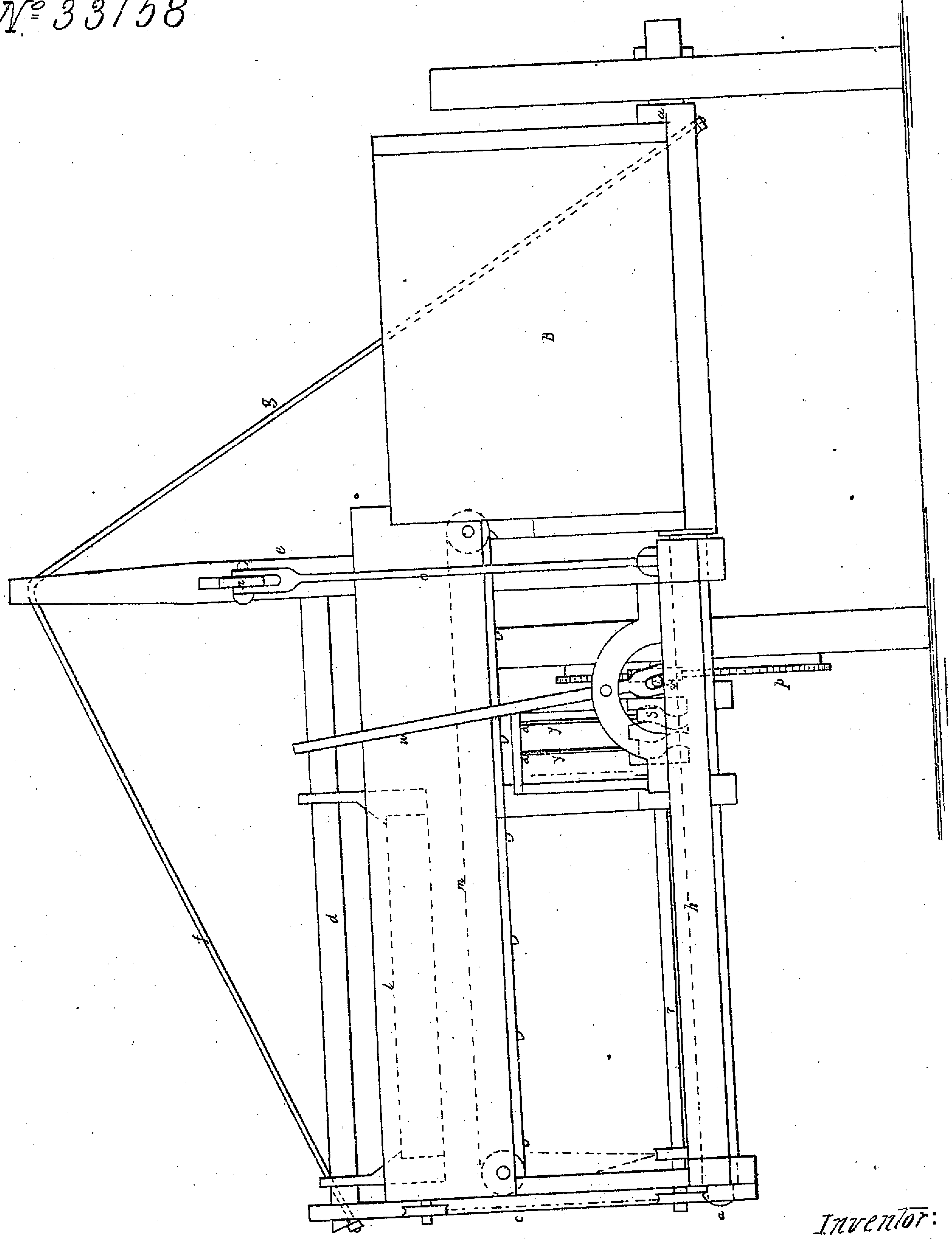
Sheet 1-3 Sheets

J. M. Orput.

Mower.

Patented Aug. 27, 1861

No. 2154
No. 33158



Witnesses:

[illegible]

[illegible]

Inventor:

James M. Orput
By his attorney
Amos Broadnax

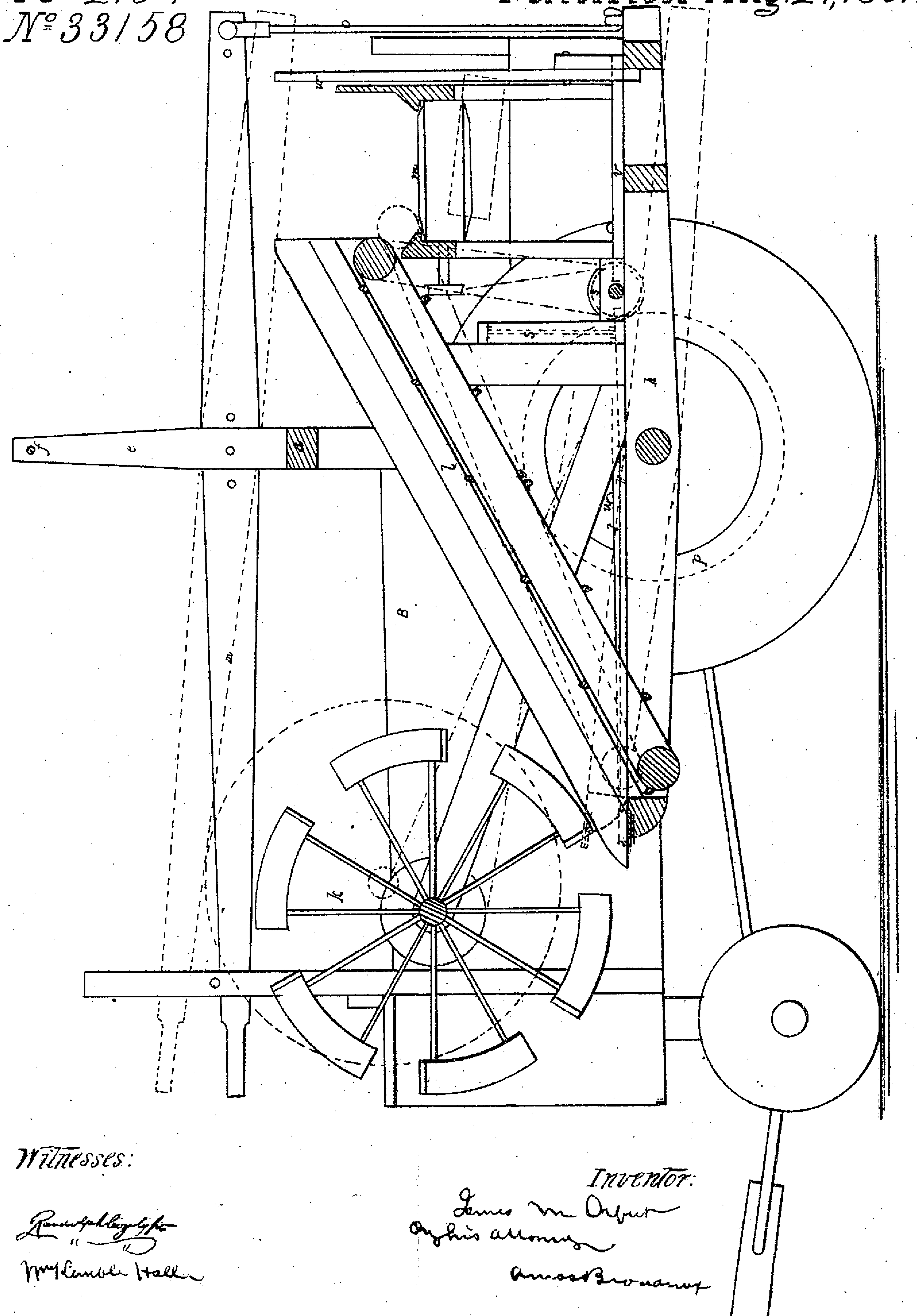
Sheet 2-3 Sheets.

J. M. Orput.

Mower.

No 2154
No 33158

Patented Aug. 27, 1861.



Witnesses:

[illegible]

[illegible]

Inventor:

James M Orput
By his attorney
Amos Broadnax

Sheet 3 - 3 Sheets.

J. M. Orput.

Mower.

No. 2154
No. 33158

Patented Aug. 27, 1861.

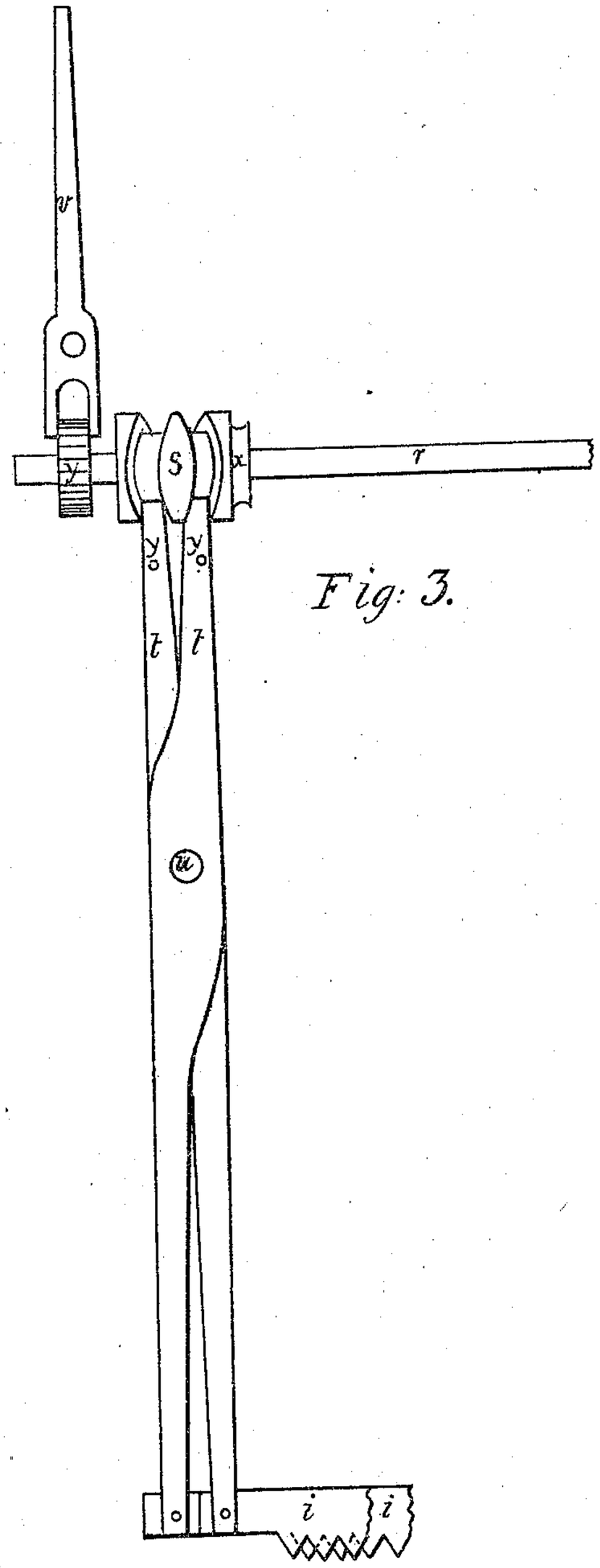


Fig: 3.

Witnesses:

Randolph Boyle Jr.
Wm Semble Hall

Inventor.
James M Orput
By his attorney
Amos Broadnax

UNITED STATES PATENT OFFICE.

J. M. ORPUT, OF MALTA, ILLINOIS.

IMPROVEMENT IN HARVESTING-MACHINES.

Specification forming part of Letters Patent No. **33,158**, dated August 27, 1861.

To all whom it may concern:

Be it known that I, JAMES M. ORPUT, of Malta, in the county of De Kalb and State of Illinois, have invented certain new and useful Improvements in Harvesting-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention consists of a swinging frame that carries the sickles at any height that may be desired by the driver of the machine and delivers the grain into the box of a wagon to which it is attached.

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

Figure 1 of the drawings is an end elevation, and Fig. 2 is a side elevation, of my said machine. Fig. 3 is a detached plan view of the parts by which the sickles are operated, as will be hereinafter more particularly described.

The axle-tree *a a* of the wagon B is prolonged at one side to carry the frame of the harvester. At the outer end of the axle is tenoned the post *c*, which is braced by the horizontal beam *d* to the vertical post *e*, which is built on the side of the box of the wagon. The stay-rod *f g* supports the outer end of the axle by bracing it to the opposite side of the wagon. The horizontal frame *h* of the harvester swings on the axle *a* and carries the sickles *i i*, the gathering-wheel *k*, the elevating endless apron *l*, and the apron *m*, and the machinery by which they are operated. The lever *n*, by which the height of the sickles from the ground is graduated, is pivoted in the middle of its length to the post *e*, the forward end being furnished with a handle alongside of the driver's seat, and the hind end with a rod, *o*, connected to the rear end of the swinging frame *h*. It is also fitted with several pin-holes at the centers of motion, by which it may be adjusted. The serrated plates or sickles *i i* have reciprocating motions simultaneously in opposite directions, which are derived from the spur-wheel *p*, placed on one of the wagon-wheels. The wheel *p* gears into a pinion, *q*, on the transverse shaft *r*, which also carries a cam, *s*, grooved for the reception of the ends of the levers *t t*, which are supported by the suspension-rods *y y*, and cross each other like a pair of shears at the fulcrum *u*. The grooves of the cam *s* start from nearly the same point on the surface, thence diverge and come together in an elliptical manner, and again diverge and come together at the point of starting. A single revolution of the shaft *r* thus occasions four transverse motions of each sickle, and the movement of each is always opposite to that of the other, so that when one moves to the right the other moves to the left, and vice versa, thus shearing the grain that may be included between their several points. The pinion *q* is held in position by the clutch *v*, which is operated by the lever *w*, that passes to the top of the machine, where it may be reached by the assistant in the box of the wagon. The gathering-wheel *k* is driven by a crossed belt from the pulley *x* on the shaft *r*, which also carries the pulleys by which the endless aprons are driven. The lever *w* thus controls the movements of all the working parts of the harvester. The frame of the machine and the gearing and aprons may be arranged in any suitable manner; but I prefer the arrangement shown in the drawings.

The operation of the machine is as follows: As the wagon progresses over the ground, the rotation of the hinder wheel rotates the shaft *r* and operates the sickles, the gathering-wheel, and the aprons, the gathering-wheel presses the grain down against the sickles, by which it is cut off, and the elevating-apron carries it up to a height sufficient to clear the wheel and transfers it to the apron *m*, by which it is delivered into the box of the wagon. The driver may at any time depress or elevate the sickles by the lever *n*, as is indicated by the red lines of the drawings, to accommodate them to the variations in the height of the grain; and the operation of the working parts of the machine may be stopped by the assistant who trims the grain in the box by simply uncoupling the pinion *q* by the lever *w*.

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

The arrangement of the vibrating frame carrying the cutting apparatus, reel, endless aprons, and gearing upon the axle *a*, and adjusting the same by means of the lever *n*, substantially in the manner described, and for the purpose specified.

J. M. ORPUT.

Witnesses:

ANDREW AKIN,

H. C. AKIN.