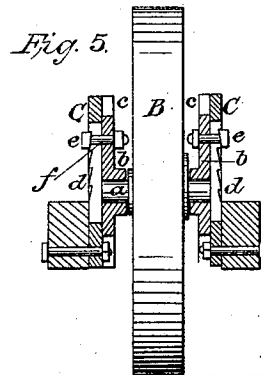
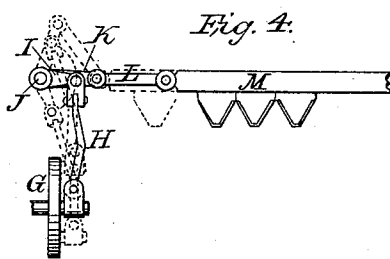
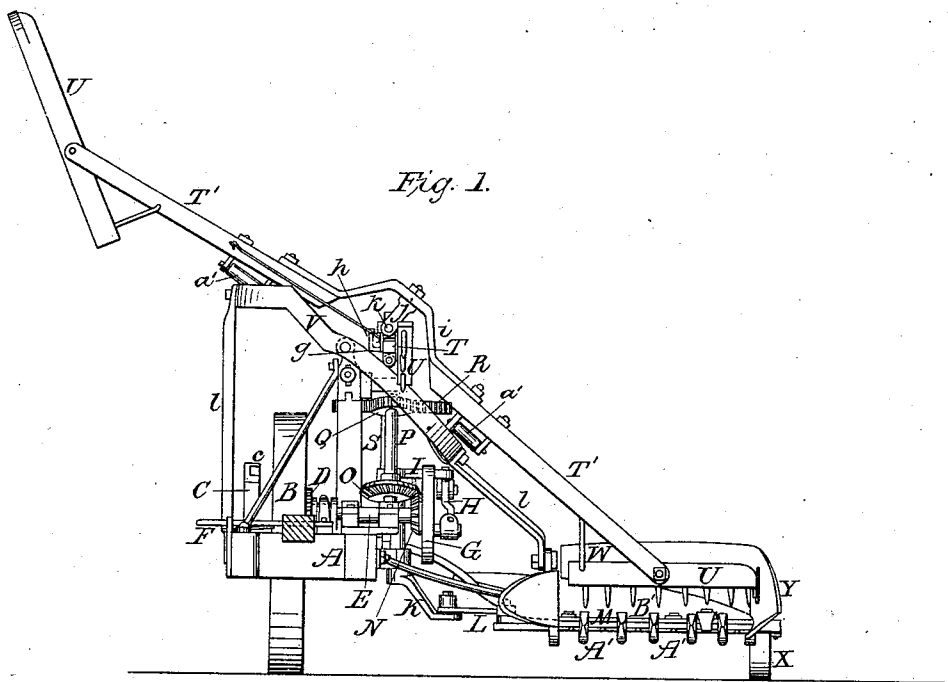


O. DORSEY.  
Reaper.

2 Sheets—Sheet 1.

No. 15,174.

Patented June 24, 1856.

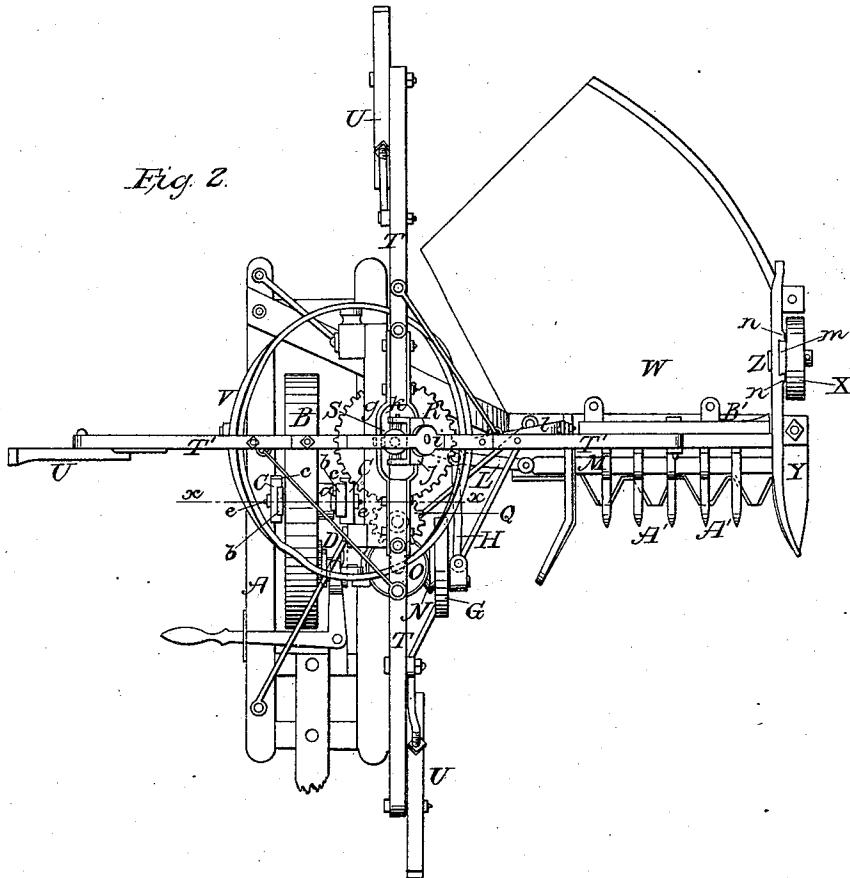


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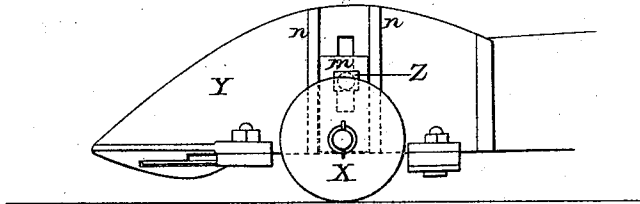
2 Sheets—Sheet 2.

No. 15,174.

Patented June 24, 1856.



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

OWEN DORSEY, OF TRIADDELPHIA, MARYLAND.

## IMPROVEMENT IN REAPERS.

Specification forming part of Letters Patent No. 15,174, dated June 24, 1856.

*To all whom it may concern:*

Be it known that I, OWEN DORSEY, of Triadelphia, in the county of Howard and State of Maryland, have invented a new and useful Improvement in Reapers; 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, in which—

Figure 1 is a front view of my improvement. Fig. 2 is a plan or top view of the same. Fig. 3 is an outer side view of the metallic separator at the outer end of the platform. Fig. 4 is a detached plan or top view of the sickle or driving device. Fig. 5 is a transverse vertical section of the main frame of the machine, the working parts being detached, with the exception of the driving-wheel *x x*. Fig. 2 shows the plane of section.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the main frame of the machine, of rectangular form, and having a driving-wheel, B, fitted within it. The axis *a* of the driving-wheel B is fitted in bearings *b b*, which are fitted and slide in or between curved guides *c*, attached to the main frame. The guides *c* are connected to slotted curved bars O, which have notches *d* cut in their outer sides, in which the heads *e* of screws *f* fit, said screws passing into the bearings *b b* of the axle. By turning the screws *f* the heads *e* may be thrown out from the notches, and the main frame A raised or lowered to the desired point. The driving-wheel B is cogged or toothed on its inner periphery, and a pinion, D, gears therein, said pinion being placed loosely upon its shaft E, and connected to it by a feather and groove, so that the pinion may be connected and disconnected with the shaft E by operating a lever, F.

To the outer end of the shaft E there is attached a crank-pulley, G, having a pitman, H, connected to it, said pitman being attached to an arm, I, at the upper end of a vertical shaft, J, on the frame A. The lower end of the shaft J has an arm, K, attached to it, said arm being pivoted to a pitman, L, which is attached to the cutter-bar M, as shown more

particularly in Fig. 4. By this arrangement or mode of communicating motion to the sickle four vibrations or strokes of the sickle are obtained at every revolution of the crank-pulley G, for the arm K and pitman L form a toggle which gives a double movement, or increases the movement of the sickle one-half more than the usual direct connection by a pitman attached to the sickle and crank-pulley.

The shaft E has a bevel-pinion, N, upon it, into which a pinion, O, gears, the pinion O being at the lower end of a shaft, P, placed in the frame A. A pinion, Q, is fitted on the upper end of the shaft P, said pinion gearing into a toothed wheel, R, placed on the upper end of the shaft S.

To the upper end of the shaft S there are attached two pairs of arms, T T'. The arms T are connected by two bars, *g g*, which work on the ends of a pin, *h*, which passes transversely through the upper end of the shaft S, the bars being allowed to work freely on the ends of the pin. The other arms, T', are connected by a bar, *i*, which has a fork, *j*, attached to its center, the lower ends of the fork working on the ends of a pin, *k*, which passes transversely through the upper end of the shaft S at right angles with the pin *h*. One pair of arms therefore, it will be seen, are placed at right angles with the other pair, and they rotate with the shaft S, and are allowed to oscillate up and down while rotating. The outer ends of the arms have rakes U attached.

V is an annular bar, which is attached to bars or supports *l*, attached to the machine in any proper manner. The annular bar V is placed in an oblique or inclined position, and is bent or curved, as shown in Fig. 1, so as to form a guide to the rakes U, while passing over the platform W. The platform is supported by a wheel, X, at its outer side, the bearing *m* of which is fitted between guides *n n*, attached to the outer side of the separator Y. A screw, Z, passes through a slot in the separator and into the bearing *m*, the head of the screw fitting in notches in the inner side of the separator. By this arrangement the platform may be raised or lowered to the desired height. The arrangement of the bearing *m* is precisely the same as the bearings *b b* of the driving-wheel B, with the exception that the guides *c c* are curved, in order to keep the pin-

ion D in gear with the wheel B. The platform W is of curved or segment form, corresponding to a portion of the circle which the rakes U describe.

A' are fingers attached to the finger-bar B at the front end of the platform, the cutter-bar M working in or through the slotted fingers.

As the machine is drawn along the shaft S will be rotated by means of the gearing previously described, and the two pairs of arms T T' will rotate of course with the shaft S, and the rakes U will pass over the platform W, raking the grain off its back end, the rakes falling or sinking as they approach the front end of the platform, and kept parallel with it while passing over it, the rakes rising as they pass off the platform. This rising and falling of the rakes is effected by the annular bar V, curved or bent, as previously stated, so as

to serve as a guide to the rakes. The under side of the arms T T' have friction-rollers *a* attached, said rollers resting upon the annular bar V.

I do not claim the raking attachment, for that was formerly patented by me; but

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

Driving the sickle or communicating motion thereto by means of the crank-pulley G, pitman H, arms I K L, and shaft J, arranged as shown, whereby four vibrations of the sickle are obtained at every revolution of the crank-pulley G.

OWEN DORSEY.

Witnesses:

WILLIAM E. FLAHERTY,  
ROBERT BROWN of W.