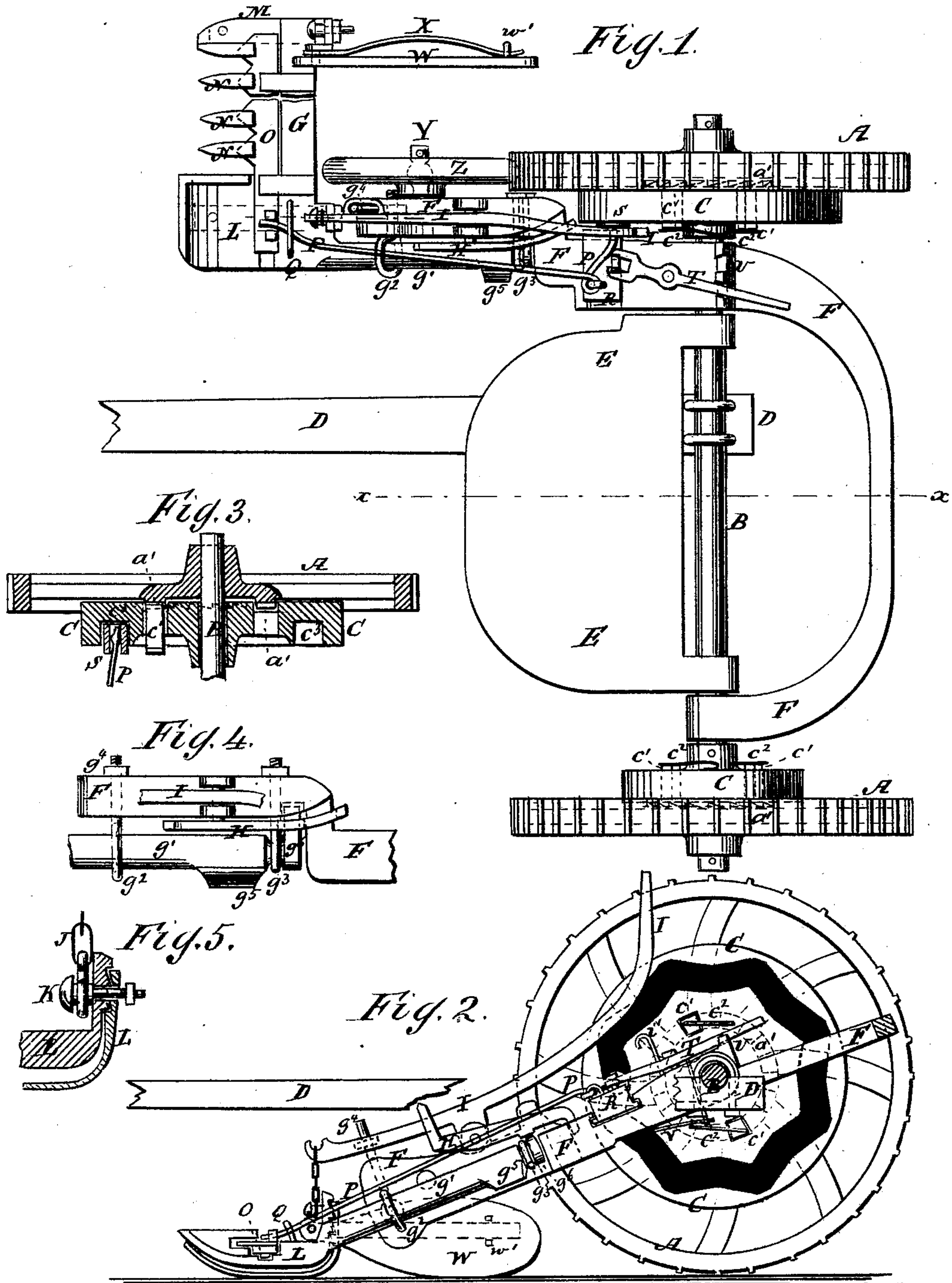


C. N. PIKE.  
Mower and Reaper.

No. 219,757.

Patented Sept. 16, 1879.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES N. PIKE, OF READSBOROUGH, VERMONT.

## IMPROVEMENT IN MOWERS AND REAPERS.

Specification forming part of Letters Patent No. **219,757**, dated September 16, 1879; application filed April 9, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES NEWELL PIKE, of Readsborough, in the county of Bennington and State of Vermont, have invented a new and useful Improvement in Mowers and Reapers, of which the following is a specification.

Figure 1 is a top view of my improved machine. Fig. 2 is a vertical longitudinal section of the same taken through the line *x x*, Fig. 1. Fig. 3 is a detail cross-section of one of the drive-wheels with its ratchet-wheel and grooved wheel. Fig. 4 is a detail top view of the shank of the cutter-bar and the forward end of the crooked bar. Fig. 5 is a detail section of the shoe.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish improved machines for cutting grass and grain, which shall be so constructed as to have no down-draft upon the horses' necks, and which shall be simple in construction, convenient in use, and effective and reliable in operation.

The invention consists of certain improvements, which will be first described in the specification, and then pointed out in the claims.

A are the drive-wheels, which revolve upon the journals of the axle B, and upon the inner sides of which is formed a circle of ratchet-teeth *a'*. To the axle B, at the inner side of the wheels A, are attached wheels or disks C, through which are formed a number of square holes to receive the pawls *c'* in such positions that the ends of said pawls *c'* may rest upon the ratchet-teeth *a'*. The pawls *c'* have their forward ends beveled to correspond with the inclination of the ratchet-teeth *a'*, and are held forward against said ratchet-teeth *a'* by springs *c''*, attached to the wheels C, and which rest against the outer ends of the said pawls *c'*. This construction enables the requisite strength to be obtained from less material than when the pawls work upon the edges of the ratchet-wheels.

D is the tongue, the rear end of which is pivoted to the axle B. To the tongue D is attached the platform E, upon the rear edge of which are formed, or to it are attached, bearings which work upon the axle B. The plat-

form E thus serves as braces or hounds for the tongue D.

Upon the axle B, at each end of the platform E, work the bearings of the crooked bar F, the right-hand arm of which is extended to receive the cutter-bar G and the other operating parts of the machine.

Upon the inner end of the finger-bar G is formed, or to it is attached, an arm or shank, *g'*, which passes back along the inner side of the crooked bar F, to which it is connected by a hook-bolt, *g''*, and a U-bolt, *g'''*. The hook-bolt *g''* passes through a cross-slot in the crooked bar F, and is secured to the lower end of a rod, *g''''*, which passes up through a guide-eye attached to the outer side of the said crooked bar F. The U-bolt *g'''* passes around a groove in the rear part of the shank *g'* and through the crooked bar F.

Upon the side of the shank *g'* is formed a lip or flange, *g'''''*, which, when the finger-bar G is raised into an erect position, strikes against the inner side of the crooked bar F, and prevents the said finger-bar from swinging over too far.

Upon the rear end of the shank *g'* is formed a cam, *g''''''*, upon which rests a lever, H, and the shoulder of which, when the finger-bar G has been raised into a vertical position, passes the lever H, so that the finger-bar G will be held in an upright position until the lever H has been raised. The lever H is pivoted to the crooked bar F.

The outer end of the finger-bar G is kept from dropping below a horizontal position by the cam *g''''''*, the shoulder of which strikes against the bottom of a notch or groove formed in the crooked bar F.

The finger-bar G is raised to pass obstructions by the lever I, which is pivoted to the crooked bar F, and may be secured in place, holding the said finger-bar G raised, by passing its rear end beneath a hook, *i'*, attached to the crooked bar F, near the axle B.

The forward part of the lever I has a guide-hole formed in it, or in a lug formed upon it, to receive the rod *g''''*. To the forward end of the lever I is attached the upper end of a short chain, J, the other end of which has an eye-link formed upon it to receive the larger rear part of the bolt K, the smaller forward part of



which passes through the upwardly-projecting part of the shoe L.

The end shoes L M of the finger-bar G are made in two parts, the rear ends of which are bent upward, have teeth or corrugations formed upon the adjacent sides of said upwardly-projecting parts to prevent them from slipping upon each other, and are secured to each other by bolts, so that by loosening the said bolts the lower parts of said shoes may be moved up or down to adjust the cutter-bar to work closer to or farther from the ground, as may be required.

To the finger-bar G are attached the guards N, upon the upper sides of which are formed cross-grooves, as shown in Fig. 2, to receive the bolts by which the sickles are secured to the sickle-bar O. The sickle-bar O works upon the finger-bar G in the usual way, and to its inner end is pivoted the end of the long arm of the bent lever P, which end also passes through a long keeper, Q, attached to the inner end of the cutter-bar F. The lever P has a loop or eye formed in its angle to receive the hook or U-bolt by which it is pivoted to a T-block, R, which slides in a T-groove in the crooked bar F.

The forward end of the short arm of the lever P has a ball-enlargement formed upon it to receive a friction-roller, S, which works in a zigzag groove,  $c^3$ , formed in the inner side of an enlargement of the pawl-wheel C. The groove  $c^3$  should be made with its sides between its inner and outer angles in straight lines, so that the sickle-bar may move at the same velocity through the whole of its stroke, the ball bearing off the friction-roller S, enabling it to move along the groove  $c^3$  without binding.

The T-block R is moved out and in to throw the lever P out of and into gear with the grooved wheel C by the lever T, the forward end of which is pivoted to said block R.

The lever T is pivoted to the crooked bar F, and its rear end passes across a bar or flange, U, attached to or formed upon the said crooked

bar F, and which is notched to receive the said lever T, and hold it in place when adjusted in either position. The lever T is held down upon the notched bar or flange U by a spring, V, attached to the lower side of the crooked bar F, and connected with the end of the pivoting-bolt of said lever T.

W is the dividing-board, the forward end of which is pivoted to the outer end of the finger-bar G, or to the end shoe M, and is held in place by a spring, X, the forward end of which is attached to the finger-bar G, and its rear end passes through a keeper,  $w'$ , attached to the outside of the rear part of the said dividing-board W. The spring X holds the dividing-board W in place under ordinary circumstances, and allows it to yield should it strike an obstruction, and thus prevent it from being broken.

To the outer side of the forward part of the crooked bar F is attached a gudgeon, Y, upon which the wheel Z revolves to support the forward end of the said crooked bar F and its attachments. The gudgeon Y is made with a ball-bearing, which allows the wheel Z to accommodate itself to the surface of uneven ground without binding.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The lever P, the T-shaped sliding block R, the forked lever T, the notched flange U, and the spring V, in combination with the grooved wheel  $c$ , and with the finger-bar O, substantially as and for the purpose described.

2. The combination of the lip or flange  $g^5$ , the cam  $g^6$ , the hook and U-bolts  $g^2$   $g^3$ , and the lever H, with the shank  $g^1$ , of the cutter-bar G, and with the slotted and notched crooked bar F, substantially as herein shown and described.

CHARLES NEWELL PIKE.

Witnesses:

ORIN TIMOTHY PARSONS,  
MINER TOWER.