

W. H. Seymour.  
Mower.

No. 97126.

Patented Nov. 23 1869

Fig. 1.

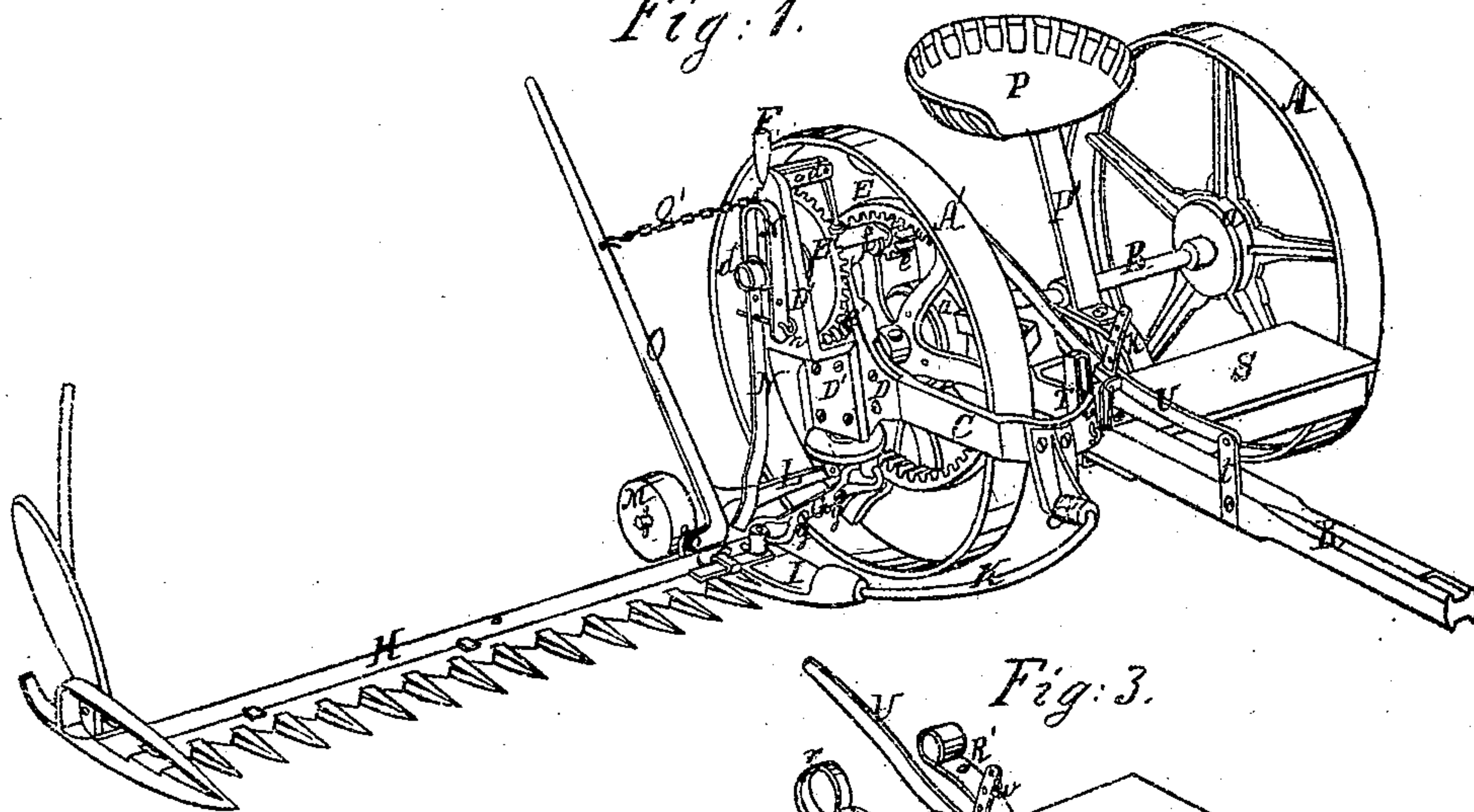


Fig. 3.

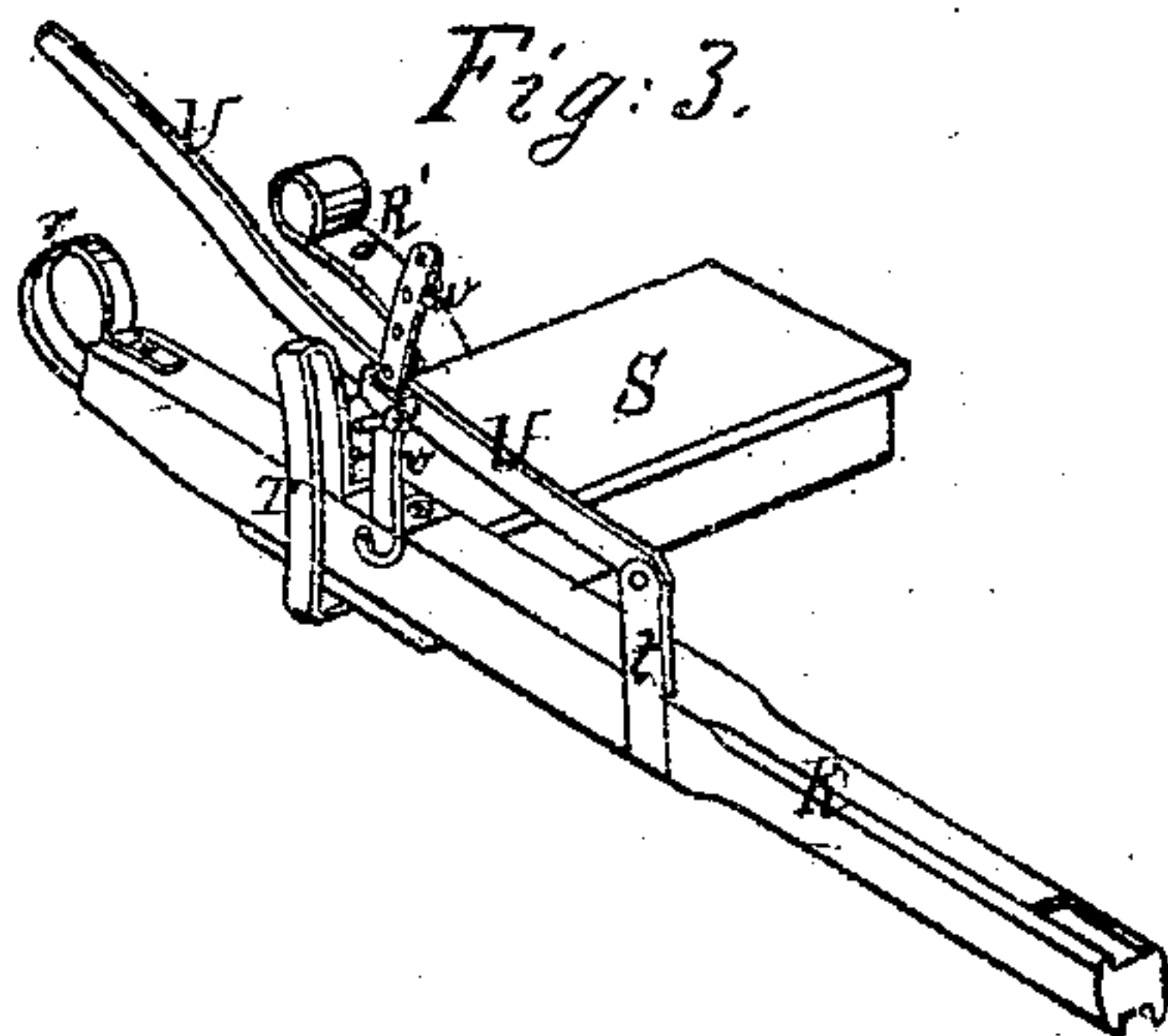
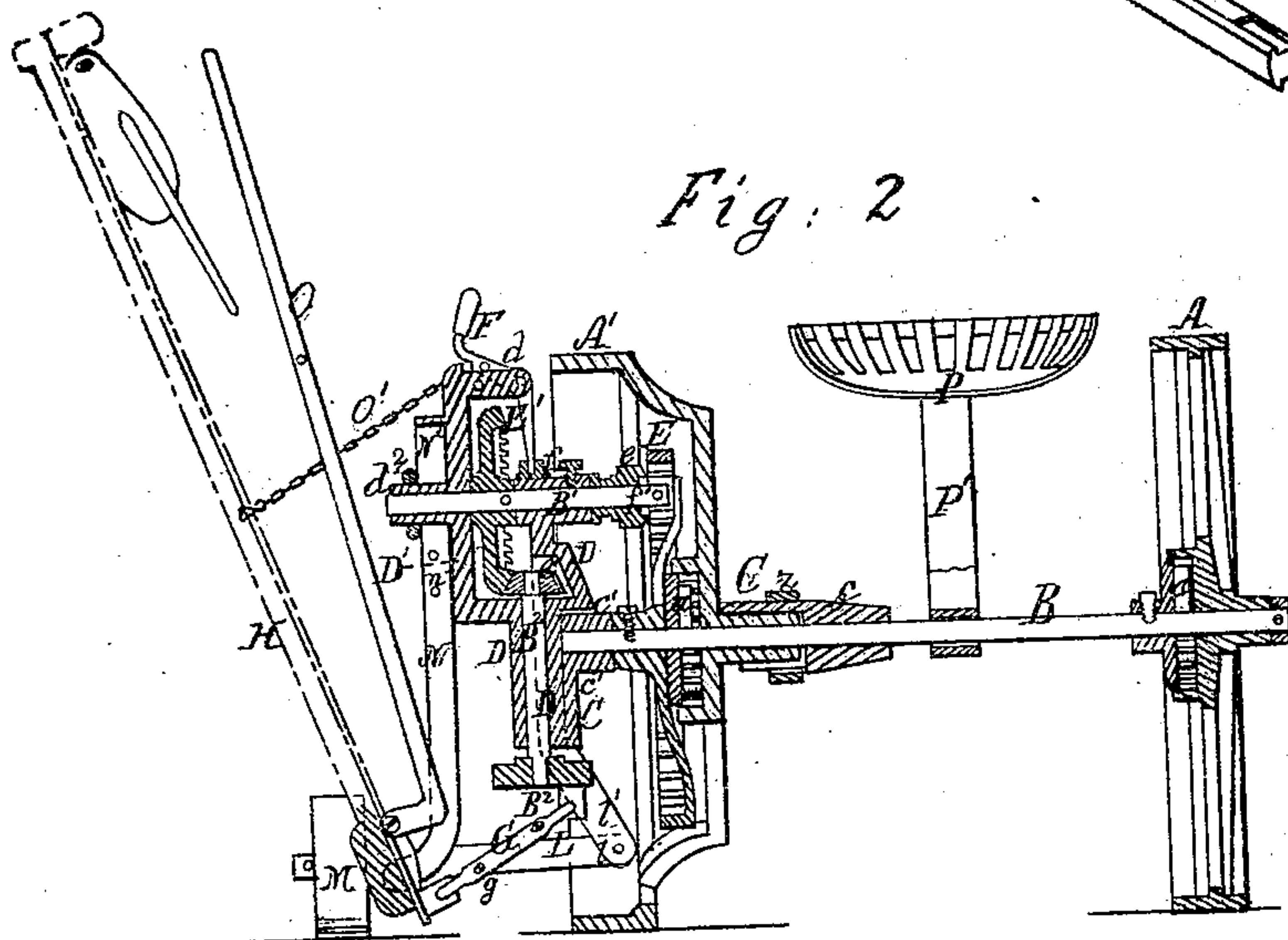


Fig. 2.



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# UNITED STATES PATENT OFFICE.

WILLIAM H. SEYMOUR, OF BROCKPORT, NEW YORK.

## MOWING-MACHINE.

Specification forming part of Letters Patent No. 97,126, dated November 23, 1869.

*To all whom it may concern:*

Be it known that I, WILLIAM H. SEYMOUR, of Brockport, county of Monroe, and State of New York, have invented certain new and useful Improvements in Mowing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of my improved mowing-machine. Fig. 2 is a transverse vertical section of the same, taken in line with the main drive-wheel axle; and Fig. 3 is a perspective view of the draft pole or tongue and its attachments detached from the machine.

My invention relates to the arrangement of the main or gear frame and gearing relative to the main axle and driving-wheels.

It further relates to the arrangement of levers for effecting the desired adjustments of the cutting apparatus, and to the manner of combining a carrying-wheel with the heel end of the cutting apparatus, as herein set forth.

In the accompanying drawing, A A' represent the two independent driving-wheels of the machine, mounted on a common axle, B, and connected thereto by "backing" ratchets, at a, in such manner as to rotate the axle only during the forward movement of the wheels, (one or both.) C is the main frame of the machine, made or cast in a single piece, of U form, and provided at its open end with sleeves c c', which embrace the axle B upon opposite sides of the inner drive-wheel A', the frame C passing around the front of and embracing said wheel, as shown in Fig. 1. To the grain-side vertical face of frame C, and in line with axle B, is bolted or otherwise secured a vertical gear-plate, D, in a horizontal sleeve in the upper end of which is mounted the pinion and bevel-wheel shaft B<sup>1</sup>, the outer end of which has a bearing in an upright angular plate, D', which is fastened at its lower end to plate D and frame C. (See Fig. 1.) The plates D D' are grooved on their adjacent faces to form a bearing between them for the crank-shaft B<sup>2</sup>, from which motion is imparted to the cutters.

The arrangement of mechanism for driving the cutters is as follows: E is a main spur-wheel, keyed to and turning with the main axle B. e is a sliding pinion, clutched to and

turning bevel-wheel shaft B<sup>2</sup> and bevel-wheel E' mounted thereon, and from which motion is communicated to bevel-pinion e' on the upper end of crank-shaft B<sup>2</sup>.

Plate D' has at its upper end a horizontal arm, d, on which is pivoted a bent lever, F, the lower arm of which enters a socket in a shipper-slide, f, which serves, when operated by lever F, to move pinion e into or out of clutch with a pin, f', in the inner end of shaft B<sup>1</sup>, and thereby to throw the cutters into or out of action during the forward movement of the machine, as desired.

The pitman G, through which motion is communicated from the crank-shaft to the cutters, is divided longitudinally, or made in two pieces, with the ends bent in such manner as to form a clasp, to embrace between them the crank-wrist at one end and the sickle-bar head at the other, as represented in Fig. 1. The ends or points of the hooks or clasps are made conical or convex in form, and these points enter corresponding sockets formed in the crank-wrist and sickle-bar head. The two parts of the pitman are fastened together, clamping the crank-pin and sickle-head between, by means of set-screws or bolts g.

The finger-bar H of the cutting apparatus, which may be of any useful construction, is bolted at its inner or heel end to a shoe, I, the forward end of which is provided with a sleeve or eye, to receive the rear end of a curved or angular forward brace-rod or drag-bar, K, which, at its forward or main-frame end, enters an eye or sleeve, C', formed in frame C. The rod or brace K is allowed to turn freely in sleeve C' at one end, and permits the shoe I to turn freely upon its opposite end, thus forming a double joint or hinge between the finger-bar and main frame. The rear end of shoe I has a stud or pivot formed upon it, which is secured in an eye in the outer end of a rear hinged brace, L, in such manner as to turn freely therein. The inner or main-frame end of brace L is pivoted or hinged at l to a pendant, V, attached to or formed upon gear-plate D or main frame C. The outer end of rear brace L is armed with a spur or shaft, on which is mounted a carrying-wheel, M, which serves to relieve the machine of the otherwise heavy drag of the cutting apparatus. Said wheel may be made adjustable in any usual manner, if desired, to



adapt its position or height relative to the cutting apparatus, as the character of the ground on which the machine is at work may require.

By the above-described arrangement of the jointed front and rear braces K L the cutting apparatus is brought in line with the tread of the driving-wheels, thereby giving to the machine a compact form, while at the same time the cutting apparatus is adapted to conform freely at both ends to the surface of the ground independently of the movements of the main frame and driving-wheels.

N is an upright or standard, pivoted at its lower end to the heel of shoe I, and provided at its upper end with a loop or yoke, N', which embraces and slides freely up and down upon an arm or stud,  $d^2$ , on plate D'. An adjustable pin or bolt,  $u$ , passing through perforations in the loop N' below stud or sleeve  $d^2$ , serves to limit the upward movement of standard N, and of the shoe or heel end of the cutting apparatus connected therewith, the upper portion of the loop itself limiting the downward movement of said parts.

For transportation the pin  $u$  is withdrawn, the standard N and shoe I raised, and pin  $u$  is inserted above arm  $d^2$  for the purpose of holding the cutting apparatus in an elevated position.

O is an elbow-lever, pivoted at the end of its short arm to an upright at  $o$  on the shoe I, with its lower horizontal face resting on the upper face of the shoe in such manner that, when the upper end of the lever is drawn inward by the driver on his seat P, the outer end of the cutting apparatus will be raised for passing an obstruction or other purpose. The connection of the lever with the shoe is such that the outer end of the cutters can rise freely without obstruction from the lever, while the extent of its downward movement may be limited by a chain, O', if desired.

The chain O' also serves to hold the cutting apparatus when folded for transportation, as shown in Fig. 2.

R represents the pole or tongue, which is connected, by a loop or strap,  $r$ , with the sleeve  $c$  of the main frame C, the strap  $r$  passing through a perforation in the frame and surrounding the sleeve and main axle B. R' is a seat plate or strap, connected by a loop or sleeve at its rear end with axle B, and bolted at its forward end to a foot-board or tool-box, S, bolted to the tongue or tongue-plate, as may be preferred. A seat-standard, P', on which is mounted the driver's seat P, is bolted to plate R'.

T is a slotted guide or yoke attached to the tongue or tongue-plate, said yoke or loop embracing the inner arm or leg of frame C at

or near its forward end, and serving to steady said frame, and to limit its vertical vibration on or around axle B.

U is a lever, pivoted at its forward end to an upright,  $t$ , on tongue R, and extending back to within convenient reach of the driver on seat P. Said lever is connected, at or near midway of its length, by a link,  $v$ , with the forward vibrating end of frame C, and serves to adjust the height thereof, and thereby to adjust the angle of presentation of the cutters, as desired. The lever U is held at any desired point of adjustment by a pin passing underneath the same, and through any one of a series of perforations in a curved standard,  $w$ , attached to the tongue. By this arrangement the angle of presentation of the cutters can be readily adjusted while the machine is at work, to adapt them to the varying conditions of the grass or grain, or the character of the surface of the ground upon which they are operating.

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

1. The adjustable main frame C, connected at its rear end with the main axle on opposite sides of the inner drive-wheel, in combination with a hinged cutting apparatus arranged in line with the tread of the drive-wheels, as described.
2. The vibrating main frame C and gear-plates D D', arranged relatively to each other and to the main drive-wheel axle, substantially as and for the purpose set forth.
3. In combination with a hinged cutting apparatus, connected with the main frame in line with the tread of the drive-wheels, the arrangement, substantially as described, of the gearing on the main frame and drive-wheel axle outside of the hub of the inner main drive-wheel.
4. The finger-bar hinged to the frame in line with the tread of the driving-wheels, in combination with the pivoted hand-lever O and link or loop N, arranged and operating as described.
5. The combination of the adjustable frame C, pivoted coupling or brace rods K and L hinged shoe I, and link or loop N, arranged and operating as described.
6. The carrying-wheel M, applied to the independently-hinged rear brace K, in combination with the hinged cutting apparatus, arranged substantially as described.

In witness whereof I have hereunto set my hand this 8th day of September, 1869.

WILLIAM H. SEYMOUR.

Witnesses:

WILLIAM STOUGHTON,  
D. S. MORGAN.