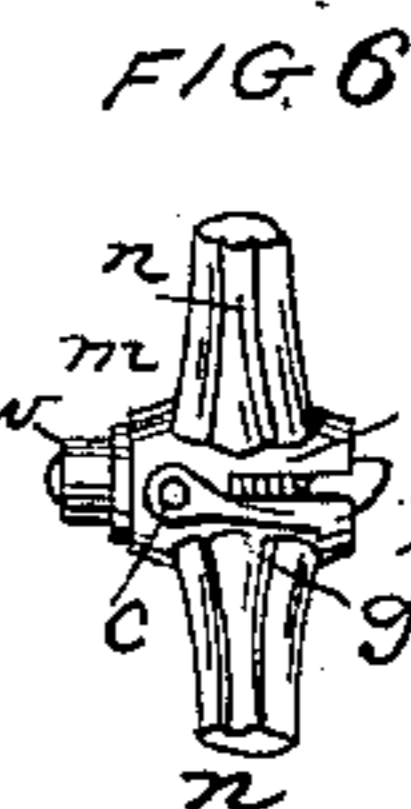
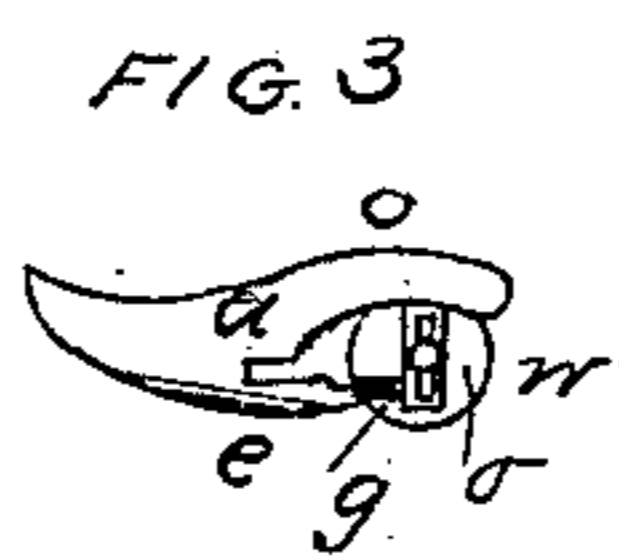
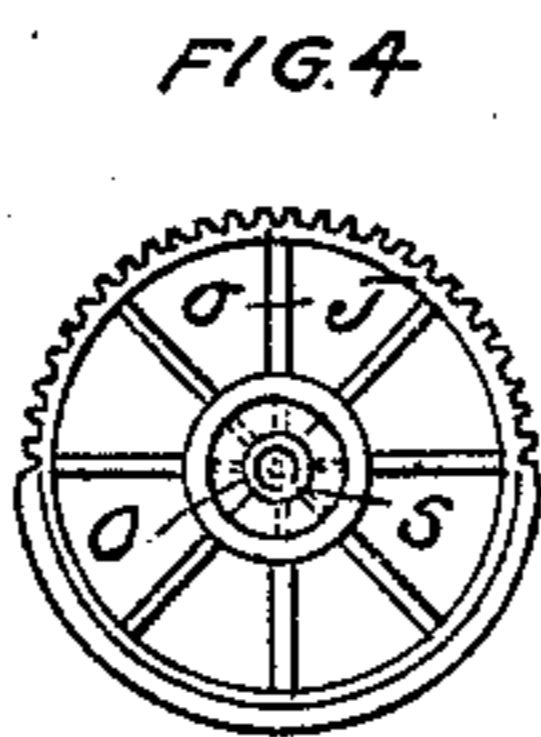
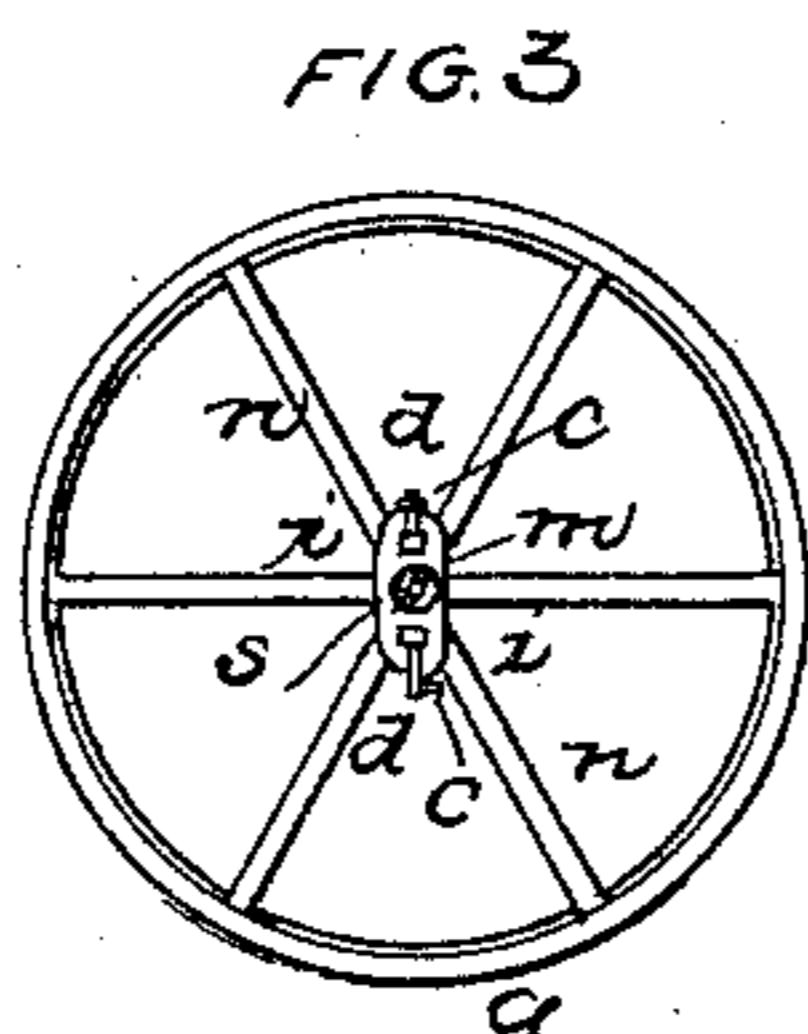
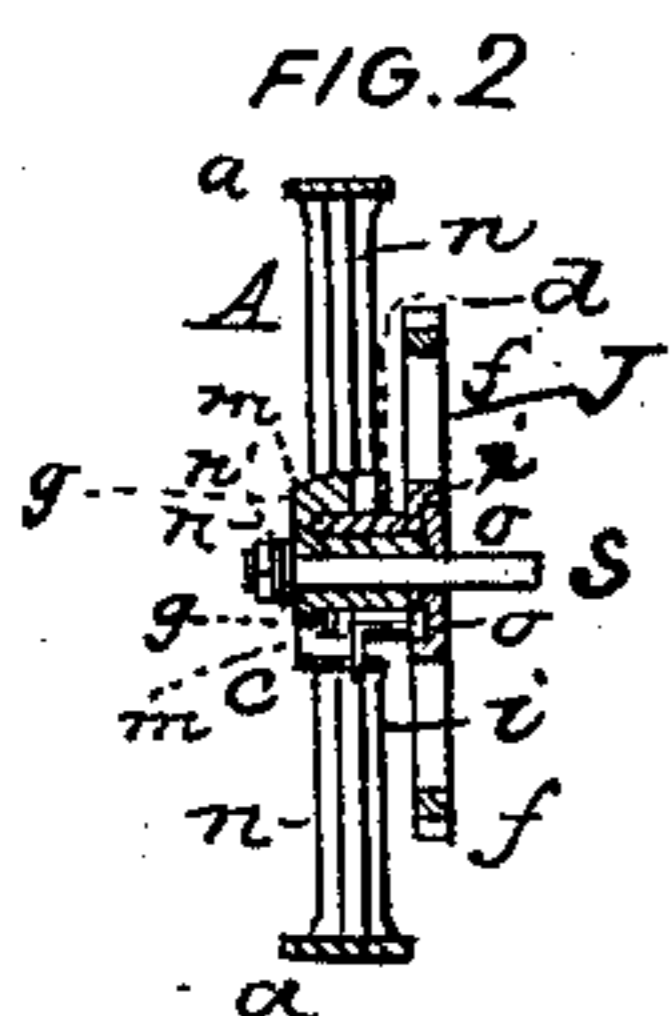
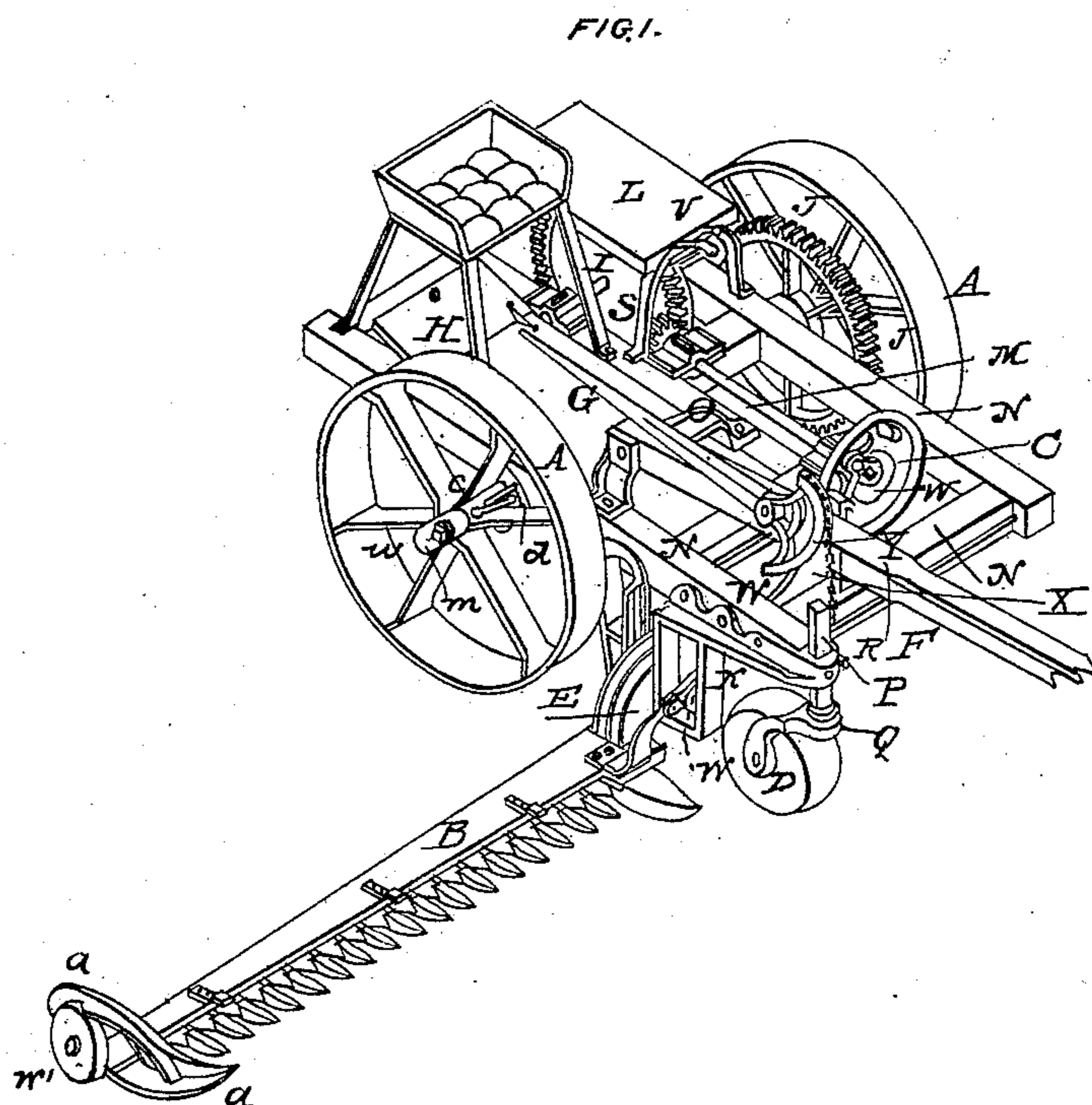


# WATKINS & BRYSON.

Mower.

No. 32,908.

Patented July 23, 1861.



WITNESSES  
M. H. Watson  
Marius P. Norton

INVENTOR  
M. D. Hawley Watkins  
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# UNITED STATES PATENT OFFICE.

JNO. DE L. WATKINS AND R. BRYSON, OF SCHENECTADY, NEW YORK.

## IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. 32,908, dated July 23, 1861.

*To all whom it may concern:*

Be it known that I, JOHN DE LANCEY WATKINS, and I, ROBERT BRYSON, each of the city of Schenectady, county of Schenectady, and State of New York, and each a citizen of the United States of America, have jointly invented new and useful Improvements in Mowing-Machines, which we entitle "Excelsior Mower;" and we each, as such joint inventors, do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making a part of this specification.

The nature of our invention consists in the combination and arrangement of the large driving-wheel with slotted hub, large spur-wheel with bevel-recesses in one end of its hub, angular catches, spiral springs, and pivoted hooks, the whole being constructed and operating together in the manner and for the purposes hereinafter described.

By our invention the mechanism for controlling the operation of the cutting apparatus, while backing the mower and while moving it from place to place, is brought compactly together, and is located immediately about the center of the large driving-wheel, where it is out of the way, and while it is thus located and compactly arranged it is still capable of being so controlled by the hand, without shifting the toothed wheels, that the motion of the cutter-bar will be ceased whether the mower is backed or moved forward.

Figure 1 is a perspective view of the entire machine. Fig. 2 is a transverse section through the center of the drive-wheel, its hub, and the cog-wheel adjoining thereto, also showing the catches hereinafter described, the coiled springs moving the same for the purpose hereinbefore described. Fig. 3 shows that part of the drive-wheel and the hub thereof to which is connected the cog-wheel shown at Fig. 4. Fig. 4 shows the cog-wheel attached to the drive-shaft, upon which revolve the drive-wheels, having a hub constructed with recesses or notches therein for the purpose of revolving the said cog-wheel, in connection with the movement of the drive-wheels. Fig. 5 shows the finger or shoe at the outer end of the cutter-bar and a wheel or pulley therein, arranged so as to be adjusted for the purposes herein described and set forth. Fig. 6 shows

the hub, spring, catch, and latch hereinafter described.

Like letters represent like parts.

We will now proceed to describe the construction of our machine, which is as follows, to wit: We construct a frame, N, of wood in such convenient manner and of sufficient strength to receive and allow the working of the machine herein described.

A are the drive-wheels, arranged and operating upon a shaft in the manner hereinafter described.

J is a cog-wheel permanently attached to the shaft upon which operate the drive-wheels A, and which operates other cog-wheels for the purpose of moving the cutter-blade in the cutter-bar B.

F is a shaft, to which a span of horses is attached for the purpose of moving the entire machine. The rear end of this shaft is connected to the frame O. This shaft extends forward over the front portion of the said frame N, where it comes in conjunction with the guide Z on the front cross-piece of the said frame N. This guide serves to give strength to the said shaft, as well as to guide and direct the machine. Upon this shaft, and near the said guide Z, is attached the quadrant Y, which is for the purpose of receiving the chain X, so that the front end of the said frame N may be raised up by means of the lever G, whereby the end of the cutter-bar B, connected to the frame K, as well as the caster D, is raised up by the driver, so that the same will pass-over any unusual impediment, not allowing that part of the cutter-bar to pass by rising upward in the frame K, as connected at E, also to give direction to the fingers of the cutter-bar B to facilitate the passage of this part of the machine over any such impediment or obstruction. The casting K K' forms an angular frame, and is attached to the mower-frame, so that one portion occupies a place on the side and the other portion a place at the front of said frame. To the front part, K', of the casting a caster-wheel, D, is attached, the stem of said wheel passing up through a bearing-box formed in the part K' of the casting. To the part K of the casting the hinge-journal of the cutter-bar is connected by means of vertical guideways cast in the casting. This latter connection is the same as that patented to Robert Bryson in 1860. The caster-wheel is for the purpose of

removing the weight of the frame N from the horses when the machine is in operation, excepting when the same is raised entirely from the ground by means of the said quadrant Y and lever G, hereinbefore described and set forth, which, when done, throws the whole weight of the said frame, cutter-bar, and caster upon the horses while passing any large obstruction, as aforesaid. This caster also serves to give a free and easy course to the machine when directed by the shaft F, as aforesaid, at the same time allowing the cutter-bar B to conform to the ground unobstructed by any part of the machine. It also governs the adjustment of the cutter-bar B to any desired angle by means of the screw-bolts R R upon the stem P of the said caster, which hold the same in any required position.

At the outside end of the cutter-bar B there is a shoe or dividing-finger, *a*, Figs. 1 and 5. This shoe or finger is constructed of any desirable shape and size to answer the purpose. It has in the rear end a wheel or pulley, *w'*, Figs. 1 and 5. This wheel or pulley is so arranged as to permit of this end of the said cutter-bar being gaged or adjusted to any desired height or position, whereby grass or grain may be cut very close to the ground. The said pulley is thus adjusted by means of the shaft upon which it revolves, (seen at *o*, Fig. 5,) which shaft moves up and down in the slot-mortise *c*, same figure, and is secured at any position by means of a nut and screw on the inner end of the said shaft *o*. This pulley or wheel allows of a free movement of this end of said cutter-bar.

The hub of the drive-wheel is constructed in an oblong form, so as to admit of the use of the catches *i* and the springs *g*, Figs. 2 and 6. *m*, Figs. 2, 3, and 6, is the hub; *s*, the shaft upon which the drive-wheels A revolve. J is the cog-wheel securely fastened upon the said shaft, and close to the driver A, for the purpose of moving the machinery by which the cutter-blade is operated. This wheel has a hub, con-

structed as seen at Fig. 4, with notches or recesses *o* therein, so formed as to allow the said drive-wheel A to move in a backward direction without operating any part of the machine for operating the cutter-blade, and, when the said drive-wheels move in a forward direction, will receive the catches *i i*, driven therein by means of the coiled springs *g g*, and thus and thereby move and operate the entire machine, unless thrown out of gear by means of the lever *v*, Fig. 1. These catches are so constructed as to allow the notches or recesses *o*, Fig. 4, to pass by freely in and during the backward motion of the machine; also so constructed that when the machine moves forward they will catch or fasten into the said notches or recesses, and thus and thereby firmly hold the same and operate the said machinery. There is a stem, *d*, projecting outward from the said catches, so that the said catches may be held drawn back or in the said hub by the hook *c*, Fig. 6. All the said catches to any machine may thus be secured, which, when done, will allow the machine to be moved in any direction without moving or operating any other part of the machine, which is useful, particularly when moving the mower into the field for use.

Having thus described our invention and improvements, what we claim, and desire to secure by Letters Patent, is—

The combination and arrangement of the large driving-wheel A with slotted hub *m*, large spur-wheel J, with bevel-notches *o* in one end of its hub, angular catches *d i d i*, spiral springs *g g*, and pivoted hooks *c c*, the whole constructed and operating together in the manner and for the purpose herein described.

In testimony whereof we have, on this 9th day of April, 1861, hereunto set our hands.

JNO. DE LANCEY WATKINS.

ROBT. BRYSON.

Witnesses:

M. H. STRATTON,

MARCUS P. NORTON.