

*J. Pine,
Mower.*

No. 44655

Patented. Oct. 11. 1864

Fig. 1.

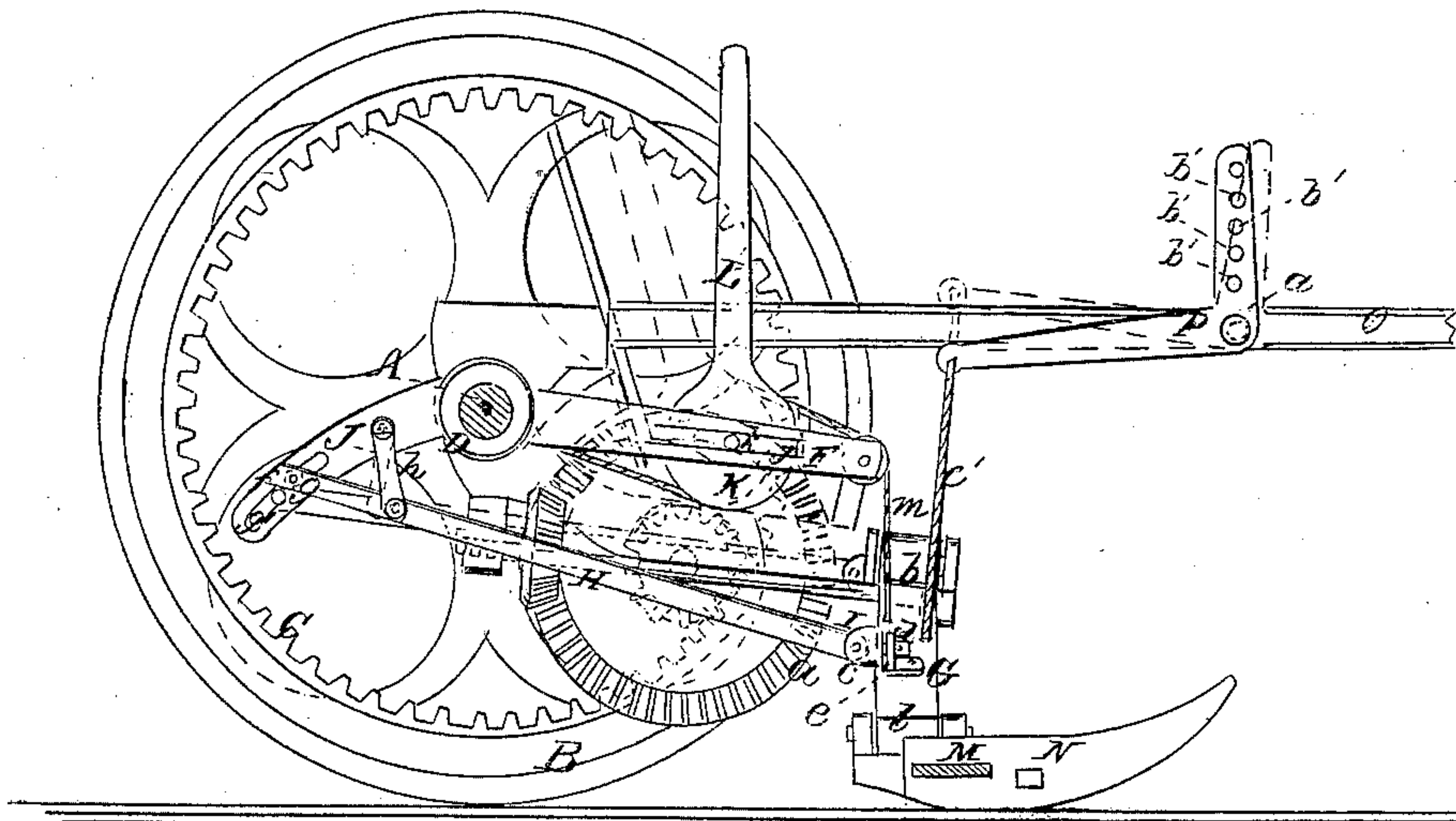
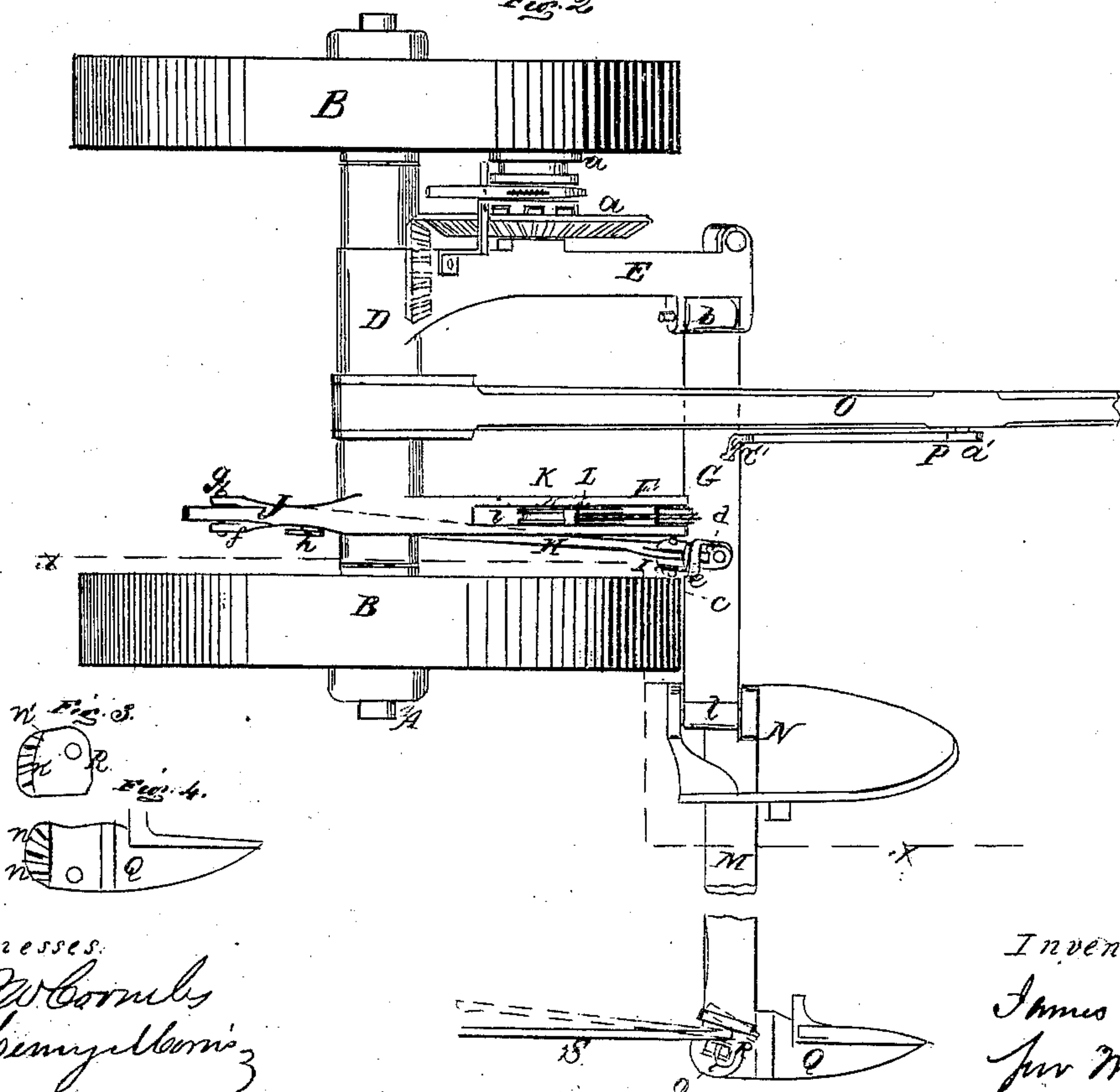


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES PINE, OF TROY, NEW YORK.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. 44,655, dated October 11, 1864.

To all whom it may concern:

Be it known that I, JAMES PINE, of Troy, in the county of Rensselaer and State of New York, have invented a new and Improved Mowing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable any person skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same; Figs. 3 and 4, views of shoe and plate for adjusting the track-clearer.

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

This invention relates to a new and useful improvement in adjusting or raising and lowering the cutter-bar, and in parts connected therewith—to wit, the brace, rod, and track-clearer. The invention also relates to an improved draft attachment for keeping the cutter-bar free from the surface of the ground, and also in an improved means for connecting the working parts with the axle of the machine, whereby the use of a framing for the purpose is avoided.

The object of the invention is to obtain a mowing-machine which will have a light draft, be capable of being economically manufactured, and admit of having its cutter-bar raised and lowered in a vertical plane, and with but a limited movement of the lever employed for adjusting or raising and lowering said bar, and also to admit of having its track-clearer adjusted so as to have a more or less oblique position, as circumstances may require.

A represents the axle of the machine, on which two wheels, B B, are placed loosely, the wheels B B being connected to the axle, when moving forward, by means of pawls and ratchets arranged in the usual way.

To the axle A there is firmly keyed a toothed wheel, C, from which motion is communicated to the sickle-driving mechanism through the medium of gearing *a* and a crank-shaft and pitman, as usual.

On the axle A there is placed loosely a sleeve, D, which has two arms, E F, projecting forward from its front side.

To the end of the arm E a bar, G, is con-

nected by a joint, *b*, and this bar G is braced by a rod, H, the front end of which is attached to G by a swivel-joint lock, I, formed by a joint, *c*, connected by a swivel, *d*, to a plate, *e*, on G, as clearly shown in both figures. The back end of the brace H is provided with a fork, *f*, through which a pin, *g*, passes, said fork receiving a curved arm, J, which projects from the rear side of the sleeve D, and which has a curved slot, *g'*, made in it for the pin *g* to pass through. The back part of the brace H is also suspended from the arm J by means of a swinging pendant, *h*. (Shown clearly in Fig. 1.)

The arm F is in line with the arm J, and the former has a vertical slot, *i*, made longitudinally in it, and also has a longitudinal horizontal slot, *j*, made in it.

In the vertical slot *i* a wheel or pulley, K, is fitted, its axis *k* being placed in the horizontal slot *j*. This wheel or pulley has a lever, L, attached to it and extending upward any suitable height.

M represents the cutter-bar, which is connected by a joint, *l*, with the bar G, said cutter-bar near this joint *l* being provided with a shoe, N. The bar G is connected to the wheel or pulley K by means of a cord or chain, *m*.

From the above description it will be seen that by a limited movement of the lever L the bar G and cutter-bar M will be raised, for the reason that the wheel or pulley K, to which the said lever is attached, has two movements—to wit, a rotary one and a sliding one—the latter being obtained in consequence of the axis *k* sliding in the horizontal slot *j*. This limited movement greatly facilitates the raising and lowering of the cutter-bar, and it will be seen that in consequence of the brace-rod H being attached to the bar G and arm J, as shown, the bar G and cutter-bar M are allowed to rise and fall in a vertical plane, and consequently with but little friction and without subjecting either the rod H or bar G to any unnecessary friction, the rod H being allowed a certain degree of longitudinal play on account of its back end working in the curved slot *g'* in the arm J, and the swivel-joint lock I forming a flexible connection between the rod H and bar G.

O is the draft-pole, which is attached directly to the sleeve D.

P is a draft-lever, of bent or right-angular

form, and attached to the draft-pole O by a fulcrum-pin, *a'*, the upper part or arm of which is perforated with a series of holes, *b'*, in any of which the hook of the double-tree is fitted. The lower arm of this lever is connected by a cord or chain, *c'*, with the bar G. By this arrangement the draft is made subservient in keeping the cutter-bar M slightly elevated, so that it may run freely over the surface of the ground, and the strength of the pull on said lever may be varied by connecting the double-tree higher or lower to the upper arm of the same.

To the outer end of the cutter-bar M there is attached a shoe, Q, which may be of the usual or any proper form, and is provided at its back end with a series of teeth, *u*, with which similar teeth, *n'*, on the under side of a plate, R, engage, said plate being on the upper surface of the cutter-bar, and both the plate and the shoe being secured to it by a screw, *o*.

To the plate R a track-clearer, S, is attached of the usual form, and it will be seen by loosening the screw *o* the plate R may be turned to give the track-clearer more or less of an oblique position, and that the teeth *n n'* will, when the screw *o* is screwed up, hold the said

plate and track-clearer firmly in place. This track-clearer is adjusted according to the state or condition of the crop of grass, so that, whether the latter be heavy or light, a free track will always be obtained for the team.

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

1. The movable or adjustable lever L, arranged, substantially as shown, for raising the cutter-bar.

2. The brace H, arranged and applied, substantially as shown, to serve as an efficient brace or stay for the cutter-bar and at the same time not interfere with the raising and lowering of the latter, as set forth.

3. The draft-lever P, applied to the draft-pole and bar G of the cutter-bar M, to operate in the manner set forth.

4. The track-clearer S, applied to and made adjustable upon the outer end of the cutter-bar M by means substantially as and for the purpose specified.

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Witnesses:

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