# A. B. CONDE.

## Lever-Attachment for Mowing-Machine.

No. 161,483. Patented March 30, 1875.

Fig. 1.

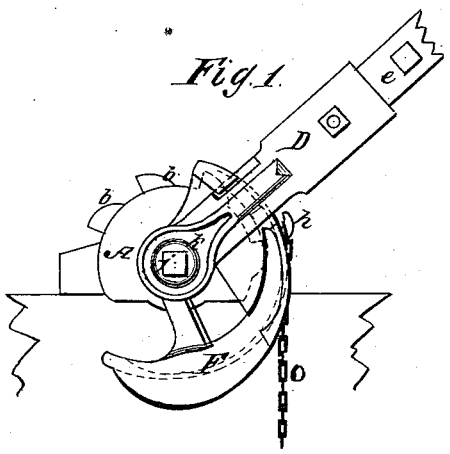



Fig. 2.

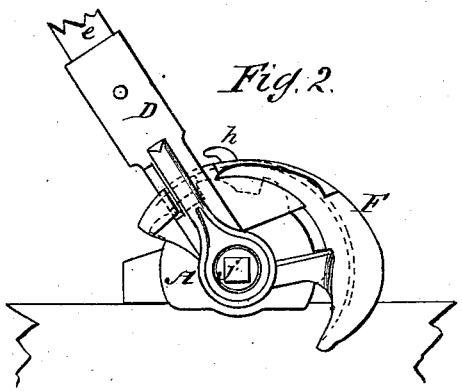



Fig. 3.

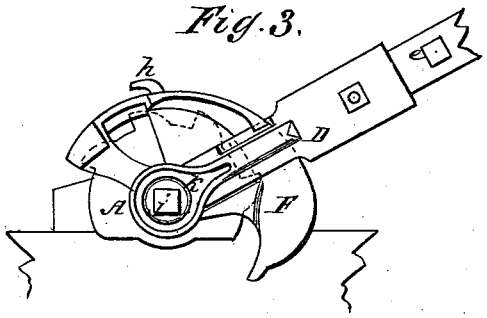



Fig. 4.

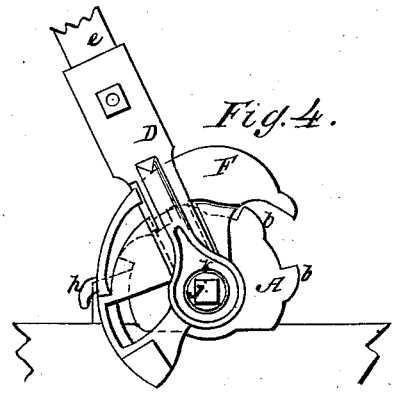



Fig. 5.

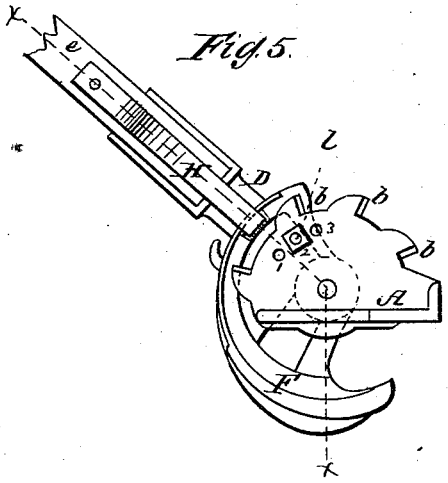



Fig. 6.

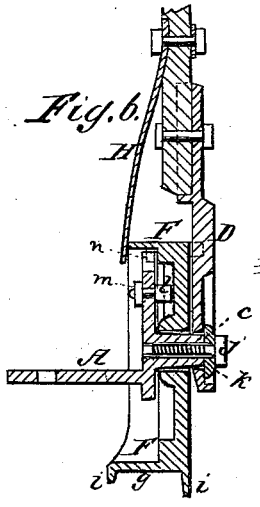



Fig. 7.

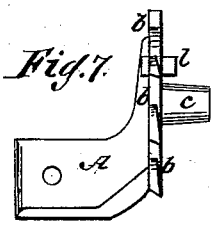



Fig. 8.

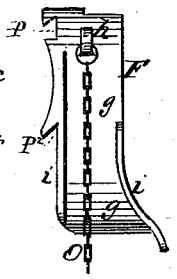
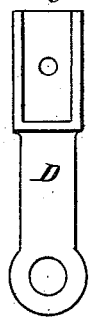



Fig. 9.




Witnesses:
E. Wolff.
Jacob Felbel

Inventor:
A. B. Conde.
By attorney
E. F. McGuire

# UNITED STATES PATENT OFFICE.

ALONZO B. CONDE, OF TRUMANSBURG, NEW YORK.

## IMPROVEMENT IN LEVER ATTACHMENTS FOR MOWING-MACHINES.

Specification forming part of Letters Patent No. **161,483**, dated March 30, 1875; application filed August 13, 1874.

*To all whom it may concern:*

Be it known that I, ALONZO B. CONDE, of Trumansburg, county of Tompkins, in the State of New York, have invented an Improvement in Lever Attachment for Mowing-Machines; and I 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.

My invention relates to a novel device or contrivance for lifting up the cutting apparatus of a mowing-machine.

I have constructed and arranged the parts for use in connection with a machine such as illustrated in the Letters Patent granted to Daniel H. Thayer March 13, 1866, and reissued April 14, 1874, and known in the market as the "Meadow King" machine, having practically applied my invention upon this kind of machines and tested its utility thereupon; but my improved apparatus or contrivance may of course be adapted to and used upon other machines in which the cutting mechanism may be lifted up into a vertical (or nearly vertical) position, to be out of the way while moving the machine on the road.

My invention has for its object to provide a means by which the driver, while in his seat, can with facility, through the medium of an ordinary hand-lever, conveniently located, completely lift up the cutting mechanism of the machine; and to this end and object my invention consists in a lifting mechanism resulting from the combination, with a suitable hand-lever and stationary ratchet-plate, very similar to the lifting device or contrivance usually employed on harvesting-machines, of an intermediate oscillatory piece adapted to carry an ordinary lifting chain or cord, and constructed and arranged to engage and disengage, alternately, with the lever and with the stationary ratchet or holder-plate, so that by alternately turning the lever and intermediate piece, and the lever alone, the lifting-chain may be so wound up on the intermediate block as to effect the complete elevation of the cutting-mechanism, as will be hereinafter more fully explained.

To enable those skilled in the art to make and use my invention, I will proceed to describe more fully its construction and operation, referring by letters to the accompanying drawings, in which—

Figures 1, 2, 3 and 4 are side elevations from the same point of view, but showing the parts in various positions. Fig. 5 is a side elevation, taken from a point of view on the opposite side of the machine. Fig. 6 is a vertical section at the line *x x*, Fig. 5, and Figs. 7, 8 and 9, are detail views of the three several parts of the machine or mechanism.

In all the figures the same part will be found designated by the same letter of reference.

A is a cast-iron stand adapted to be bolted on to the main frame of the machine a little to the right and in front of the driver's seat, or about at the usual and proper place for a lifting-lever (to raise and lower the finger-bar.) It is formed with a segmental plate portion, the edge of which is notched, or tooth-like, as seen at *b b*, &c., and it has a hub, or hollow stud, *c*, projecting horizontally from its outer side, on which are mounted, to turn freely, (in a manner to be presently described,) the casting D, to which is secured the hand-lever *e*, and also a casting, F, which I have alluded to as an "intermediate piece." The intermediate piece F is formed, as seen, with a broad, flat face at *g*, and is provided with a pin or hook at *h*, to which is fastened the chain, which extends down to and and is coupled at its lower end with the cutting mechanism. It has flanges at *i i* to prevent the chain from slipping off, and it is so mounted on the hub or stud *c* that, while it turns hinge-like on said stud, it can rock toward and from the casting A, at its upper portion. The casting D is mounted in like manner on the said stud *c*, and it and casting F are retained on the said stud by a bolt, *j*, which is screwed into the outer end of the said stud, and is provided with a washer at *k*. From the outer face of casting A projects a lug or stop-pin, *l*, against which strikes and rests the casting F, from which depends the chain extending to the cutting apparatus. This pin or stop *l* has its shank formed like a screw-bolt, so that it may be secured in one of a series of holes in the plate A by a nut, *m*, as clearly shown. (See Fig. 5.) H is a spring-bar fastened at one end to the hand-lever *e*, and pressing, at its

other end, against the inner edge of the intermediate piece F. The office and effect of this spring is to hold the castings F and D together, or toward each other laterally.

The foregoing description of the several parts and their arrangement together, taken in connection with the drawings, will serve, I believe, to render perfectly clear the following explanation of the operation of my improved lifting mechanism.

Supposing the parts to be in the positions or condition illustrated at Fig. 1, the intermediate piece F to the hook *h* of which the cutting apparatus is connected by a chain, *o*, will rest in contact with and be held (against any tendency to rotate forward as the chain pulls on it) by the stop-pin or lug *l*, which, as before remarked, projects from the outer side of the stationary stand or casting A.

By preference I make that side of the stop-pin *l* which comes against a shoulder or other surface of the piece F tapering, and correspondingly shape the surface which comes in contact with it, so that the stop surfaces may slightly dovetail or interlock, to prevent any easy displacement of them by a movement sidewise of the intermediate piece F.

When it is desired to raise the cutting apparatus up into a vertical position, the driver takes hold of the lever *e* and pulls it upward and backward into the position (for instance) seen at Fig. 2, whereby the intermediate piece F will be partially rotated, or oscillated, together with the casting D, on the stud or arbor *c*, and the chain *o* will be wound up on the periphery or face *g* of plate F, sufficiently to partially elevate the outer end of the cutting apparatus.

In this position of the parts, the projection or lip *n* of intermediate piece F is made to engage or interlock, as illustrated, with one of the notches *b* of the stationary casting A, and by this interlocking of the parts the cutting apparatus is held in its partially-elevated condition.

The driver now pushes the hand-lever slightly out sidewise against the spring-bar H, thus releasing it from its seat in the notch or depression P, at the outer side of piece F, and thence downward and into the position shown at Fig. 3. In this position the lever *e* or its casting D engages with another notch or interlocking seat, $P^2$, in the piece F, and now, pulling the lever *e* upward and backward into the position seen at Fig. 4, the driver throws the cutting apparatus up into its completely-elevated position, in which it is caught and held by any suitable catch device for locking the finger-bar to the draft-frame of the machine.

The teeth *b* of plate A, and the lip *n* of piece F, and also the interlocking portion of the plate D and notches P $P^2$, are made slightly tapering or dovetailing, for the same reason assigned for this shape of the stop-pin *l*, and the surface against which it comes—viz., to prevent any too ready disengagement of the parts by any lateral movement, or the side play of which both the parts F and D are capable.

As the point in the cutting apparatus to which the lower end of the chain *o* is fastened stands at first slightly outward beyond the lifting device, and then, as the cutter-bar is lifted up, swings inward to some extent, it is necessary to provide for this lateral movement of the winding-up chain *o*. This I do by making the chain-carrying surface *g* of the intermediate piece F broader, or extended inward, at its front lower portion, as shown, (see Fig. 8,) and forming it with the flanges *i i*.

By thus flanging and shaping the piece F, I am enabled, while lifting the cutting apparatus upward and inward by the chain *o*, to avoid any possibility of the chain *o* slipping sidewise off of the lifter-piece F, and also to permit the slip of the chain necessary to effect the inward swing of the cutter-bar.

I make a series of holes, 1 2 3, in plate A, for the insertion and securement to said plate of the screw-shank of stop-pin *l*. The object and effect of having a series of such holes is to permit the adjustment of said pin *l* or stop so as to regulate the position in which the lever *e* shall stand when the machine is at work to suit the reach or capacity of the driver of the machine.

It will be observed that, as the chain-surface *g* of casting F is eccentric or extends farther from the center of motion as it reaches its foremost point, the leverage will be decreased and the motion increased as the position of the hand-lever *e* becomes such as to afford the operator the best opportunity of exerting his power.

It will also be seen that in the operation of bodily lifting the elevated or swung-up cutting apparatus to catch it onto the draft-frame, the hand-lever, as seen at Fig. 4, passes downward to the rear so far that the driver can partially throw his weight onto it through the medium of his right hand.

What I therefore claim, broadly, as of my invention, and desire to secure by Letters Patent, is—

The combination of the stationary holder-plate A, intermediate oscillatory lifting device F, and repeating hand-lever D, the combination of devices operating substantially as set forth.

In testimony whereof I have hereunto set my hand and seal.

A. B. CONDE. [L. S.]

In presence of—

GEO. T. SPINK,

G. J. MCLALLEN.