

(No Model.)

T. JOHNSTON.
LAWN MOWER.

No. 566,911.

Patented Sept. 1, 1896.

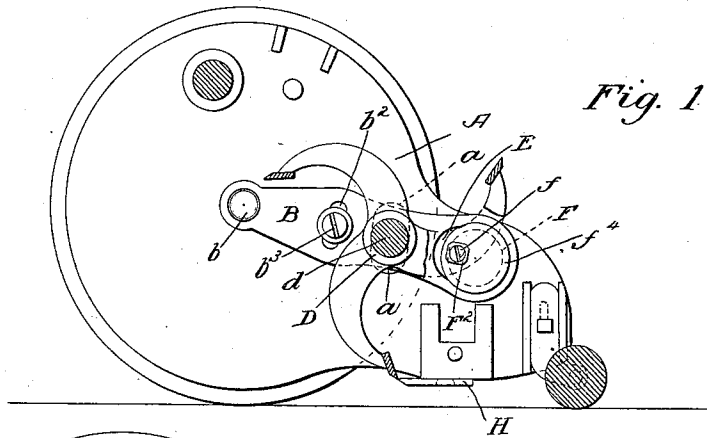


Fig. 1.

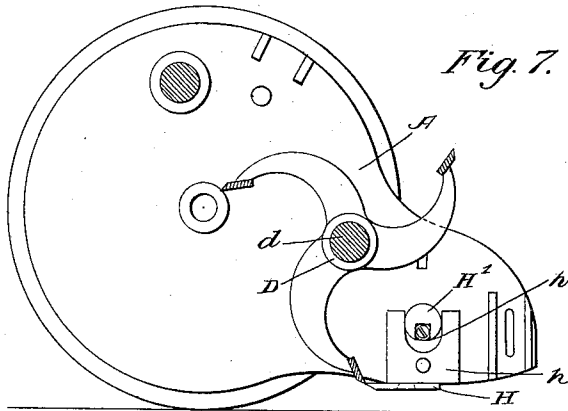


Fig. 7.

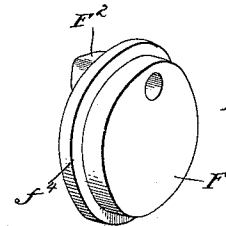


Fig. 4.

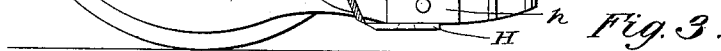


Fig. 3.

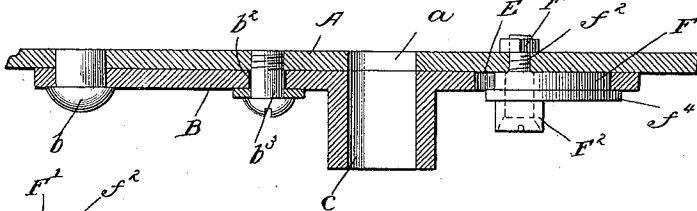


Fig. 6.

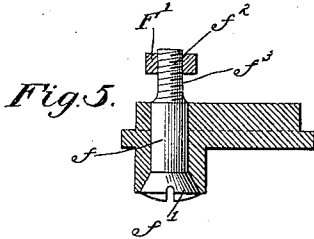


Fig. 5.

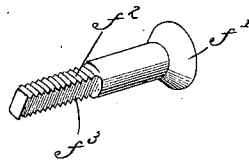
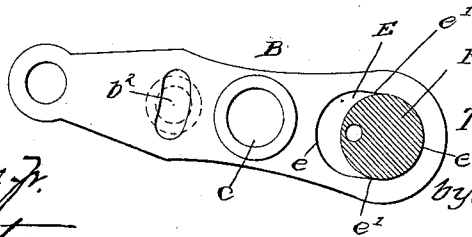


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS JOHNSTON, OF NEWBURG, NEW YORK.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 566,911, dated September 1, 1896.

Application filed August 16, 1895. Serial No. 559,530. (No model.)

To all whom it may concern:

Be it known that I, THOMAS JOHNSTON, a citizen of the United States, residing at Newburg, in the county of Orange and State of New York, have invented certain new and useful Improvements in Lawn-Mowers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in lawn-mowers, and it is embodied in the construction hereinafter described and definitely claimed.

The invention consists in improved means for effecting the adjustment of a cutting member of a lawn-mower.

The object of the invention is the provision of means for adjusting a cutting member of a lawn-mower in a positive and easy manner and in effecting such adjustment through the instrumentality of a cam or eccentric engaging or acting on the carrying frame or arms of the cutter, as distinguished from structures wherein the adjustment is effected by direct adjustment of the cutter and screw adjustments.

A further object of the invention is to simplify the adjustment of a cutting member and dispense with a plurality or multiplicity of adjusting means.

The invention is illustrated in the accompanying drawings, wherein like letters of reference designate corresponding parts in the several views, and in which—

Figure 1 is an elevation of a side frame, showing the cutter and connecting-bars in section. Fig. 2 is a detail view of a carrying arm or frame, showing the adjusting device in section, with the flange omitted. Fig. 3 is a longitudinal section of the arm and portion of the frame. Fig. 4 is a detail view of the eccentric. Fig. 5 is a section through the eccentric and its securing-bolt or pivot-pin. Fig. 6 is a detail perspective of the bolt or pin. Fig. 7 is an elevation showing parts in section and illustrating a modified form of the invention as applied to the stationary cutter.

In the drawings, A designates the side frame, of any desired construction, having the curved elongated slot *a* therein, as shown in full and dotted lines, Fig. 1. I have shown

but one side of the machine, as the construction is the same on both sides.

B designates the carrying-arm which supports the revolving cutter. This arm is pivotally secured at its forward end to the side frame A by the bolt or pin *b*. The arm B has formed thereon at points rearwardly beyond its center the journal-boxes C, in which the supporting-shaft *d* of the revolving cutter-reel D is journaled, the shaft extending through the arm and the slot *a*, and receives its motion through the usual or any desired drive connection with the ground-wheels. Between the box C and the pivot *b* is formed a curved guide-slot *b*², through which passes a bolt *b*³, capped by a suitable head projecting over and laterally beyond the slot, and serves as a guide and brace for the arm. The rear end of the arm B has an oblong slot or recess E formed therein beyond the box C, extending longitudinally from points adjacent to the box and rear end. This slot has the curved end walls *e* and the substantially straight side walls *e*'. Within this slot is placed a disk F, the curvature of which corresponds with that of the ends of the slot. This disk is pivotally supported eccentrically by a pivot-pin *f*, passing through the same and frame A, the pin being located relative to the end walls of the slot at a point between the longitudinal center of the slot and forward end wall. The pin has a conical head *f*' and a threaded section *f*², formed with flat sides *f*³, which engage in a corresponding opening in the frame A, so that the same may be moved longitudinally, but is prevented from rotating.

F' designates a binding-nut on the threaded end of the pivot-pin. The eccentric has its outer face extended beyond the plane of the arm B and is formed with the flange *f*⁴ normally resting against the side of the arm. F² designates a squared lug on the outer face of the eccentric, having a central bore constituting a continuation of the disk-opening through which the pivot-pin passes. The bore of this lug is tapered at its outer end and forms a seat for the tapered section of the pin *f*.

By the above-described construction it will be seen that when it is desired to adjust the cutting-reel or revolving cutter it is only necessary to place a wrench on the squared lug F² and turn the eccentric in the slot, raising

or lowering the arm as desired. The elongation of the slot permits the movement of the eccentric until the latter reaches its upward or downward limit, at which points the eccentric engages the forward wall of the slot and is prevented from moving farther. After the arm has been adjusted the nut F' is tightened, drawing the pin tightly into the tapered portion of the lug F² and the flange on the eccentric closely against the side of the arm, thus clamping the arm securely in its adjusted position. The arm and cutter are, as will be seen, adjusted by the single instrumentality in either direction and are firmly held in place after adjustment.

Heretofore it has been customary to use two or more adjusting-screws to effect the adjustment, which is accomplished by tightening one screw and loosening the other. The advantage of the present form over the old form is obvious.

In Fig. 7 I have shown a modified form wherein the eccentric feature is applied to the stationary cutter-bar. In this form the bar H is mounted on the arms h, which are pivotally secured to the frame. The ends of the arms are recessed or formed with an elongated slot h', in which the eccentric H' is mounted. By turning the eccentric the arm is moved on its pivot from right to left, thereby adjusting the stationary cutter-blade relative to the revolving cutter-blades.

I am aware that many minor changes in the construction and arrangement of the parts can be made and substituted for those herein shown and described without in the least de-

parting from the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a lawn-mower, the combination with a frame, of arms pivotally supported on the frame, and formed with elongated recesses therein, a cutter carried by the arms, eccentrics located in the recesses, flanges on the eccentrics bearing against the arms, and means for securing the eccentrics in adjusted positions, substantially as described.

2. In a lawn-mower, the combination with the side frame, of a swinging arm pivotally secured thereto, having an elongated slot therein, a cutter carried by the arm, an eccentrically-mounted adjuster located in the slot, an angular projection on the adjuster, a pivot-pin passing through the same, and means for securing the adjuster in its adjusted positions, substantially as described.

3. The combination with the pivotally-supported arm having an elongated slot, of a cutter connected therewith, an adjuster consisting of a disk located in the slot, a pin passing eccentrically through the disk, a lug on the disk having an angular exterior, a flange on the disk, and means for drawing the flange onto the arm, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS JOHNSTON.

Witnesses:

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