2 Sheets—Sheet 1.

A. JUSBERG.
Lawn-Mower.

No. 215,366. **Patented May 13, 1879.**

Fig. 1.

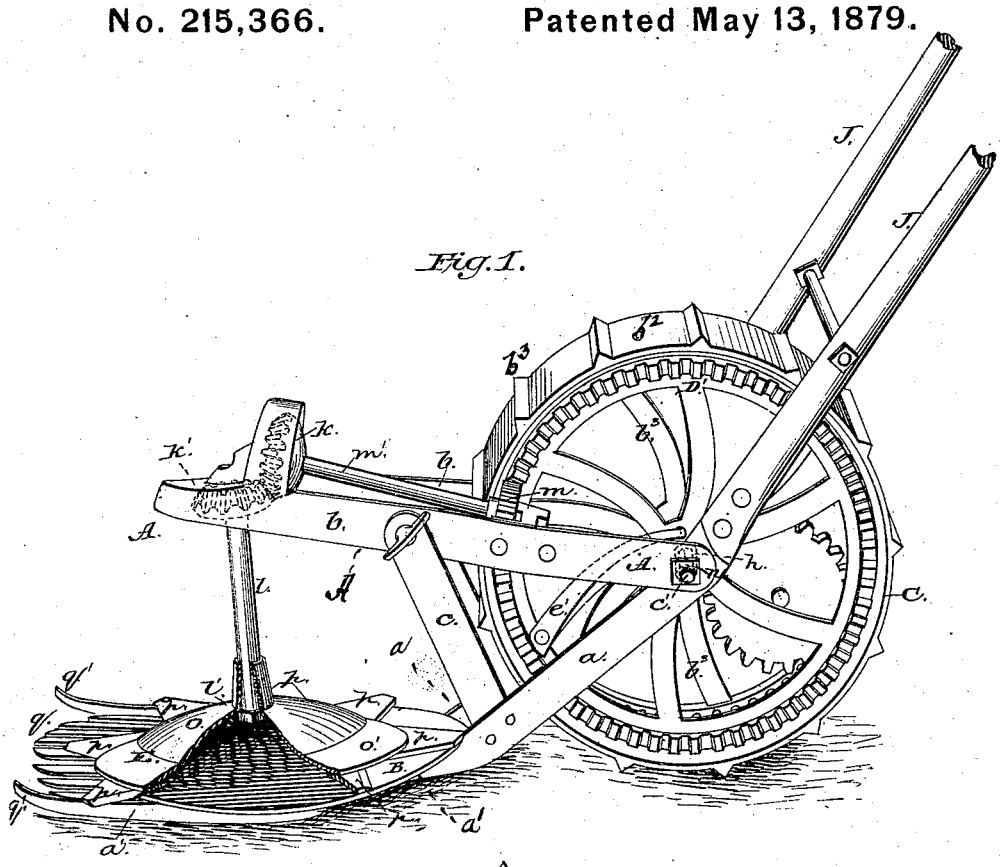
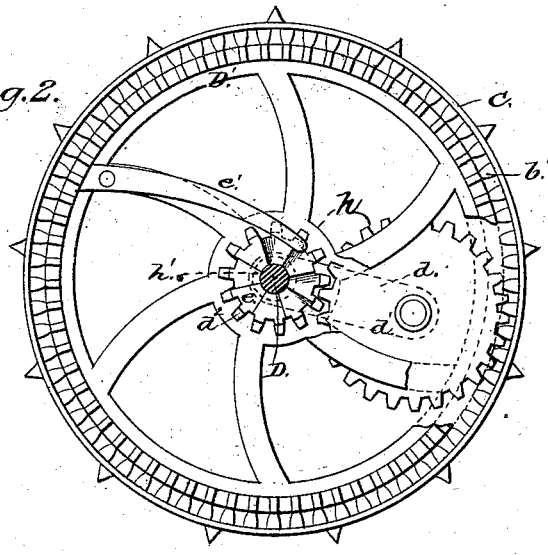


Fig. 2.



WITNESSES

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Andrew Jusberg.
by E. W. Anderson
ATTORNEY

2 Sheets—Sheet 2

A. JUSBERG.

Lawn-Mower.

No. 215,366. Patented May 13, 1879.

Fig. 3.

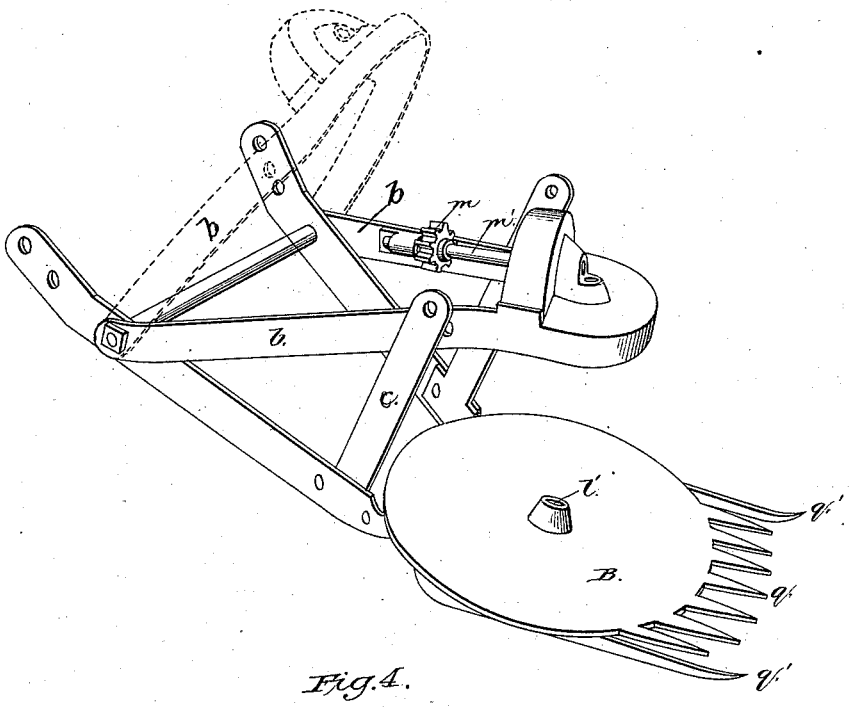
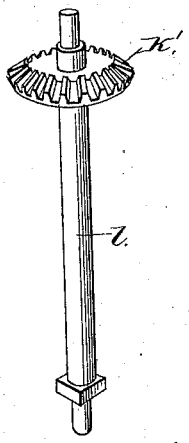


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

ANDREW JUSBERG, OF GALVA, ILLINOIS.

IMPROVEMENT IN LAWN-MOWERS.

Specification forming part of Letters Patent No. **215,366**, dated May 13, 1879; application filed November 30, 1878.

To all whom it may concern:

Be it known that I, ANDREW JUSBERG, of Galva, in the county of Henry and State of Illinois, have invented a new and valuable Improvement in Lawn-Mowers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of this invention. Fig. 2 is a vertical section, showing the wheel. Figs. 3 and 4 are details.

This invention has relation to improvements in devices for mowing lawns, cutting standing grain, and other like purposes.

The nature of the invention consists in the construction and novel arrangement of parts, as hereinafter shown and described.

In the annexed drawings, the letter A designates the frame of my improved lawn-mower or harvester, consisting usually of the obtuse-angular beams *a*, to which the horizontal table B is rigidly secured, the lower edges of the said beams forming runners *a'*, upon which the fore part is propelled; of the swinging U-shaped beam *b*, bolted to beam *a* at each end, and extending to the front past the center of the circular table; and of the braces *c*, connecting beams *a* and *b*. The entire frame is preferably of metal, and the portion *b* thereof is horizontal, or nearly so. The rear portion of this frame is supported by a driving-wheel, C, having an internal gear, b^1, and a broad tread, b^2, provided with transverse ribs b^3. This wheel rotates freely upon a shaft, D, the square ends *c'* of which are received in corresponding recesses in the side bars of the frame, by which means it is held stationary. Upon this shaft is rigidly secured a strong metallic arm, *d*, that projects radially therefrom, and affords a bearing in its end to a gear-wheel, d^1, that engages the internal gear-wheel, b^1, of the master-wheel C, and a pinion, d^2, turning loosely on the said shaft. This pinion or small gear has on its face farthest from the hub of the driving-wheel a ratchet, *e*, secured thereto or cast therewith, the object of which will hereinafter appear.

D' indicates a face gear-wheel, rotating loosely on the shaft D, and having a spring-pawl, *e'*, of angular form, that lies upon said wheel, and has one arm extending through the same and engaging the ratchet *e*, thus locking the face-wheel to the pinion d^2 during the forward movement of the driving-wheel, and disconnecting the same during the backward rotation thereof.

Both the driving and face wheels are composed of a hub and a long sleeve, (lettered respectively *h h'*,) the ends of which abut against the inner faces of the side bars of the frame, and, when nuts *n* are screwed onto the ends of shaft D, hold the parts of the driving mechanism in proper position relative to each other. The face-wheel D' engages a cog-wheel, *m*, on a longitudinal shaft, *m'*, having its bearings in the frame, and having on its front end a bevel-gear, *k*, that engages a similar gear, *k'*, on a vertical shaft, *l*, having its upper bearing in the upper part of the frame, and its lower bearing in a step, *l'*, in the platform B, near and in front of the center of the table. Upon this shaft is secured the cutter-carrying disk E in any suitable manner. This disk, as to its middle portion, is concave, as shown at *o*, Fig. 1, the concavity being downward, and having on its edge a narrow horizontal flange, *o'*, to which the cutting-knives *p* are secured. These knives are of angular form, and sharpened only on one edge. *q* indicates dividers projecting from the table, and extending on the under side thereof to the rear to form runners; and *q'* represent the fingers projecting to the front beyond the sweep or points of the cutters, and serving as supports for the grass-blades at the moment the said cutters come in contact therewith.

This device is propelled over the grass by means of the handles J, not differing essentially from plow-handles in form; but I may use any other form of handles, if I so elect.

When used as a reaper or harvester I propose to use two supporting and driving wheels, and to propel or draw the device by horse-power. When the driving-wheel is rotated during the propulsion of the mower, motion is imparted to the gear-wheel, and through it to the gear or pinion d^2, which, being locked to the face-wheel by the pawl *e'*, actuates the said

face-wheel and imparts rotary motion to shafts m' l through the medium of the pinion m and bevel-gears k k'. By this means a rapid rotation is imparted to the cutter-head plate, and the blades or cutters carried past the fingers q', accurately severing any blades of grass caught between them.

The advantages of this device are obvious. It shears the sward or lawn very close, and may be stopped completely and drawn back, and an imperfectly-shorn part of the lawn repassed over without arresting the motion of the cutter-head, this property of the device being especially useful in operating under bushes and shrubbery, or close up against sidewalks, posts, or other obstacles.

By disengaging the pawl from the ratchet the mower may be propelled to any part of a lawn without operating the cutter-head, thus obviating unnecessary wear of the journals and working parts of the device.

What I claim as new, and desire to secure by Letters Patent, is—

In a lawn-mower, the platform B, having a step, l', and the shaft l, carrying the rotary cutter-head mechanism, concave on its under side, journaled at its lower end in said step, and provided with a gear-wheel, k', near its top, the swinging U-shaped frame b, the shaft m, journaled at one end in said frame b, and provided with a gear-wheel, k, engaging gear-wheel k' of shaft l, and the braces c, secured at one end to the main frame, and detachably secured to the said swinging frame b, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANDREW JUSBERG.

Witnesses:
JONAS W. OLSON,
PETER E. MATTESON,
J. P. SWIGERT.