(No Model.)

A. WALSH.

LAWN MOWER.

No. 266,333. Patented Oct. 24, 1882.

Fig. 1.

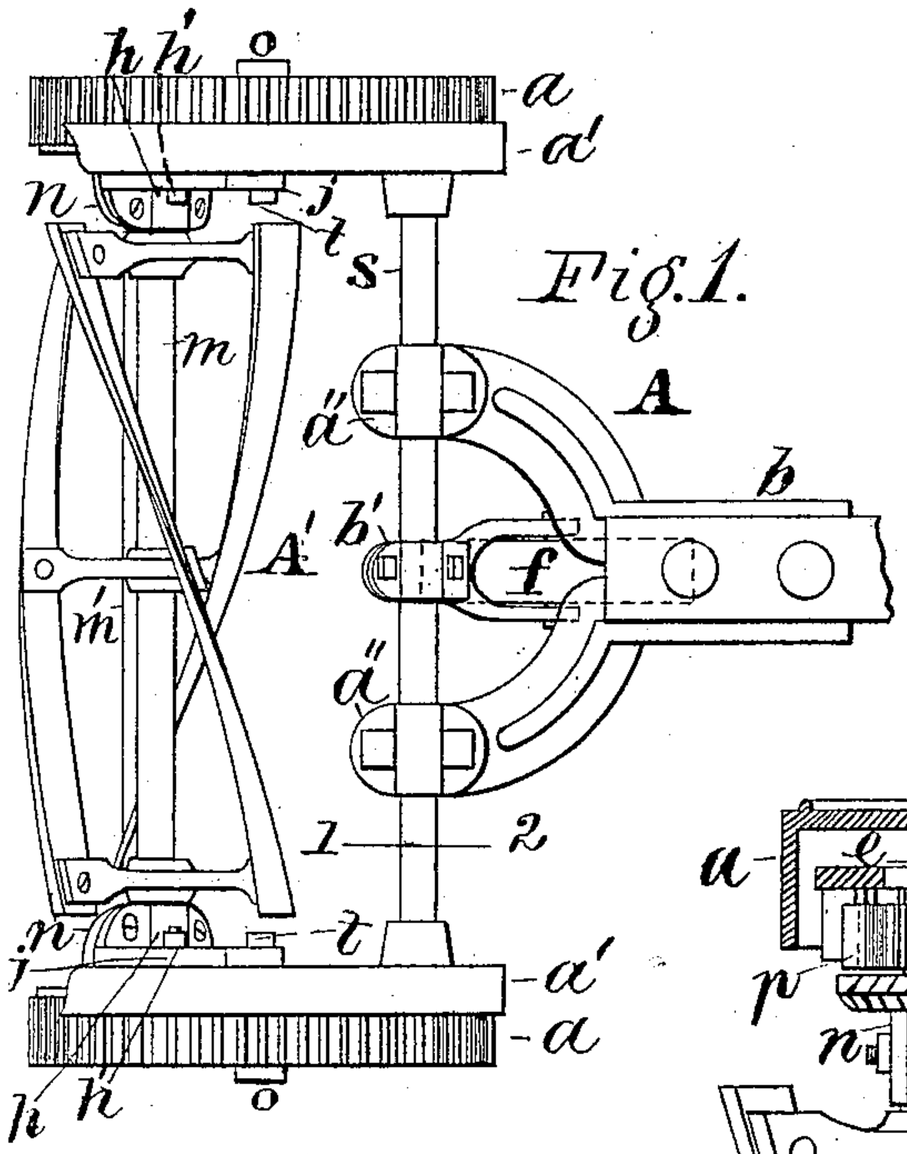


Fig. 7.

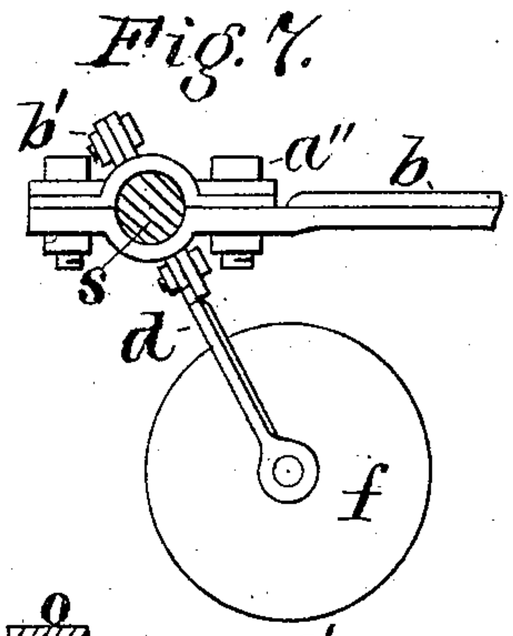


Fig. 2.

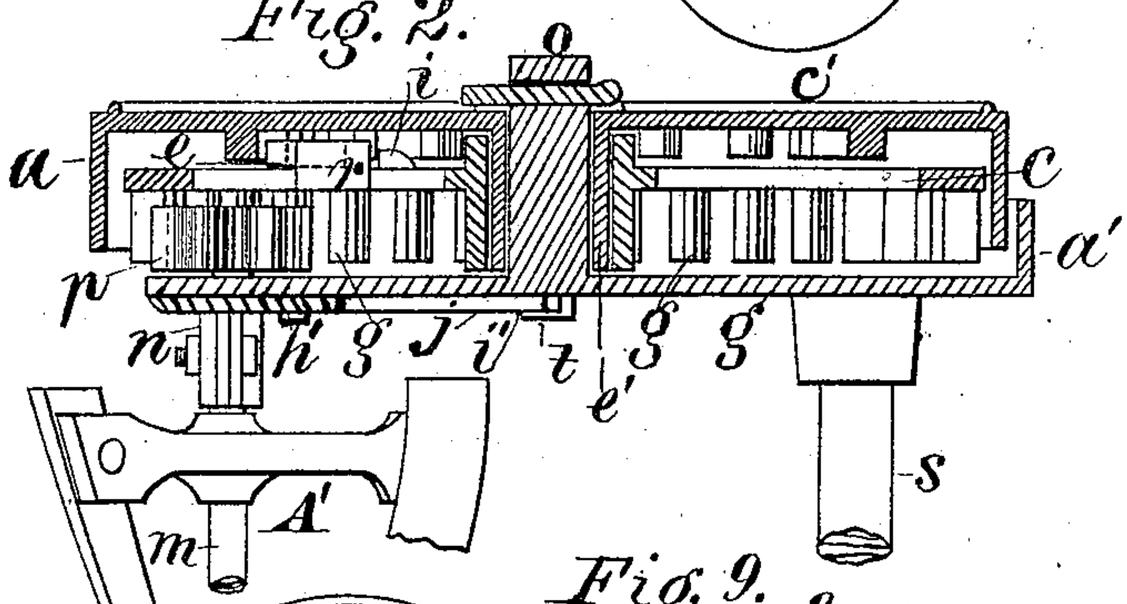


Fig. 3.

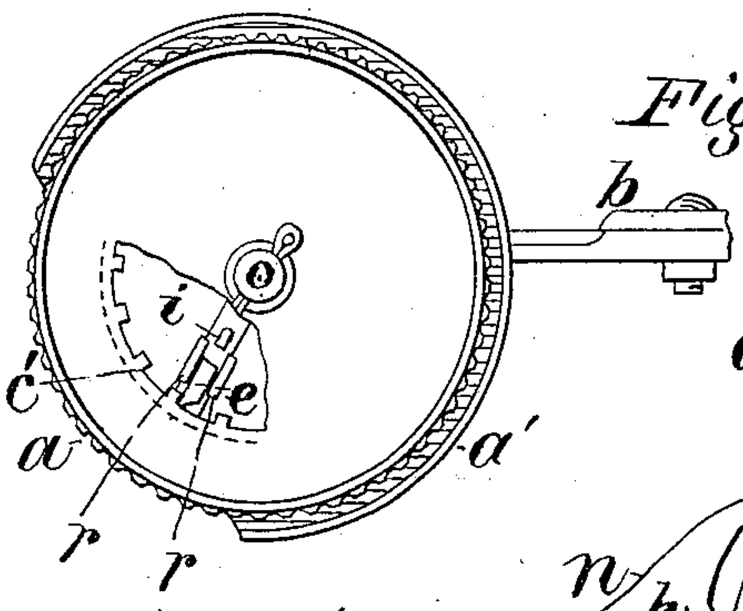


Fig. 4.

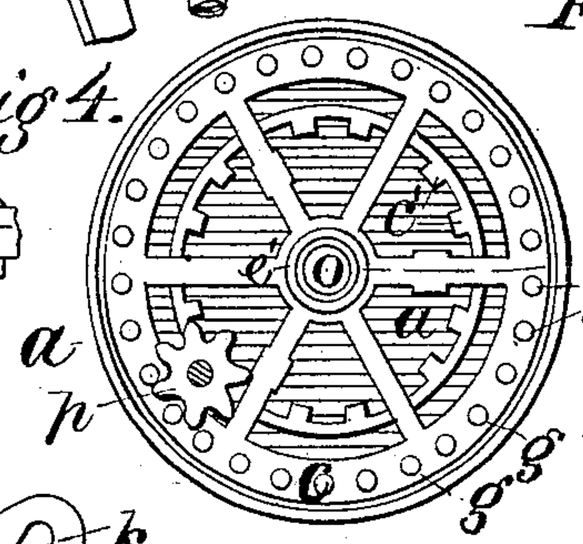


Fig. 9.

Fig. 5.

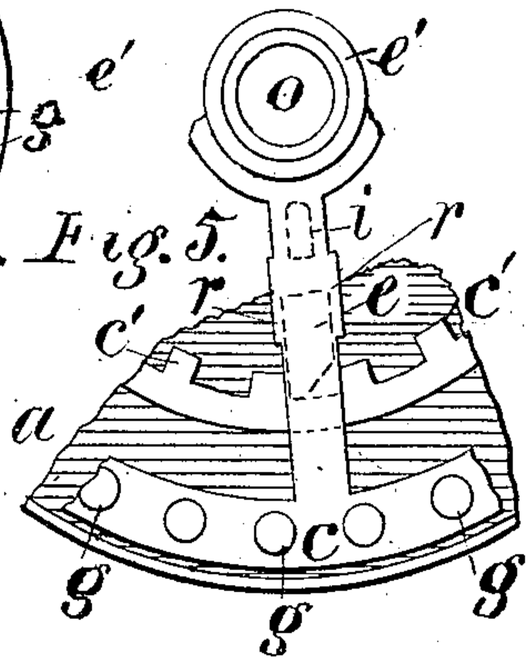


Fig. 6.

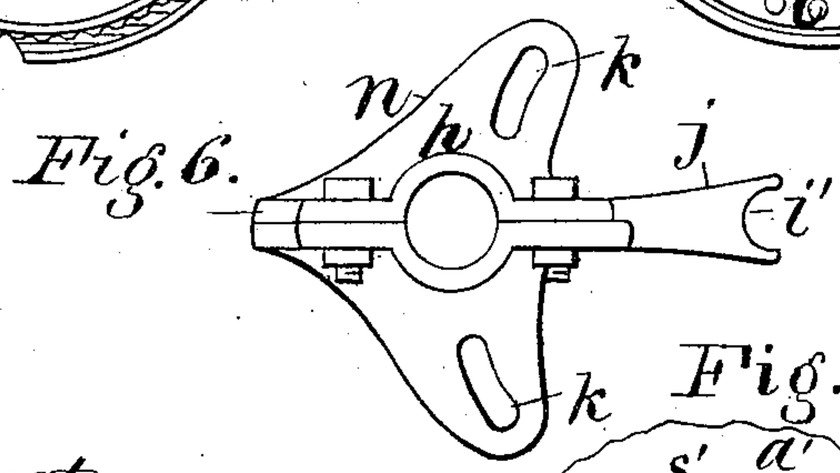
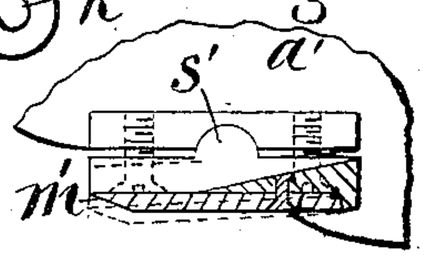


Fig. 8.



Attest.

W. W. Converse
G. M. Gridley

Inventor.

Anthony Walsh.
B. G. Converse, Atty.

UNITED STATES PATENT OFFICE.

ANTHONY WALSH, OF SPRINGFIELD, OHIO, ASSIGNOR OF ONE-HALF TO THEODORE HOHL, OF SAME PLACE.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 266,333, dated October 24, 1882.

Application filed June 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY WALSH, a citizen of the United States, residing at Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Lawn-Mowers; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of lawn-mowers in which spiral knives operated by a system of gearing are used.

My invention consists of parts and combination of parts, all as will hereinafter be described and claimed.

Figure 1 is a top view of my improved lawn-mower. Fig. 2 is an enlarged cross-section of the right drive-wheel and its connections. Fig. 3 is a side elevation of the machine with the handle broken off. Fig. 4 is a view of the inside of the drive-wheel and its connecting-gear. Fig. 5 is a broken section of the same, enlarged. Fig. 6 is a side view of the adjusting-plate and box of the shaft of the knife-reel. Fig. 7 is a cross-section of the shaft to which the handle and ground-wheel are attached. Fig. 8 is a cross-section of the stationary knife and its cutter-bar. Fig. 9 is a cross-section of one of the pawls, its guides, and the arm of pin-wheel *c*, on which it is located.

A is the lawn-mower; *a*, the traction-wheels of the same, which form the main drive-wheels. These are cast in one piece, with the gearing *c'* on the inside, in the teeth of which the gravitating pawls *e* operate. These are seen in the engaging position, with the teeth *c'* in the side elevation, Fig. 3, and in dotted lines, Fig. 5. A cross-section of both the pawl *e* and guides *r* is seen in Fig. 9. It will be noticed that both the pawl and groove in which it operates are dovetailed in their cross-section, which prevents their being freed from their guides. A stop, *i*, prevents the pawl from dropping out toward the hub of the wheel as it revolves. The pawls are on the inner side of the arms of wheel *c*, next to the traction-wheel, as seen in Figs. 2, 3, and 5. The wheel *a* has a tubular sleeve, *e'*, at the center, which is slipped over the spindle *o*, extending outward from the shield-plate *a'*. This shield overlaps the face of wheel *a* about one-third of its width, extending about two-thirds around it, leaving the remaining space for the bearing of the wheel upon the ground. It also serves as a scraper for the traction-wheel. Pivoted upon the hollow journal *e'* of the traction-wheel *a*, between it and the shield-plate *a'*, is the pin-wheel *c*, having the round teeth *g* projecting outward from the side of its rim. These teeth drive the knife-reel A' through the pinion *p* on each end of its shaft *m*, within the shield-plate. Boxes *h* support this shaft at either end of the reel. The lower half of the box is cast in one piece with the wing-plate *n*. (Seen in Fig. 6 enlarged.) This plate has bolts *h'* extending through slots *k* on either side of its bearing, and has an arm, *j*, extending to and pivoted by a notch, *i'*, in its end upon a central stud, *t*, on the inside of the shield-plate, and is slightly adjustable upon this center, the object being, when the knives of the reel become much worn, to lower the reel sufficiently to bring its knives into adjustment with the stationary knife *m'*. This latter is pivoted upon a semi-cylindrical bearing, *s'*, which extends from the cutter-bar. This bearing is in a fixed half-box cast on the inside of the lower edge of the shield-plate, and is milled out on the under side for the purpose, as seen in Fig. 8. A bolt on either side of the journal *s'* is used to tilt the bar up or down, (a space being left between the fixed and movable part of the bearing to allow of the adjustment,) and to fasten it. To raise and lower the cut of the machine, it is only necessary to elevate or depress the handle *b*, which is attached to a shaft or rod, *s*, connecting the shield-plate *a'* on the opposite side of the center from the knife-reel. Boxes *a''* clamp the two ends of the handle-braces to the rod and allow the handle to be adjusted thereby. A ground-roller, *f*, about five inches in diameter and one and a quarter inch in thickness, is pivoted in the lower end of a

forked arm, *d*, the top end of which is clamped to the middle of rod *s*, between the handle-braces, by a clamp-box, *b'*, similar to boxes *a''*, and is made adjustable thereon in the same manner. These boxes have a bolt on either side of the rod, which secures them to the rod in the manner of an ordinary box. The view Fig. 7 is a cross-section of shaft *s* through line 1 2, Fig. 1.

In referring to Figs. 3 and 5 it will be noticed that the pawl *e* is beveled at its engaging end to allow it to disengage itself from teeth *c'* with ease when the motion of the wheels is reversed. As this mode of using pawls obviates the necessity of springs, its advantages over the spring-pawl are seen.

I am aware that lawn-mowers with a knife-reel driven by internal gearing are not new, and I do not claim this mode of construction.

I claim as my invention—

1. In a lawn-mower, the combination, with the main frame-plates, of wing-plates *n*, attached to said frame-plates by means of bolts passing through the curved slots therein, and having journals for the reel-shaft, and arms extending to a central stud upon the plates, which studs form the center of adjustment for the knife-reel, and of a knife-reel journaled in wing-plates *n*, for the purpose set forth.

2. In a lawn-mower, the combination, with the main frame-plates, of wing-plates *n*, attached to said frame-plates by means of bolts passing through curved slots therein, and having journals for the reel-shaft, and arms extending to a central stud upon the plates, which studs form the center of adjustment of the knife-reel, of a knife-reel shaft journaled in wing-plates *n*, and of a stationary knife below the knife-reel and adapted to be adjusted to and from the latter, for the purpose set forth.

3. In a lawn-mower, the combination, with the main frame-plates, connected together as shown, and each having a spindle, *o*, and a flange, *a'*, extending about two-thirds of its periphery, and overlapping and serving as a scraper for the traction-wheel, of said traction-wheel, having a tubular sleeve, which fits over the spindle *o*, for the purpose set forth.

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

ANTHONY WALSH.

Witnesses:

B. C. CONVERSE,

JNO. V. BISHOP.