(No Model.)

A. C. KENT.

LAWN MOWER.

No. 523,896. Patented July 31, 1894.

Fig. 1.

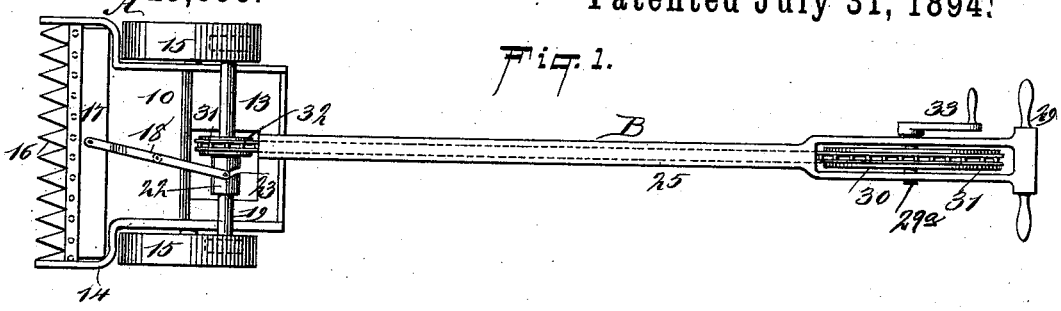


Fig. 4.

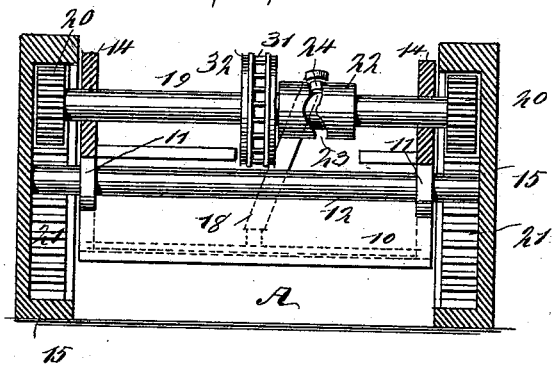
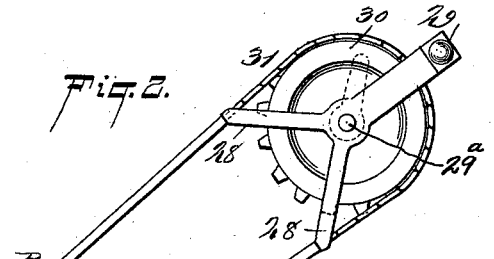


Fig. 2.



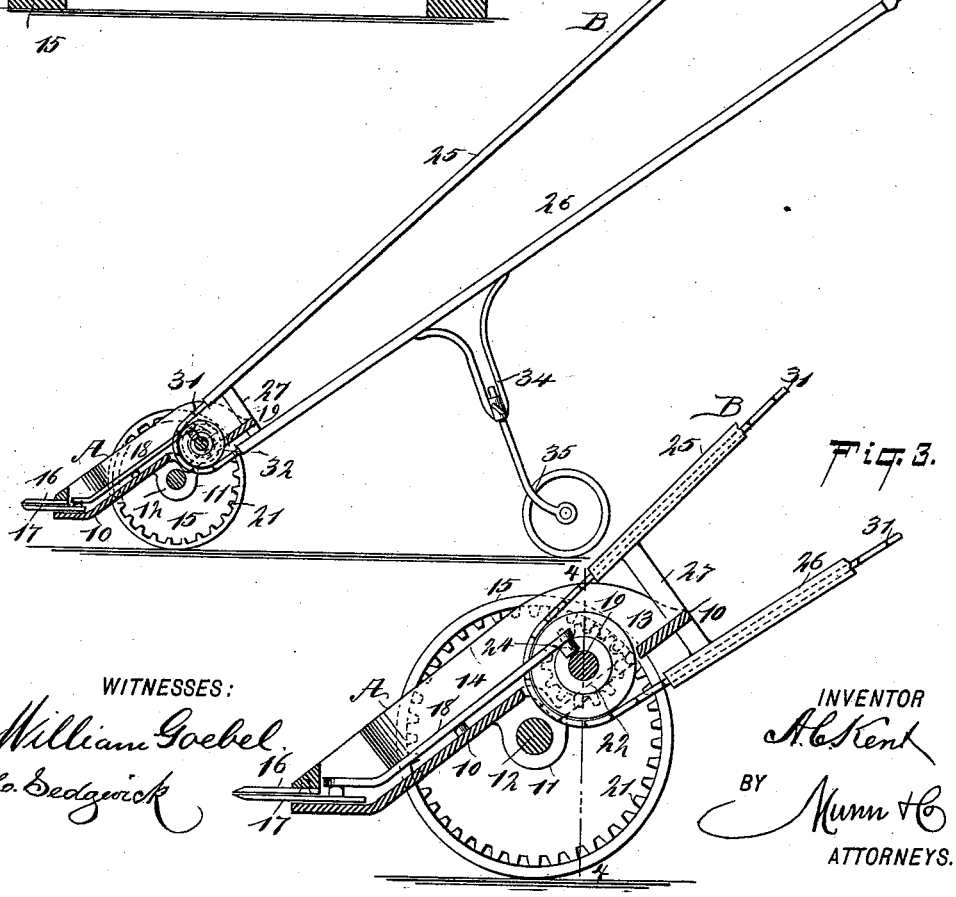


Fig. 3.

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ARTHUR C. KENT, OF JANESVILLE, WISCONSIN.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 523,896, dated July 31, 1894.

Application filed November 9, 1893. Serial No. 490,416. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. KENT, of Janesville, in the county of Rock and State of Wisconsin, have invented a new and Improved Lawn-Mower, of which the following is a full, clear, and exact description.

My invention relates to an improvement in mowers, and especially to an improvement in garden and lawn mowers, and it has for its object to provide a machine which will be simple, durable and economic, and which will not be cramped or in any manner crowded in the act of cutting, the machine being so constructed that the motion of its knives will be regulated by the movement of the machine over the ground, the knives cutting more rapidly when the machine advances with comparatively great speed than when it moves on slowly and thereby clearing for itself a clean swath.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the machine. Fig. 2 is a longitudinal section through the body of the machine. Fig. 3 is an enlarged sectional view of the body of the machine, the section through the body being the same as that shown in Fig. 2; and Fig. 4 is a vertical transverse section through the body, the said section being taken practically on the line 4—4 of Fig. 3.

The body A of the machine may be said to consist of a box-like structure, the same comprising a bottom 10, provided with lugs 11 at its sides, in which an axle 12, is journaled, the body inclining at its central portion from a point over the axle downwardly and forwardly, and the forward end of the body is practically straight or parallel with the ground, while the rear or upper portion of the body is stepped downward to form substantially a well 13. The body is completed by the addition of side pieces 14, which follow the contour of the bottom; and it may here be remarked that the lower portion of the body is much wider than the remaining portion, and that the supporting wheels 15, which are loosely mounted upon the axle 12, are located back of the wide forward portion of the body, as shown in Fig. 1. In the wide portion of the body, over the flat forward portion of the bottom thereof, a sickle bar 16, is rigidly secured, extending from side to side; and below the fixed bar 16 a similar bar 17, is held to slide in the body, the lower sickle bar being attached to the lower or forward end of a lever 18, which latter is fulcrumed at about the central portion of the inclined section of the body, as is best shown in Fig. 3.

A shaft 19, is journaled above and parallel with the axle, being held to revolve in suitable bearings produced in the sides of the body, as shown in Fig. 4. The shaft 19, extends beyond the body, and is provided with a pinion 20 at each extremity, the pinions being made to mesh with the teeth 21, produced upon the inner face of the periphery or tread of the wheels 15.

The shaft 19, is provided with an enlargement or a fixed sleeve 22, and in this enlargement or fixed sleeve a circumferential or cam slot 23, is produced, of a zig-zag shape; and the upper end of the lever 18, is provided with a pin 24, and the said pin travels in the said cam groove, whereby the lever is given a lateral vibratory movement, which it imparts to the movable sickle bar 17.

The shaft 19 is revolved through the movement of the supporting wheels, and it is adapted to be likewise revolved by the hand of the operator, since the machine is to be driven both through the medium of the hand of the operator and its supporting wheels.

The hand power is communicated in the following manner: The body of the handle B of the machine consists of an upper and a lower trough or casing, designated respectively as 25 and 26, the two troughs being connected at their lower ends by an upright 27, which upright is secured to the upper or rear portion of the body. The upper ends of the troughs are connected by Y-branches 28 of a yoke-like handle bar 29, and in the yoke-like handle bar a hand shaft 29^a, carrying a pulley 30, is journaled, which pulley is preferably a sprocket wheel, and is connected by a belt 31, which passes through the casing 25

and also the casing 26, with a sprocket wheel 32, located upon the drive shaft 19. The upper sprocket wheel 30, may be revolved in any approved manner, but it is usually turned through the medium of an attached crank 33. It will be seen that the operator can hold the handle bar 29 with one hand, and with the other hand turn the crank 33.

A hanger 34, is projected downward from the lower casing 26, and in the said hanger a wheel 35, is mounted to turn, the said wheel serving as a support for the handle so that the weight of the machine is entirely removed from the operator.

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

1. In a lawn mower or like machine, the combination, with the supporting wheels and the cutting mechanism located in front thereof and operatively connected therewith, of a handle extending rearwardly from the supporting wheels, said handle consisting of casings connected at their upper and lower ends, a hand shaft journaled in the upper portion of the handle and arranged essentially parallel with the shaft of the supporting wheels, a pulley carried by the hand shaft, and an endless belt for operatively connecting the said pulley with the cutting mechanism, the said belt being passed through the casings of the handle, substantially as described.

2. In a lawn mower or like machine, the combination, with a body section, a fixed and a movable cutting blade located therein, supporting wheels provided with internal gears, and a drive shaft carried by the body and provided with a circumferential cam groove, of a lever fulcrumed upon a fixed support, one end whereof is connected with the movable cutter, the other end entering the cam groove of the drive shaft, pinions located upon the drive shaft, meshing with the internal gears of the supporting wheels, and a handle connected with the body, said handle consisting of casings having a yoke connection at their upper ends, a hand shaft journaled in the upper portion of the handle, a pulley carried by the hand shaft, a pinion mounted upon the drive shaft of the body, and an endless belt connecting the pulley of the handle with the pulley on the drive shaft, the said belt being passed through the casings, substantially as shown and described.

3. In a lawn mower or like machine, the combination, with a body section, a fixed and a movable cutting blade located therein, supporting wheels provided with internal gears, and a drive shaft carried by the body and provided with a circumferential cam groove, of a lever fulcrumed upon a fixed support, one end whereof is connected with the movable cutter, the other end entering the cam groove of the drive shaft, pinions located upon the drive shaft, meshing with the internal gears of the supporting wheels, and a handle connected with the body, said handle consisting of casings having a yoke connection at their upper ends, a hand shaft journaled in the upper portion of the handle, a pulley carried by the hand shaft, a pinion mounted upon the drive shaft of the body, an endless belt connecting the pulley of the handle and the pulley on the drive shaft, said belt being passed through the casings, a hanger projected downward from one of the casings, and a wheel mounted in the hanger, said wheel being adapted as a support for the handle, as and for the purpose specified.

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