

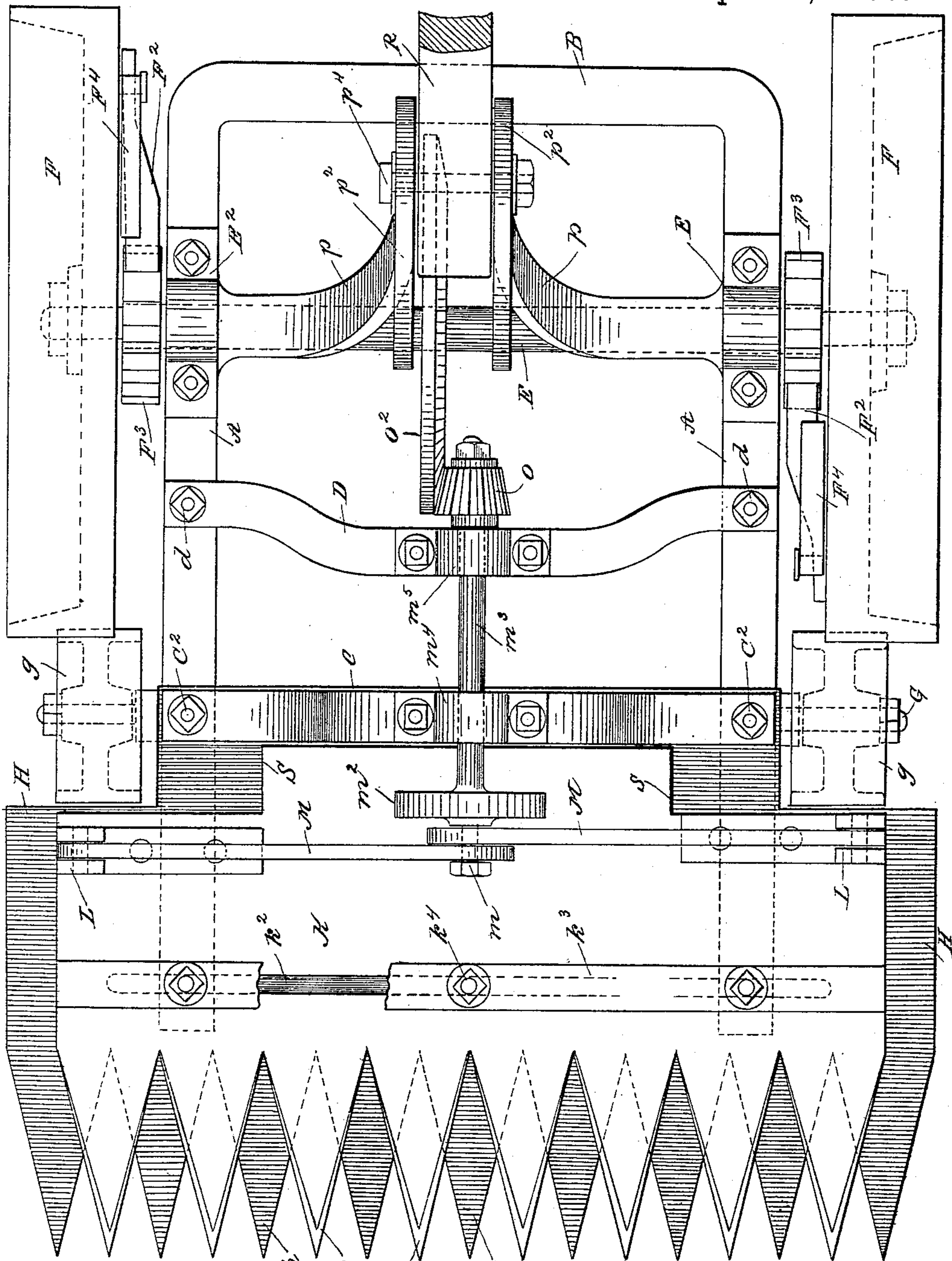
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3 Sheets—Sheet 1.

H. W. MORGEL.
LAWN MOWER.

No 602,513.

Patented Apr. 19, 1898.



WITNESSES:

C. Nordforn
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Fig. 1.

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(No Model.)

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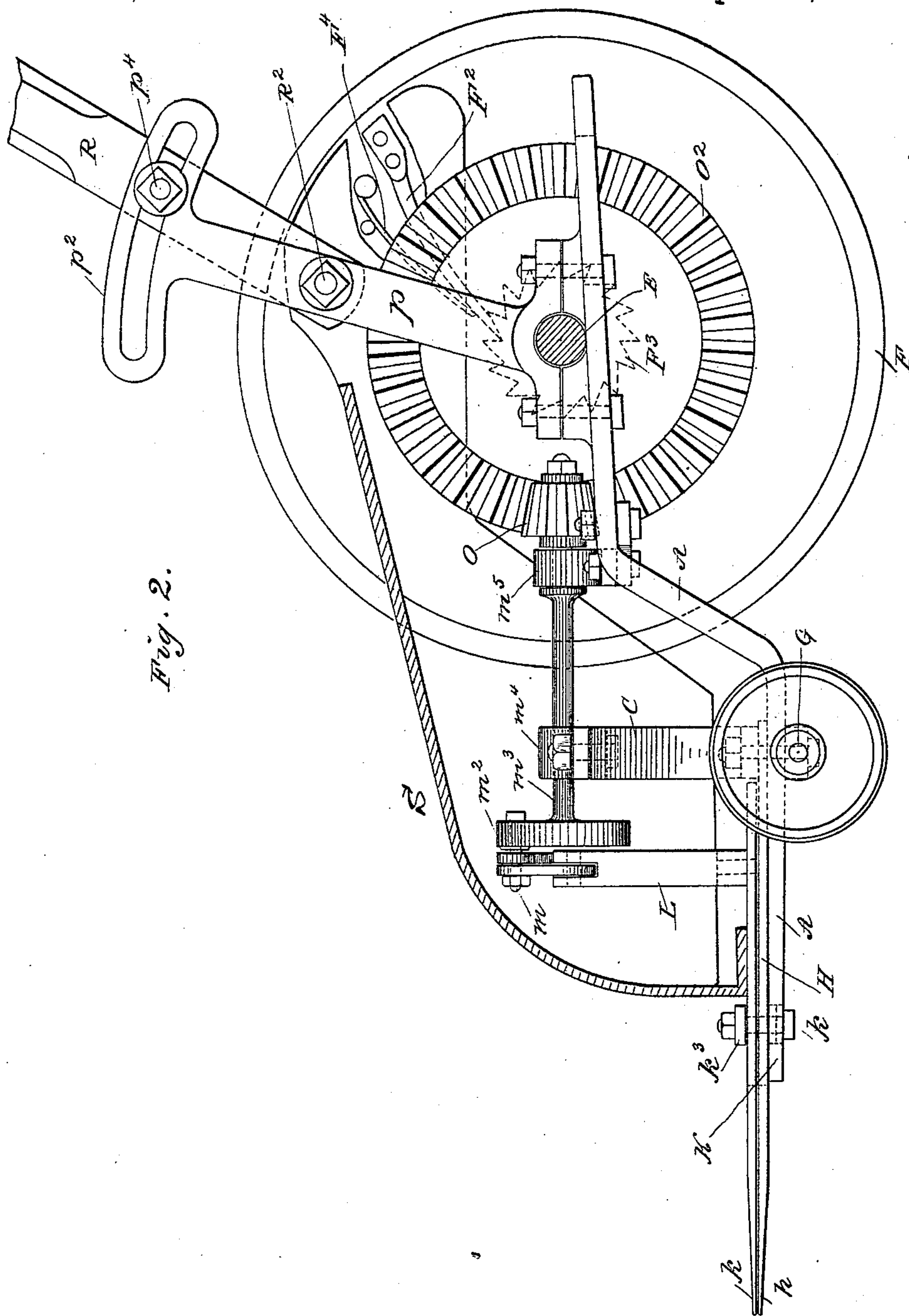


Fig. 2.

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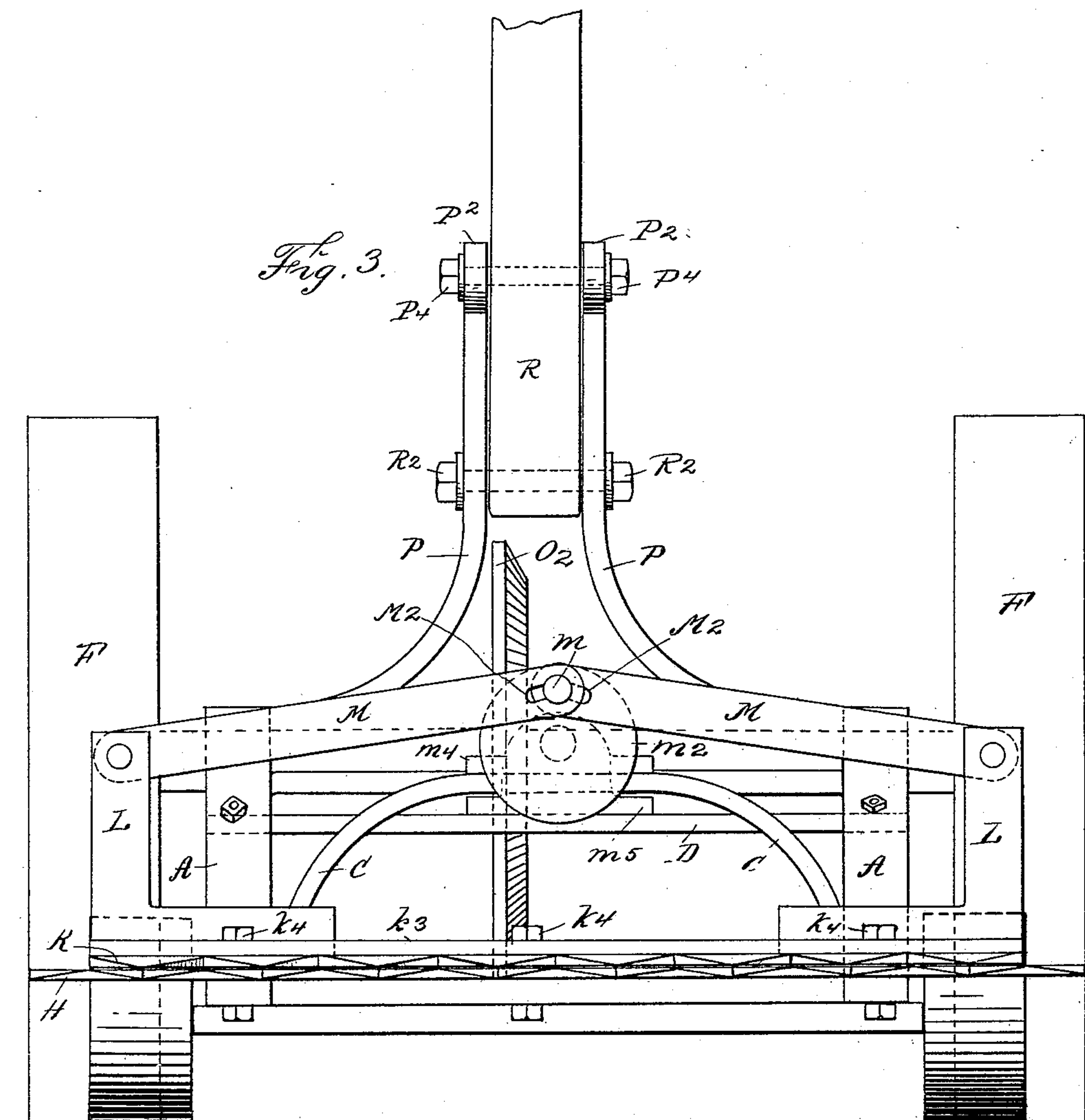
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UNITED STATES PATENT OFFICE.

HENRY W. MORSEL, OF BRAZIL, INDIANA.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 602,513, dated April 19, 1898.

Application filed March 27, 1896. Serial No. 585,042. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. MORSEL, a citizen of the United States, and a resident of Brazil, in the county of Clay and State of Indiana, have invented certain new and useful Improvements in Lawn-Mowers, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to lawn-mowers; and the object thereof is to provide an improved lawn-mower which is simple in construction and operation and which is also comparatively inexpensive; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a plan view of my improved lawn-mower; Fig. 2, a central vertical section, and Fig. 3 a front elevation, thereof.

In the practice of my invention I provide a suitable frame which comprises side bars A and a rear bar B; and the side bars A are bent downwardly, as shown in Fig. 1, and extended forwardly, and said side bars are connected at the end of the downward inclination by a yoke C, the ends of which are securely bolted thereto at C², and also by a curved cross-bar D, the ends of which are bolted to the side bars A at d.

The main axle E of the machine is connected with the rear portion of the side bars A and is provided with suitable bearings or boxes E², and the main drive-wheels F are mounted on the ends of the axle E, and each of said wheels is provided on its inner side with a pivoted pawl F², each of which operates in connection with a corresponding ratchet-wheel F³, one of which is rigidly secured to each end of the axle inside of the main drive-wheels F.

Mounted beneath the forward extension of the side bars A is a supplemental shaft or axle G, on which are mounted small wheels g, which are adapted to support the forward portion of the machine and to hold the frame thereof in the desired position, and the forward

extension of the frame A is provided with a cutting-blade H, which is provided with cutting sections or teeth h, and the blade H is rigidly secured to the frame, and placed upon the blade H is a movable blade K, which is also provided with cutting sections or teeth k and with a longitudinal slot k², and placed longitudinally thereover is a bar k³, which is held in place by bolts k⁴, which pass through through the slot k² and through the stationary blade and the side bars A, and the object of this construction is to provide means for holding the movable blade K in place, while permitting the free movement thereof.

Each end of the movable blade K is provided rearwardly of the slot k² with vertical standards L, which are rigidly secured thereto and which are arranged at each side and provided with jaws between which are pivoted pitman-rods M, which are slotted at their inner ends, as shown at M², which engage with a crank m on a wheel m², which is mounted on a shaft m³, which passes through bearings m⁴, secured to the yoke C of the main frame, and similar bearings m⁵ on the bar D, and the rear end of which is provided with a beveled gear wheel or pinion O, which is operated by a large beveled gear-wheel O², which is rigidly secured to the main shaft E of the machine.

Secured to the opposite sides of the frame of the machine, immediately over the main shaft, are inwardly and upwardly directed arms P, the upper ends of which are provided with segmental cross-heads P², in which are formed segmental slots through which passes a bolt P⁴, and the bolt P⁴ passes through the lower end of a handle-bar R, the lower end of which is pivotally connected with the arms P by a bolt R², and by means of the pivotal connection of the handle-bar at R² and the segmental cross-heads P², through which the bolt P⁴ passes, the position of the handle-bar may be adjusted at will.

I also provide a cover or cap S, which is composed of sheet metal and which is pivotally connected with the bolt R² and which is adapted to be swung down over the frame and the operating parts of the machine, and it will also be observed that each of the pawls F² is provided with a spring F⁴, which are secured to the wheels F, and the operation will

be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

5 It will be understood that when the machine is shoved forward the wheels F and the shaft E revolve together, and the shaft E revolves the gear-wheel O^2 , and by means of the gear-wheel O^2 the shaft m^3 and the wheel m^2
10 are also rapidly revolved, and this revolution of the wheel O^2 operates the movable blade K and causes it to move rapidly back and forth over the stationary blade H. The shaft E is revolved by the main wheels F through the
15 agency of the pawls F^2 , which operate in connection with the ratchets F^3 , and in the backward movement of the wheels F they revolve freely on the shaft E. It will therefore be observed that the machine may be pulled back-
20 wardly without operating the blade K and that whenever the machine is pushed forwardly the blade K will be operated, as hereinbefore described.

The rear corners of the blade K are cut away,
25 as shown at S, in order that said blade in the operation thereof will not strike or interfere with the wheels g , and the rear corners of the stationary blade H are similarly cut away, and said stationary blade is carried back-
30 wardly, and the yoke C and said blade are together bolted to the side bars A.

By the use of the double pitman-rods slotted at the inner end it will be seen that the reciprocating blade is always operated by a
35 pull on the pitman-rods and never by a push, and the said rods are so constructed that one of said pitman-rods is engaged by the crank m during one half of the revolution of the wheel m^2 and the other pitman-rod will be
40 engaged by the said crank m during the other half of the revolution thereof.

My improved lawn-mower is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and my invention is not limited to
45 the exact form, construction, combination, and arrangement of the various parts thereof, as herein described, and I reserve the right to make all such alterations therein and modi-

fications thereof as fairly come within the scope of the invention.

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

1. In a lawn-mower of the character described, a stationary cutting-blade, a movable blade mounted thereover, standards secured to said movable blades at each end thereof, pitman-rods connected with each of said standards, the inner ends of said pitman-rods
55 being provided with longitudinal slots and both being mounted on the same crank and being so proportioned that one of said pitman-rods will be engaged during one half of the revolution of said crank and the other
60 pitman-rod will be engaged during the other half of the revolution of said crank, substantially as and for the purpose described.

2. The herein-described lawn-mower comprising two drive-wheels, a main shaft on
70 which the said drive-wheels are mounted, a large beveled gear-wheel mounted on said shaft, a ratchet-wheel mounted at each end of said shaft and a pawl mounted on each of the drive-wheels adapted to engage said ratchet-
75 wheels, a shaft revolvably mounted in the frame which is mounted on said axle, and provided at the rear end with a beveled gear adapted to engage said beveled gear on the
80 shaft of the drive-wheels, and the outer end being provided with a crank to which is secured a crank-pin, a movable cutter-bar mounted in the forward end of the frame and
85 provided at each end with an upwardly-directed standard, pitman-rods pivotally mounted in each of said standards each of which is provided at the inner end with a longitudinal slot and each being mounted upon the said
90 crank-pin, substantially as and for the purpose described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d day of March, 1896.

HENRY W. MORGEL.

Witnesses:

FRANK A. HORNER,
JOHN C. KAEHLER.