(No Model.) 2 Sheets—Sheet 1.

J. BRAUN & H. DECK.

LAWN MOWER.

No. 456,471. Patented July 21, 1891.

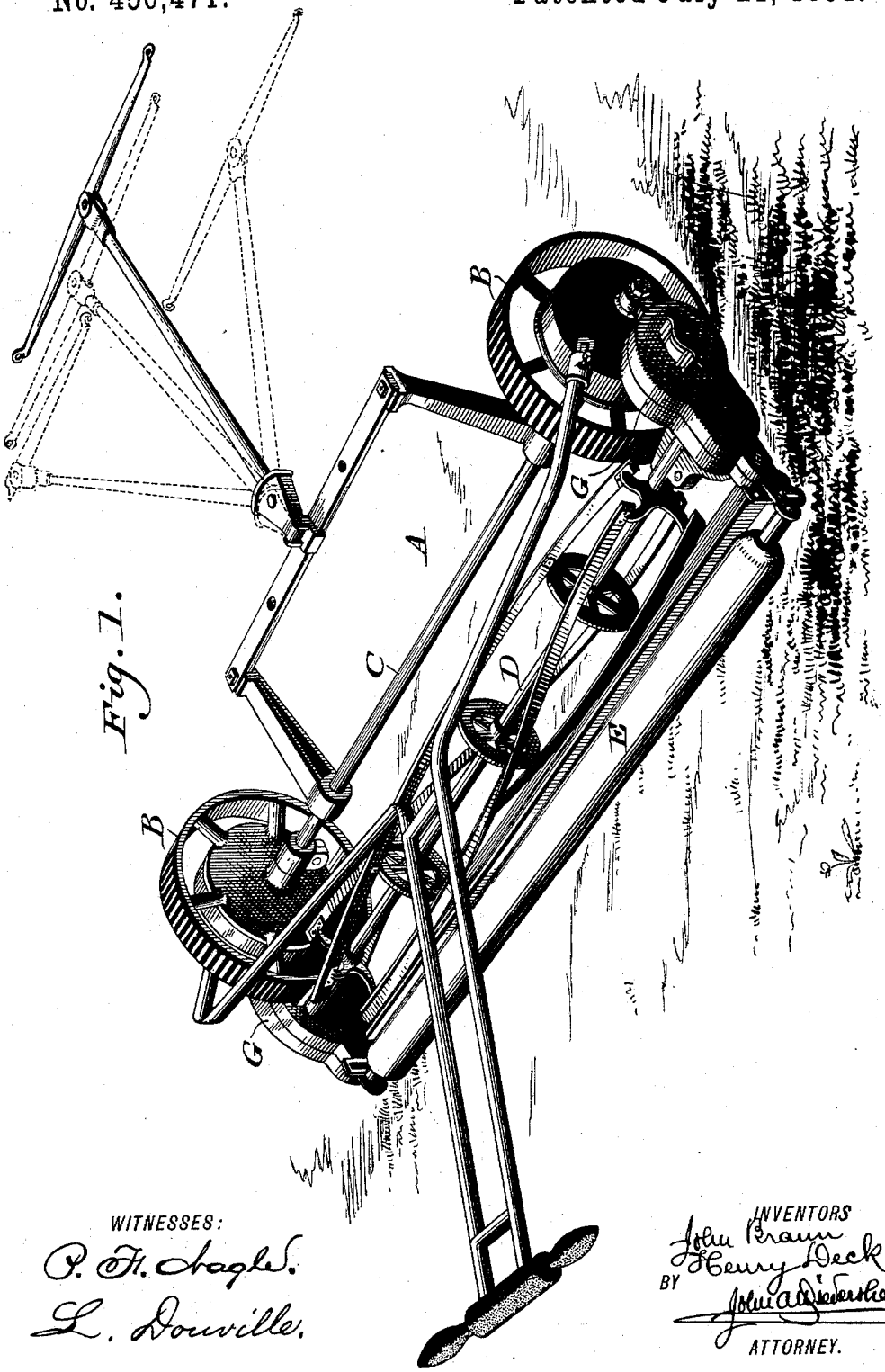


Fig. 1.

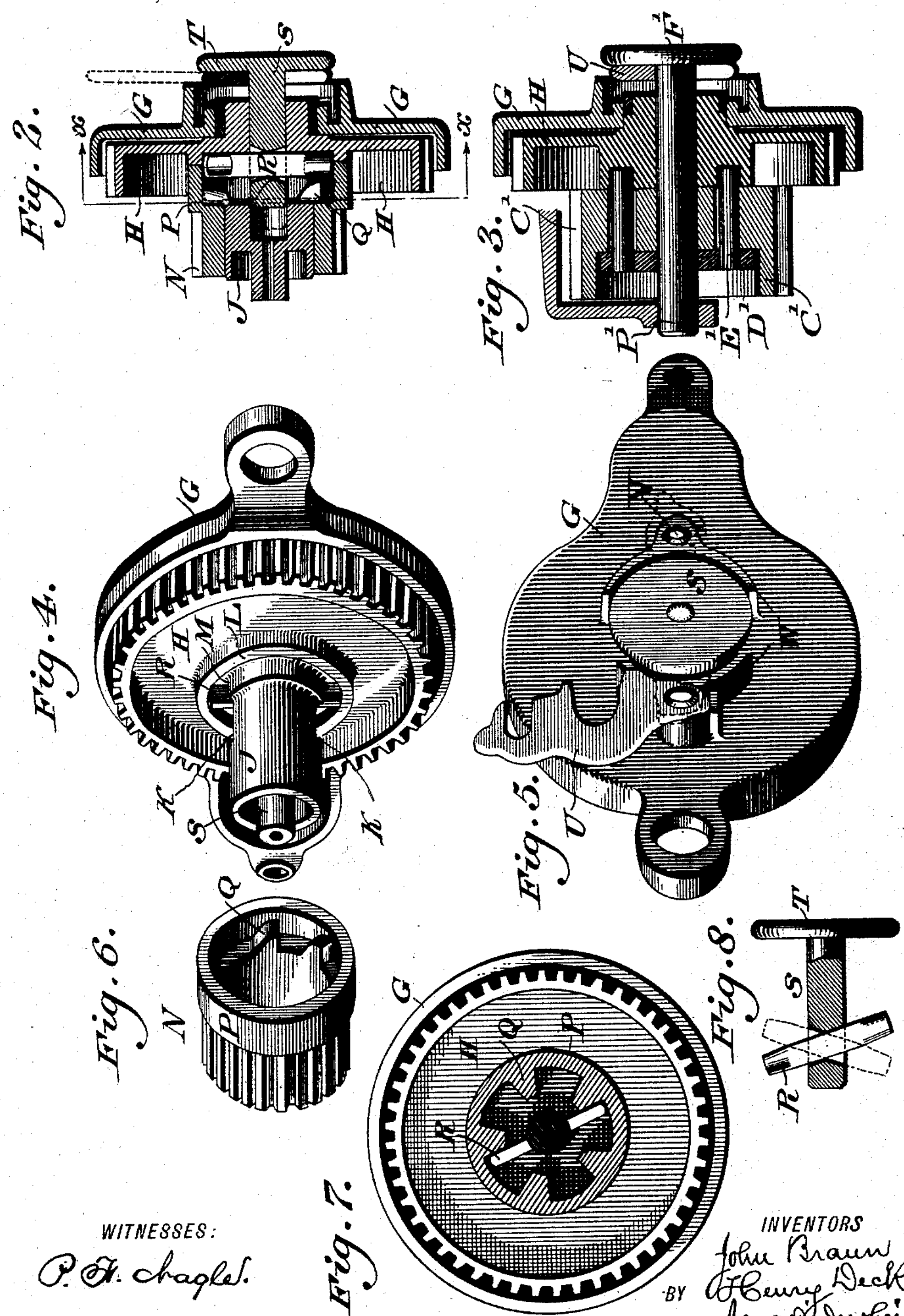
WITNESSES:
P. H. Eagles.
L. Douville.

INVENTORS
John Braun
Henry Deck,
BY
John A. Wiedersheim
ATTORNEY.

(No Model.) 2 Sheets—Sheet 2.

J. BRAUN & H. DECK.
LAWN MOWER.

No. 456,471. Patented July 21, 1891.



WITNESSES:

P. F. Nagle.

L. Douville.

INVENTORS

John Braun

Henry Deck.

BY John A. Wiedersheim

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN BRAUN AND HENRY DECK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO JOHN BRAUN & SONS, OF SAME PLACE.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 456,471, dated July 21, 1891.

Application filed January 17, 1891. Serial No. 378,105. (No model.)

To all whom it may concern:

Be it known that we, JOHN BRAUN and HENRY DECK, citizens of the United States, both residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Lawn-Mowers, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention relates to improvements in lawn-mowers; and it consists of mechanism substantially as hereinafter described for either connecting or disconnecting the operating train of gearing of the knife-cylinder and the running wheels of the device.

It further consists of the combination of parts hereinafter set forth.

Figure 1 represents a perspective view of a lawn-mower embodying my invention. Fig. 2 represents a longitudinal section of the parts of the mechanism embraced in my invention. Fig. 3 represents a modification of the same. Fig. 4 represents a perspective view of detail parts of the device. Fig. 5 represents a perspective view of the outer face of the gear-box, showing the lock. Fig. 6 represents a perspective view of a detail part. Fig. 7 represents a sectional view on line *x x*, Fig. 2. Fig. 8 represents a partial side and partial sectional view of the pawl-holder with pawl.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a lawn-mower having the running wheels B, with the axle C, the knife-cylinder D, and the roller E, all of usual and well-known construction, the said knife-cylinder being operated by means of a train of gearing located in the gear-box G, which latter is secured to the axle C. Journaled in the said box G is a gear-wheel H, having a hub or sleeve portion J, which is slotted at K on opposite sides thereof. The body of the said wheel is also provided with a circular collar or flange L, surrounding the sleeve J and forming a recess M. Mounted on the sleeve or hub J is a gear-wheel N, having a sleeve portion P, adapted to contact with the collar L, and having its inner wall provided with the ratchet-teeth Q, adapted to engage the ends of a pawl R, which loosely rests in the slotted end of a holder S and the slots K of the sleeve J. The said holder S consists of a slotted stem or pin adapted to be inserted through the side of the box G and into the journal or hub J of the wheel H, and is provided with a head T, by means of which the said holder may be readily operated. The slots K are of greater length than the width of the pawl R, so as to permit the longitudinal movement of the holder S.

Pivoted to the outer side of the box G is a lock U, having a recess in its under face coinciding with the periphery of the holder, so that when the latter is operated so that the pawl is removed from contact with the ratchet-teeth, as in the position shown in Fig. 2, the lock, when its free end engages the stud V, will prevent the said holder from being moved inward.

W designates guides for the holder, the same being connected with the outer face of the box G, and having their inner faces conforming to the shape of the head T of the said holder. It will be noticed that when the holder is inserted in the box G and sleeve J so that the ends of the pawl R are in contact with the ratchet-teeth Q, the rotation of the gear-wheel N, which, as is usual in devices of this character, is in contact with a gear-wheel connected with a running wheel B, will rotate the sleeve J along with the wheel H, and thereby the usual wheel on the knife-cylinder of the mower, so as to rotate the latter. The slot in the holder in which the pawl R is inserted is of such shape as to permit a rocking motion of the pawl therein and thereby permit the backward movement of the said wheel N without rotating the sleeve J and gear-wheel H, so that in the backward movement of the running wheels the knife-cylinder is not rotated.

When it is desired to stop the movement of the knife-cylinder during the forward movement of the running wheels, the holders S are drawn out and locked, as shown in Fig. 2. The ends of the pawl R being no longer in contact with the ratchet-teeth Q, the rotation of the latter does not affect the sleeve or hub J nor the wheel H.

In Fig. 3 a modification is shown wherein the main gear-wheel H of the operating-train is secured to the gear-wheel C′, that connects with the running-wheel gear by means of a disk D′, having the pins E′, which enter openings in said gear-wheels H and C′, the holder or shaft F′ having an inner bearing on the casing of the gear-box.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A lawn-mower having an axle with a gear-box thereon, a gear-wheel journaled in said box having a slotted hub with a surrounding recess, a gear-wheel on said hub and having a sleeve adapted to contact with said hub and with ratchet-teeth thereon, a slotted holder adapted to be inserted through the said gear-box, and a pawl in said slotted holder and engaged by said ratchet-teeth, said parts being combined substantially as described.

2. A lawn-mower having a gear-box on the axle thereof, a gear-wheel journaled therein having a slotted hub, and a surrounding circular collar forming a recess, a gear-wheel mounted on the said hub and provided with a slotted sleeve and ratchet-teeth, a holder with slotted end, a pawl resting loosely in said slotted end and slotted sleeve, and a lock for said holder, said parts being combined substantially as described.

3. In a lawn-mower, the combination of a gear-box attached to an axle, a gear-wheel journaled in said gear-box having a slotted hub or sleeve connected therewith, a circular collar on the body of said wheel surrounding the said sleeve and forming a recess, a gear-wheel mounted on the hub having a sleeve adapted to contact with the said collar and with ratchet-teeth on its inner wall, a slotted holder adapted to be inserted through the side of the said gear-box, and a pawl resting loosely in said slotted holder and adapted to be engaged by the said ratchet-teeth, substantially as described.

4. A support, a gear-wheel journaled therein and having a slotted sleeve on one side, a gear-wheel journaled on said sleeve and provided with ratchet-teeth, a holder with slotted stem movable in said first-mentioned gear-wheel and sleeve, and a pawl in said holder having its ends adapted to be engaged by the ratchet-teeth, said parts being combined substantially as described.

5. A support, a gear-wheel journaled therein and having a slotted sleeve, a second gear-wheel mounted on said sleeve and having ratchet-teeth, a holder with slotted stem, and a pawl in said slots having its ends adapted to be engaged by said ratchet-teeth, said holder being movable endwise in its bearings, said parts being combined substantially as described.

JOHN BRAUN,
HENRY DECK.

Witnesses:
JOHN A. WIEDERSHEIM,
A. P. JENNINGS.