

(No Model.)

A. GRAHAM.
LAWN MOWER.

No. 411,498.

Patented Sept. 24, 1889.

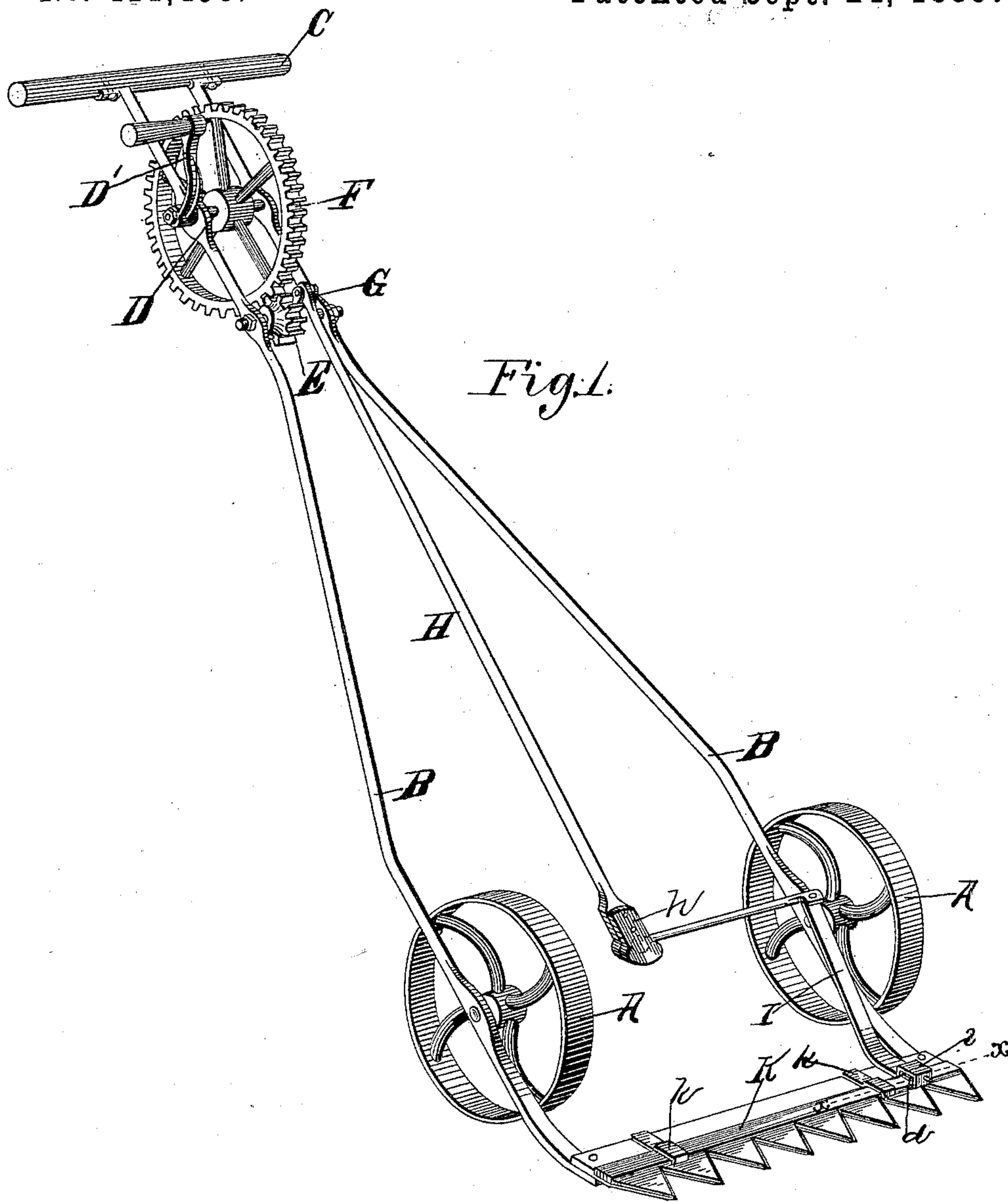


Fig. 1.

Fig. 4.

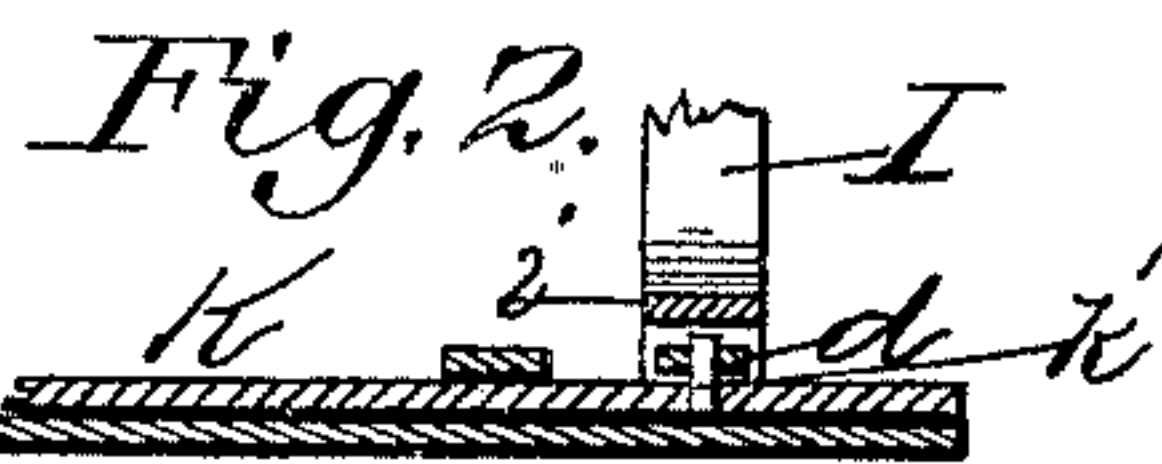
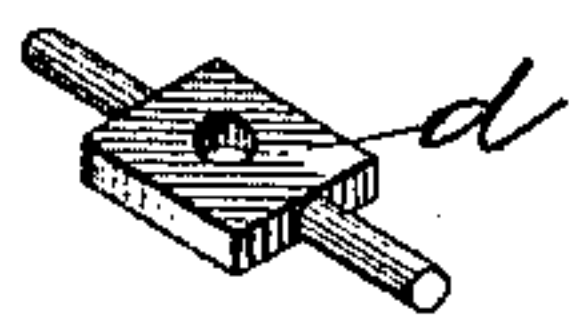
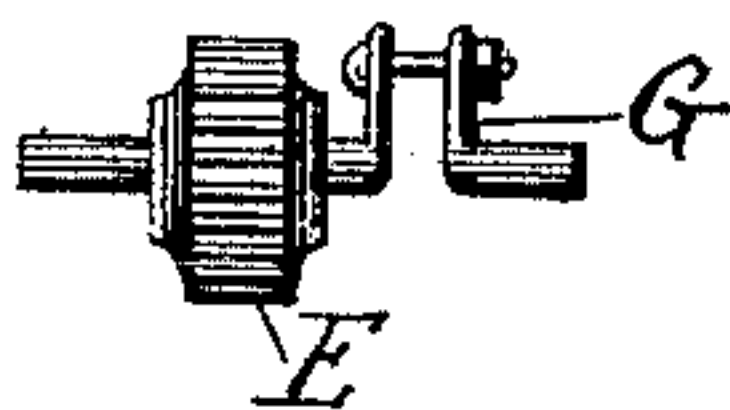


Fig. 3.



Witnesses:

W. H. Clements
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Inventor:

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UNITED STATES PATENT OFFICE.

ALEXANDER GRAHAM, OF HARRISONVILLE, MISSOURI.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 411,498, dated September 24, 1889.

Application filed December 11, 1888. Serial No. 293,321. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER GRAHAM, a citizen of the United States, residing at Harrisonville, Cass county, Missouri, have invented a new and useful Lawn-Mower, of which the following is a specification.

My invention relates to an improvement in lawn-mowers; and it consists in the construction and arrangement of parts hereinafter described and claimed.

The object of my invention is to provide a simple and effective lawn-mower of that class wherein the cutter-bar or sickle is operated by the hand of the operator from the upper ends of the handles. I attain this object by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 represents a perspective view of the entire machine; Fig. 2, a sectional view on the line xx of Fig. 1; Fig. 3, a detail view of the crank-shaft with pinion and crank, and Fig. 4 a detail perspective view of the block forming the connection between the bell-crank and sickle.

In the drawings, A represents the wheels mounted on stub-axles.

B represents the frame, consisting of two curved metal bars, in the lower end portion of which the axles are secured. The upper portion of the frame-bars are bent in toward each other and their ends carried up parallel and secured to a handle C. Between the parallel portions of the bars is journaled a shaft D, one end projecting beyond the bar, on which is secured a crank D'. On the shaft D, between the bars, is keyed a large gear-wheel F, which meshes with a pinion E, keyed on a crank-shaft G, mounted in the bars, the crank being formed by bending the shaft adjacent to the pinion between the bars.

H represents a pitman pivotally secured to the crank and having a socket formed in its lower end, which is provided with a removable cap h.

A bell-crank I is pivoted at its angle to the frame, near the wheel, its upper end having a ball formed thereon incased in the socket of the pitman. The lower end of this crank

has a U-shaped box i thereon, extending over the end of the cutter-bar or sickle.

K is the cutter-bar or sickle, working in guides k , secured on the stationary bar. It has a pin or lug k' , extending out from its upper face, near its end.

To permit an easy reciprocating movement of the cutter-bar, I place a block d in the box i , it having two cylindrical arms extending out from its ends through openings in the ends of the box. The block is of such dimensions that a sliding horizontal movement of the arms may be had in the box. An opening is formed in the center of the block, in which the pin k' is placed. It will thus be seen that as motion is transmitted to the pitman by the crank and gearing a reciprocating movement is given to the lower end of the bell-crank, and consequently to the cutter-bar, the arrangement of the block d preventing any binding of the same.

I am aware that minor changes can be made without departing from the nature and principle of my invention.

Having thus described my invention, what I claim as new is—

The lawn-mower herein described, consisting of the frame B, having wheels mounted thereon and the bars of its upper ends arranged parallel to each other, a gear-wheel F between the parallel portions of the frame-bars, a crank for rotating the same, a pinion mounted on a crank-shaft between the bars, with which the gear meshes, a pitman secured to the crank of the crank-shaft having a socket at its lower end, a bell-crank pivoted to the frame having a ball on one end placed in the socket, and a box on its opposite end, the cutter-bar having a pin on its upper face, and a block, as d , formed with oppositely projecting arms, and a central opening for connecting the bell-crank and cutter-bar, substantially as described.

ALEXANDER ^{his} X GRAHAM.
mark

Witnesses:

R. M. KYLE,
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