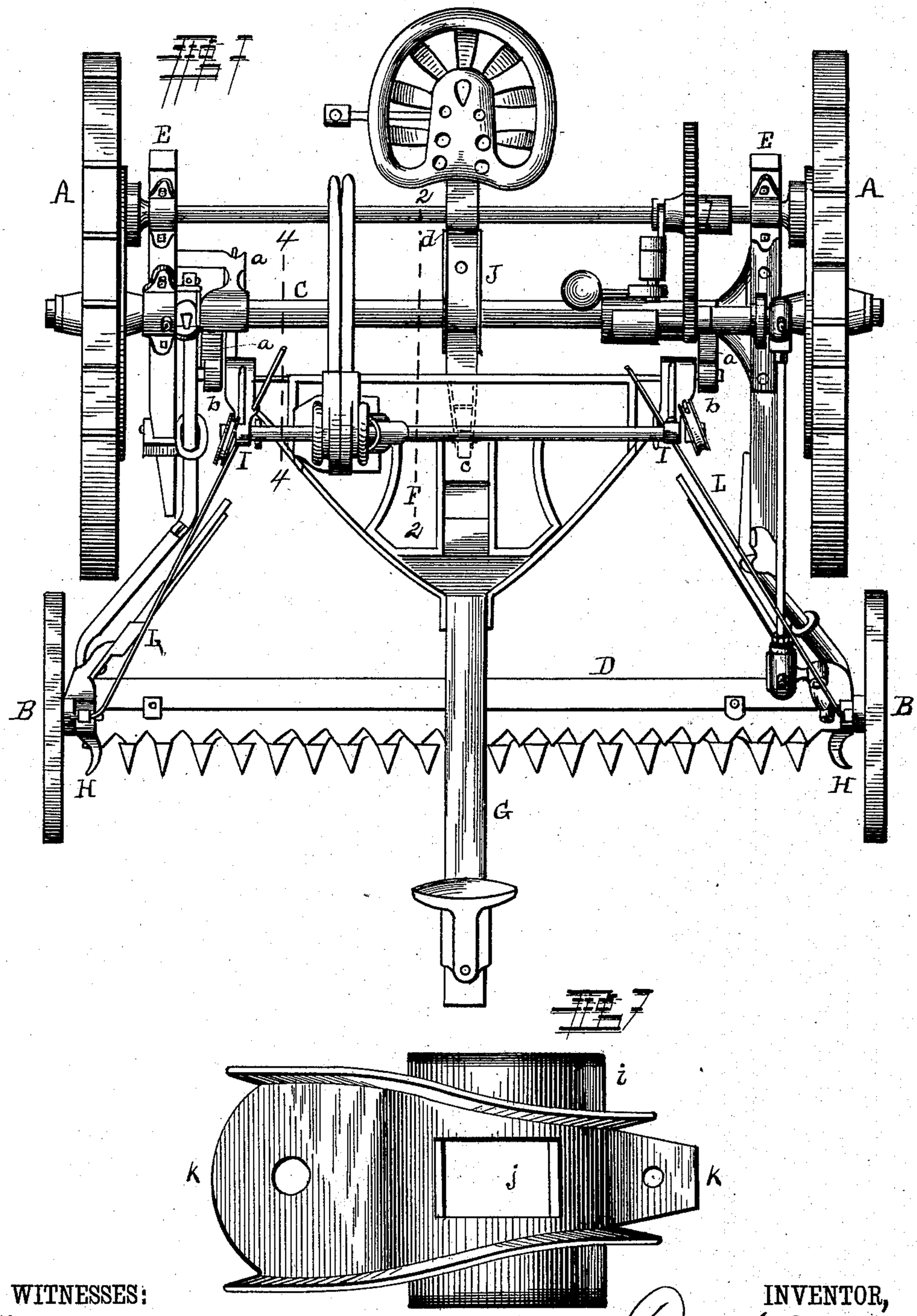
(No Model.)

2 Sheets—Sheet 1.

D. C. MARKHAM.

MOWING MACHINE.

No. 325,949. Patented Sept. 8, 1885.



WITNESSES:

Fred. L. Dieterich.

J. A. Blackwood.

INVENTOR,

Dewitt C. Markham

by W. H. Doolittle

ATTORNEY.

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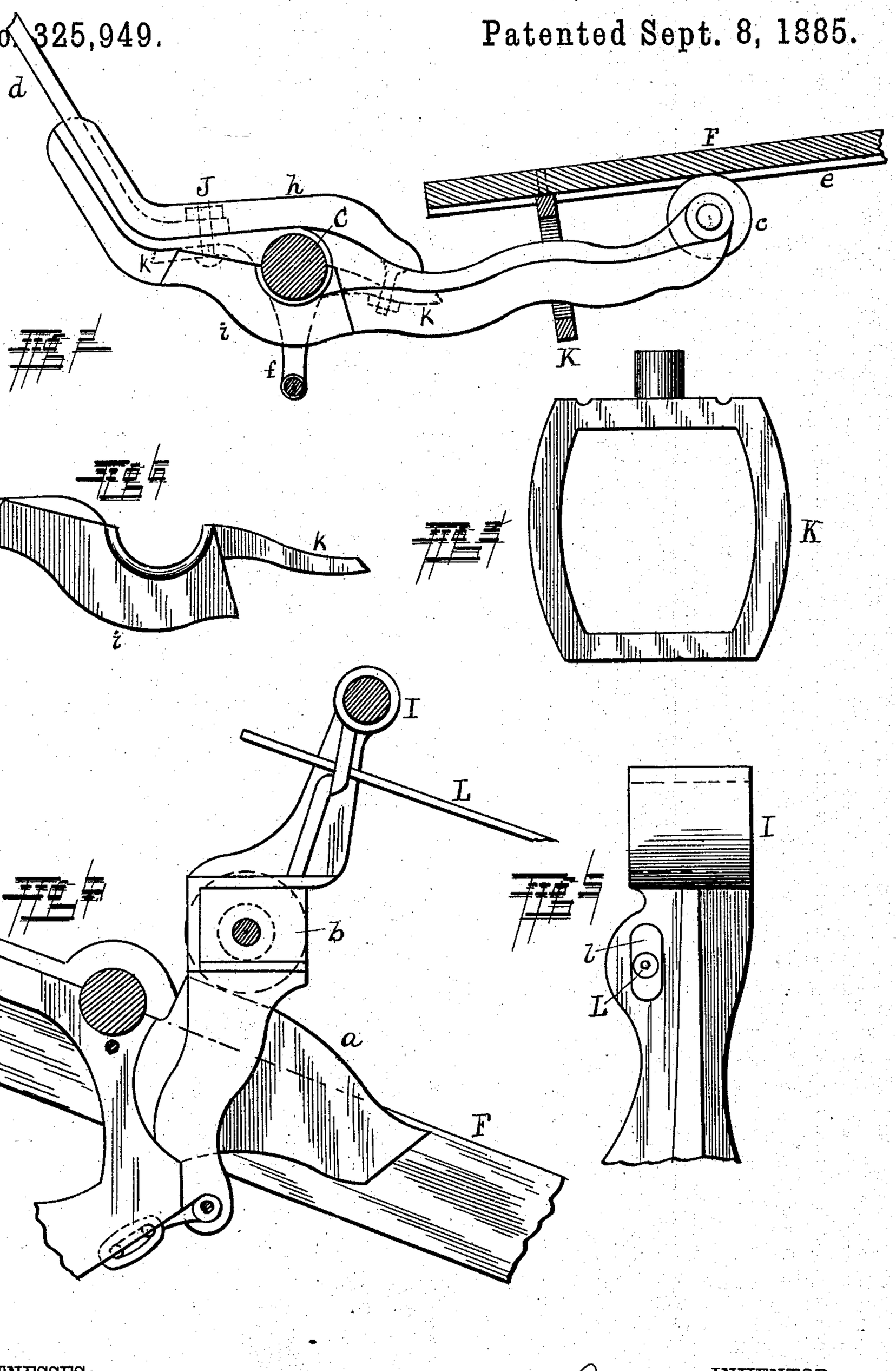

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ATTORNEY.

UNITED STATES PATENT OFFICE.

DEWITT C. MARKHAM, OF TOWANDA, PENNSYLVANIA, ASSIGNOR TO THE EUREKA MOWER COMPANY, OF UTICA, NEW YORK.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 325,949, dated September 8, 1885.

Application filed July 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, DEWITT C. MARKHAM, a citizen of the United States, residing at Towanda, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Mowing-Machines; and I do hereby 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.

My present invention relates to mowing-machines of the same general construction as those described in Letters Patent No. 265,525, granted to me October 3, 1882, and in my Patent No. 304,837, September 9, 1884; and it consists in improvements in the construction of certain parts of the machine.

The present invention consists more particularly in the method of connecting the tongue-frame to the machine, in the mounting of the driver's seat so that it may more effectually counterbalance the weight of the tongue-frame and cutter-bar, in the arrangement of the grass-rods, and in certain minor details of construction, which will be hereinafter more specifically set forth.

In the accompanying drawings, which illustrate my invention and form part of this specification, I have shown only so much of a mowing-machine as will enable my present improvements to be understood, the operating mechanism generally being omitted, since the parts omitted are identical with those shown in my Letters Patent above mentioned, to which reference is herein made for more full and complete illustration.

In the present drawings, Figure 1 is a plan view of a mowing-machine embodying my present improvements. Fig. 2 is a vertical section in a plane indicated by the line 2 2, Fig. 1, showing especially the seat-holder, its attachment to the axle, and its relation to the tongue-frame. Fig. 3 is a detail front view of the tongue-frame staple, through which the seat-holder extends. Fig. 4 is a vertical section in a plane indicated by the line 4 4, Fig. 1, showing the grass-rod holder. Fig. 5 is a detail view showing the front of the standard which forms the grass-rod holder; and Figs. 6 and 7 are side and bottom views, respectively, of the lower portion of the seat-holder.

Like letters designate corresponding parts in all of the figures.

A A represent the main driving-wheels; B B, the lead-wheels; C, the main axle; D, the cutter-bar; E E, the side rails; F, the tongue-frame; G, the pole; H H, the shoes; *a a*, the under-draft chain-wheel brackets; *b b*, the rollers mounted on the tongue-frame, which travel on the brackets *a a*, and I I the brackets on the tongue-frame, which support the mechanism for raising and lowering the cutter-bar, which mechanism is partly shown. All of these parts are identical with the corresponding parts in my above-mentioned application.

The first of my present improvements relates to the seat-holder. In my above-mentioned patents and application the seat-holder is rigidly secured to the tongue-frame and extends backward beyond the points where the tongue-frame is hinged to the chain-wheel brackets, so that the seat may counterbalance the weight of the tongue-frame, and so relieve the horses from the strain which would otherwise be imposed upon them. According to that arrangement the balance can be perfect only at a single position, since when the cutter-bar is raised the relative position of the seat and tongue-frame with reference to the points of support are changed more or less, thus rendering the balance more or less imperfect. According to my present invention the seat-holder J is secured to the main axle C, instead of to the tongue-frame. At the forward end of the holder, which extends under the tongue-frame, is mounted a roller, *c*, upon which the tongue-frame is supported. To the rear end of the seat-holder which extends back of the axle, is fastened the seat-spring *d*. By this arrangement the weight of the driver counterbalances the weight of the tongue-frame in all positions, and at the same time permits the tongue-frame to move up and down independently of the seat, the supporting-roller *c* being a friction-roller to prevent wear and to permit the easy movement of the tongue-frame. The side bars of the frame, to which the finger-bar is attached, are rigidly secured to the axle, to which the

seat-holder is also rigidly secured, as hereinafter described. When the finger-bar is raised, the seat is moved back slightly, and the tongue-frame is at the same time slightly raised. The roller *c* works between ways or guides *e e* on the under side of the tongue-frame, and the seat-holder passes through a staple, K, secured to the under side of the tongue-frame, which staple limits the movement of the tongue-frame.

The seat-holder itself may be of any suitable construction, and it may be secured to the axle in any manner desired. I prefer, however, the construction and arrangement shown.

To the axle at its center is secured a downwardly-extending bracket, *f*. The seat-holder J is made in two parts, the upper part, *h*, of which forms the main portion of the holder, and to it are fastened the supporting-roller *c* and the seat-spring *d*. This upper part is formed with a curved bearing-surface, which fits over the axle. The lower part, *i*, is shaped to correspond with the shape of the upper part, and is also formed with a curved bearing-surface, which fits the axle from underneath. This lower part, *i*, is provided with a central aperture, *j*, which passes over the bracket *f*, which, when the part *i* is in position, exactly fits said aperture, whereby the seat-holder is rigidly secured to the axle. The lower part, *i*, is provided with lips *k k*, by means of which the parts are bolted together. For the sake of economy, one of these bolts may be the same one which secures the seat-spring to the holder. The seat-holder being thus made in two parts, enables it to be readily applied to the machine, and also enables the parts to be easily replaced should either be broken.

The grass-rods in my above-mentioned Letters Patent No. 265,525 are rigidly secured at both ends to the shoes and to the axle, and in my above-mentioned Patent No. 304,837 they are shown as rigidly attached at one end and unsupported at the other. Both of these arrangements are open to objections—the first, because as the cutter-bar is raised and lowered the grass-rods are bent out of shape, and the second because, being entirely unsupported at one end, the rods are likely to be bent entirely out of position, so as to be practically worthless. According to my present invention I obviate these objections by rigidly securing the rods at one end and by so supporting them at the other end that they are allowed to move freely longitudinally. The rods L L are secured at their lower ends to the shoes H H, as in my patent above mentioned. The upper ends pass freely through eyes *l l* in the brackets I I on the tongue-frame. The rods L L are made of elastic wire, and they extend far enough behind the eyes *l l* so that they can never be disengaged therefrom.

I claim as my invention—

1. In a mowing-machine, the tongue-frame hinged to the main frame of the machine, in combination with the seat and seat-holder, said seat-holder being separate from the tongue-frame and secured to the axle of the machine and being adapted to support the tongue-frame and counterbalance its weight, substantially as set forth.

2. In a mowing-machine, the axle and the seat-holder mounted thereon, in combination with the tongue-frame hinged to the frame of the machine and adapted to be supported and counterbalanced by said seat-holder, substantially as set forth.

3. The tongue-frame hinged to the frame of a mowing-machine, in combination with the seat-holder and a roller mounted on said seat-holder, on which the tongue-frame is supported, substantially as set forth.

4. The tongue-frame F and the staple K, fastened on the under side thereof, in combination with the seat-holder J, which passes through said staple, substantially as set forth.

5. A seat-holder composed of two parts connected together, substantially as set forth, in combination with the axle of a mowing-machine, one part being located above said axle and the other part below, substantially as set forth.

6. The combination of the axle C, the bracket *f*, and the seat-holder, composed of two parts, *h* and *i*, the lower part, *i*, being provided with an aperture, *j*, which fits over the bracket *f*, substantially as set forth.

7. The wire grass-rods L, in combination with the shoes to which the rods are secured at their lower ends, and the brackets I, provided with the eyes *l*, through which eyes the upper ends of the said rods freely pass, substantially as described.

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

DEWITT C. MARKHAM.

Witnesses:
M. W. ROSS,
JOHN E. FOX.