

(No Model.)

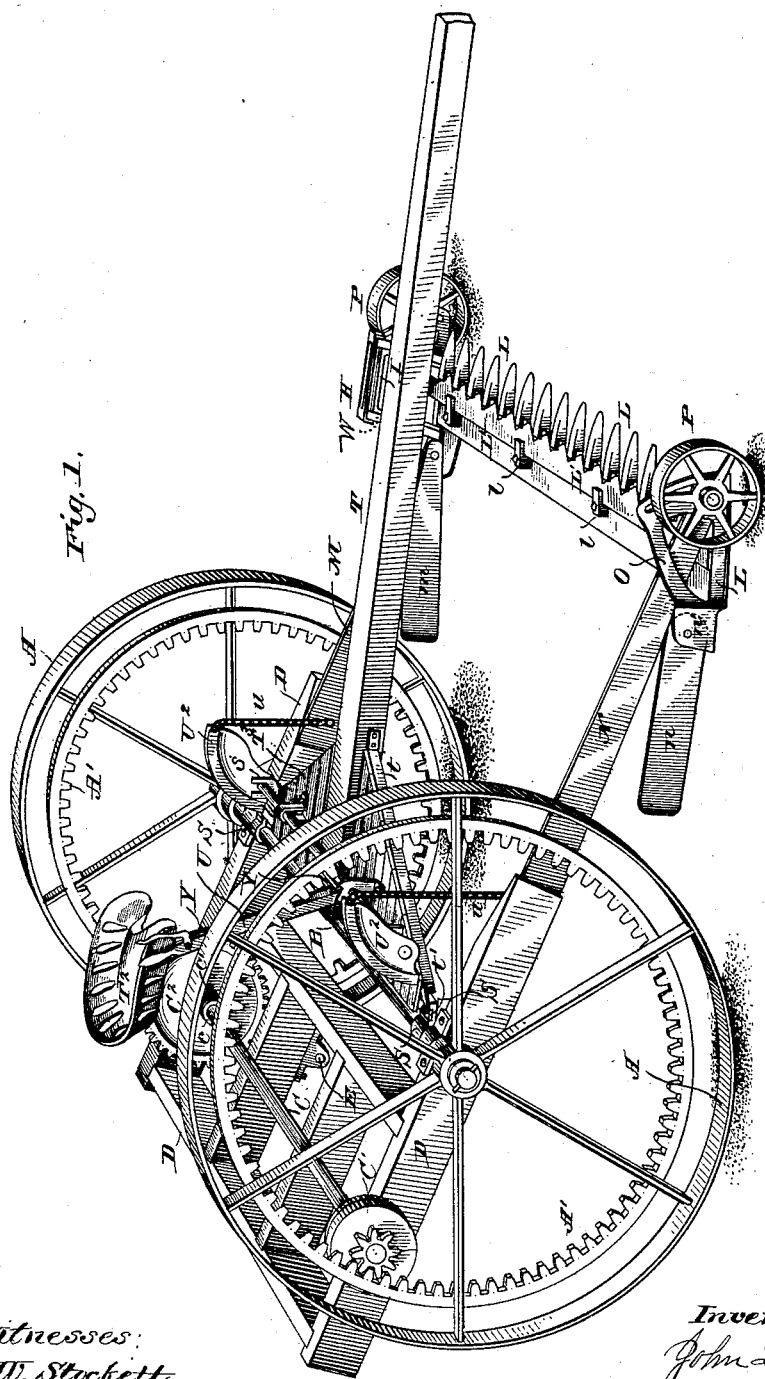
3 Sheets—Sheet 1.

J. D. WILBER.

MOWER.

No. 346,007.

Patented July 20, 1886.



Witnesses:
J. W. Stockett,
M. E. Webster.

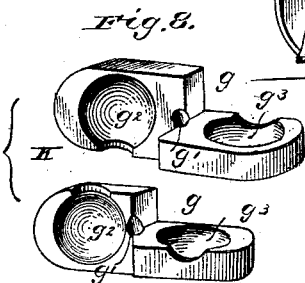
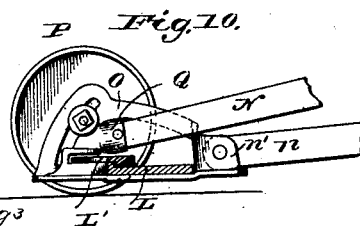
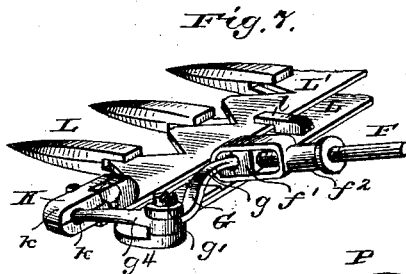
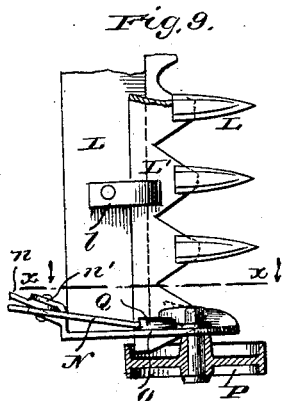
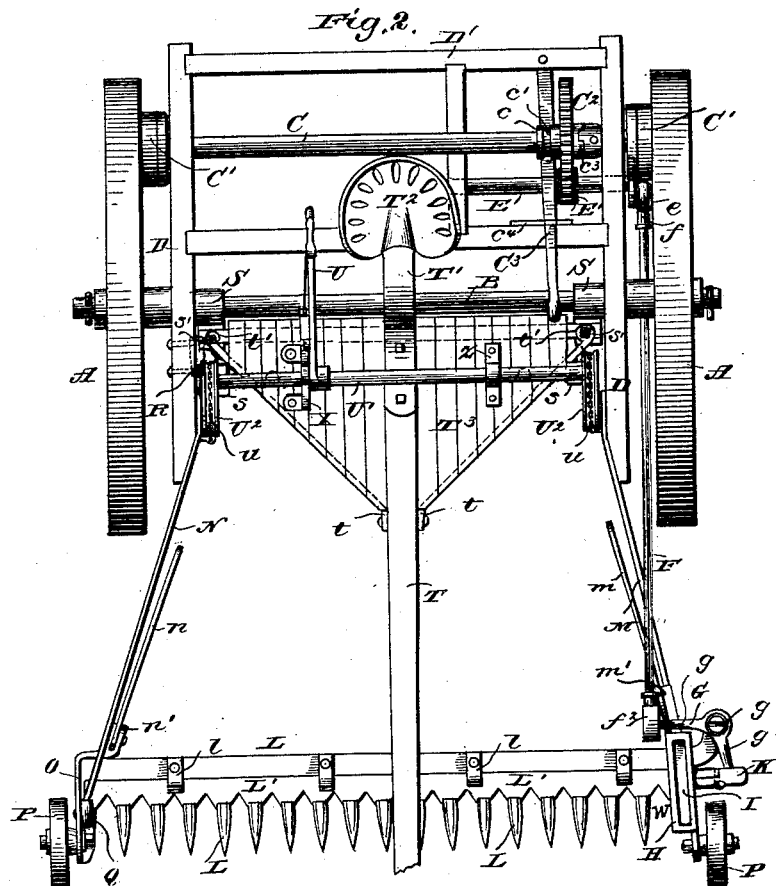
Inventor
John D. Wilber

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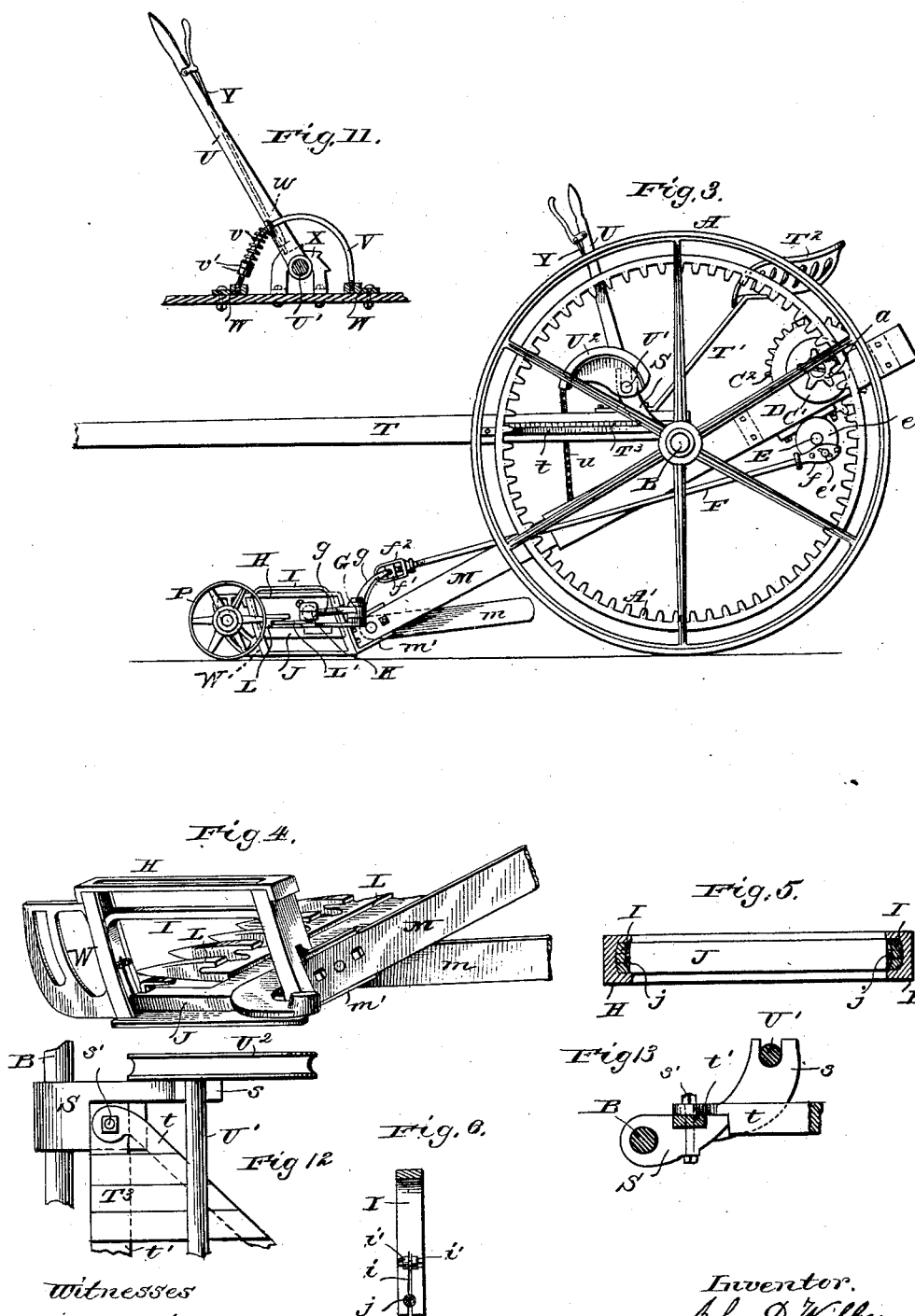
3 Sheets—Sheet 3.

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Inventor.
John D. Wilber

UNITED STATES PATENT OFFICE.

JOHN D. WILBER, OF CHICAGO, ILLINOIS.

MOWER.

SPECIFICATION forming part of Letters Patent No. 346,007, dated July 20, 1886.

Application filed May 22, 1884. Serial No. 132,473. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. WILBER, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Mowers, of which the following is a specification, reference being had to the accompanying drawings, which form a part of and illustrate this specification.

This invention relates to an improvement in the direct-draft mower patented to me, John D. Wilber, in the year 1863, No. 37,656; patent of March 30, 1880, No. 225,960; also of March 7, 1882, No. 254,753, and on other mowers known as "Wilber's Eureka Mower"—that is, the mower that has the draft-tongue passing centrally over and at right angles to the cutter-bar.

Figure 1 is a perspective view of a mower embodying my invention. Fig. 2 is a plan view thereof. Fig. 3 is a side elevation; Fig. 4, a perspective view of the left shoe and its connections, enlarged and detached from the other parts. Fig. 5 is a plan view of the cap of said shoe and the top of the sliding frame in the shoe. Fig. 6 is an inside elevation of one of the ends of said sliding frame in said shoe; Fig. 7, an enlarged perspective view of the left end of the finger-bar and cutter-bar and their connections with the pitman-shaft. Fig. 8 is an enlarged perspective view of the two parts of the double ball-and-socket connection between the cutter-bar and bell-crank lever. Fig. 9 is an enlarged plan view of the right end of the finger and cutter bar, lead-wheel, and side-arm attachment. Fig. 10 is an enlarged inside elevation of the right shoe lead-wheel with the side arm and track-clearer attached. Fig. 11 is a side elevation of the lifting device removed from the carriage. Fig. 12 is an enlarged view of an end section of the platform and its connection with the axle and support for the hoisting apparatus; Fig. 13, a side elevation of one of the axle-brackets removed.

A A are the main driving-wheels of the machine, in which is mounted the axle B. The wheels are provided with cogged driving-rims A', with which gear-wheels C', on the end of the driving-shaft C, mesh, thus driving the mechanism. The gear-wheel c^2 is keyed upon the shaft C, and provided with a clutch-half, c^3 , to engage a clutch formed rigid with the

shaft C. The gear c^2 is also provided with an annular groove, c' , which engages with the lever c^3 , for throwing the mechanism in and out of gear. This gear c^2 meshes with a pinion, E', mounted upon the crank-shaft E. The pitman F is attached to the crank-wheel e , and thence extends forward and is attached to the bell-crank lever G, which reciprocates the knife-bar in the usual well-known manner.

D are the side bars of the frame, sleeved upon the axle, to the forward ends of which are attached the push-bars $n m$, connected at their forward extremities to the finger-bar L.

T is the tongue provided with the braces $t t$ and rear bars, t' , upon which the platform T³ of the machine is built. The seat T² is mounted upon the tongue by means of the spring-seat standard T', attached thereto. A rock-shaft, U', is mounted in bearings X, and provided with lifting-segments, to which the chains connected to the push-bars are attached, and ratchet-detents for retaining the bars in the proper position; but these parts, together with the lead-wheel P and the track-clearers $n m$, do not form any part of my invention, but are old in my former patents, as cited.

The crank-shaft E is placed below the main frame of the machine, so as to render the forward thrust of the pitman more nearly in a horizontal plane, and so avoid downward pressure on the finger-bar. The right-hand lead-wheel, P, is made concave on its inside, or recessed so as to permit the cutter-bar to pass through the shoe and reciprocate within the wheel. The right-hand push-bar is pivoted to the right shoe at a point above the finger-bar and in advance of it, and in line with the upper end of the bar and the points of the fingers, so as to render the push of this bar more nearly horizontal, and not give a twist to the finger-bar.

The ball-and-socket connecting-block, forming the connection between the arm of the bell-crank lever and the ball on the cutter-bar, is made in two parts, as shown in Fig. 8. These parts are constructed of flat plates of metal, g , lying in planes at right angles to each other, and provided with shoulders adapted to abut solidly against each other and hold the parts firmly in place. Each of these separate parts is provided with half-sockets $g^2 g^3$.

The block is placed upon the balls, and fastened together by a bolt passing through the bolt-hole g' , as shown. The axle-brackets are provided with bearings S , in which the axle B is journaled. A forward extension, s , is provided with forked bearings, in which is mounted the rock-shaft U' . Recesses are formed upon the rear part of the brackets, in which the rear bar, t' , of the platform rests, and in which it is removably secured by the bolts $s' s'$. Braces $t t$ extend laterally back from the tongue, and fastened by the same bolts $s' s'$. Thus by lifting the rock-shaft out of the forked bearings and removing the bolts $s' s'$ the platform and tongue can be removed from the machine. The advantages of this construction are greater strength with less material, and mechanism less unwieldy and top-heavy.

To lessen the pressure on the ground of the finger-bar caused by its weight and the lift to rear of frame through the gears in drive-wheels and on ends of back shaft, I place on platform T^3 , under the hoisting-lever U , a coil-spring, v , which is held by and moves freely on a curved rod, V , which rod is on a circle and secured to platform, with its ends equally distant from and spanning the hoisting-shaft U' . Attached to the lever-handle is an eyebolt or loop, w , which incloses and slides freely over the curved rod V , and rests against the upper end of the coil-spring. On the lower front end of the curved rod is placed jam-nuts or other proper device of larger diameter than the spring, and made adjustable, so as to be secured to any part of the rod desired.

In practical operation, when mowing on soft or stony ground and it is desirable to have the

finger-bar press but lightly on the ground, the jam-nuts are run up on the curved rod, bringing the coil-spring up with a heavier pressure against the hoisting-lever, causing it to take a more upright position, rotating these segments on ends of rock-shaft u' , and through the attached lifting-chains give the desired lift to the side bars, and through them to the finger-bar, throwing the weight on the platform and pole.

I claim—

1. The axle-brackets consisting of the parts S , encircling the axle B , the forward and upwardly projecting parts s , and the seats for the bar t' , the said forward projections $s s$ having open bearings for the support of the journals of the rock-shaft U' , as and for the purpose specified.

2. A double ball-and-socket coupling-block composed of the flat plates or blocks lying in planes at right angles to each other and provided with square shoulders, whereby the parts may be firmly locked together, substantially as described.

3. In a mower, the combination of the tongue T and its platform T^3 , the rock-shaft U' , and lifting apparatus, as described, the bar t' , the axle-brackets s , the braces $t t$, and the forked bearings on the forward ends of the brackets, as specified.

4. The combination of the coil-spring v , curved rod V , eyebolt w , and jam-nuts v' , located and arranged as described, and for the purpose specified.

JOHN D. WILBER.

Witnesses:

G. L. CHAPIN,
A. G. MOREY.