

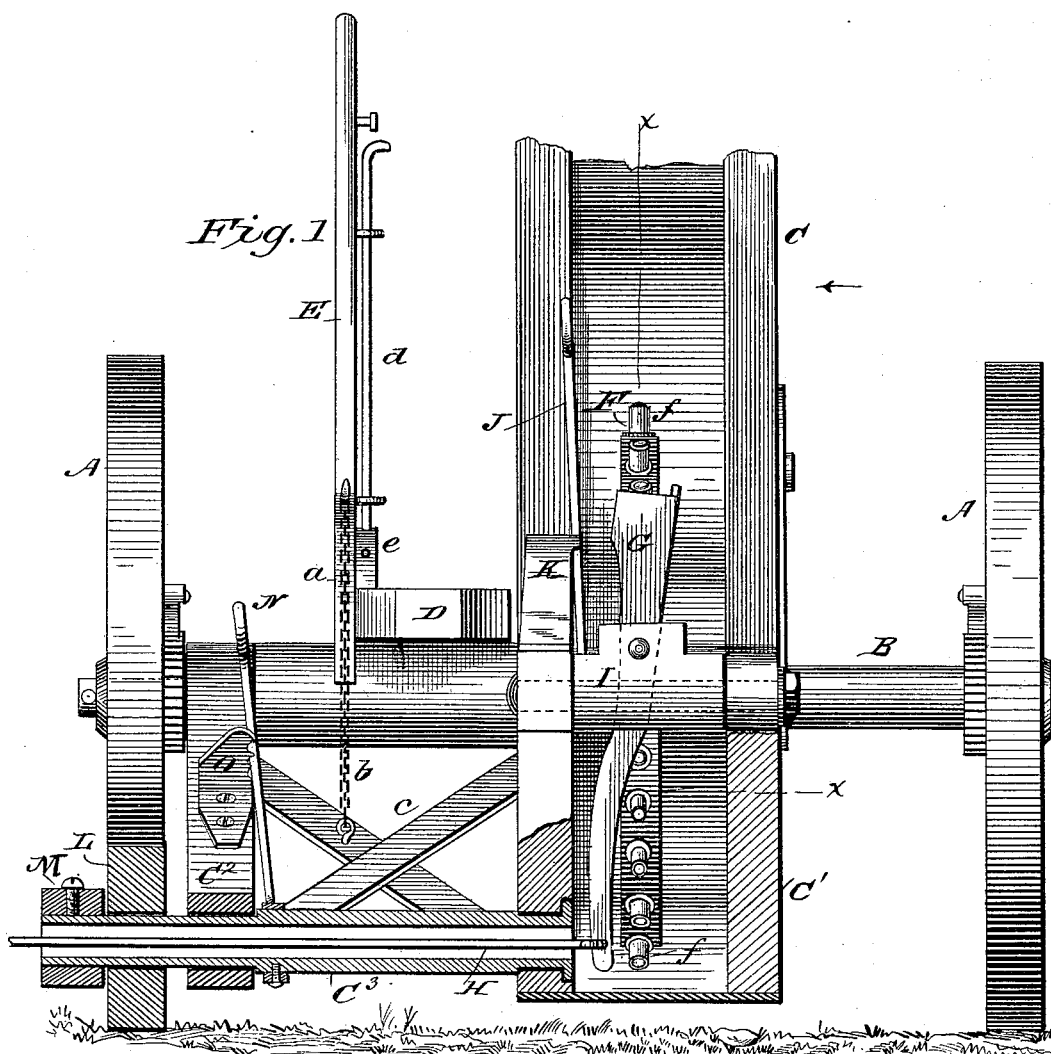
(No Model.) 3 Sheets—Sheet 1.

3 Sheets—Sheet 1.

MOWER.

No. 385,862.

Patented July 10, 1888.



WITNESSES:
Fred G. Dieterich.
Edw. W. Byrnes.

INVENTORS.
R. D. Stoke.
P. A. Harris.
BY Munn & Co.
ATTORNEYS.

(No Model.)

R. D. HOKE & I. A. HARRIS.

3 Sheets—Sheet 2.

MOWER.

No. 385,862.

Patented July 10, 1888.

Fig. 2.

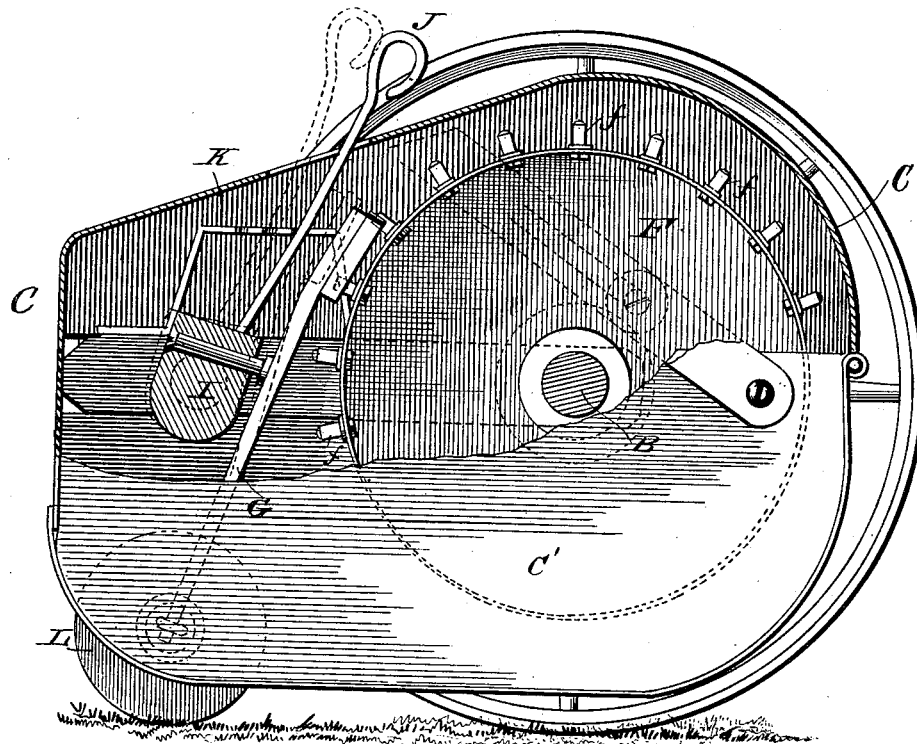


Fig. 4.

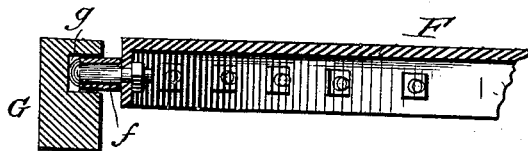
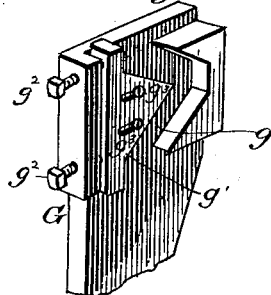


Fig. 5.



WITNESSES:

Frederick G. Dietrich

Edw. W. Byrnes

INVENTORS.

R. D. Hoke

I. A. Harris

BY

Mann & Co.
ATTORNEYS.

(No Model.)

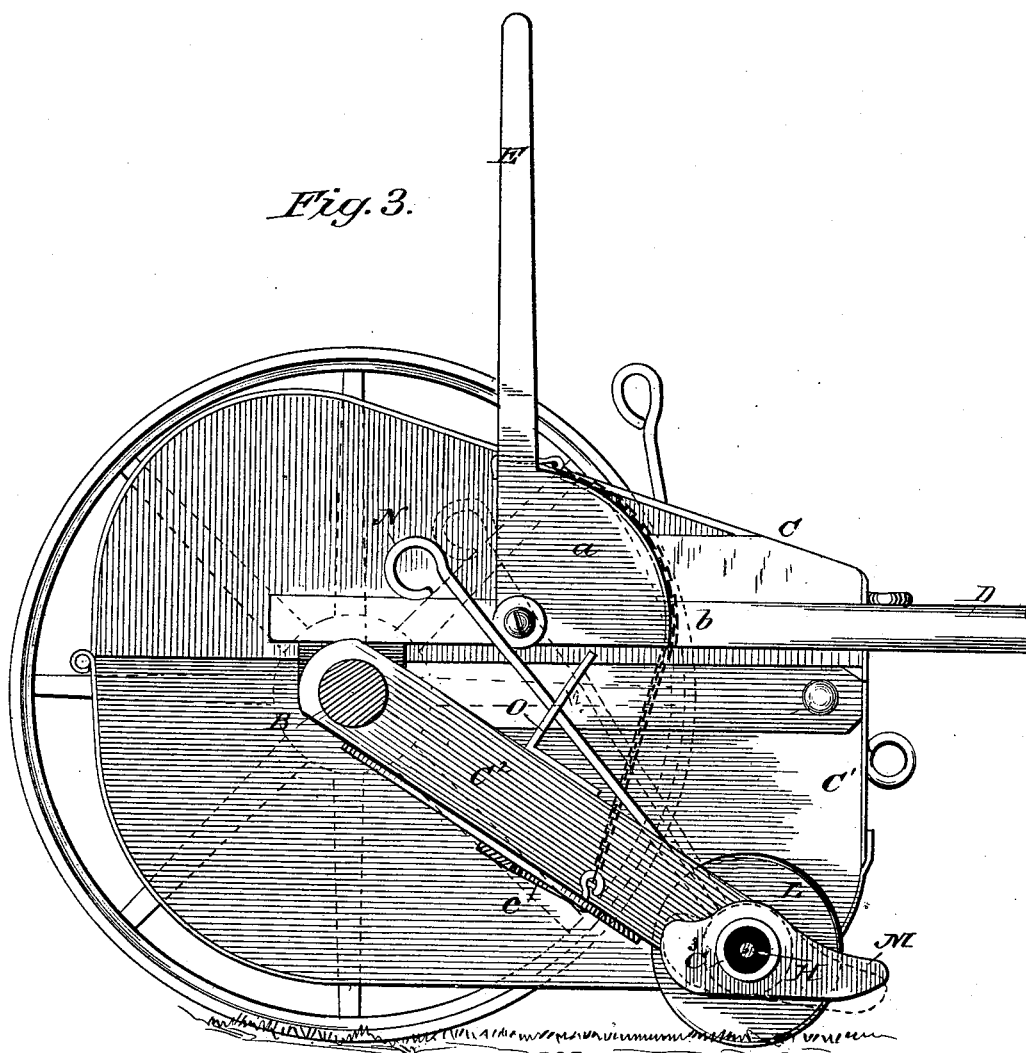
3 Sheets—Sheet 3.

R. D. HOKE & I. A. HARRIS.

MOWER.

No. 385,862.

Patented July 10, 1888.



WITNESSES:
Fred G. Dietrich,
Edw. W. Byrnes,

INVENTORS.
R. D. Hoke,
I. A. Harris.
BY *Mann & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBLEY DUNGLISON HOKE AND ISAAC ALLEN HARRIS, OF WESSINGTON,
DAKOTA TERRITORY, ASSIGNORS OF ONE-HALF TO CHARLES N. CURTISS
AND DAVID T. HIRE, BOTH OF SAME PLACE.

MOWER.

SPECIFICATION forming part of Letters Patent No. 385,862, dated July 10, 1888.

Application filed July 26, 1887. Serial No. 245,341. (No model.)

To all whom it may concern:

Be it known that we, ROBLEY DUNGLISON HOKE and ISAAC ALLEN HARRIS, of Wessington, in the county of Beadle, Dakota Territory, have invented a new and useful Improvement in Mowers, of which the following is a specification.

Our invention is in the nature of an improved driving mechanism, and adjusting mechanism for mowers and reapers designed to drive the sickle-bar with a sufficient number of strokes to secure a perfect cut of the grain in proportion to the advance of the machine and with a simple and durable construction of parts, and designed also to secure a simplified and practical means of adjusting the shoe of the sickle-bar.

To these ends our invention consists in the peculiar construction and arrangement of parts, which will now be fully described with reference to the drawings, in which—

Figure 1 is a front elevation, partly in section. Fig. 2 is a side elevation, partly in section, through line *xx* of Fig. 1. Fig. 3 is a side elevation from the opposite side, partly in section. Fig. 4 is a sectional detail of the flanged wheel rollers and cam-grooves of the oscillating lever, and Fig. 5 is a perspective view of the end of the lever containing the cam-grooves.

A A represent the drive-wheels of the mower, which may be of any suitable construction. These drive-wheels are connected as usual to an axle, B, by ratchets. On this axle is hung a frame-work consisting of a hollow casing, C C', a longitudinal bar, C², and a transverse hollow pipe or tube, C³, which latter connects the forward end of bar C² with the forward end of the lower part, C', of the hollow casing.

D is the tongue, which is also at its rear end hung upon the axle and has pivoted to it a hand-lever, E, with a grooved segment, *a*, and a chain, *b*, which latter extends down to cross-braces *c* of the frame and serves as a means for adjusting the downward inclination of the frame, which dips to the front. To hold this lever in its different positions, a locking-rod, *d*, is arranged in guides in parallel position beside the lever, and its lower end is

made to enter one of a series of holes in a curved projection, *e*, on the tongue.

Within the hollow casing C C' and rigidly fixed upon the axle is a wheel or disk, F, which has a peripheral flange, into which is secured by nuts a series of radial shoulder-bolts having rollers *f* upon the same. As the wheel rotates, these rollers play in a cam-groove, *g*, in the upper end of a vibrating lever, G. The lower end of this lever is connected to a pitman-rod, H, which passes through the hollow tube C³ and connects with the sickle or knife. It will therefore be seen that the action of the rollers of the disk F in the cam-groove of the lever G causes the latter to oscillate and impart through pitman H the necessary reciprocating motion to the knife. This lever, it will be seen, is arranged in the vertical plane of the driving-disk, and thus secures a great advantage, as it brings the frictional strain of the rollers in longitudinal direction or endwise to the lever, which causes the parts to work much easier or more freely, and hence requires less power to operate the machine. This lever is fulcrumed upon a rock-shaft, I, which is journaled in the two sides of the casing C', and is provided with a hand-lever, J, engaging with notches on an arch-bar, K. By deflecting this lever and throwing it into one or the other of the notches in the bar K the fulcrum-shaft I is rocked and its end bearing the cam-groove is thrown away from the rollers of the disk, as shown in dotted lines, Fig. 2, thereby disconnecting the driving mechanism of the knife.

The upper part of the casing C C' is hinged at the back to the lower part, and is provided with a suitable brace and catch to raise after the manner of a trunk-lid.

Turning on the outer end of the hollow tube C³ is a wheel, L, adapted to run on the ground, and just outside of the wheel is an inner divider, M, which also runs upon the ground, and which is connected to the finger-bar of the knife. In order to permit this shoe to be turned up or down to adjust the inclination of the finger-bar, this inner divider is rigidly attached to the hollow tube C³, and the latter is carried loosely in bearings in the casing C' and

longitudinal bar C², so as to permit it to be turned about its own axis, which adjustment is given it by a rigid lever, N, held in a notched plate, O. The bottom part of the casing C C' is curved like a runner to cause it to ride smoothly over the mud and dirt, and said casing completely houses and protects the working parts from dirt.

From the foregoing description it will be seen that our device is a simple, compact, and durable mechanism for accomplishing its object, working smoothly at a great advantage of leverage, and requiring but little power to drive it, and may be applied generally to all classes of grain and grass harvesters without material change.

In order to take up looseness or lost motion in the cam-groove *g* of the lever G, one side, *g'*, of the cam-groove is made adjustable and is provided with set-screws *g*², by which the cam-groove may be diminished in width as it wears away. These screws *g*² are tapped through a flange of the lever, and when the proper adjustment of the piece *g'* is attained the latter is fixed rigidly in that position by means of binding-screws *g*³ *g*³, which pass through slots in piece *g'* into the lever.

Having thus described our invention, what we claim as new is—

1. The combination, with the frame C' C², of the hollow tube C³, journaled loosely in said frame, the supporting-wheel L, loosely jour-

naled on the tube, the knife-pitman extending through said tube, the oscillating lever attached to the pitman and bearing cam-groove, and the driving-disk with radial projections, substantially as shown and described.

2. The combination of the frame C' C², the hollow tube C³, loosely journaled therein and having the rigidly-attached inner divider, M, adjusting-lever N, rigidly attached to the tube bearing said inner divider, the pitman extending through the hollow tube, the oscillating lever attached to said pitman and provided with cam-groove, and the driving-disk having radial projections playing in said cam-groove, substantially as and for the purpose described.

3. The combination, with the wheel F, with radial bolts and the lever G with cam-groove, of a housing consisting of lower section, C', having its front end curved as a runner, an upper section, C, hinged to C', the hollow rock-shaft C³, one end of which is journaled loosely in the casing C' and the other end in the wheel L and bar C², the pitman H, bar C², wheel L, and adjusting-lever N, to rock said shaft C³, substantially as and for the purpose described.

ROBLEY DUNGLISON HOKE.
ISAAC ALLEN HARRIS.

Witnesses:

S. P. LOVELL,
M. V. ROBINSON.