2 Sheets. Sheet 1.

J. W. Shuckers.

Mower.

No. 111,482. Patented. Jan. 31, 1871

Fig. 1

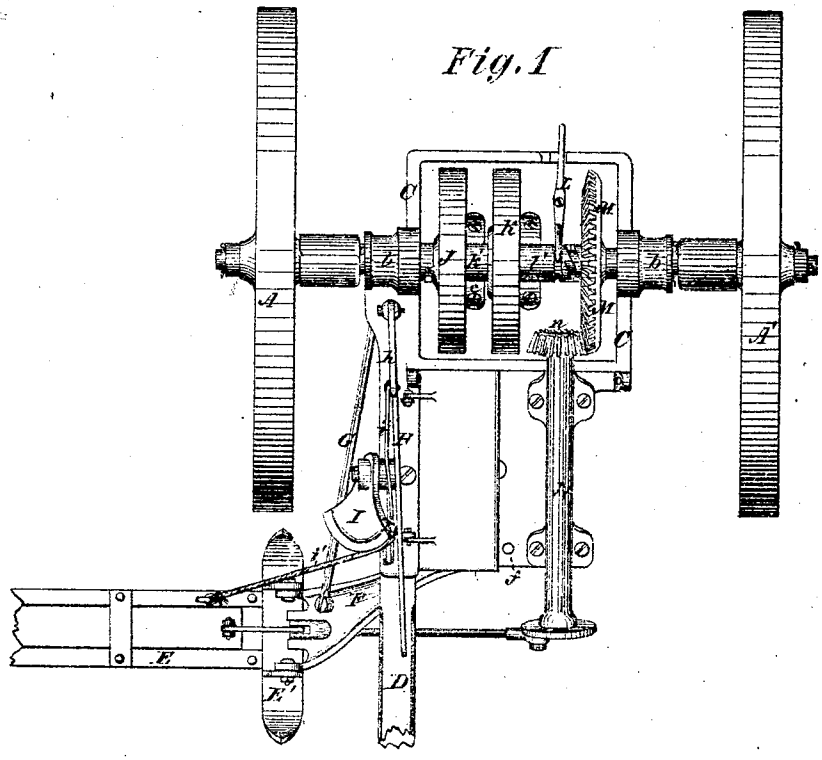
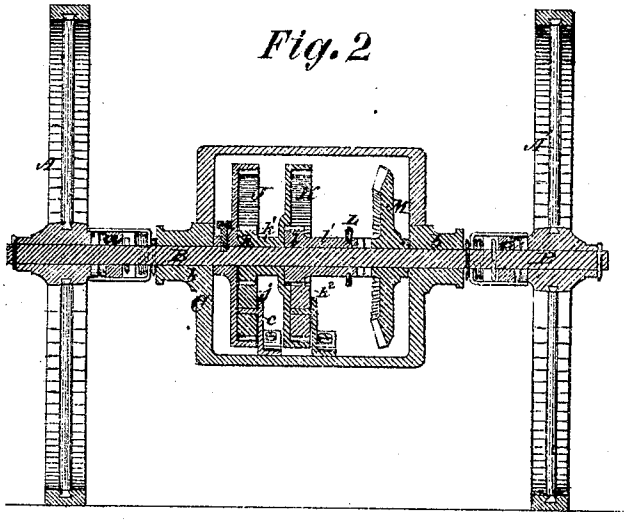


Fig. 2



Witnesses:- Wm. H. Rowe, Joe. Peyton.

Inventor:- J. W. Schuckers by his Atty Wm. L. Baldwin

2. Sheets, Sheet. 2.

J. W. Shuckers.

Mower.

No. 111,482. Patented. Jan. 31. 1871.

Fig. 3

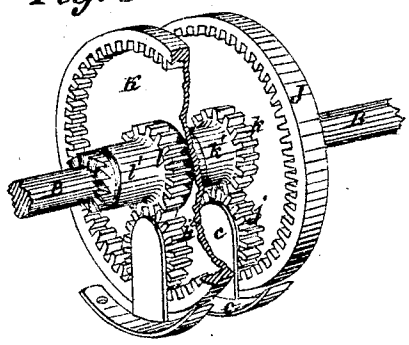
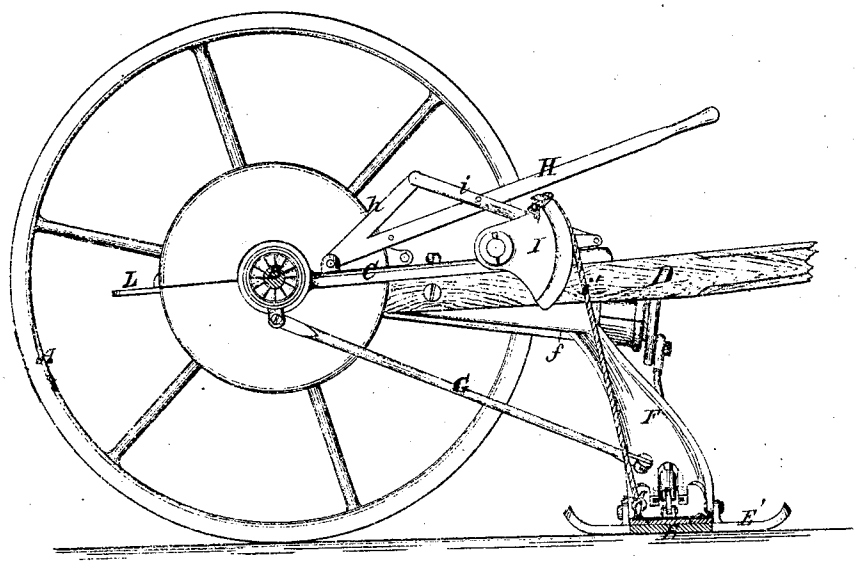


Fig. 4



Witnesses:- Wm. H. Rowe, Jas. S. Taylor.

Inventor:- J. W. Shuckers by his Atty Wm. D. Baldwin

UNITED STATES PATENT OFFICE.

JACOBS W. SCHUCKERS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ISAAC A. SHEPPARD, OF SAME PLACE.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **111,482**, dated January 31, 1871.

To all whom it may concern:

Be it known that I, JACOBS W. SCHUCKERS, of the city and county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improvement in Harvesters, of which the following is a specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan view of so much of a machine as is necessary to illustrate my invention; Fig. 2, a vertical longitudinal central section through the same in the line of the main axle; Fig. 3, a view, in perspective, of the gearing, with a portion of the nearest wheel broken away to show the parts behind it; Fig. 4, an elevation of the stubble side of the same with the inner driving-wheel removed.

The invention herein claimed relates only to the gearing. The other features shown form the subject-matter of another application.

The machine herein delineated is so well known in most of its details as to require merely a reference to its constituent parts.

Two driving-wheels, A A′, revolve freely on an axle, B, with which they are connected by backing ratchets or clutches *a*. The axle B revolves freely in pipe-boxes *b* on the main frame C, which is of metal, and cast in such shape as to inclose the gearing. A tongue, D, projects from the inner front corner of this frame. A finger-beam, E, is secured to a shoe, E′, having lugs upon it, by means of which it is pivoted to the lower end of a coupling-arm, F, the outer end of which is swiveled to the under side of the frame at *f*. A brace-bar, G, is pivoted at one end to the frame, and at the other to the coupling-arm. A lifting-lever, H, is pivoted to the frame. An arm, *h*, of this lever, extending upward from its pivot, is pin-jointed to a link, *i*, in turn similarly pivoted to a rocking sector, I, having a groove in its face for the reception of a chain, *i′*, which is also attached to the finger-beam at a point outside of the shoe, by which means the finger-beam is not only lifted from the ground at both ends, but its divider end is also lifted higher than its heel end.

An internally-geared spur-wheel, J, mounted upon and turning with the main axle, drives a spur-pinion, *j*, mounted on a stud-axle on an arm, *c*, of the frame. This pinion drives a corresponding one, *k*, on a sleeve, k^1, which revolves freely upon, and independently of, the main axle, and carries a second internally-geared spur-wheel, *k*, which in turn drives a spur-pinion, k^2, mounted in bearings on the frame, like its fellow *j*.

The pinion k^2 drives a small spur-pinion, *l*, which runs in a recess in the spur-wheel *k*, and is mounted on a sliding sleeve, *l′*, which is movable freely on the axle B by means of a shipping-lever, L. A clutch on this sleeve engages with a bevel-wheel, M, revolving freely on the main axle, and driving a corresponding pinion, *n*, on a crank-shaft, N, which drives the cutters by a crank and pitman.

The object of this method of arranging the gearing is to secure compactness and a high speed of the cutters, which is essential in mowing.

In this instance the relative proportion of the gearing is such as to produce about forty revolutions of the crank-shaft to one of the main driving-wheels A A′. This relative speed might, obviously, be varied by changing the relative numbers of the teeth of some of the gears, as is well understood by mechanics.

I am aware that multiplying-gear heretofore has been mounted on the main axle of a harvester, and therefore do not, broadly, claim every mode of doing this.

I claim as my invention—

The combination of the internally-geared spur-wheel J, revolving with the main axle, the pinion *j*, mounted on the frame, the pinion *k* on the collar k^1, the internally-geared spur-wheel, revolving loosely on the main axle in a direction opposite to that of its fellow *j*, the pinion k^2 on the frame, the pinion *l* on the sliding sleeve, the clutch, the bevel-wheel loose on the main axle, and the crank-shaft, all these parts being constructed and operating as described.

In testimony whereof I have hereunto subscribed my name.

JACOBS W. SCHUCKERS.

Witnesses:

W. H. DYER,

WILLIAM A. WELLS.