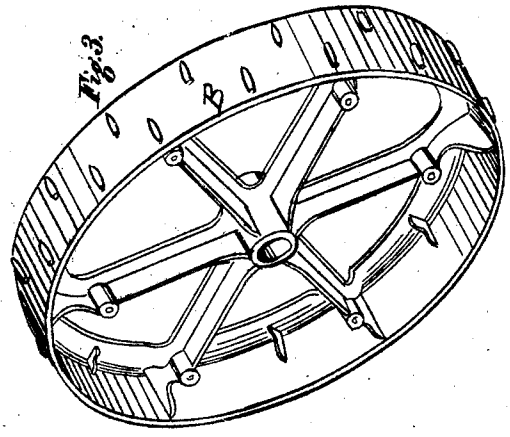
J. P. Manny.
Mower.

No. 38,054 Patented Mar. 31. 1863

Fig. 3.



John P. Manny

J. Snowden Bell
Francis Mais } Witnesses

Fig. 1.

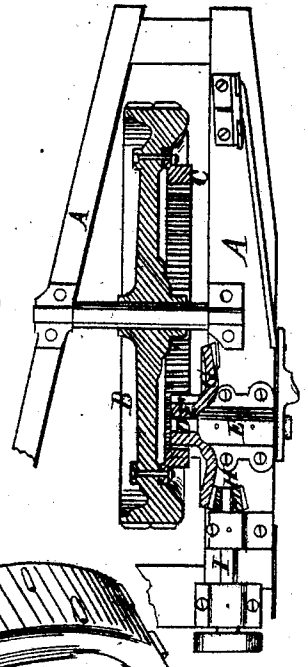
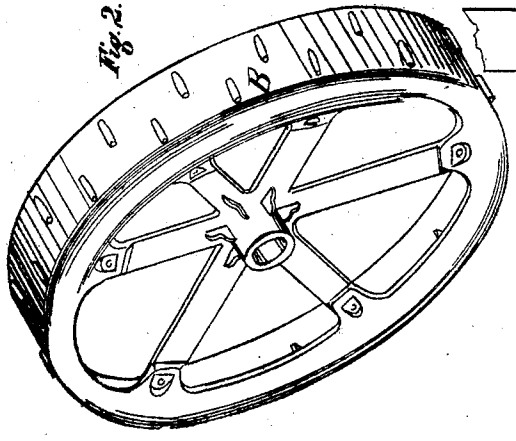


Fig. 2.



UNITED STATES PATENT OFFICE.

JOHN P. MANNY, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **38,054**, dated March 31, 1863.

To all whom it may concern:

Be it known that I, JOHN P. MANNY, of Rockford, in the county of Winnebago and State of Illinois, have invented a certain new and useful Improvement in Gearing for Harvesters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a horizontal section through the driving-wheel and gearing of a harvester to which my improvement is applied; Fig. 2, a view in perspective of the outer side of my improved driving-wheel, and Fig. 3 a similar view of the other side of the same.

My improvement consists in mounting the spur-pinion and bevel-wheel upon an overhanging or projecting bearing in such manner that the bevel-wheel shall be between the driving-wheel and gearing-frame, and yet outside of the plane of the driving-wheel, while the crank-shaft has its bearings upon the frame-timber, as hereinafter described, whereby I am enabled to secure a simple, strong, and compact arrangement of the gearing, and consequently to reduce the width of the gear-frame.

In the accompanying drawings a stout frame, A, is shown as encompassing a driving-wheel, B, which turns on suitable bearings in it. The driving-wheel has a concave or depression on its outer face, in which an internal spur-wheel, C, is bolted. A counter-shaft, D, is mounted in a long box, E, firmly secured upon the outer frame-timber. A spur-pinion, F, and bevel-wheel G are mounted upon the end of this shaft. In this instance the spur-pinion and bevel-wheel are represented as cast in one piece and with a concavity in the face of the bevel-wheel, into which the projecting end of the box or bearing E fits. The spur-wheel C engages the spur-pinion F, thus driving both it and the bevel-wheel G, which in turn drives a bevel-pinion, H, on a crank-shaft, I, mounted in suitable bearings on the gear-frame. The bevel-wheel and spur-pinion are shown as keyed upon and turning with the counter-shaft, which method I prefer; but it is obvious that the counter-shaft might be rigidly fastened to the frame, and the pinion and wheel be made to revolve upon it, if desired.

The following are some of the advantages attained by the use of my improvement, viz:

First. The outside frame-timber (which was only necessary to support the outer journal-box of the counter-shaft, which box was always outside of the bevel-wheel) is dispensed with.

Second. The frame is rendered more compact and strong, and consequently not so liable to sag or twist, and thus strain the gearing.

Third. The wheels, being firmly secured together, must always run true to each other.

Fourth. When thus united, it follows that the driving-power is applied to the bevel-wheel directly from the spur-pinion. The counter-shaft is thus relieved from torsion or strain, and the friction consequently reduced.

Fifth. The machine is rendered stronger, cheaper, more simple, compact, and durable, and the attractiveness of its appearance is increased.

Sixth. By dishing the face of the bevel-wheel the length of bearing of the counter-shaft is increased, and its liability to torsion diminished, and dirt and other foreign substances are kept out of the journal.

Seventh. The end of the box and counter-shaft are brought within the plane of the bevel-wheel, thus bringing the pressure to bear more directly upon them.

I deem it unnecessary to describe in detail here the construction of the driving-wheel, as it is fully described in another application for Letters Patent of the United States filed simultaneously with this.

I am aware that a bevel-wheel and spur-pinion have been used on the same end of the counter-shaft and within the plane of the driving-wheel, and do not broadly claim such device; but,

Having thus described the construction and operation of my improved gearing for harvesters, what I claim therein as new, and desire to secure by Letters Patent, is—

Mounting the bevel-wheel and spur-pinion upon a projecting bearing, so that the bevel-wheel shall be between the gear-frame and driving-wheel, but outside of the plane of the latter, as set forth, in combination with the crank-shaft having its bearing upon the gear-frame, substantially as described.

In testimony whereof I have hereunto subscribed my name.

JOHN P. MANNY.

Witnesses:

J. SNOWDEN BELL,
WM. D. BALDWIN.