2 Sheets—Sheet 1.

J. L. OWENS.

HARVESTER.

No. 193,614. Patented July 31, 1877.

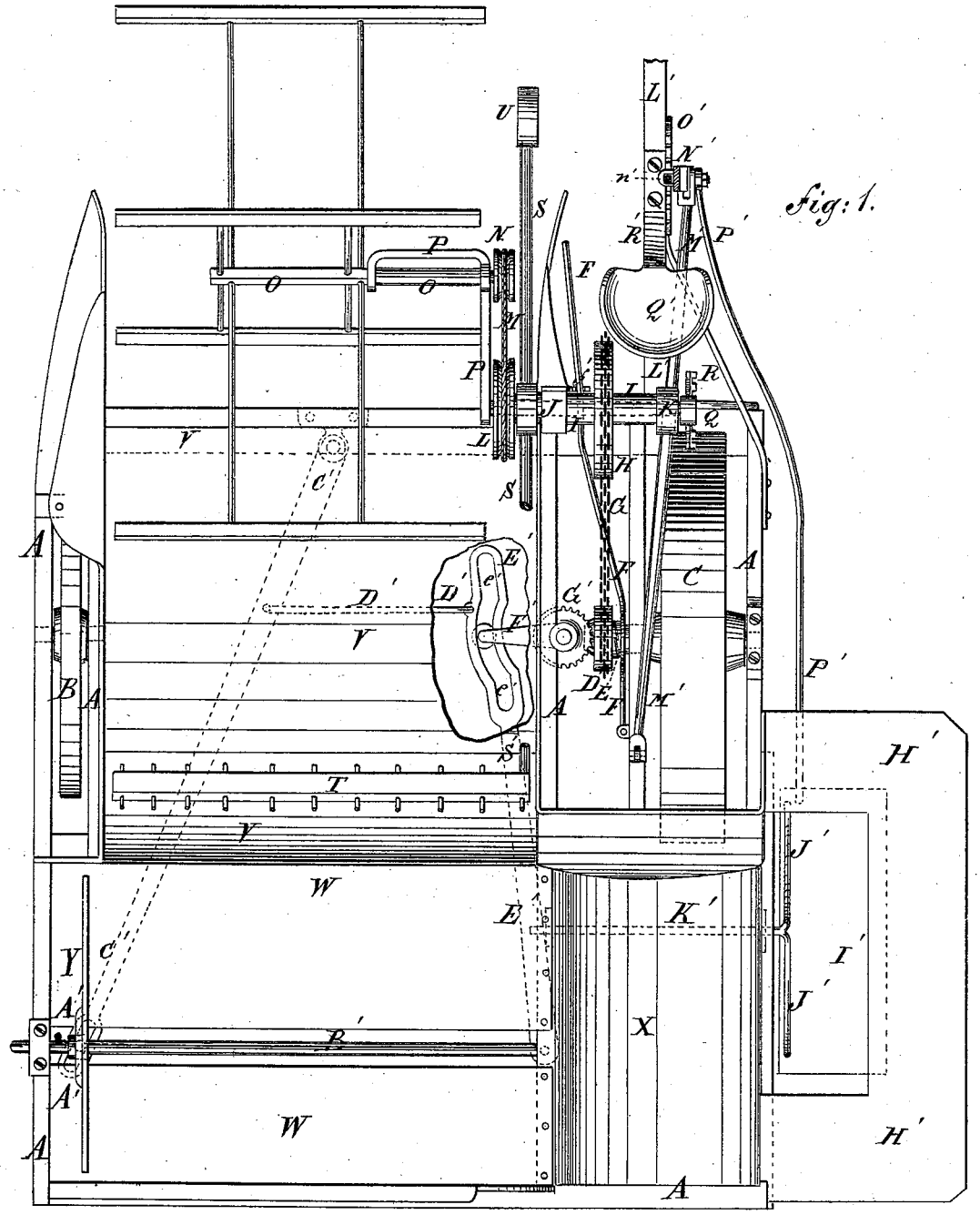

Fig: 1.

WITNESSES:

Chas. Kida.
John Goethals

INVENTOR:

J. L. Owens

BY

ATTORNEYS.

2 Sheets—Sheet 2.

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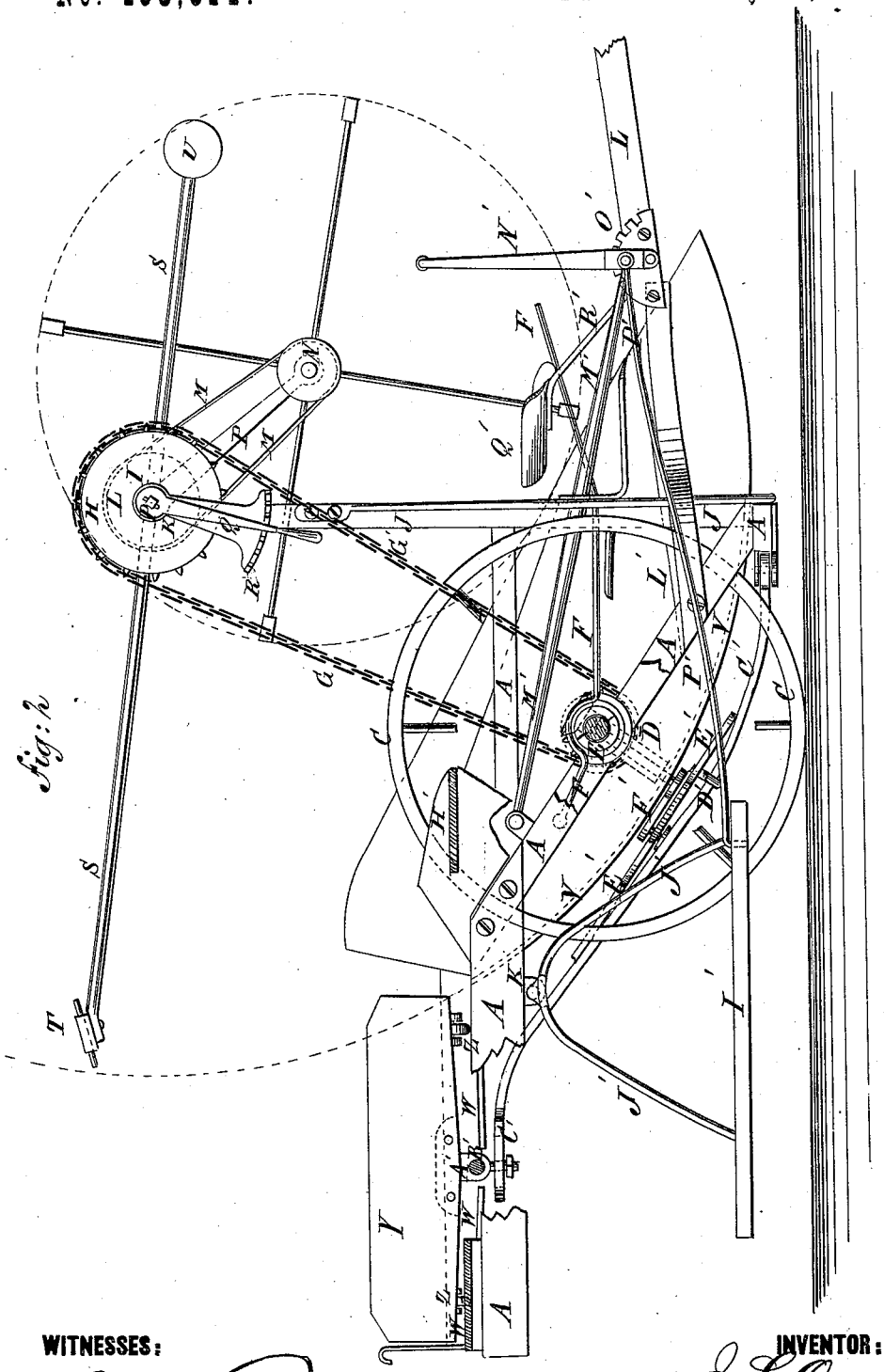

Fig: 2.

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UNITED STATES PATENT OFFICE.

JOHN L. OWENS, OF CAMBRIA, ASSIGNOR TO GEORGE ESTERLY; SAID GEO. ESTERLY ASSIGNOR OF ONE FOURTH HIS RIGHT TO G. W. ESTERLY, OF WHITEWATER, WISCONSIN.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **193,614**, dated July 31, 1877; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, JOHN L. OWENS, of Cambria, in the county of Columbia and State of Wisconsin, have invented a new and useful Improvement in Harvesters, of which the following is a specification:

Figure 1, Sheet 1, is a top view of my improved harvester, part being broken away to show the construction. Fig. 2, Sheet 2, is a side view of the same, parts being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improvement in the class of harvesters which are so constructed as to remove the grain from the platform at regular intervals, gather it into gavels, and deliver it into a receiver, whence it is removed by the binders and bound, and which shall be simple in construction and reliable in operation.

The invention will first be described in connection with drawing, and then pointed out in the claims.

A is the frame of the harvester. B is the transporting-wheel, and C is the drive-wheel. The journals of the wheels B C revolve in bearings attached to the frame A. Upon the inner part of the journal of the drive-wheel C is placed a loose chain-wheel, D, which has bevel-gear teeth formed upon its inner side, and clutch-teeth upon its outer side, to engage with the clutch E, that slides upon the said journal as it is moved by a lever, F, pivoted to the frame A, and which is held in position, when adjusted, by a catch-bar, f'.

Around the chain-wheel D passes an endless chain, G, which also passes around a chain-wheel, H, attached to the outer part of a hollow shaft, I. The hollow shaft I revolves in bearings in the upper end of the reel-post J and of the bracket K, attached to said reel-post.

To the inner end of the hollow shaft I is attached a pulley or chain-wheel, L, around which passes an endless band or chain, M. The band or chain M also passes around a pulley or chain-wheel, N, attached to the end of the reel-shaft O, which revolves in bearings formed upon or attached to the arm of the crank-shaft P. The other arm of the crank-shaft P passes through and works in the cavity of the hollow shaft I, and to its end is attached a lever, Q, which moves along a toothed catch-plate, R, by which it is held in place when adjusted.

By this arrangement the reel can be readily adjusted to work closer to or farther from the cutter-bar without stopping the machine or affecting the gearing.

To the hollow shaft I, between the pulley or chain-wheel L and the reel-post J, is rigidly attached a rod or bar, S, to one end of which is attached a rake, T, which is balanced by a weight, U, attached to the other end of the said rod or bar S. The rod S is made of such a length that the rake T may pass around the reel and sweep the cut grain up the platform V to the table W. The platform V is concaved upon the arc of the circle corresponding with the circle through which the rake T sweeps, and the table W is horizontal, or nearly so. The cut grain upon the table W is gathered into a gavel and pushed into the concaved receiver X by the gatherer Y. To the end parts of the gatherer Y are attached small wheels Z, that roll along the table W, and to its center is attached a cross-head, A', the stem of which passes down through a slot in the table W, and has a long bearing or socket upon its lower part, to receive and slide upon the rod B', and a pivot, to which is pivoted the slotted end of the lever C'. The ends of the rod B' are attached to the part of the frame A that supports the table W. The lever C' passes forward beneath the concaved platform V, and its forward end is pivoted to the frame of said platform, or to the cutter-bar. To the lever C', toward its forward end, is pivoted one end of a connecting-rod, D', the other end of which is pivoted to the lever E'. The rear end of the lever E' is pivoted to the part of the frame A that supports the table W near the end of the rod B'. In the forward end of the lever E' is formed a longitudinal slot, e', the end parts of which are straight,

and its middle part is curved, as shown in Fig. 1. The slot *e'* is designed to receive the lower arm of the crank-shaft F', the upper arm of which revolves in bearings attached to the frame A, and to its upper end is attached a bevel-gear wheel, G', the teeth of which mesh into the bevel-gear teeth formed upon the side of the chain-wheel D.

This construction enables the gatherer Y to be swept back and forth upon the table W by the revolution of a short crank. The curve in the slot *e'* of the lever E' allows the gatherer Y to stand still at the farther side of the table W while the grain is being swept from the concaved platform V to the table W.

The gavel is taken from the receiver X and laid upon the table H', where it is bound, the binders standing upon the platform I'. The binders' platform I' is attached to the lower end of a frame, J', to the upper end of which is attached a rod, K', projecting beneath the receiver X, and working in bearings attached to that part of the frame A that supports the said receiver X. L' is the tongue, the rear end of which is pivoted to the frame A below the journal of the drive-wheel C. M' is a brace-rod, the rear end of which is pivoted to the frame A above the journal of the drive-wheel C. The forward end of the rod M' is pivoted to a lever, N', the lower end of which is pivoted to the tongue L', and which is provided with a spring-pawl, *n'*, to engage with the notched edge of the catch-plate O', attached to the said tongue L'.

By this construction, by operating the lever N' the forward part of the frame A will be raised or lowered to adjust the machine to cut the grain farther from or closer to the ground, as may be desired.

To the lever N' is pivoted the forward end of the rod P', the rear end of which is attached to the binders' platform I', so that the said platform I' may be held in a horizontal position, however the frame A may be adjusted.

Q' is the driver's seat, the standard R' of which is attached to the tongue L', in such a position that the driver can readily reach and operate the levers F N' when required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the lever C', the connecting-rod D', the lever E', provided with the slot *e'*, having its middle part curved, and the crank F', with the cross-head A' of the gatherer Y, and with the bevel-gear wheels G' D, connected with the drive-wheel C, substantially as herein shown and described.

2. The combination of the rods P' M', of equal length, and diverging from a common center, with the binders' swinging platform I', and with the lever N', that raises and lowers the frame A, substantially as herein shown and described.

JOHN L. OWENS.

Witnesses:
E. O. JONES,
ENOCH EVANS.