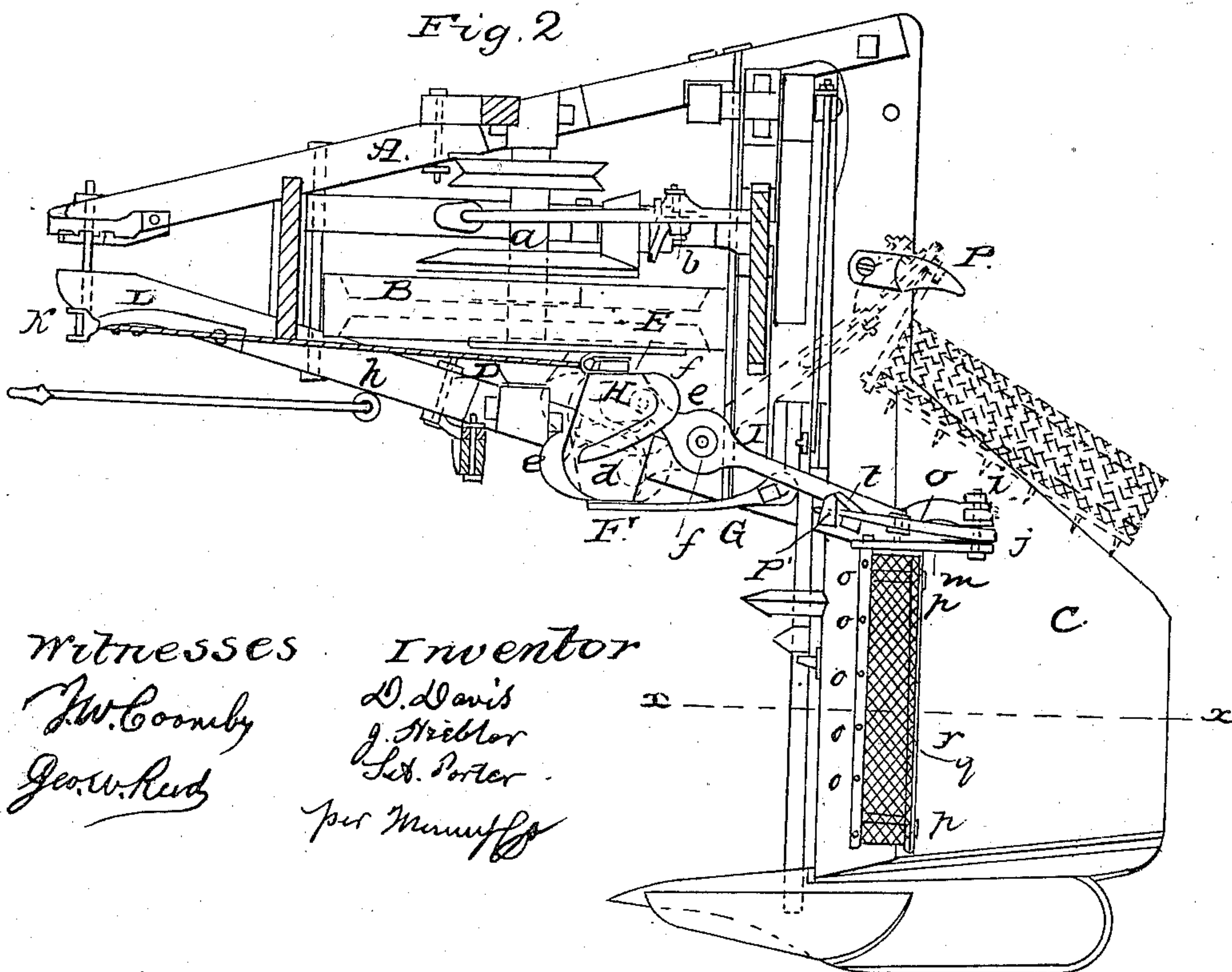
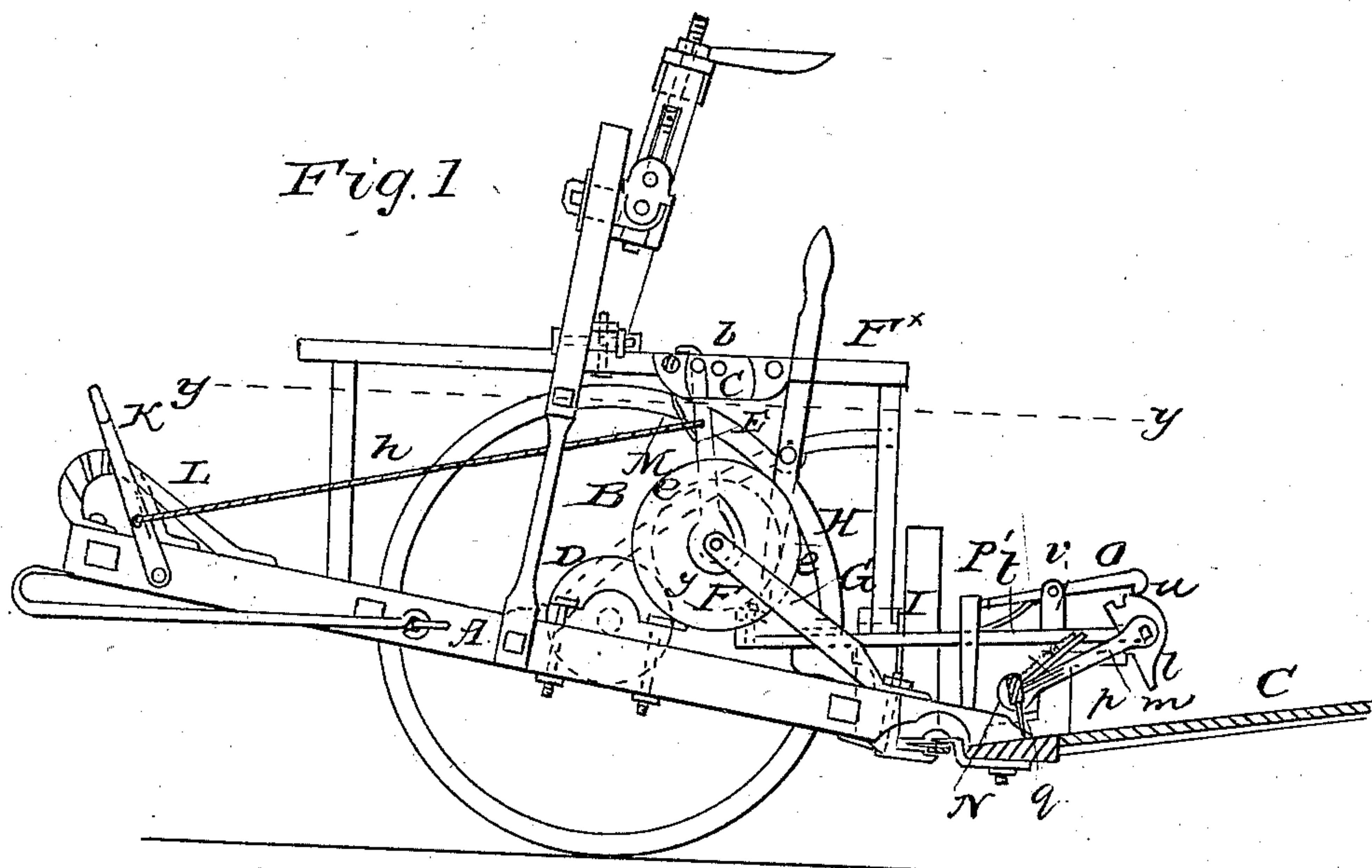


# DAVIS, HIEBELER & PORTER.

## Harvester Rake.

No. 42,171.

Patented April 5, 1864.



Witnesses  
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# UNITED STATES PATENT OFFICE.

DAVID DAVIS, JOSEPH HIEBELER, AND SAMUEL A. PORTER, OF PRESCOTT, WISCONSIN.

## IMPROVEMENT IN RAKING ATTACHMENTS TO HARVESTERS.

Specification forming part of Letters Patent No. 42,171, dated April 5, 1864.

*To all whom it may concern:*

Be it known that we, DAVID DAVIS, JOSEPH HIEBELER, and SAMUEL A. PORTER, all of Prescott, in the county of Pierce and State of Wisconsin, have invented a new and Improved Raking Device for Harvesters; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of our invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents the main frame of a harvester; B, the driving-wheel fitted in the main frame; and C, the platform attached to the back end of the main frame, and projecting at one side of it, as shown clearly in Fig. 2.

On the axle *a* of the driving-wheel there is attached a cog or friction wheel, D, which adjoins the left-hand side of the driving-wheel; and E is a pendent bar or hanger, the upper end of which is secured by a pin or pivot, *b*, in a bearing, *c*, at the left-hand side of the driver's seat F<sup>x</sup>.

In the lower part of the hanger E a shaft, F, is fitted near one end, the opposite end of said shaft being fitted in the upper end of an inclined bar, G, which is attached to the main frame A. On this shaft F there is placed a cam, H, which is formed of a hub, *d*, having two spiral flanges, *e e'*, upon it at opposite sides.

I is a lever, which has its fulcrum *f* on the main frame A just back of the cam H, and the front end of this lever has a friction-roller, *g*, attached horizontally to it, against which the flanges *e e'* act alternately as the cam H is rotated, said flanges communicating to the lever I an oscillating or vibratory motion on its fulcrum *f*, as indicated by the arrows 1 and 2 in Fig. 2.

The inner end of the cam-shaft F has a friction-wheel, J, upon it, which, when engaged with or pressed against the wheel D on the

axle *a* of the driving-wheel, causes the shaft F and cam H to rotate. The wheel J is pressed against the wheel D by means of a cord or chain, *h*, one end of which is attached to the hanger E and the opposite end to a foot-lever, K, at the front end of the main frame A. The foot-lever is actuated by the foot of the driver, and when pressed forward to engage the wheel J with D is caught and retained in a forward position by a bar, L, on the main frame, as shown clearly in Fig. 1. The hanger E has a spring, M, bearing against it, which spring, when the foot-lever K is released from the bar L, has a tendency to throw the wheel J free from the wheel D, and consequently stop the rotation of the cam H and the vibratory movement of the lever I.

In the back end of the lever I there is placed transversely a small shaft, *i*, on one end of which there is secured a sector, *j'*, having a notch, *k*, made in its edge, said sector being also provided with a pendent bar, *l*, as shown clearly in Fig. 1. On this shaft *i* and adjoining the sector *j'* there is also secured an arm, *m*, to the front end of which a rake, N, is rigidly attached. This rake is composed of a single bar, *u*, having a series of pendent teeth, *o*, attached to it, the bar *n* having two oblique bars, *p p*, at its back, connected by a cross-bar, *q*, the bars *p p q* forming a frame on which a piece of canvas, *r*, or any flexible material is secured to serve as a guard and prevent the grain as it is raked from the platform passing over the top of the rake.

On the lower end, I, there is secured by a pin or pivot, *s*, a pawl or catch, O, which has a spring, *t*, bearing against its under side in front of the pin *s*, said spring having a tendency to keep the back end, *u*, of the pawl or catch O, which is of hook form, pressed down on the sector *j'*. (See Fig. 1.)

On the back part of the main frame A there are secured two fixed bars, P P', the use of which will be presently shown.

The operation is as follows: As the machine is drawn along the driver, when it is designed to operate the rake, throws the wheel J in gear with the wheel D by pressing his foot against the lever K, as previously described. The cam H will thereby be rotated in the direction of arrow 1, and the flange *e* of the cam will move



the lever I in the direction of arrow 1, and the rake N will be moved from the front to the back end of the platform C, and the cut grain raked therefrom, the rake during this movement being down so that its teeth *o* will be in contact with the platform. When the rake nearly reaches the termination of its backward movement the pendent bar *l* of the sector *j'* will come in contact with the fixed bar P, and the sector *j'* will consequently be turned and the arm *m* and rake N elevated, the latter being retained in an elevated position in consequence of the hook *u* of the pawl or catch O fitting in the notch *k* of the sector. The rake N, while in this elevated position, is moved forward, as indicated by arrow 2, to the front end of the platform C, the flange *e'* of the cam H acting upon the lever I, the rake, in consequence of being thus elevated, cannot interfere with the cut grain falling upon the platform, and just previous to the rake reaching the termination of this movement the front end of the pawl or catch O will come in contact with the fixed bar P', and, passing under a lip, *a*<sup>x</sup>, at the upper end of the latter, will have its front end pressed down and its back end elevated, so that the hook *u* will be raised out of the

notch *k* of the sector, and the rake will fall by virtue of its own gravity and be in a working position to sweep again over the platform to rake the cut grain therefrom.

The movement of the rake may be stopped at any time by simply freeing the lever K from the bar L, so that the spring M may throw the wheel J free from the wheel D.

Thus by this simple arrangement a very efficient automatic raking device is obtained, and one that is under the complete control of the driver or attendant.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

Arranging or suspending the cam H in a swinging bar, E, connected to a foot-lever, K, by a cord or chain, *h*, in connection with the wheels J D, attached respectively to the cam-shaft F and axle *a* of the driving-wheel B, all arranged as and for the purpose specified.

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Witnesses:

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