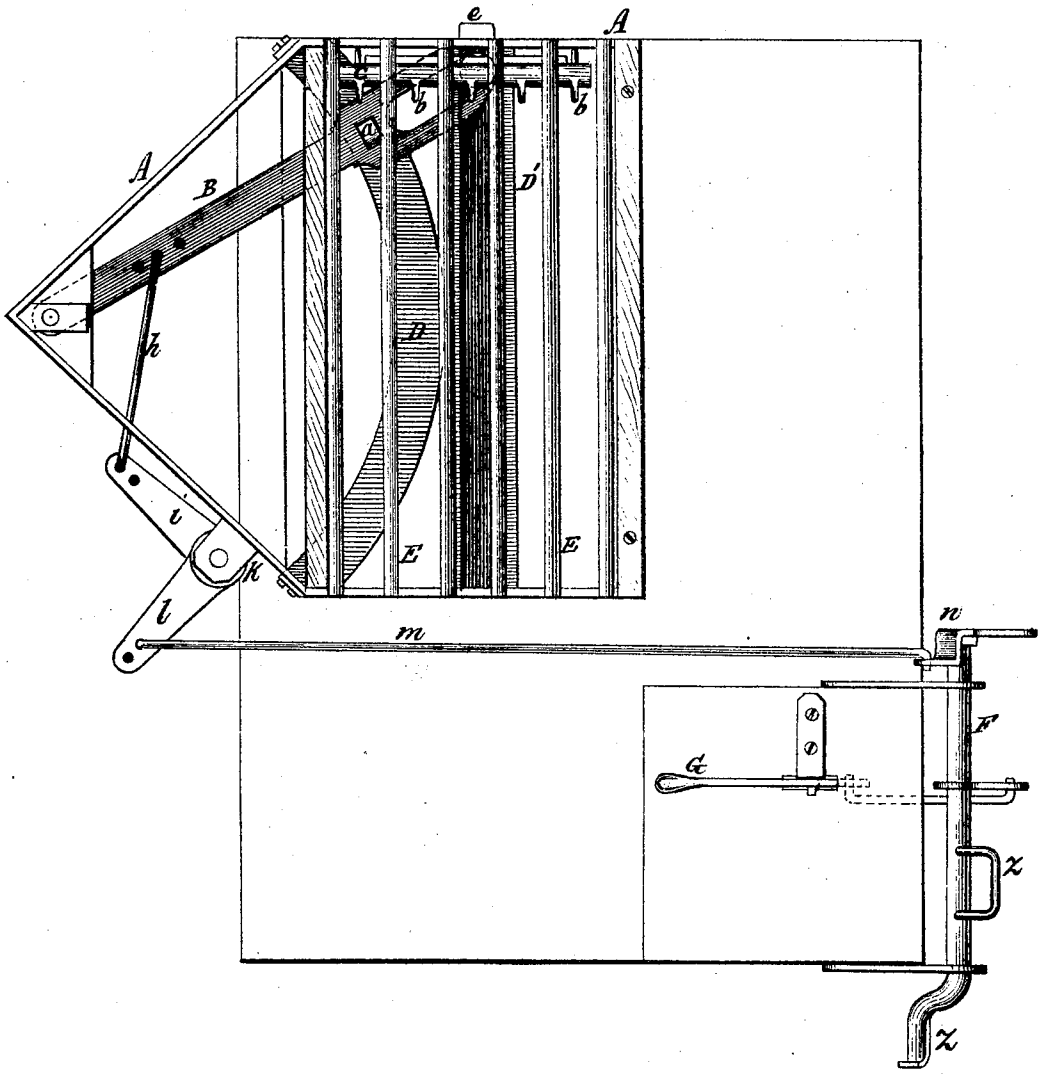
2 Sheets--Sheet 1.

W. R. G. HUMPHREY.

Improvement in Harvester Rakes.

No. 123,701. Patented Feb. 13, 1872.

Fig. 1.



Witnesses.
A. Ruppert.
L. P. Freund

Inventor.
William R. G. Humphrey
by his attys
Cox & Cox

2 Sheets--Sheet 2.

W. R. G. HUMPHREY.

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Fig. 2.

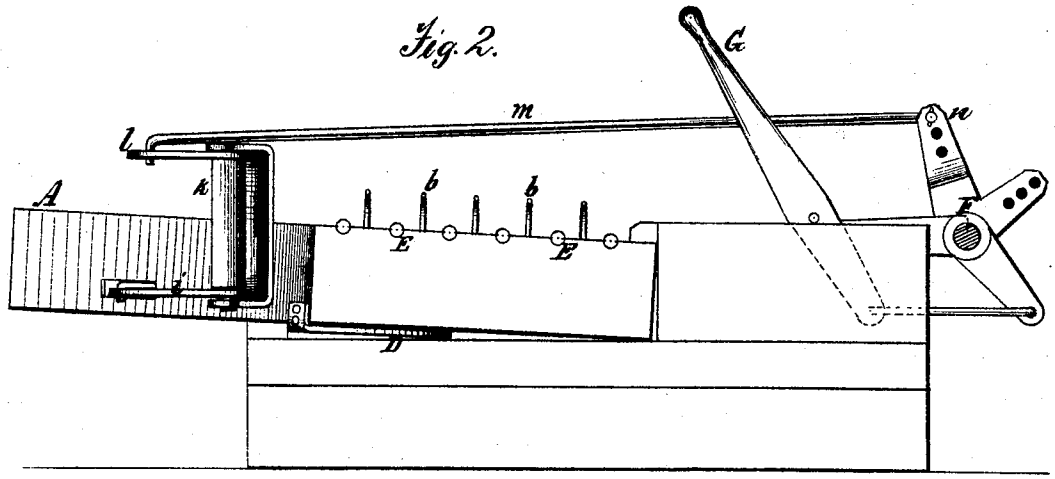


Fig. 5.

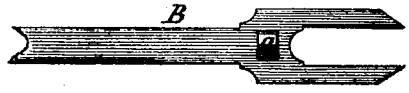


Fig. 4.

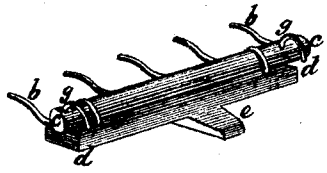
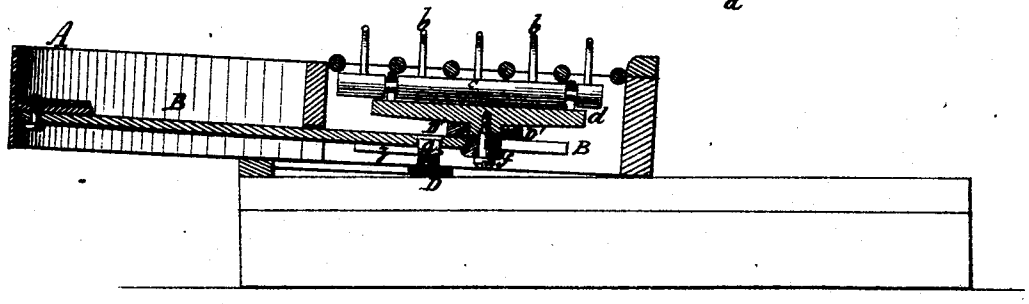


Fig. 3.



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A. Ruppert.

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UNITED STATES PATENT OFFICE.

WILLIAM R. G. HUMPHREY, OF CHILLICOTHE, MISSOURI, ASSIGNOR TO ARTEMAS N. SMITH.

IMPROVEMENT IN HARVESTER-RAKES.

Specification forming part of Letters Patent No. 123,701, dated February 13, 1872.

To all whom it may concern:

Be it known that I, WILLIAM R. G. HUMPHREY, of Chillicothe, in the county of Livingston and State of Missouri, have invented a new and useful Improvement in Harvesters, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Object of the Invention.

The invention relates to an improvement in raking attachments for harvesters; the object of the invention being to rake the platform of a harvester from one end to the other by means of an arm provided with a rake and operated by a crank-axle, as hereinafter specified and described.

Description of the Accompanying Drawing.

Figure 1 is a plan view of a device embodying the elements of the invention. Fig. 2 is a side elevation of same. Fig. 3 is a vertical central longitudinal section of same. Fig. 4 is a perspective view of the rake. Fig. 5 is a plan view of the arm B.

General Description.

A is a frame, the front part of which is rectangular, the rear portion being V-shaped. At the apex of the rear frame is pivoted the arm B, the front end of which is provided with a vertical opening forming a fork. The ends of the sides of the arm B are reduced to such an edge or side as that when the lever is thrown against either side of the inside of frame the vertical plane of said edge or side is parallel with that side of the frame with which it is in contact, or so that the arm B being reduced at its ends, as above, throws the pin on the rake-head flush against the side of the frame over which the gavel is dropped. A shouldered wheel, *f*, revolves in the vertical opening or slot of the arm B, as the arm is moved, which wheel is attached to a vertical spindle secured to the rectangular slide *e*, which is attached to the supporting plate, and operates between the parallel guides D′ D′, which are secured at each end to the sides of the frame A, about midway between the upper and lower edge thereof, an aperture being in the frame on the side opposite the driver's seat, provided to receive the end of the slide *e*. In the present instance the arm B is provided with the friction-roller *a*, revolving upon the axle Z, which is properly attached to the under side of the arm, so that the friction-wheel rotates upon the curved traveling-floor D; but the arm B may also be used without the friction-roller or shaft, or the traveling-floor D. The rake-head *c* is provided with the teeth *b*, which are firmly set in said head, which is so constructed as to oscillate freely in bearings or staples attached to the supporting plate *d*. The teeth *b* may have their points inclined forward so that they will gravitate into a horizontal position below the bars E, which form the platform when relieved from support above the said bars, or these teeth may be straight. Near each extremity of the rake-head is a curved staple or pin, *g*, so arranged that when they strike the frame they will rotate the rake-head, elevating the teeth into a vertical position. The link *h* connects the arm B, and vertical axle *k* being journaled at one end in an aperture in the arm B, and at the other end in an aperture in the end of the lower arm of the axle *k*, which axle is provided at its upper extremity with a second arm, *l*, which stands in the relation of a right angle both to the axle *k* and to the arm *i*. The axle *k* is of sufficient height to so elevate the arm *l* as that the rod *m* is so raised above the horizontal plane of the platform that the gavel may be delivered over the side without hindrance. The axle *k* oscillates in a vertical frame rigidly secured to the frame A. The axle *k* is connected with the arm *n* by means of the rod *m*, one end of which is bent and works in an aperture near the arm *l*, the other operating similarly in an aperture in the upper extremity of the arm *n*, which is rigidly secured to the horizontal axle F that oscillates in bearings fastened to the frame of the reaper immediately in front of and below the driver's seat, which axle is provided with an operating lever and stirrups within easy reach of the driver's hands or feet, and whereby he may operate the device.

Operation.

The device being attached to a reaper, the rectangular part of the frame A is immediate-

ly in rear of the cutter-bar. The lever G being retracted throws the rake against that side of the frame opposite the driver's seat, thereby elevating the teeth *g*, and the reaper is then started. The reel throws the cut grain upon the platform. When a sufficient quantity is thus deposited to form a sheaf the lever G is projected, which moves the rake-head, the teeth of which carry the grain across the platform over the side of the frame in rear of the driver's seat. The lever is then retracted, the teeth of the rake falling into a horizontal position, and so passing below the platform to the other side of the frame.

The same operations may be performed by using the stirrups Z in a similar manner.

The rake may be constructed so as to stand above the platform.

Claims.

I claim as my invention and desire to secure by Letters Patent—

1. The forked arm B, having the ends of its prongs beveled to throw the pin on the rake-head directly against the delivery side of the frame, substantially as shown and described.

2. The forked arm B, as described, in combination with the rake, consisting of the rake-head *c*, teeth *b*, staples *g*, supporting plate *d*, slide *e*, working between the bars D′, and provided with a spindle and roller, *f*, as shown and described.

In testimony that I claim the foregoing improvement in harvesters, as above described, I have hereunto set my hand and seal, this 22d day of September, 1871.

WM. R. G. HUMPHREY.

Witnesses:

JOHN C. COX,
DENNIS TIRNNEY.