M. McNITT.

Harrows.

No. 155,037. Patented Sept. 15, 1874.

Fig: 1.

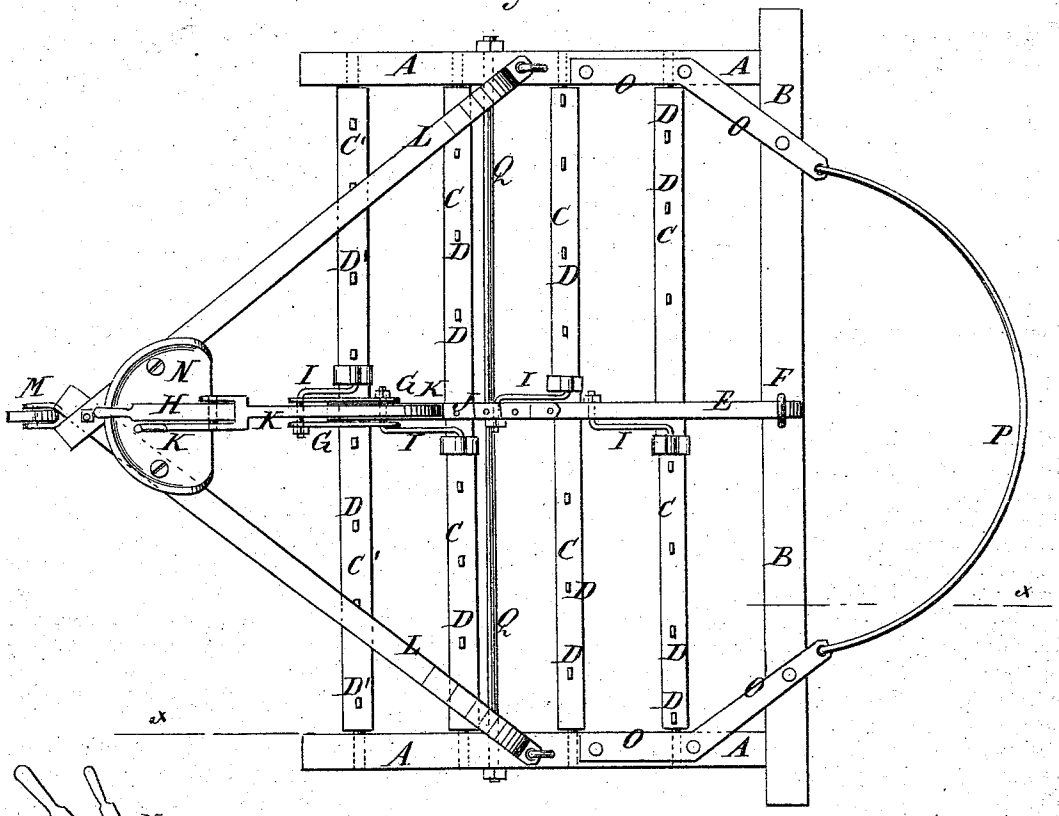
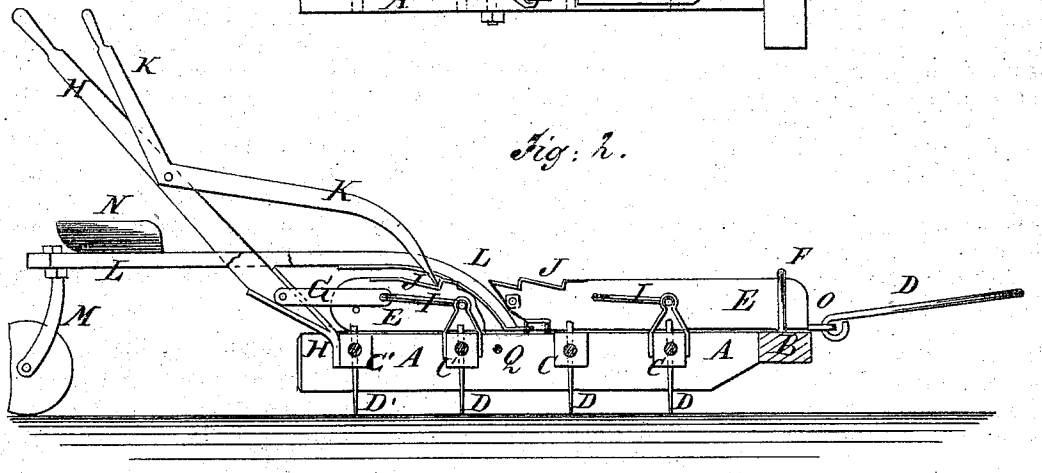


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MARTIN McNITT, OF MOUND STATION, ILLINOIS.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **155,037**, dated September 15, 1874; application filed May 16, 1874.

To all whom it may concern:

Be it known that I, MARTIN MCNITT, of Mound Station, in the county of Brown and State of Illinois, have invented a new and useful Improvement in Harrow, of which the following is a specification:

Figure 1 is a top view of my improved harrow. Fig. 2 is a detail section of the same, taken through the line *x x*, Fig. 1, and part being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

The invention is an improvement in a well-known class of harrows whose teeth are set in oscillating bar.

The improvement relates to the construction and arrangement of parts whereby the teeth of the rear bar of the series are adapted to assume an angle or position different from the teeth of the other bars, as hereinafter described.

In the drawing, A A indicate the side bars of the harrow-frame, which are beveled at the front end and connected by a cross-bar, B. The bail P and straps O form a draft attachment. A bar, L, is hinged to each of bars A, and the two are secured together at the other or rear end, and supported by a caster-wheel, M. The driver's seat N is also located at that point. The bars C C′ are provided with teeth D D′, respectively, and journaled equidistantly in the side bars A A. A hand-lever, H, is attached to the rear bar, C′, and connected with the bars C by means of bar G, links I, and bar E. The latter slides in a keeper, F, fixed on the front bar, B, being arranged at right angles to the toothed bars. Said bar E has notches J in its upper side or edge, in which the pawl K engages when suitably adjusted therefor. The pawl K is pivoted to the lever H at its angle, as shown.

By this construction and arrangement of toothed bars, lever, and connecting devices, the teeth of the rear bar C′ move through a less number of degrees than those of bars C, which all move in unison. The result is that the teeth D′ of bar C′ may be set at different angles, and hence be brought into action even when the others are out of action altogether. Thus not only may the soil be acted on differently by reason of the teeth being set at different angles, but the rear teeth, D′, may be used to operate alone, as is frequently requisite on old or well-pulverized soil.

When the lever H is thrown back, as shown in the drawing, the teeth of the several bars stand nearly vertical together; but when the lever is thrown forward the teeth D′ of bar C′ assume such an angle that they still project below the side bars A A, while the teeth D of bars C do not.

What I claim is—

The combination of lever H, toothed bars C′ C, bar G, links I, notched and sliding bar E, and pawl K, as shown and described, whereby the teeth D′ may be employed singly, as set forth.

MARTIN MCNITT.

Witnesses:
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