R. H. McCORMICK.

Harvester.

No. 168,271. Patented Sept. 28, 1875.

Fig 1.

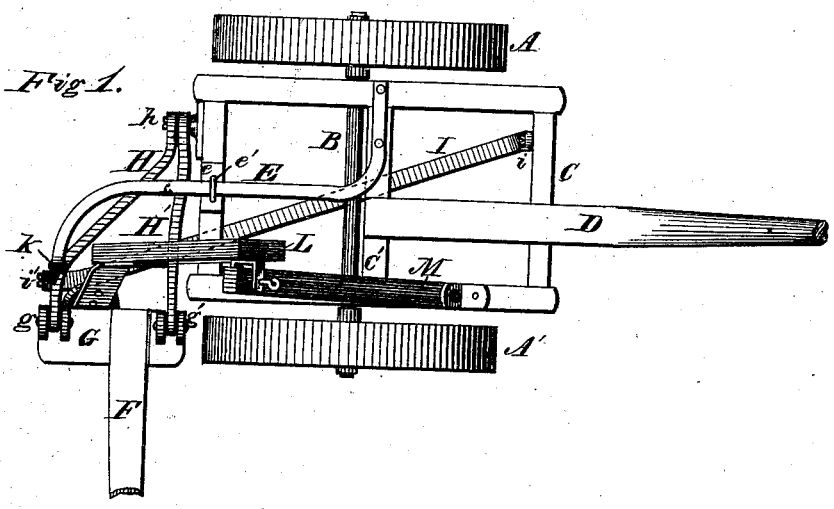
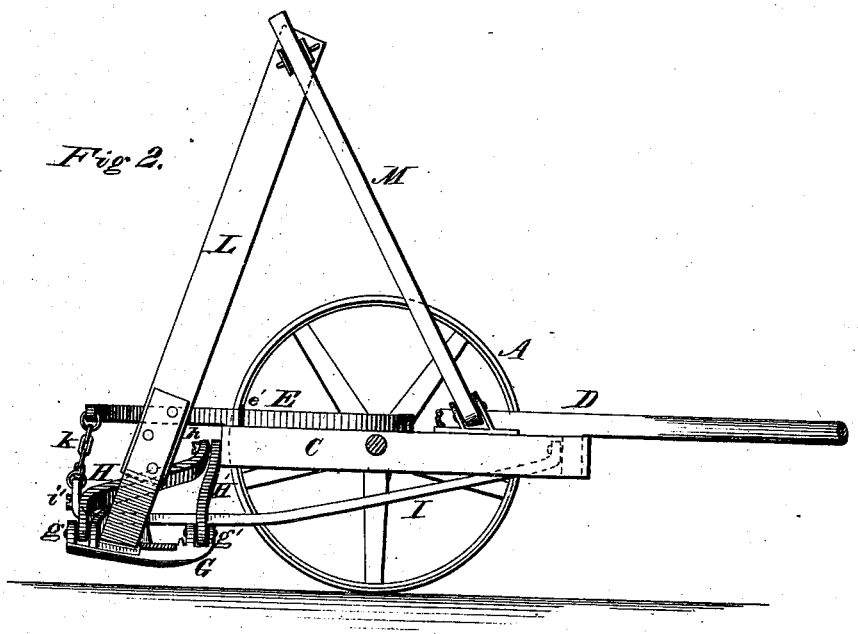


Fig 2.



WITNESSES

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ROBERT H. McCORMICK, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **168,271**, dated September 28, 1875; application filed April 6, 1874.

To all whom it may concern:

Be it known that I, ROBERT HALL McCORMICK, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Harvesters, of which the following is a specification:

My invention relates to harvesters having two main wheels and a hinged cutting apparatus, and adapted for the use of an automatic rake. Its objects are, first, to prevent the twisting or straining of the frame incident to the common method of attaching the cutting apparatus and raking and reeling mechanism directly to, or suspending them from, one corner of the main frame; and, secondly, to allow the finger-beam to flex freely on its connections with the main frame.

The subject-matter claimed is hereinafter designated.

Figure 1 represents a plan, and Fig. 2 a side elevation, of so much of a machine embodying my improvements as is necessary to illustrate the invention herein claimed, with the inner driving-wheel removed.

In practice, of course my invention would be used in connection with a fully-organized harvester; but it is deemed unnecessary here to describe any parts except those germane to the subject-matter claimed, the details of construction of a harvester being familiar to all skillful constructers.

Two main wheels, A A′, turn on or with an axle, B, mounted in a main frame, C, from which a tongue, D, projects. Upon the center cross-beam C′ of the main frame the supporting-bar E is secured. This bar, it will be observed, is **Z**-shaped; it is made of iron; its front member is pivoted or bolted fast to the cross-beam; its main portion extends backward centrally between the wheels beyond the rear of the main frame, and its rear portion is bent inward toward the shoe. The bar, it will be noted, is not let into the rear cross-timber of the main frame, but simply rests upon it. A plate, *e*, and a staple, *e′*, are employed to hold the supporting-bar in place. A finger-beam, F, is secured at its heel end to a shoe, G, provided with lugs *g g′*, to which the lower ends of two independent coupling-arms, H H′, are pin-jointed. The opposite ends of these arms are pivoted to a common stud, *h*, on the main frame, but each is free to move independently of the other. A drag-bar, I, pivoted or swiveled at *i* near the outer front corner of the main frame, in the same axial plane as the stud *h*, extends diagonally backward and inward, passing under the coupling-arms, its back end being bent upward and pin-jointed at *i′* to the rear coupling-arm H. By this mode of connection, the finger-beam, coupling-arms, and drag-bar have free play on their pivots. The drag-bar, it will be observed, rocks transversely on its pivots as the coupling-arms rise or fall; it also abuts against the rear coupling-arm, and thus acts as a stop to limit the descent of the coupling-arm, while leaving it free to rise; it also forms a fulcrum on which the finger-beam and shoe may be rocked, as hereinafter explained. A chain, rod, or link, *k*, attached to the rear ends of the supporting-bar and drag-bar, respectively, suspends the cutting apparatus at any desired height. A post, L, mounted upon the shoe, is intended to support proper reeling and raking devices. (Not shown in the drawings.) The inclination of this post, and of the guards also, is regulated in a well-known way, by an adjustable laterally-rocking brace, M, pivoted on the main frame, and to the post L.

An additional advantage flowing from the use of the suspension-bar is, that I am enabled to extend the post-support inward beyond the pivot of the shoe, so as to counterbalance the weight of the divider end of the cutting apparatus, and thus bring its weight upon the pivots of the shoe, which are substantially in the plane of the inner face of the inner supporting-wheel A′. The weight of the cutting apparatus, rake, &c., is, in fact, by this arrangement, thrown directly upon the main frame between the wheels, which tends greatly to diminish side draft. I am also enabled by this arrangement to locate the rake-post so far inside the track of the inner wheel A′ as materially to diminish the arc necessary to be traversed by the rake in delivering the gavel out of the path of the team when cutting the succeeding swath.

I do not broadly claim the rake-post and

brace; neither do I broadly claim a forked swiveling coupling-arm made in one piece; but

What I do claim as of my own invention is—

1. The suspension-bar, constructed substantially as hereinbefore set forth, secured centrally upon the main frame, and having its rear end curved inward, so as to form a point of support for the rear coupling-arm, and afford room for the rake-post.

2. The combination of the shoe, the independent coupling-arms pivoted thereto, and to a common stud on the main frame, and the drag-bar pivoted to the main frame near its outer front corner, extending diagonally backward between the wheels and pivoted to the rear coupling-arm, these members being constructed and operating in combination substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

ROBERT HALL McCORMICK.

Witnesses:

W. R. SELLECK,

F. H. MATTHEWS.