E. BENNETT.

Improvement in Rotary Harrow.

No. 125,523. Patented April 9, 1872.

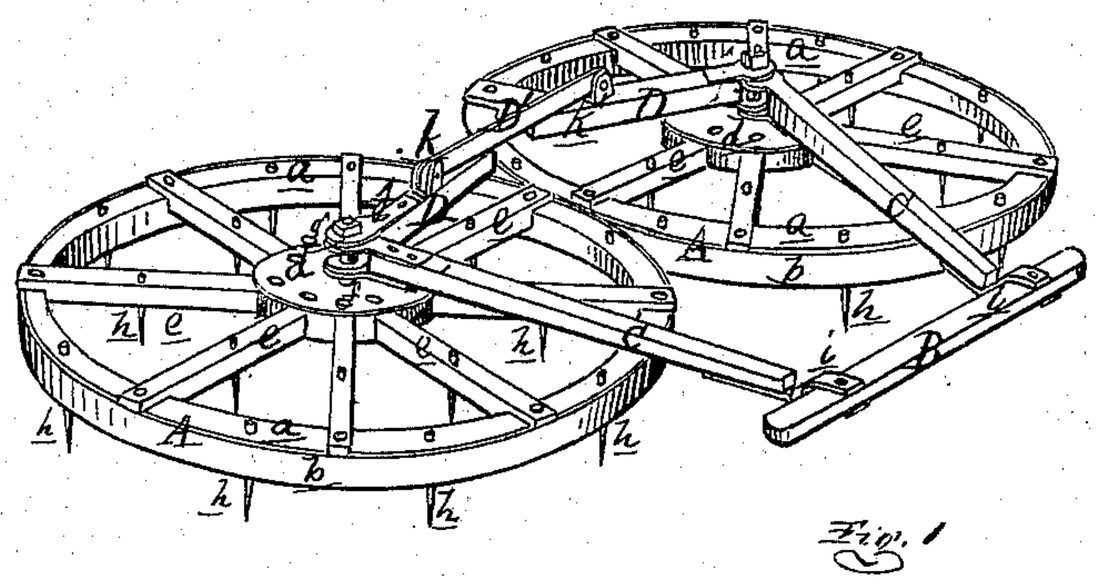

Fig. 1.

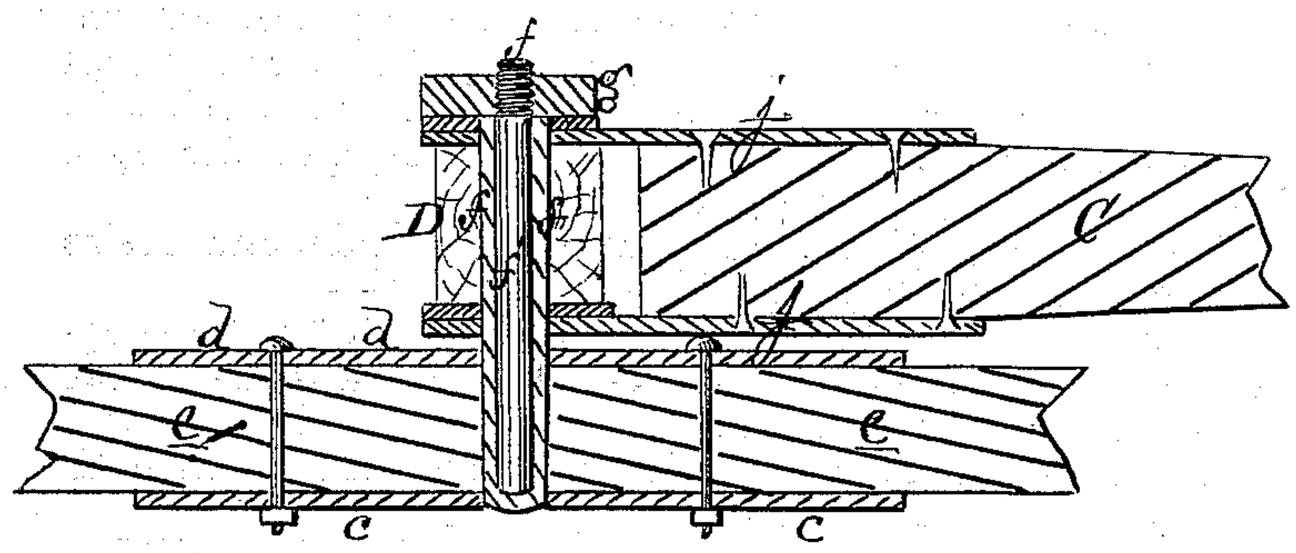

Fig. 2.

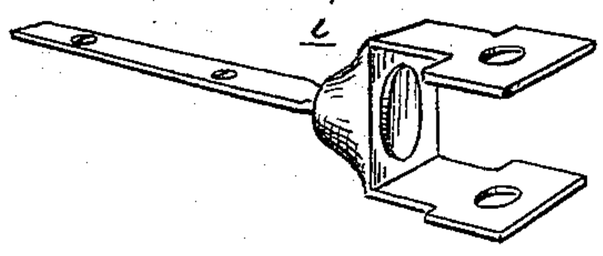

Fig. 3.

ATTEST:

Ed. F. Dumbell

Thyron H. Church

INVENTOR:

E. Bennett

per Atty

Fred S. Sprague

125,523

UNITED STATES PATENT OFFICE.

EDMUND BENNETT, OF NANKIN, MICHIGAN.

IMPROVEMENT IN ROTARY HARROWS.

Specification forming part of Letters Patent No. 125,523, dated April 9, 1872.

To whom it may concern:

Be it known that I, EDMUND BENNETT, of Nankin, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Rotary Harrows; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my harrow. Fig. 2 is a longitudinal section of one of the pivots or spindles and its hub-plate. Fig. 3 is a detached perspective view of one of the swivels on the spreader-coupling.

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

The nature of this invention relates to an improved and simplified construction of circular revolving harrows; and it consists in the combination of its principal operative parts, all constructed and arranged as more fully hereinafter set forth.

In the drawing, A A represent circular harrows, which are cheaply constructed in the following manner: I first bend the rim or felly *a*, of wood, into a circle, and secure the ends. Then I shrink on a tire, *b*, of heavy band-iron. I then take the plain cast lower hub-plate *c* and the upper one, *d*, and insert the spokes *e* radially, and secure them by clamping the plates through bolts passed through every second spoke. The outer ends of the spokes are then "halved" on the upper edge of the rim *a*, and securely bolted thereto. The upper plate *d* is cast with a vertical spindle, *f*, which has a wrought-iron center, *f'*, inserted while in the mold, which center is a rod projecting above the spindle, on which to cut the screw-thread which receives the nut *g*, which holds the other parts, hereinafter described, in place. This construction enables the farmer to replace, with little trouble or expense, any part of the harrow which may be broken. The harrow-teeth *h* are inserted through the spokes and rim in the usual manner. B is a spreader-bar, to the rear side of which, near each end, is pivoted a draw-bar, C, by means of a swivel-coupling, *i*, which allows the rotation of said draw-bar in passing over uneven ground. The rear end of the draw-bars have a coupling-plate, *j*, at the top and bottom sides. Their projecting ends are perforated to slip over the spindle of the harrow at the same time with intermediate coupling-plates *j'* on the outer ends of the coupling-bars D D, which are not coupled together, as usual, at the ends, but by a metallic bar, D', pivoted at each end to a short standard, *k*, rising from the central portion of the bars D, to overcome the tendency of the inner parts of the harrows, in rising over or over-riding each other, which it effectually does by keeping down the free extremity of the coupling-bars, and thus compels all the teeth in the harrows to act uniformly. The team is attached to the spreader by a clevis, in the usual manner.

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

The combination of the spindle *f f'*, the coupling-bars D D and D', the draw-bars C, the spreader B, and the swivel-couplings *i*, constructed, arranged, and operating substantially as described and shown.

E. BENNETT.

Witnesses:

H. F. EBERTS,

HARRY S. SPRAGUE.