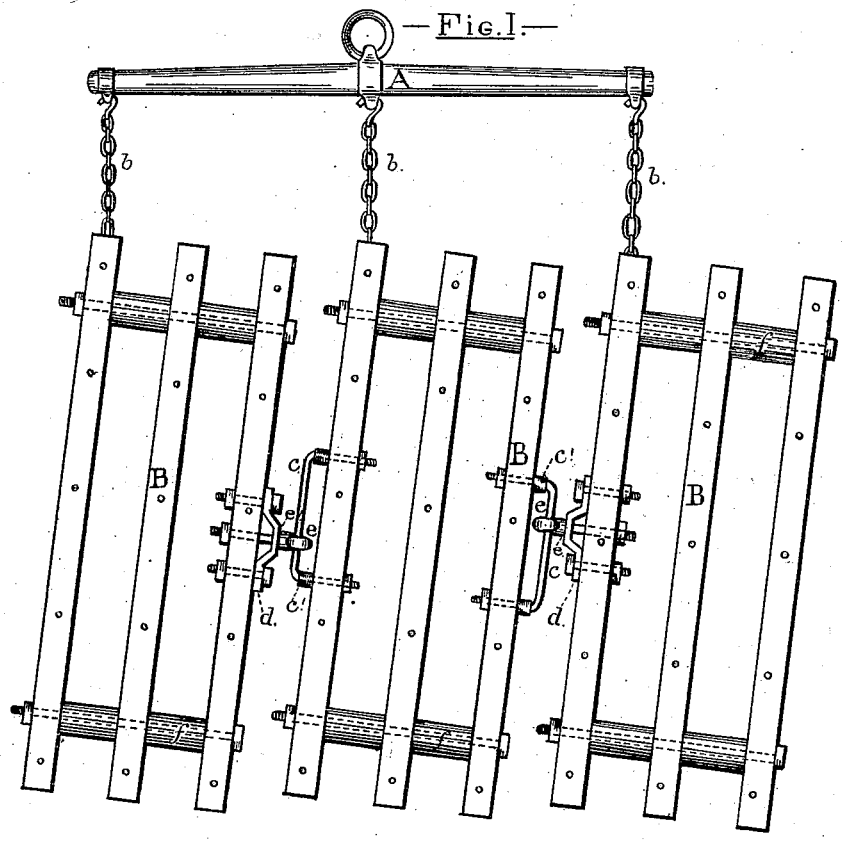
A. B. BAKER.

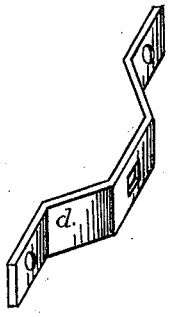
Harrow.

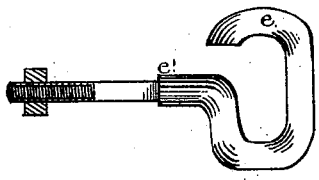
No. 197,586. Patented Nov. 27, 1877.

—Fig. I.—



—Fig. II.—





—Witnesses;—

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Anson B. Baker

By his Attorney

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UNITED STATES PATENT OFFICE.

ANSON B. BAKER, OF WOODHULL, ILLINOIS.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **197,586**, dated November 27, 1877; application filed July 2, 1877.

To all whom it may concern:

Be it known that I, ANSON B. BAKER, of Woodhull, in the county of Henry and State of Illinois, have invented a new and useful Improvement in Harrows, which is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a plan or top view. Fig. 2 represents enlarged views of the coupling-hook and brace.

My invention consists in connecting sections of a harrow of rectangular form by means of a coupling of novel construction, hereinafter more particularly described.

In the drawing, A represents the draft-bar, to which each harrow-section B B B is attached by a chain, *b*, secured at one corner, preferably on the under side of the beam. On the side beams of the center section is a rod, *c*, with each end bent at right angles and then passing through a round collar, *c'*, forming a shoulder, which rests against the side of the beam through which the ends of the rod pass, and are secured on the inner side by nuts. Attached to each inside beam of the outside sections is a brace, *d*, shaped as shown in the drawing, and at each end bolted or riveted to the beam. A square hole in the center of this brace receives the bolt end of the coupling-hook *e*, which is square in cross-section, and has a shoulder, *e'*, to abut against the brace, so that when the bolt-nut on inner side of beam is turned the shoulder is drawn close to the brace, the hook becoming rigidly secured and capable of withstanding great strain. The rod *c*, as described, and the hook *e* with brace *d* constitute the coupling, and while affording to each section a universally-independent movement cannot accidentally come uncoupled. To uncouple requires the outside section to be raised or turned immediately over the center section.

In practice I give about twelve inches space between the collars *c'*, while the hook may have a vertical measure of about six inches.

Each section consists of wood beams, preferably three in number, between which cross bars or braces *f* are inserted, the section being united by bolts passing through the beams and braces. The beams are provided with teeth in the usual manner.

The mode of coupling the sections of a harrow, by the coupling shown and herein described, permits to each section a thoroughly-independent movement. Either section may have a back-and-forth or vibratory motion of twelve inches, a side-tilting motion of six inches, and an end up-and-down or oscillating motion almost without limit. The advantages which such free movement affords will be readily recognized by all familiar with the inconveniences of ordinary harrows.

The advantage of attaching the chains to the under side of beam is, it prevents the front end from plowing the ground, which, if chains are fastened to the end or upper side of beam, sometimes causes the harrow to turn over and strike the horses.

Having described my invention, I claim and desire to secure by Letters Patent—

The improved coupler for harrows, consisting of the rod *c*, passing through the collar *c'* on the outside of the beam of one section and secured on the inner side of beam by a nut, and the brace *d*, shaped as shown in the drawing, with square hole to receive the bolt end of hook *e*, having the shoulder *e'* resting against the brace attached to another section, the coupler being arranged centrally to the beams, as shown and described, affording an independent movement to each section.

ANSON B. BAKER.

Witnesses:
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