

(No Model.)

A. D. MANSON.

HARROW.

No. 384,457.

Patented June 12, 1888.

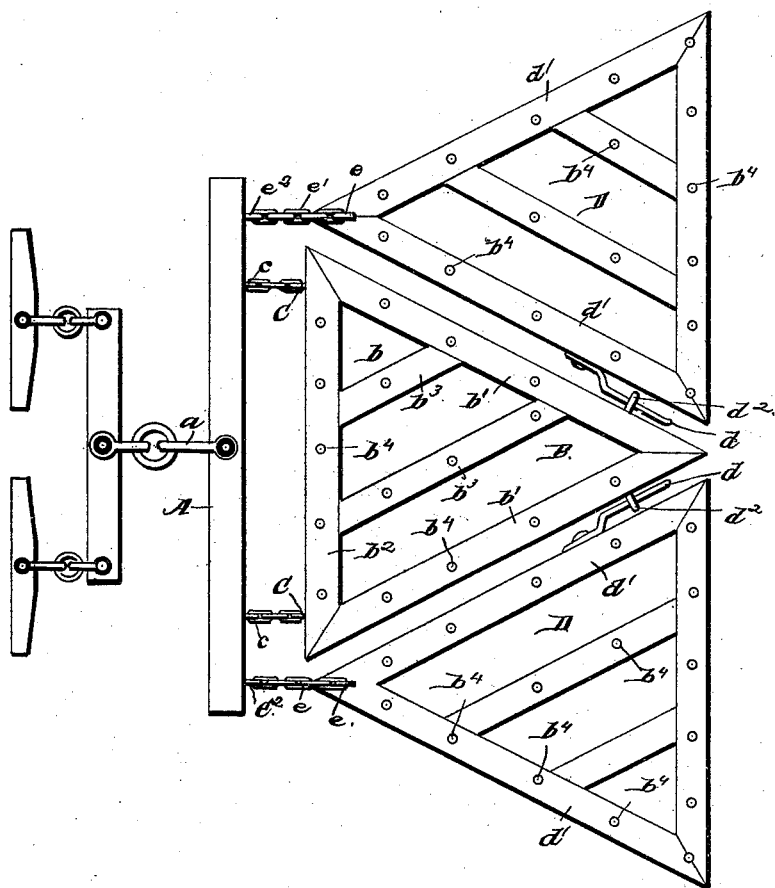


Fig. 1.

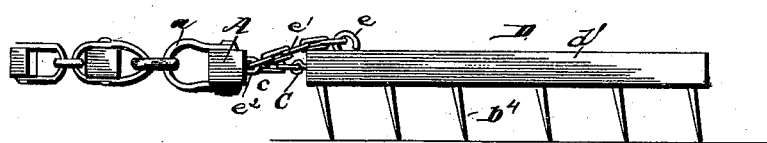


Fig. 2.

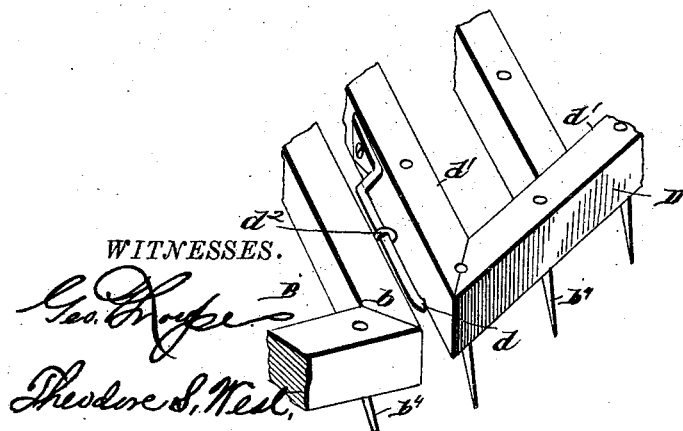


Fig. 3.

WITNESSES.

*Geo. H. Hays*

*Theodore S. West*

INVENTOR.

*A. D. Manson*

*by C. H. Snow & Co.*  
Attorneys.

# UNITED STATES PATENT OFFICE.

ASA D. MANSON, OF OVERTON, MISSOURI.

## HARROW.

SPECIFICATION forming part of Letters Patent No. 384,457, dated June 12, 1888.

Application filed March 21, 1888. Serial No. 267,964. (No model.)

*To all whom it may concern:*

Be it known that I, ASA D. MANSON, a citizen of the United States, residing at Overton, in the county of Cooper and State of Missouri, have invented new and useful Improvements in Harrows, of which the following is a specification.

The invention relates to improvements in harrows, the object being to provide means whereby a harrow will be prevented from inclining laterally while in motion; and it consists in the construction and novel combination of parts, hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claim.

In the drawings, Figure 1 is a plan view of a harrow embodying the invention. Fig. 2 is a side or edge view thereof. Fig. 3 is a detail view showing the connection between the central section and one side section of the harrow.

The harrow is composed of three sections, the outer ones being wing attachments to the central section, which is attached to the draw-bar of the machine.

Referring to the accompanying drawings by letter, A designates the draw-bar, having attached centrally the clevis *a*, of ordinary construction.

*b* is the frame of the central section, B, of the harrow, which frame is composed of the side rails, *b'* *b'*, forming a triangle with the front rail, *b<sup>2</sup>*, and the transverse rails *b<sup>3</sup>*, which are parallel to one side rail, as shown. To the said rails and to the front and side rails of the frame *b* are secured the harrow-teeth *b<sup>4</sup>*, preferably inclined backward.

C C are staples, secured to the front edge of the rail *b<sup>2</sup>* at equal distances from the ends thereof.

*c c* are links connecting the staples C with the upper staples, *c'* *c'*, secured to the draw-bar A at equal distances from the ends of said bar.

D D are similar triangular wing-frames, situated on each side of the central frame, *b*, and

each connected thereto by a pintle, *d*, secured to the edge of its side rail, *d'*, which pintle enters a staple, *d<sup>2</sup>*, secured to the adjacent side rail of the central section, B, of the harrow near the rear end of said rail.

The wing-sections D D have their apices frontward, being reversed in position in relation to the central section, B, and have secured to their apices, on the upper surfaces thereof, the staples *e*, which are connected by the links *e'* to the staples *e<sup>2</sup>*, secured to the rear edge of the draw-bar near the end thereof. The side sections are provided with teeth similar to those of the central sections.

It will be seen from the described construction that the three sections, while being free to swing together laterally and to bend upon each other when passing over uneven ground, cannot incline laterally on each other and thereby change the line of draft without unhooking the pintles.

Having thus described my invention, I claim—

The herein-described harrow, composed of the draw-bar A, the triangular frame B, provided with proper teeth and with the staples *d<sup>2</sup>*, secured at corresponding points to its side rails near its apex, the links or chains *c*, connecting the base-rail of the frame B, at equal points from its ends, to the draw-bar A, at equal points from the ends thereof, the triangular frames D, provided with proper teeth and with the pintles *d* on the side rails engaging the corresponding staples, *d<sup>2</sup>*, and having their apices front, and the chains connecting said apices to the draw-bar at equal distances from the ends thereof, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ASA D. MANSON.

Witnesses:

W. G. HAYS,  
E. I. SMITH.