

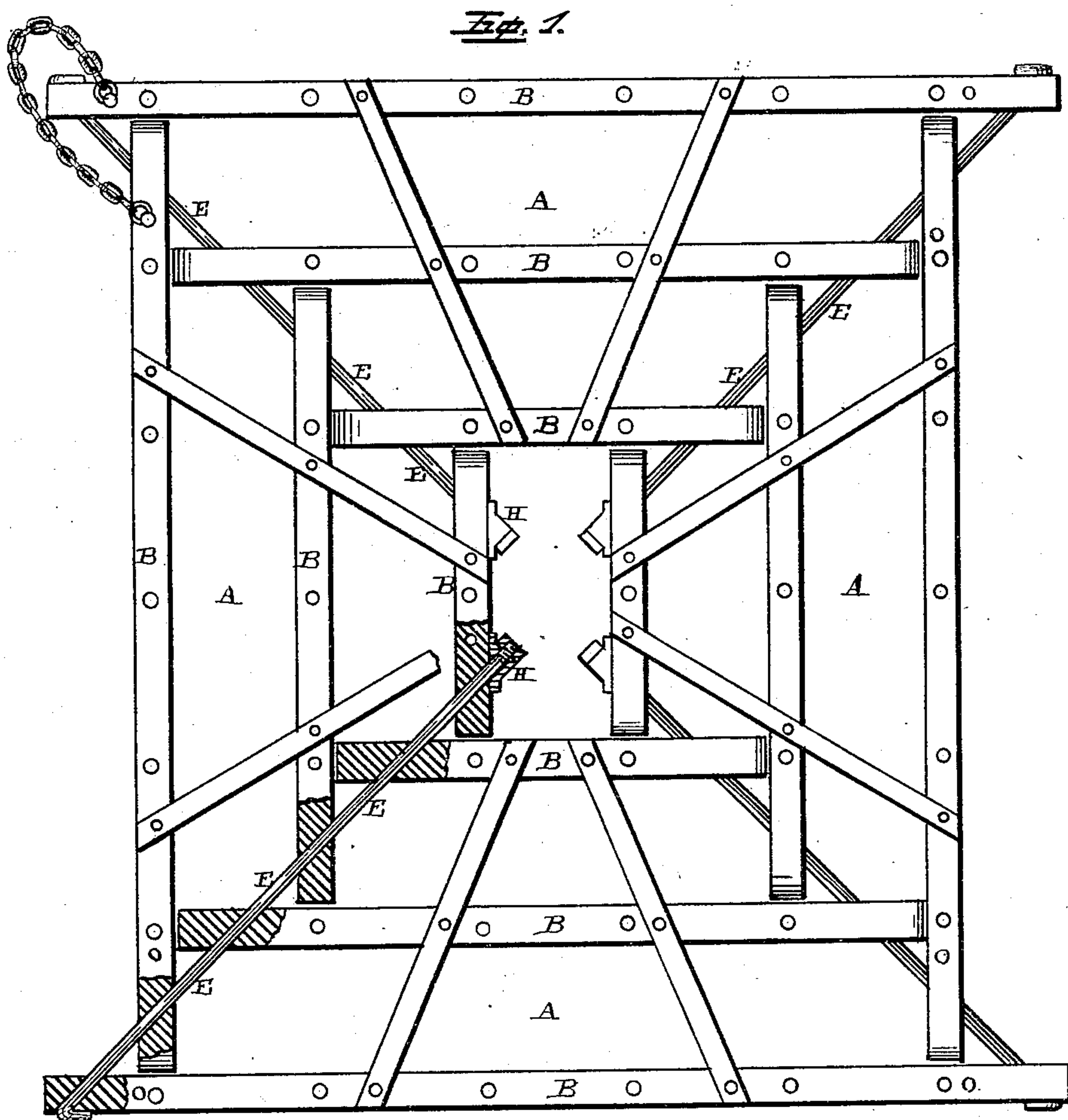
(No Model.)

G. JACKSON.

HARROW.

No. 254,017.

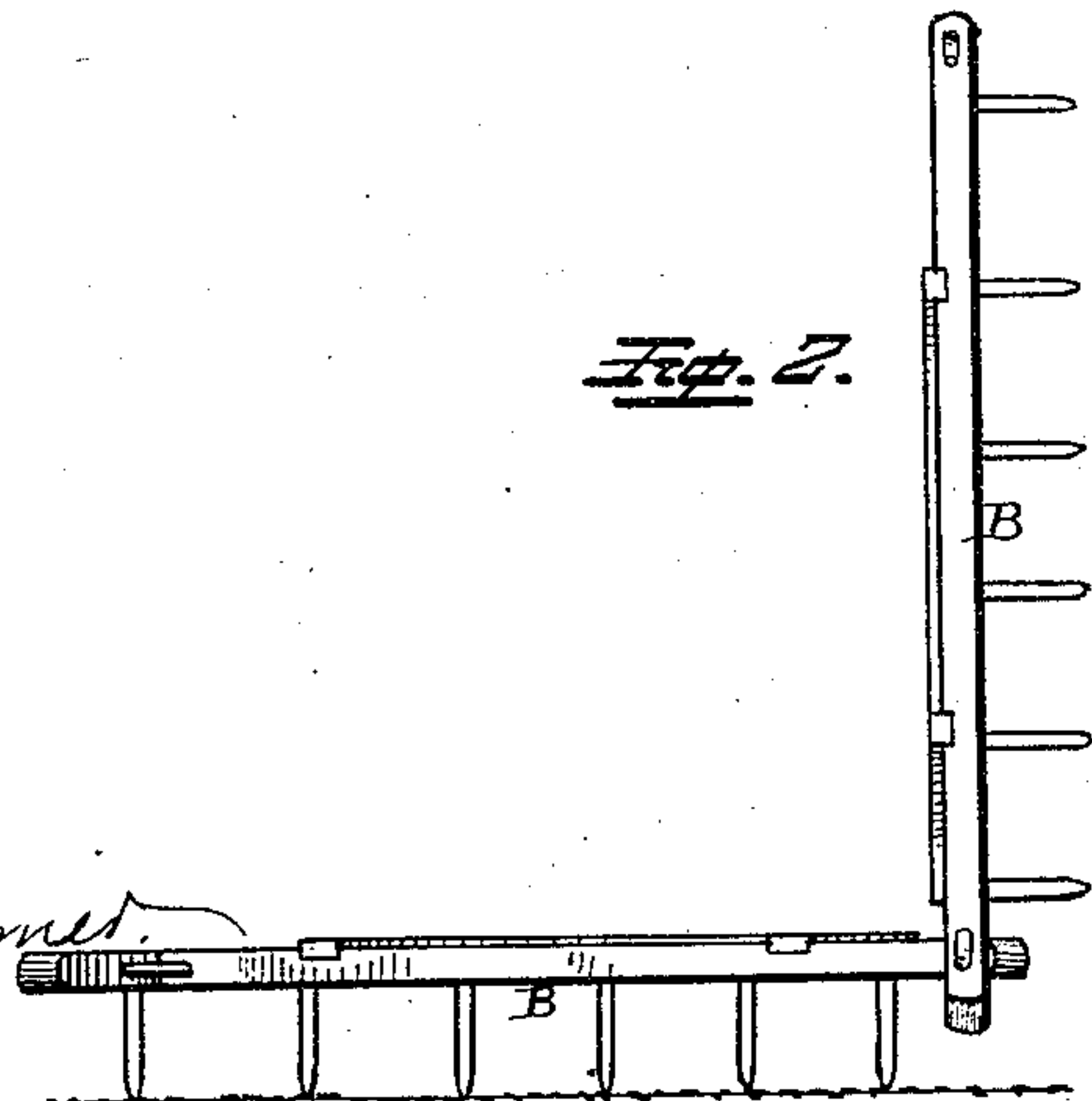
Patented Feb. 21, 1882.



*Fig. 2.*

WITNESSES.

*W. H. Mortimer*  
*W. H. Kern*



*INVENTOR.*

*Geo. Jackson,*  
*per*  
*F. A. Schmann, atty*



# UNITED STATES PATENT OFFICE.

GEORGE JACKSON, OF BOSCOBEL, WISCONSIN.

## HARROW.

SPECIFICATION forming part of Letters Patent No. 254,017, dated February 21, 1882.

Application filed December 10, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, GEO. JACKSON, of Boscobel, in the county of Grant and State of Wisconsin, have invented certain new and useful  
5 Improvements in Harrows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had  
10 to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in harrows; and it consists in the combination of  
15 of a number of parallel beams which are placed equal distances apart, and which are united together by means of rods which pass diagonally through the ends of adjoining sections, the beams being so arranged that the ends of no  
20 two of the beams will come together, as will be more fully described hereinafter.

The object of my invention is to provide a harrow which can be turned up from any one corner, and which is adapted to be pulled  
25 from any one corner or side equally as well, without the necessity of any changes, with the exception of the device to which the draft-chains are to be fastened.

Figure 1 is a plan view of my invention,  
30 partly in section. Fig. 2 is an edge view of the same, showing one-half of the harrow turned up at one corner.

A represents four separate and distinct sections of the harrow, each one of which is formed  
35 of the three beams B, which are placed equal distances apart. The beams of any one section are made the same length as the corresponding section which is made opposite to it, and in which case the beams are secured rigidly together by means of the brace-rods D,  
40 which are secured across their tops. These four sections are attached loosely together by means of the pivotal rods E, which are passed diagonally through their corners, each rod  
45 passing at an angle through the end of each beam of both sections. The outer ends of these rods are hooked or bent backward in any suitable manner, and the inner ends of the rods are passed through washers or shoes H,  
50 which are made of iron and secured to the inner beams of the two sections which have the shortest inner beams. In order to prevent the inner ends of the rods from being pulled out-

ward through the washer, pins or stops of any kind may be applied to the rods, as shown. 55

Each corner of the harrow will be provided with two holes—one in each adjoining section—in which suitable staples or holding-bolts will be placed, and to these staples or bolts will be fastened a suitable draft-chain. This  
60 draft-chain can be transferred from one corner to the other of the harrow, and thus enable the harrow to be drawn equally well from each one of its four corners.

As the pivotal rods pass loosely through the  
65 ends of the beams of each section these rods form a pivot upon which any two of the sections can be raised upward from any one of its four corners, as shown in Fig. 2.

It will be noticed that the beams are ar-  
70 ranged in such relation to each other that the end of no one beam comes in contact with the end of another beam, but that the ends are all placed at equal distances apart, as shown, so that the pivotal rods will pass through the  
75 end of each beam alike. While the ends of these beams do not come together, the end of each beam bears against the edge of another beam, and the parts are thus braced together while in operation without in any manner in-  
80 terfering with their folding movement.

As the harrow is drawn along, in case an obstruction is encountered the harrow will give equally alike at any point. Should the obstruction be just in a line with the center of  
85 the harrow the harrow will rise upward at the center, so as to pass over it; but should the obstruction be to either side of the center the outer corners of the harrow will rise upward.

This same construction of parts can be ap-  
90 plied to a single V or A shaped harrow.

Having thus described my invention, I claim—

In a harrow, the combination of a number of sections, A, each one of which is composed of  
95 a number of beams or bars, B, of unequal length, with the pivotal rods E, which pass diagonally through the ends of the beams, substantially as shown.

In testimony whereof I affix my signature in  
100 presence of two witnesses.

GEORGE JACKSON.

Witnesses:

C. H. SYLVESTER,  
JOHN KELTZ.