

(No Model.)

JOSEPH McINDOO & JACOB McINDOO.

HARROW.

No. 312,570.

Patented Feb. 17, 1885.

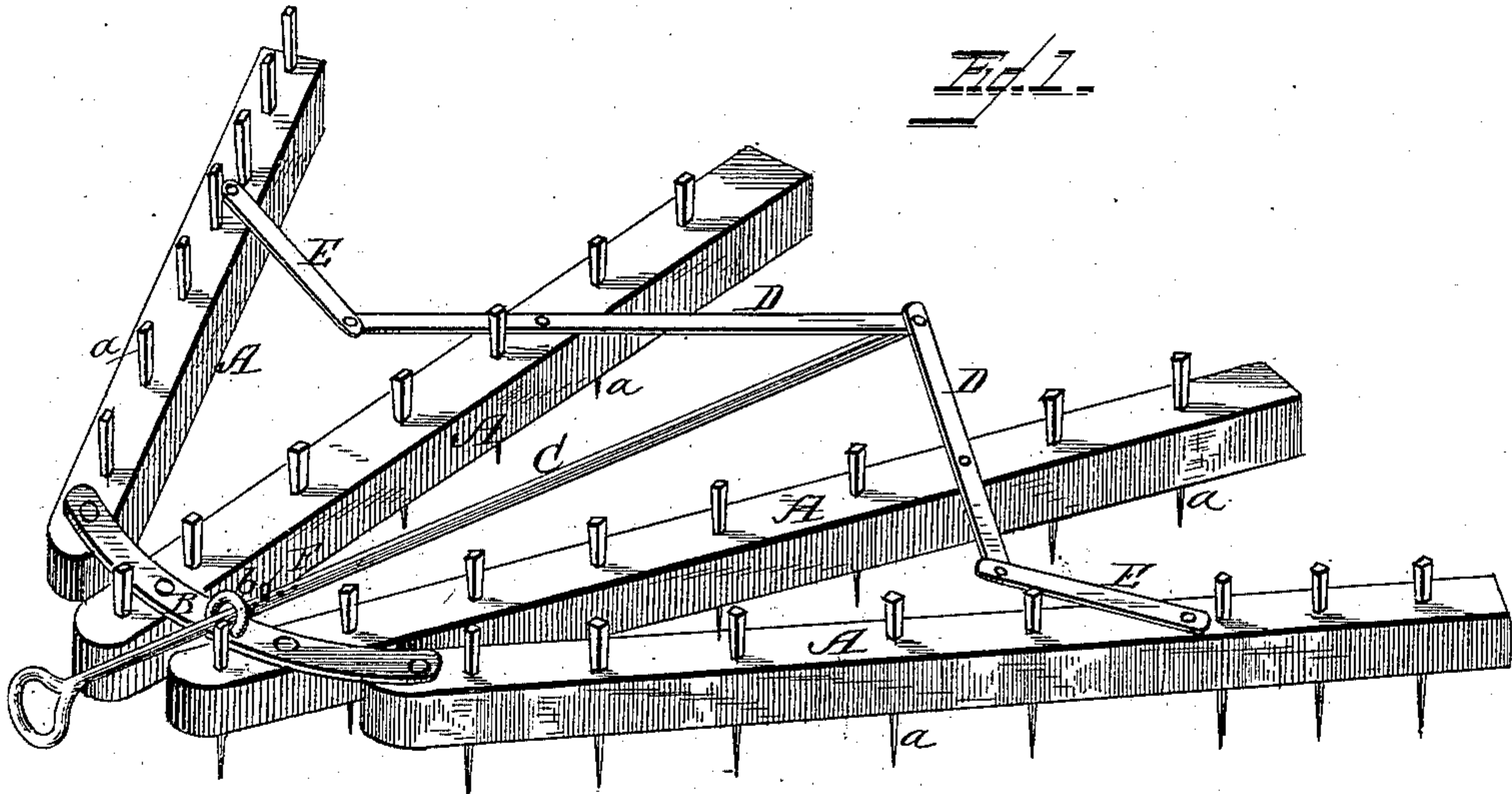
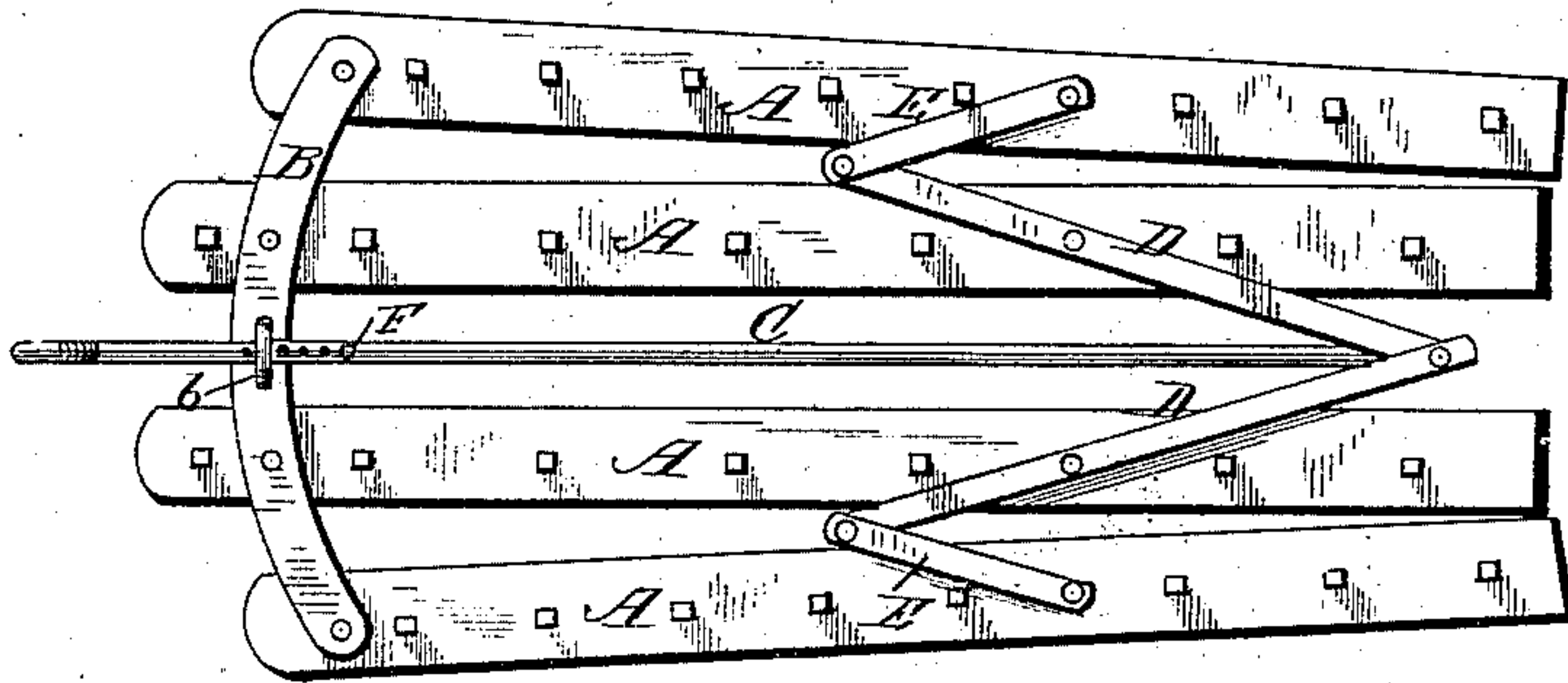


Fig. 2.



WITNESSES

*F. L. Ourand*  
*L. L. Miller*

INVENTORS

*Joseph McIndoo,*  
*Jacob McIndoo,*  
*per Cha. H. Fowler*

Attorney

# UNITED STATES PATENT OFFICE.

JOSEPH McINDOO AND JACOB McINDOO, OF LYONS, INDIANA, ASSIGNORS  
OF ONE-HALF TO ANDREW JACKSON CLARK, OF SAME PLACE.

## HARROW.

SPECIFICATION forming part of Letters Patent No. 312,570, dated February 17, 1885.

Application filed July 25, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH McINDOO and JACOB McINDOO, citizens of the United States, residing at Lyons, in the county of Greene and State of Indiana, have invented certain new and useful Improvements in Harrows; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of our improved harrow, showing the beams spread apart; and Fig. 2, a top plan view, showing the beams folded together.

The present invention has relation to that class of harrows in which the beams thereof are connected together by pivoted bars or links. Previous to our invention these bars or links were pivoted at their extremities and centers directly to the harrow-beams, and the consequence was the harrow did not receive a sufficient brace at its center and its adjustment was rendered more difficult.

The object of the invention therefore is to improve the construction of the above-mentioned class of harrows; and it consists in not only pivoting the bars or links to the beams thereof, but, in addition thereto, pivoting them to each other, and the inner extremities of the two middle bars or links to the rear end of the draft-rod, substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents the four beams of the harrow, provided with suitable teeth, *a*, and at their forward ends suitably pivoted to metal straps B—one above and the other below the beams—and to this upper strap is attached an eye, *b*, through which passes a suitable rod, C. The rod C at its forward end is constructed so as to attach the team thereto, and at its rear or opposite

end is connected to the inner ends of links D in such manner as to form a pivotal connection between the rod and links. The links D are pivoted to the upper side of the two inner ones of the beams A, and at the outer extremities of the link they are pivoted to the inner ends of similar but shorter links, E, which in turn have their outer ends pivoted to the outer ones of the beams, as shown. By the employment of the several links a pivotal connection is made between the several beams near their rear ends, while the links will also act as braces, and at the forward ends of the beams they are pivoted to the straps B, as previously stated. The draft of the horses upon the rod C will, by the connection of said rod with the links, spread apart the harrow-beams, and to gage or regulate the width of spread we provide a pin, F, adapted to be secured in one of a series of holes in the rod. By adjusting the pin in the hole nearest the rear end of the rod, the beams may be held apart permanently, unless the harrow strikes a stump or other obstruction, when the beams will immediately close and open again as soon as it has passed it.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a harrow, the combination, with the beams thereof pivoted at their front ends to suitable straps, and an adjustable draft-rod connected at its front end to the upper one of said plates, of a series of links pivoted to the beams, pivoted together and to the draft-rod, substantially as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH McINDOO.  
JACOB McINDOO.

Witnesses:

MAX STEIN,  
JOHN W. SKOMP.