

(No Model.)

C. LANNER.

HARROW.

No. 336,415.

Patented Feb. 16, 1886.

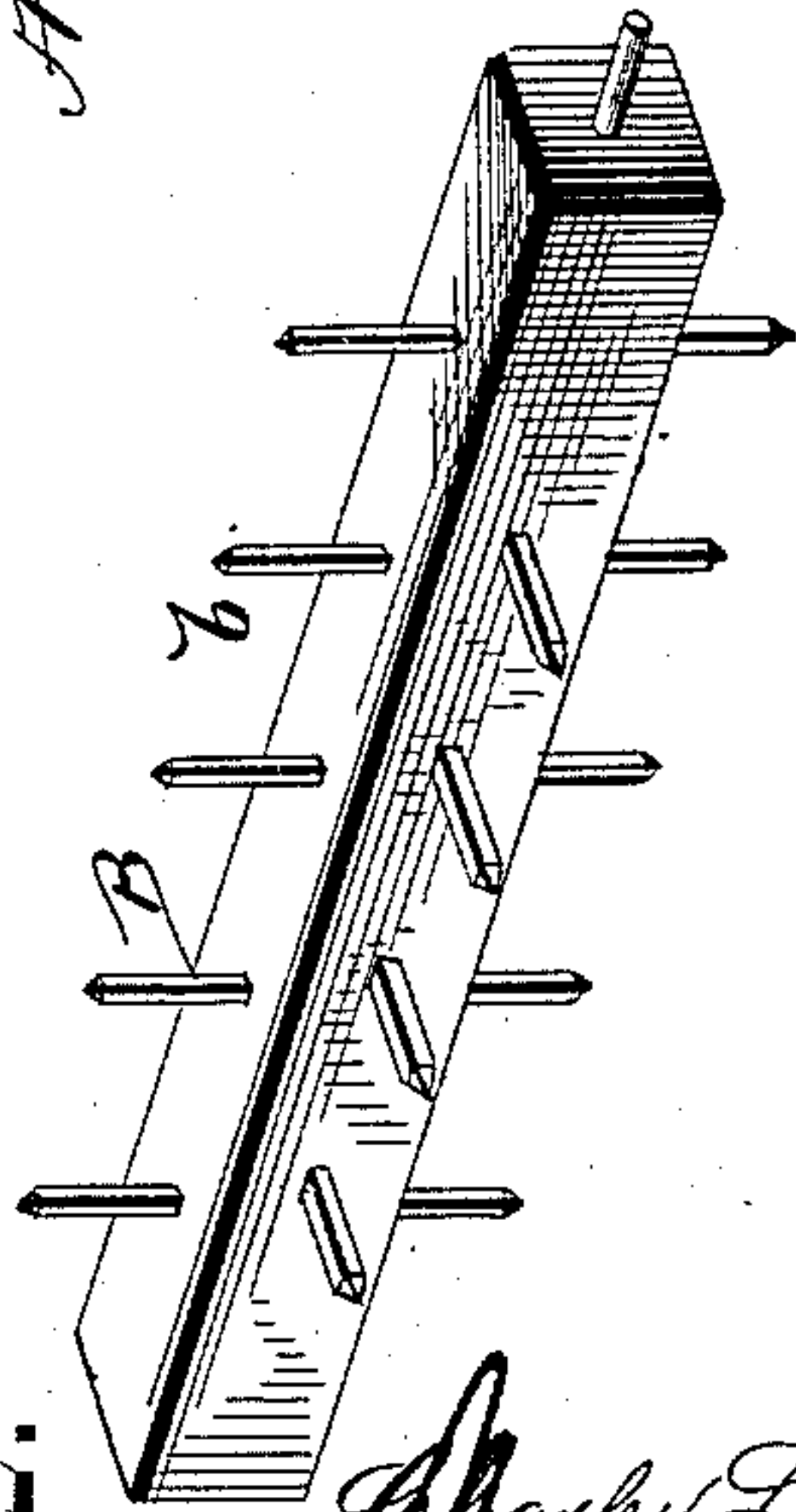
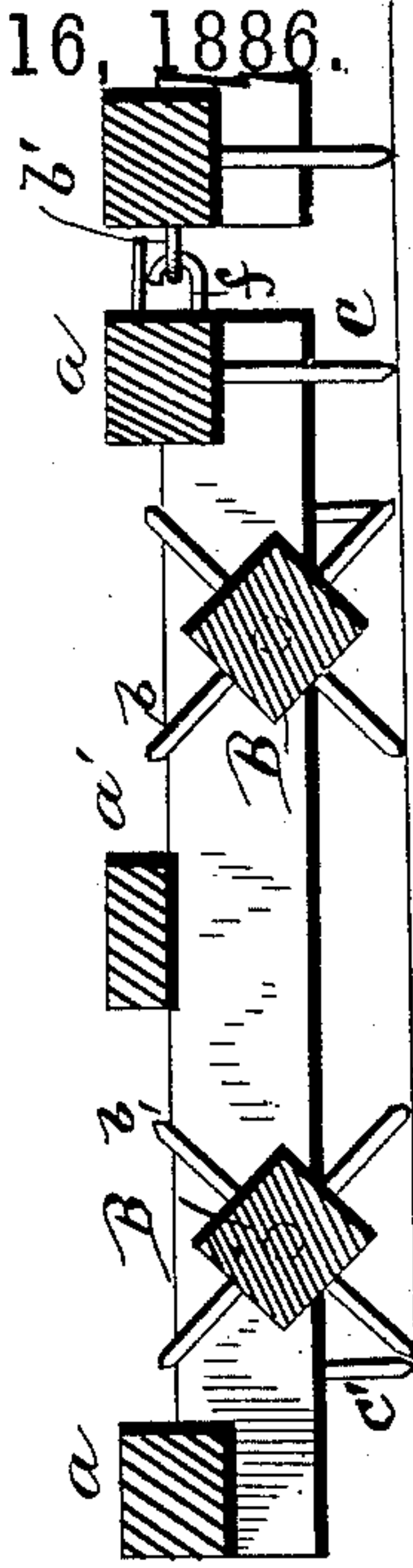
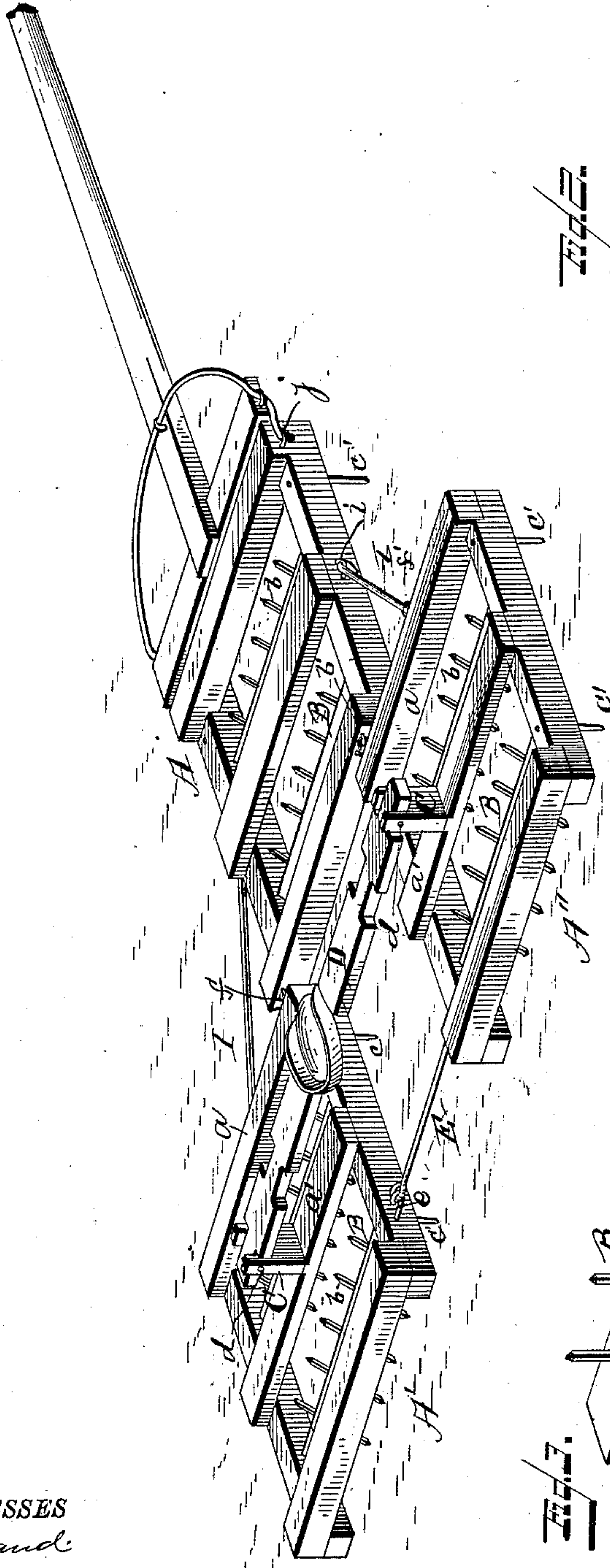


Fig. 1.

Fig. 3.

WITNESSES  
F. L. Ourand  
E. M. Johnson

Charles Lanner  
INVENTOR  
[Signature]  
Attorney



# UNITED STATES PATENT OFFICE.

CHARLES LANNER, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF  
TO GEORGE STARKS, OF SAME PLACE.

## HARROW.

SPECIFICATION forming part of Letters Patent No. 336,415, dated February 16, 1886.

Application filed August 6, 1885. Serial No. 173,745. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LANNER, a citizen of the United States of America, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to harrows; and it consists in the improvements hereinafter described and set forth.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a harrow constructed in accordance with my invention. Fig. 2 is a sectional view, and Fig. 3 is a detail perspective view.

A A' A'' represent rectangular harrow-sections, between the side beams of which are journaled the rotary bars B, from which project pins or teeth *b*. The cross-beams *a a a'* are also provided with downwardly-projecting teeth *c*, while the side beams have similarly depending teeth, *c'*. The cross-bars *a'* of the sections A' A'' are provided on their upper sides with standards C C, which are bifurcated at their upper ends for the reception of a recessed cross-bar, D, which carries centrally the driver's seat, said cross-bar being attached to the standards by pins *d*, which pass through perforations in the recessed portion of the bar D. To the inner side of the under side beams of the sections A' A'' are attached hooks and staples *e e*, while to the forward cross-beams, *a*, hooks *f* are secured.

The front harrow-section, A, has secured at its rear end staples *b' b'*, and centrally to its side beams staples *i i*, to which are secured the hooks I I, and upon the ends of the forward cross-beam are located staples *j*, with which engage the bent ends of a bar attached to the draft-tongue.

When it is desired to employ the three harrow-sections together, the standards are pivotally attached by means of pins to the ends of the cross-bar D, and a bar E, having one end formed into an eye and the other with a hook, is made fast to the staple and hook located in the side beams of the sections A' A'', so as to hold the rear ends of said sections apart. The front section, A, is then secured to the rear sections, A' A'', by placing the staples *b' b'* over the hooks *f*, and placing the bars I in engagement with the staple *f'*, which bars serve to brace the sections to each other. By the construction herein described, the sections will be securely and pivotally attached to each other, so that they can rise and fall with the inequalities of the ground.

When desired, the front section, A, may be removed, and the sections A' A' brought close together, in which case the use of the bar E will be dispensed with, the hooks and staples *e e'* engaging with each other, and the draft-tongue is secured to the staples *f' f'*, the inner recesses of the bar D resting in the bifurcated upper ends of the standards C.

When it is desired to use simply a single section independent of the other sections, the section A is removed therefrom and the bars I detached.

I claim—

In combination with sections A' A'', having cross-bars *a'*, upward-projecting standards which are bifurcated at their upper ends, the recessed cross-bar D, adapted to rest within said standards and provided with a seat, the hooks and staples *e f f'* and connecting-rod E, the front section, A, having a removable draft-tongue attached thereto, staples *b' b'*, and brace-bars I I, the parts being organized substantially as shown.

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

CHARLES LANNER.

Witnesses:

ALEX. McBECK,  
A. K. P. WITHAM.