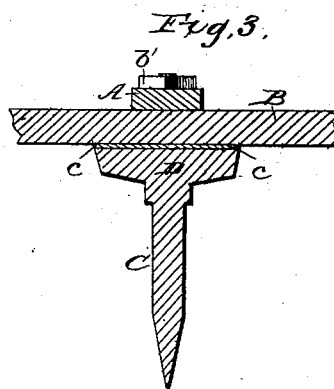
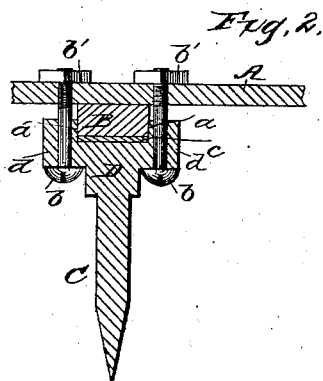
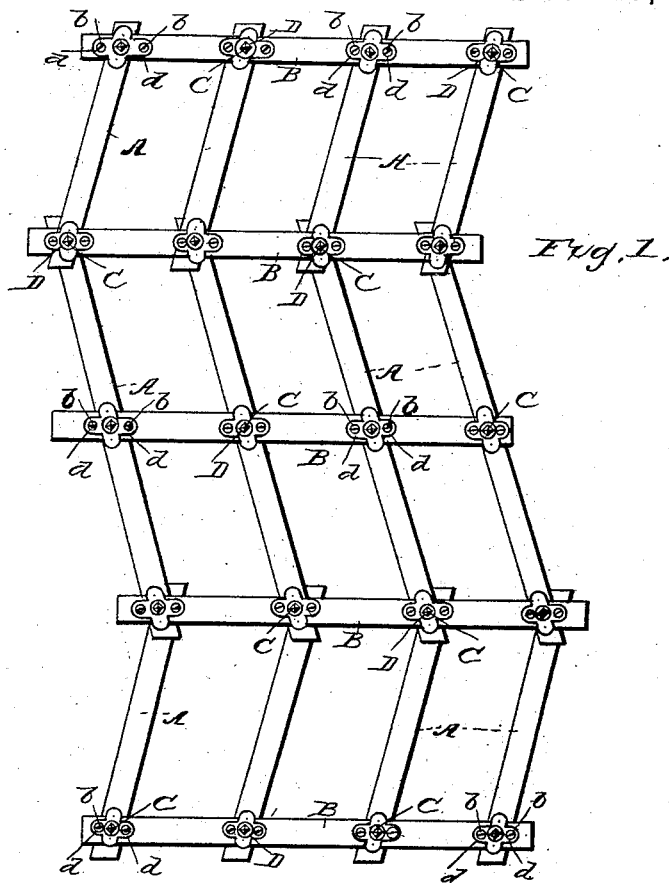


(No Model.)

D. C. HARTUNG.
HARROW TEETH FASTENING.

No. 265,960.

Patented Oct. 17, 1882.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL C. HARTUNG, OF BLAIRSTOWN, IOWA.

HARROW-TEETH FASTENING.

SPECIFICATION forming part of Letters Patent No. 265,960, dated October 17, 1882.

Application filed June 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL C. HARTUNG, a citizen of the United States, residing at Blairstown, in the county of Benton and State of Iowa, have invented certain new and useful Improvements in Harrow-Teeth Fastenings; 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.

This invention relates to certain new and useful improvements in fastenings for securing harrow-teeth to the beams; and the object of the invention is the production of an efficient and durable fastening involving simplicity and economy in construction; and to this end the invention consists in novel features of construction and combination and arrangement of parts, all as will be hereinafter fully described, and set forth in the claims hereto annexed.

Referring to the accompanying drawings, Figure 1 represents a bottom view or plan of a harrow, showing my improvements as applied thereto for securing the teeth in position; Figs. 2 and 3, enlarged detail vertical sections, at right angles to each other, through the harrow-beams, fastening, and tooth.

In the drawings, A represents the upper transverse beams, and B the lower longitudinal beams, forming the harrow-frame.

C represents the teeth of the harrow, each one of which is provided with a head-block, D, cast integral therewith or rigidly secured thereto, and *d d* side lugs formed or cast integral with the head-block. These lugs have vertical holes through them for the reception of the fastening-bolts *b b*, and extend a short distance above the head-block to form a recess, *a*, between them for the reception of the lower bar, B, of the harrow-frame, and which is rigidly

secured therein by the lugs embracing the sides of the bar, and the bolts which pass through said lugs and the upper bar, A, of the frame and secured by the screw-nuts *b' b'*.

c represents a leather cushion arranged intermediate of the bar B and head-block, and in the recess *a*, by which jarring of the fastening-bolts is obviated, whereby they are prevented from becoming loose.

The above-described fastening is economical and simple in its construction, while being strong and durable, and giving additional strength to the frame by obviating the punching of holes through the beams for the reception of the teeth and through the lower bars for the reception of the fastening bolts.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described harrow-tooth, consisting of the body portion C, having the recessed head-block D *a* cast integral or rigidly secured thereto, the side lugs, *d d*, cast with said block and provided with vertical holes for the reception of the fastening-bolts *b*, substantially as specified.

2. The combination, with the lower bars, B, and upper bars, A, having bolt-holes through them, of the teeth C, each tooth having a head-block, D, provided with a central recess, *a*, side lugs, *d d*, having bolt-holes through them, and the fastening bolts and nuts, substantially as and for the purpose herein shown and described.

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

DANIEL C. HARTUNG.

Witnesses:

WILLIAM HOUBUL,
JAMES DONAHOE.