H. S. SMITH.
Harrow.

No. 220,183.

Patented Sept. 30, 1879.

Fig: 1.

Fig: 2.

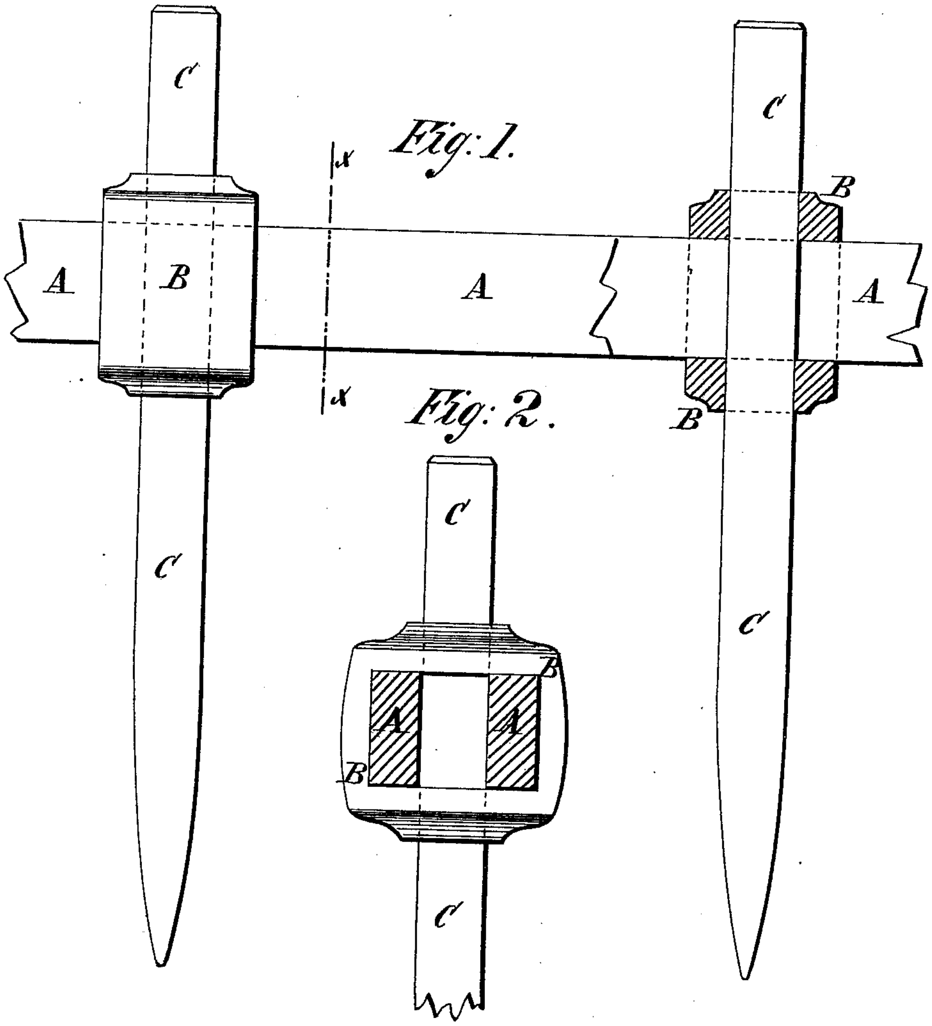
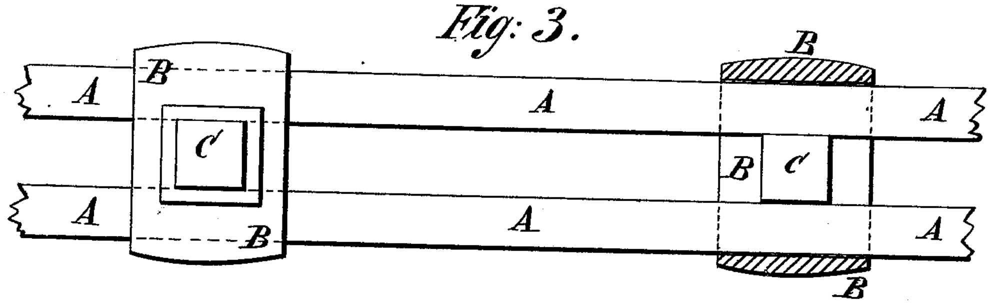


Fig: 3.



WITNESSES:

Achilles Schehl.

C. Sedgwick

INVENTOR:

H. S. Smith

BY Munn & Co

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HIRAM S. SMITH, OF AUSTIN, MINNESOTA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **220,183**, dated September 30, 1879; application filed September 7, 1878.

To all whom it may concern:

Be it known that I, HIRAM S. SMITH, of Austin, in the county of Mower and State of Minnesota, have invented a new and Improved Beam and Tooth Fastening for Harrows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of a fragment of a harrow-beam, showing the fastening for one of the teeth in section. Fig. 2 is a cross-section of Fig. 1 in line *x x*. Fig. 3 is a top view of the same, partly in section.

My invention consists in a beam and tooth fastening for harrows, formed of two straight parallel bars and two or more socket-bands, which latter serve the double purpose of securing the bars together and clamping the teeth between them, so as to permit their adjustment wider apart or closer together, as may be desired.

A A represent flat iron bars, and B B socket-bands of malleable cast-iron. These bands B are made of such a size interiorly that when placed upon the bars A the latter can be spread apart sufficiently to allow the teeth C, which are made rectangular in cross-section and slightly tapering toward the working-point, to be driven between them, where they are held in a perpendicular position by the apertures in the top and bottom of the bands.

By loosening the tooth upward in any one of the bands the band and tooth can be moved together in the beam toward or from its fellow, and then both secured by simply driving the tooth down to the level of its fellow.

The beams to form a harrow are intended to be fastened together by two or more cross-beams of wood or metal resting on top of the beams, and secured thereto by bolts passing between the bars of the beams.

I am aware that trussed beams for harrows with a similar tooth-fastening to mine are old; but in such beams the teeth cannot be adjusted wider apart or nearer together, but must remain as they are originally set in the beam. I therefore do not claim such invention; but,

Having described my invention, what I do claim is—

A beam and tooth fastening for harrows, consisting of the straight parallel bars A A, socket-bands B B, and teeth C C, combined as and for the purpose specified.

HIRAM SAFFORD SMITH.

Witnesses:
C. C. KIMMAN,
A. N. KIMMAN.