

(No Model.)

J. B. MORRISON.
HARROW.

No. 532,332.

Patented Jan. 8, 1895.

Fig. 1.

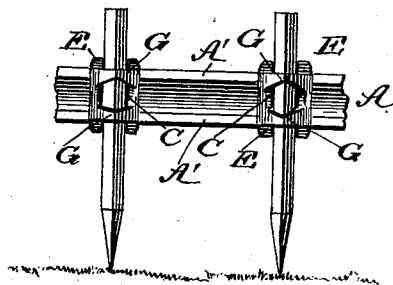


Fig. 2.

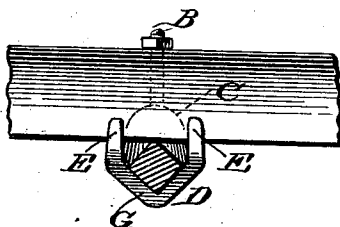


Fig. 3.

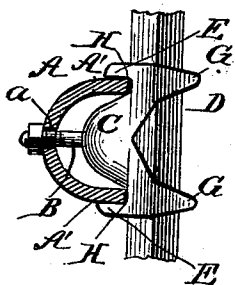
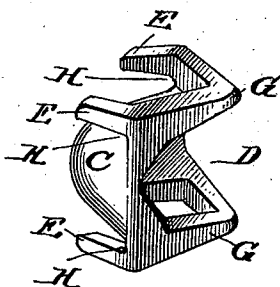


Fig. 4.



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JOSEPH B. MORRISON, OF FORT MADISON, IOWA.

HARROW.

SPECIFICATION forming part of Letters Patent No. 532,332, dated January 8, 1895.

Application filed January 15, 1894. Serial No. 496,927. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. MORRISON, of Fort Madison, in the county of Lee and State of Iowa, have invented a new and useful Improvement in Harrows, of which the following is a specification.

My invention is an improvement in harrows and especially in that class of harrows in which the beams are formed of channeled or double-flanged iron and the invention has for its object among others to provide a tooth holder which laps outside of as well as fits within the channeled beam.

The invention has for further objects other improvements and consists in the novel constructions and combinations of parts as will be hereinafter described and pointed out in the claim.

In the drawings—Figure 1 is a face view. Fig. 2 is a top plan view; Fig. 3, a sectional view of a harrow beam provided with my improvements, and Fig. 4 is a detail view of the holder.

The harrow frame is formed with beams A of channeled or double-flanged metal as shown and the frame may be of any desired style, the beams being arranged with their flanges one above the other and the hollow of the beam opening laterally. This beam has bolt holes *a* at intervals for the bolt B which secures the tooth holder. This bolt connects with the body C of the tooth holder D in any suitable manner, passes through the hole *a* and is suitably secured.

The tooth holder D is formed with the body portion C which fits between the flanges of the beam B and with the lugs or ears E which lap over and fit against the outer sides of the flanges A' of the beam. These lugs or ears are preferably four in number, two above and two below, one at each side of the tooth seat

F. In fact these ears are in the nature of extensions of the clamp like cross pieces G which form the seat for the tooth firmly against the harrow beam as the securing bolt is tightened.

My improved tooth holder not only clamps the tooth firmly in position but also braces the beam as the grooves H H between the ears and the body C receive the edges of the flanges and serve to brace same firmly. Thus at each tooth the holder not only serves its primary purpose of securing the tooth; but also operates to brace and give rigidity to the beam and prevent the strain of the pressure against the tooth from causing the holder to force the flanges of the beam apart and thus loosen the fit of the holder between said flanges. This results from providing the tooth holder with the overlapping portions or ears fitting outside said flanges as shown.

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

As a new and improved article of manufacture, the harrow tooth holder herein described composed of the body portion, the upper and lower laterally projecting clamps which fit around the tooth, the inner ends of the side arms of said clamps being extended or prolonged over the body, forming flange like portions, said flange like portions being separated from the body to form a seat for the rail plates and separated from each other to avoid any obstruction to clamping the tooth against the rail, all substantially as and for the purposes set forth.

JOSEPH B. MORRISON.

Witnesses:

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