

No. 668,937.

Patented Feb. 26, 1901.

M. J. TODD.

HARROW TOOTH AND HOLDER THEREFOR.

(Application filed May 16, 1900.)

(No Model.)

Fig. 1.

Fig. 2.

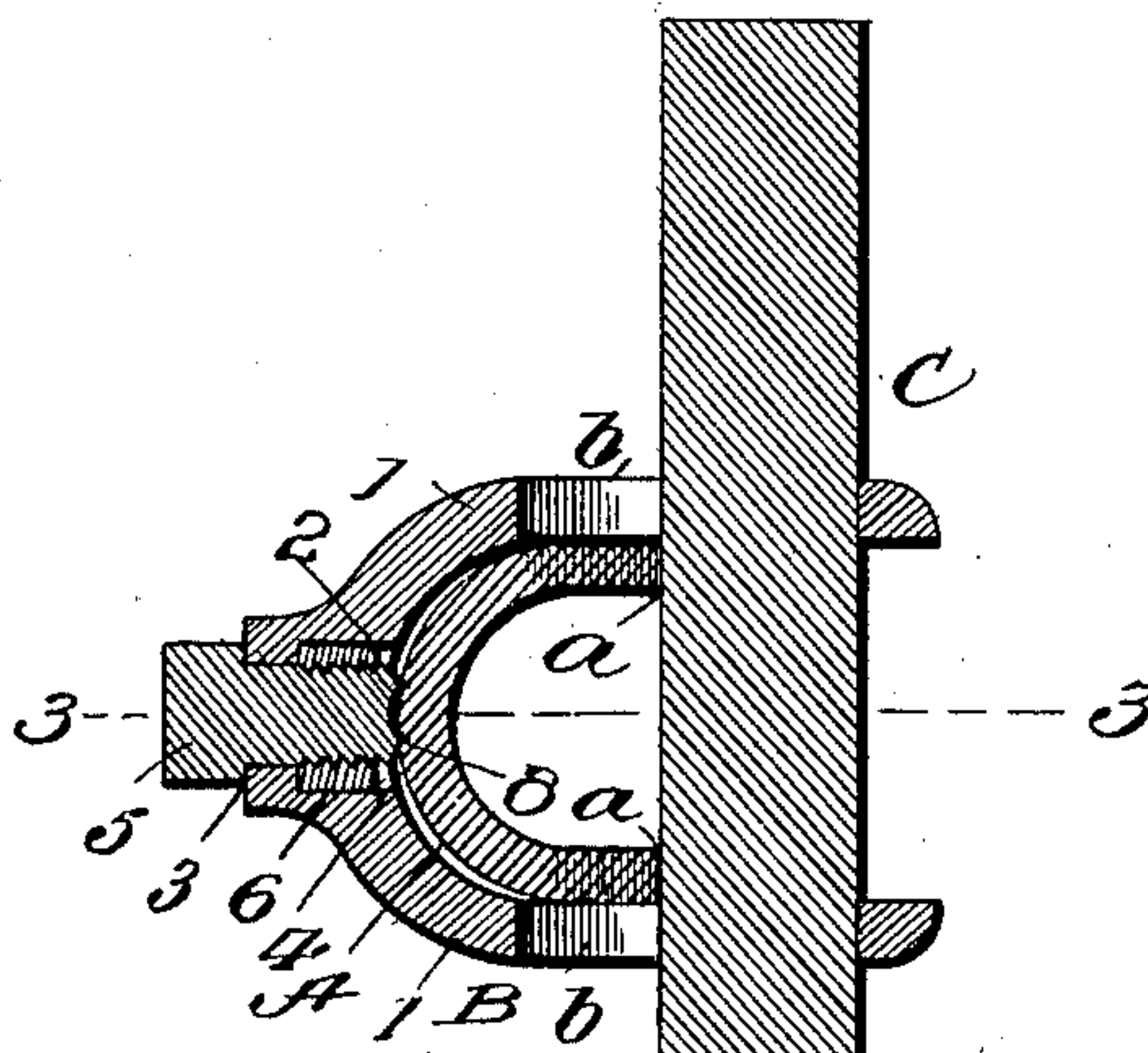
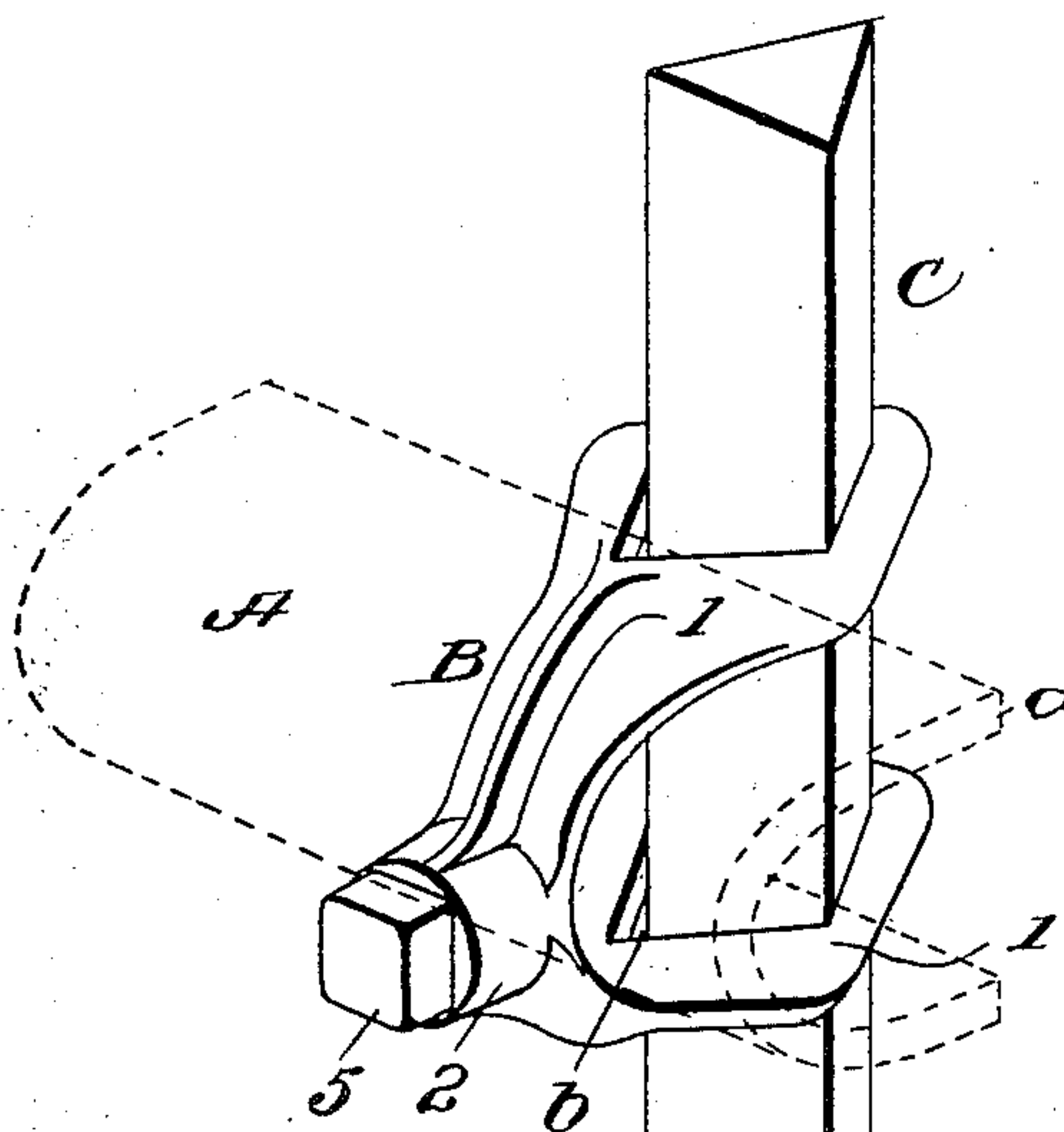


Fig. 3.

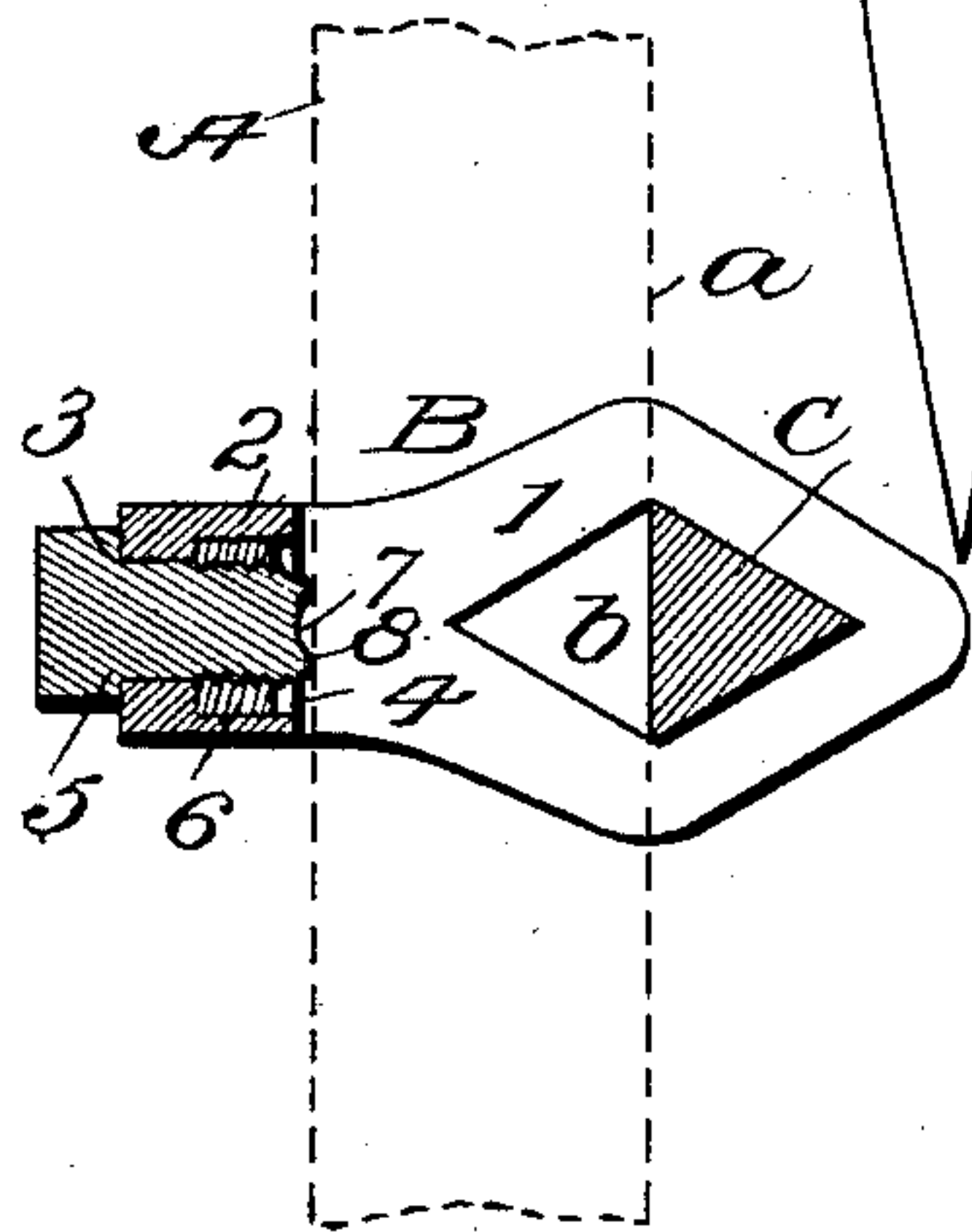


Fig. 4.

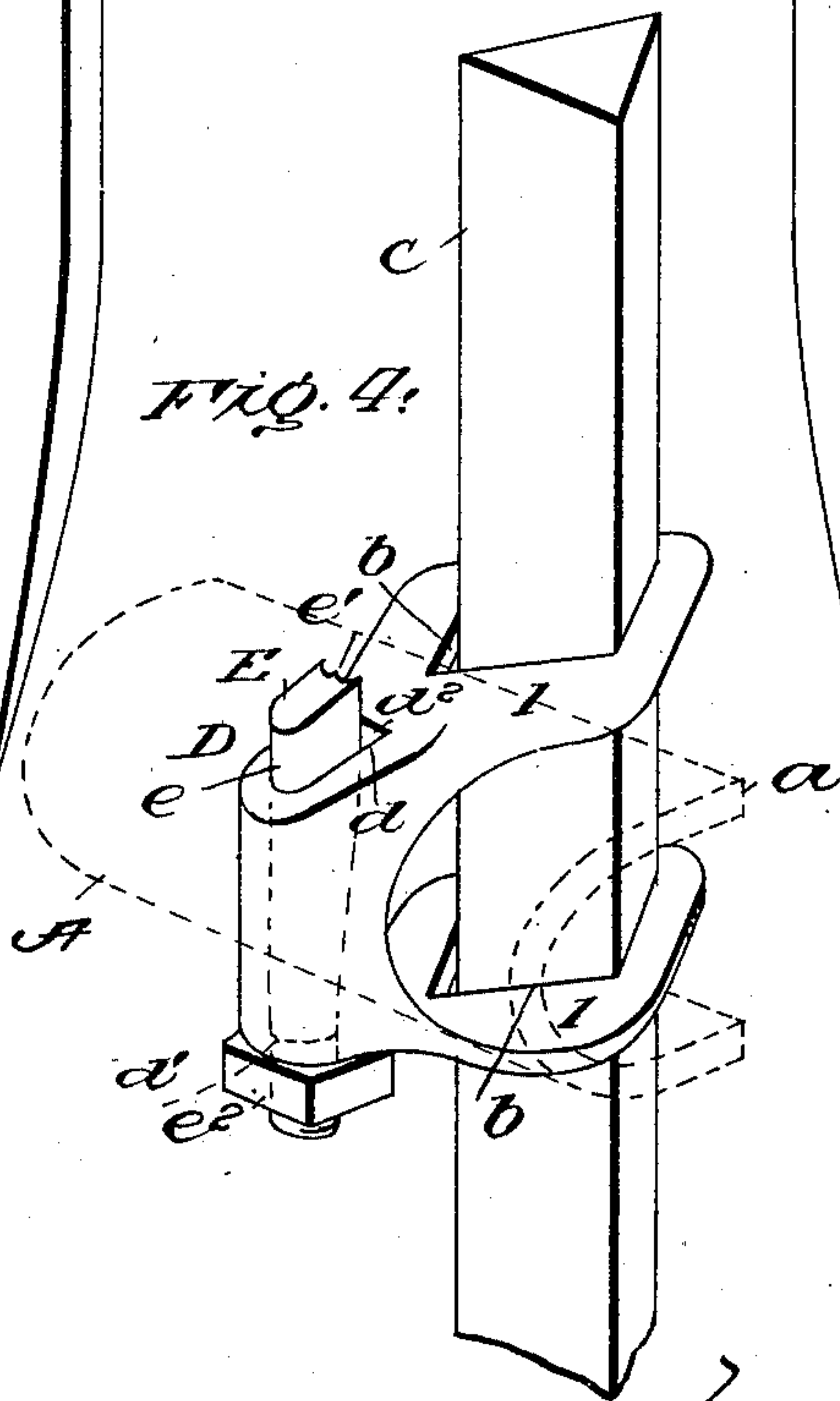
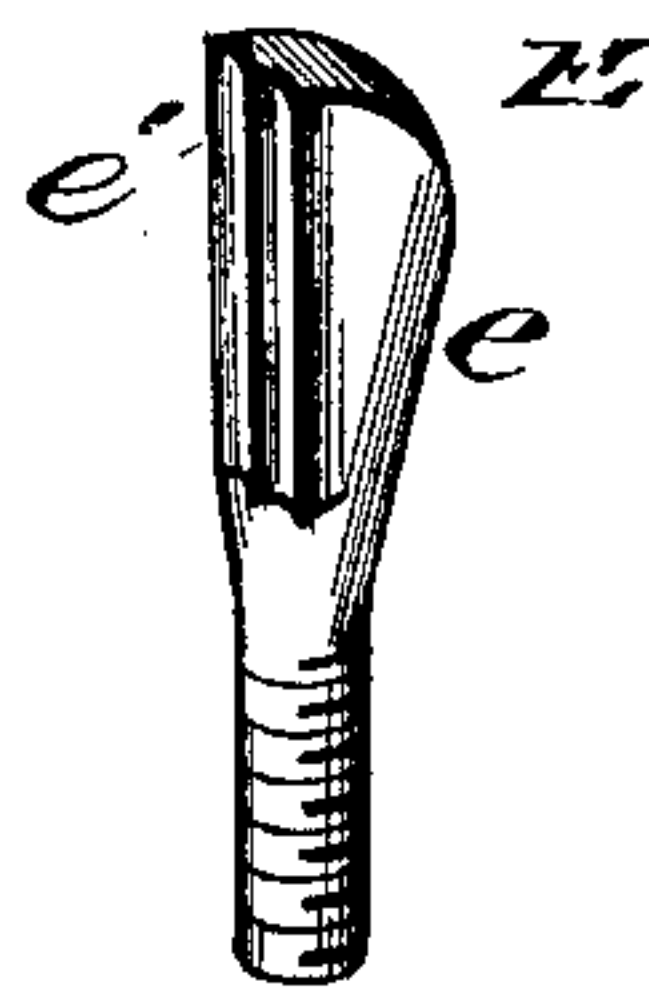


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

MARQUIS J. TODD, OF BUFFALO, NEW YORK, ASSIGNOR TO BUFFALO PITTS COMPANY, OF SAME PLACE.

## HARROW-TOOTH AND HOLDER THEREFOR.

SPECIFICATION forming part of Letters Patent No. 668,937, dated February 26, 1901.

Application filed May 16, 1900. Serial No. 16,912. (No model.)

*To all whom it may concern:*

Be it known that I, MARQUIS J. TODD, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Harrow-Teeth and Holders Therefor; 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 contemplates certain new and useful improvements in harrow-teeth and holders therefor, having reference to the class of harrows employing spike-teeth.

The primary object of the invention is to provide a harrow-tooth having a plurality of cutting edges, so that when one cutting edge becomes worn another edge may be utilized.

A further object is to provide a tooth which will be held firmly to its seat as against slipping.

A further object is to provide a holder having securing means which, in addition to binding the holder to the frame and bar, will bite into the surface of the latter and hold it as against longitudinal movement on such bar.

The invention will be hereinafter fully set forth, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a view in perspective. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a horizontal sectional view on line 3-3, Fig. 2. Fig. 4 is a perspective view of slightly-modified means for securing the holder to its bar. Fig. 5 is a detached view of the holding-bolt shown in Fig. 4.

Referring to the drawings, A designates a section of a harrow-frame bar of U shape in cross-section, which in practice has its straight edges *a* faced toward the front of the harrow.

B designates the holder, and C the harrow-tooth. The latter is shown as being of triangular formation in cross-section and the former as having diamond-shaped openings *b* therein to accommodate the tooth, two of the sides of the latter bearing against two divergent sides of the openings *b*, while the remaining or third side of the tooth is seated against edges *a*. The holder B is in the form of a clip encircling bar A. The openings *b* are in

the upper and lower ends 1, which project in advance of the bar, so that when the clip is locked to the bar the tooth will be bound against its seat with one of its cutting edges facing forward. When this edge becomes worn, it is only necessary to loosen up the clip sufficiently to permit the tooth to be withdrawn and then reinserted with another edge faced forwardly. That portion of the clip encircling the bar A is formed at its center with a chambered boss 2 and a threadless opening 3. Through this opening is passed a threaded bolt 5, which engages a nut 6 within the chamber 4. The inner end of bolt 5 is formed with a central concavity 7 and a cutting edge 8. When the bolt is turned, the nut will be drawn against the outer end of the chamber 4 and the inner end of the bolt will cut into the bar. In this way not only is the clip caused to bind the tooth to its seat against the edges of the bar, but the bolt by cutting into the latter will prevent the holder from having any longitudinal displacement on the bar.

In Fig. 4 I have shown the holder D as being formed at its rear with a vertical opening *d*, terminating at the bottom in a round hole *d'*, the upper portion of such opening being elongated at *d''*. Through this opening is passed a threaded bolt E, having a wedge-shaped head *e*, the forward face of which is formed with cutting edges *e'*, whereby when the nut *e''* is tightened up the edges *e'* will cut into the bar A and prevent the holder from moving longitudinally thereof. To reposition the tooth when a fresh cutting edge is desired or to substitute a new tooth, it is only necessary to remove nut *e''* and force the bolt upward.

The advantages of this invention are apparent. It will be observed that the spike-tooth has its seat against the forward flat edges of the frame-bar and is also held by two conforming portions of the holder. By making the tooth of triangular formation its firm seating is insured and a plurality of cutting edges are obtained. By forming the binding-bolts with cutting edges the moving of the holders on their bars is rendered impossible.

I claim as my invention—

The combination with a harrow-bar, of a

harrow-tooth of triangular formation in cross-section, a holder having openings, the walls of which conform to two sides of such tooth for binding one of the sides of the latter  
5 against said bar, said holder also having a projection formed with an opening, a threaded bolt inserted through said opening having a cutting edge, and a nut whereby the cutting edge of said bolt will bite the harrow-

bar in securing the holder thereto, as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARQUIS J. TODD.

Witnesses:

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