(No Model.)

# A. B. FARQUHAR.

## HOLDER FOR HARROW TEETH.

No. 492,326. Patented Feb. 21, 1893.

Fig. 1.

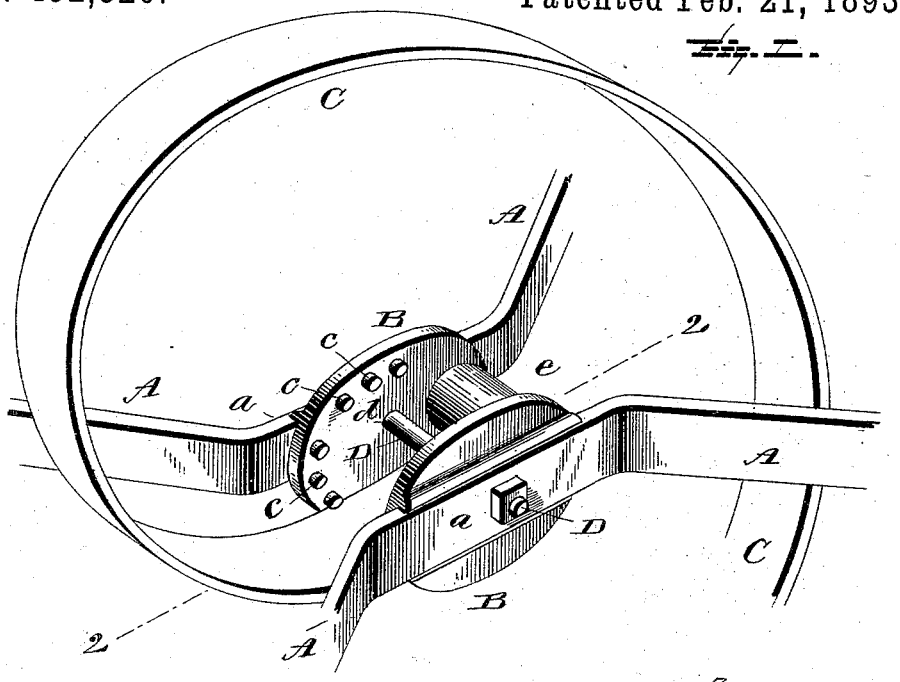



Fig. 2.

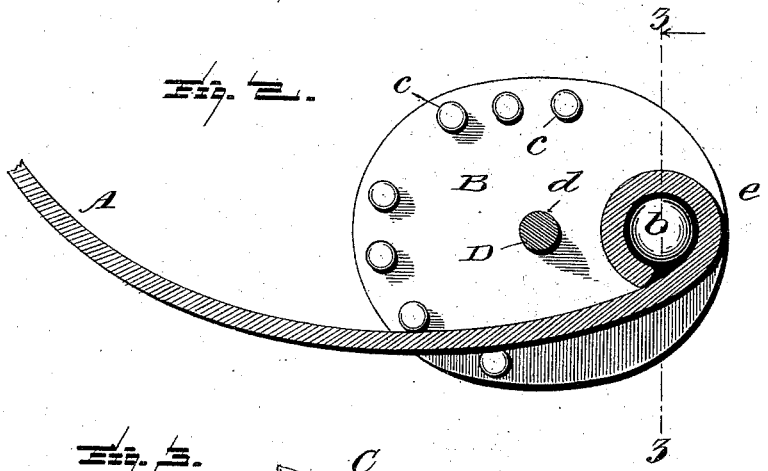
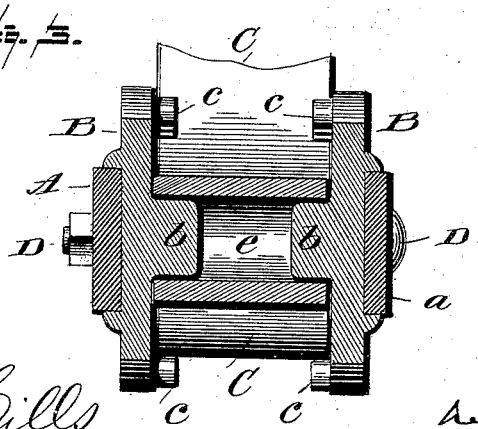



Fig. 3.




Witnesses
L. C. Hills.
Lowell Dick

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# UNITED STATES PATENT OFFICE.

ARTHUR B. FARQUHAR, OF YORK, PENNSYLVANIA.

## HOLDER FOR HARROW-TEETH.

SPECIFICATION forming part of Letters Patent No. 492,326, dated February 21, 1893.

Application filed April 5, 1892. Serial No. 427,907. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR B. FARQUHAR, of York, in the State of Pennsylvania, have invented a new and useful Improvement in Holders for Harrow-Teeth, of which the following is a specification.

The holder embodying my invention is one in which the tooth is pivotally mounted between plates having on their interior opposite faces sets of lugs or projections between which the tooth is received and held at its edges,—the plates being connected by a bolt or other fastening which closes them together upon the edges of the tooth. Such a holder broadly considered is not new with me, it being shown for example in Letters Patent No. 468,446 of February 9, 1892. In all prior instances however of which I have knowledge, the bolt which connects the plates also forms the pivot on which the tooth, or the hub to which it is connected, is mounted. In my holder this is not the case. The construction moreover is simplified, the plates are better and more securely held in the frame, and there is not that liability of the plates cocking, spreading or springing in the frame that there is when the bolt is at one end of the plates and arranged to form a pivot for the tooth.

In the accompanying drawings—Figure 1 is a perspective view of a single harrow tooth with its holder and the parts of the harrow frame to which the same is attached. Fig. 2 is a section on line 2—2, Fig. 1. Fig. 3 is a section on line 3—3, Fig. 1.

The harrow frame is one of that kind—old in the art—which is composed of zigzag straps A having at the bends short parallel faces *a* between which the teeth are fastened.

The holder consists of two cheek plates B—each the counterpart of the other, so that a description of one will answer for both. Each plate on its external face has a groove to receive the part *a* of the frame; and on its inner face it has near one end a lug *b*, near the other end a series of projections *c*, and at a point between the two, a hole *d*. The tooth C—which is a spring tooth—has at the end which is to be secured in the holder a hub *e;* and this hub can conveniently be provided, by coiling the end of the tooth onto itself to form an eye, as shown.

Such is the construction of the parts. They are fitted together in the following manner: The plates and tooth are put together—the hub *e* of the tooth fitting upon the lugs *b* of plates, and the tooth at its edges being entered between those projections *c* on the plates, which will insure the requisite set and depth of penetration of the tooth. They are then fitted between the parts *a* of the frame straps—these parts entering the external grooves in the plates. After this is done the bolt D is passed through the frame straps *a* and the holes *d* in the plates, and then by the nut on the bolt the parts are drawn tightly together. The drawing and clamping action is exerted at a point intermediate the hub or pivot of the tooth, and the point where it passes between the projections *c;* and in this way I obtain a pivoted adjustable tooth in which the power to draw and hold the plates upon the teeth is applied between the two points named, and in such a way that the clamping action is even and thorough throughout the whole length of the plates.

It will be noted that some of the projections *c* lie above a horizontal plane passing through the bolt and the pivot of the tooth, and some below that plane. But in order to shift the tooth from projections *c* above this plane to projections below, or vice versa, all that is needed is to remove the bolt D, then adjust the tooth as desired, and then replace the bolt—an operation which can be performed with ease. The bolt is in no sense a pivot bolt; and the pivot of the tooth has nothing to do with the holding or clamping of the parts.

Having described my improvement, what I claim, and desire to secure by Letters Patent, is—

The combination with the harrow frame of the cheek plates B having on their interior opposite faces each a lug *b* near one end, a

series of projections *c* near the other end, and a bolt hole *d* intermediate of these points, the tooth having a hub or eye to engage said lugs *b*, and adjustable and extending between the selected ones of the oppositely arranged projections *c*, and the bolt passing through the frame and the bolt holes *d* of the cheek plates, and acting to draw and hold all of the parts firmly together as herein shown and described.

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

A. B. FARQUHAR.

Witnesses:
EWELL A. DICK,
VINTON COOMBS.