

No. 647,059.

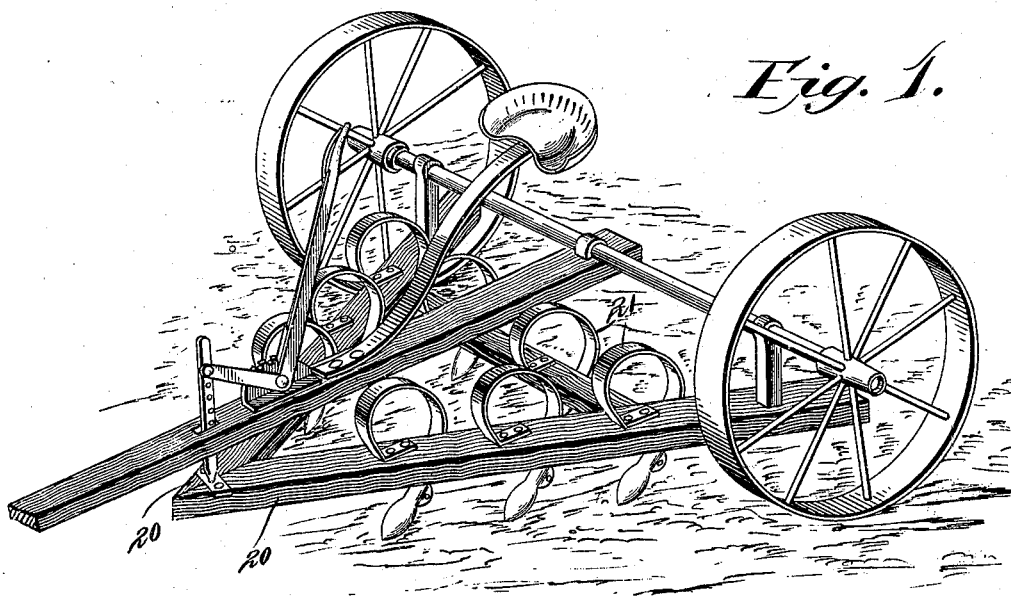
Patented Apr. 10, 1900.

W. D. WHITNEY.  
HARROW TOOTH.

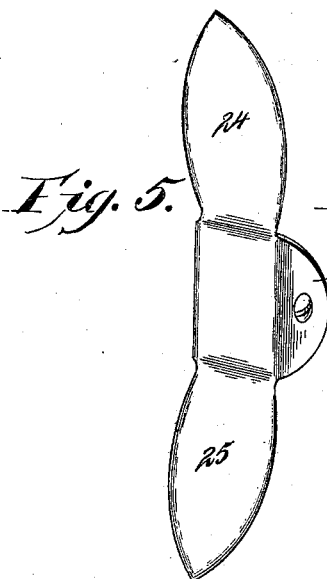
(Application filed Oct. 2, 1899.)

(No Model.)

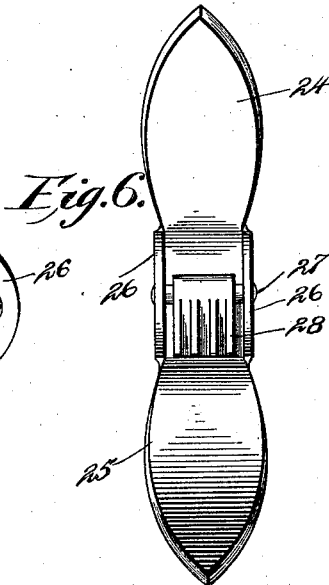
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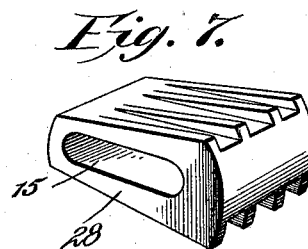
*Fig. 1.*



*Fig. 5.*



*Fig. 6.*



*Fig. 7.*

Witnesses  
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*Geo. H. Chandler*

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2 Sheets—Sheet 2.

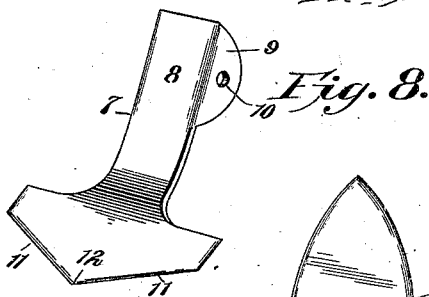
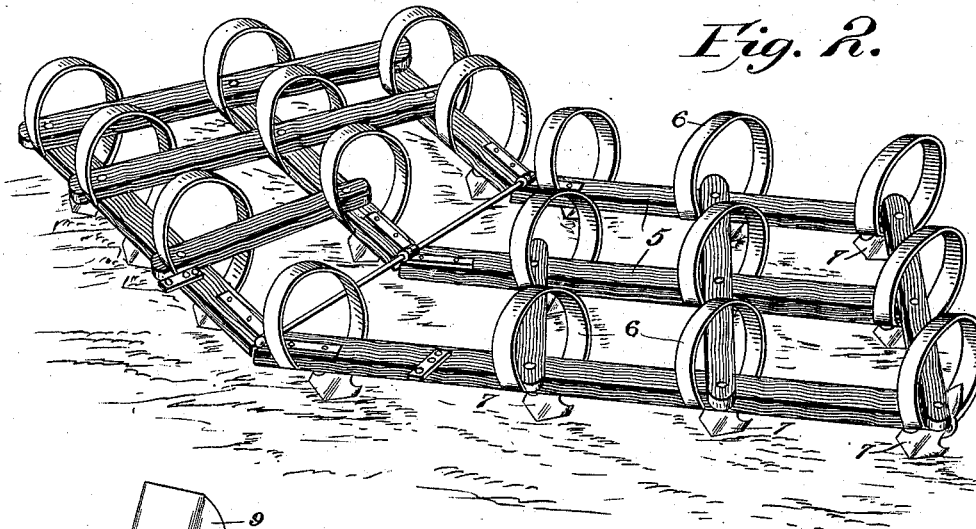


Fig. 3.

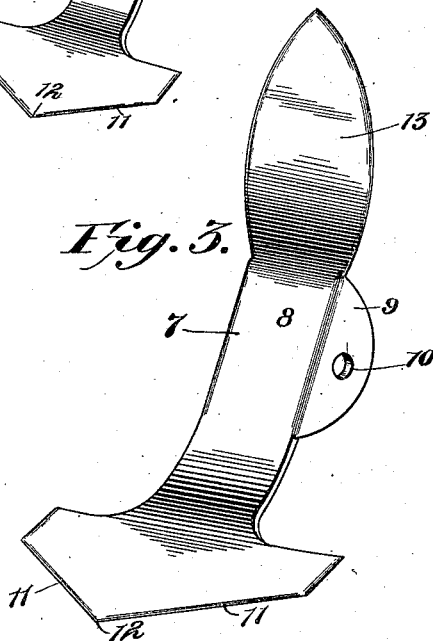
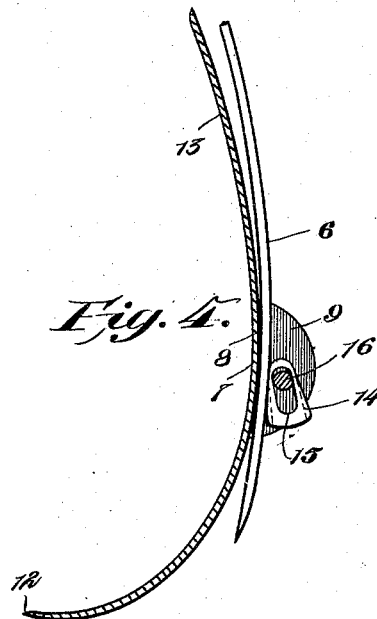


Fig. 4.



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# UNITED STATES PATENT OFFICE.

WILLIE D. WHITNEY, OF CLARENDON, NEW YORK.

## HARROW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 647,059, dated April 10, 1900.

Application filed October 2, 1899. Serial No. 732,389. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIE D. WHITNEY, a citizen of the United States, residing at Clarendon, in the county of Orleans and State of New York, have invented a new and useful Harrow-Tooth, of which the following is a specification.

This invention relates to harrows in general, and more particularly to that class having adjustable and reversible teeth; and it has a specific reference to the construction of the teeth and the method or means for holding the teeth in their adjusted positions, the object of the invention being to provide teeth which may be reversed for operation under different conditions and to provide a simple and efficient means for holding these teeth fixedly when thus adjusted.

In the drawings forming a portion of this specification, and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a perspective view showing one form of harrow-teeth applied to the usual spring-teeth for a wheeled harrow. Fig. 2 is a perspective view showing a different form of tooth applied to the usual spring-tooth of a drag-harrow. Fig. 3 is a detail perspective showing one form of reversible tooth. Fig. 4 is a longitudinal central section of Fig. 3 with the locking means attached as showing the application of the tooth to the usual spring harrow-tooth. Fig. 5 is a detail perspective of a different form of harrow-tooth which is detachable and reversible. Fig. 6 is a rear elevation of Fig. 5 with the locking-wedge in place. Fig. 7 is a detail perspective view of the locking-wedge. Fig. 8 is a perspective view of a third form of tooth, which is similar to that shown in Fig. 3, with the omission of one end portion.

Referring now to the drawings, and more particularly to Fig. 2 thereof, 5 represents the beams of a common form of drag-harrow, and which beams form frames which are hinged together and have attached to them spiral-spring harrow-teeth 6, the outer ends of said teeth being disposed downwardly and forwardly to engage the earth. Upon each of the usual teeth 6, which are employed in this instance merely as supports or hangers, is secured a reversible and adjustable tooth 7.

This tooth consists of a plate one end of which is substantially oval in outline, the sides of said end fading into the body portion of the tooth before the formation of the usual rounded end of the oval. The body portion 8 of the tooth is substantially rectangular and the sides are parallel, flanges 9 being formed at the side edges by bending the material rearwardly and parallel. In these flanges are formed alining perforations 10 for a purpose which will be presently explained. The opposite end of the tooth 7 is broadened and the front edge thereof is cut on converging lines 11, lying at a wide angle, resulting in the formation of a blunt point 12, which lies in the axis of the tooth. The outline of the ends of the tooth at the outer ends of the lines 11 is continued rearwardly and parallel and then curved inwardly and rearwardly to coincide with the outline of the body portion, the result being a tooth having a minor end 13 which is substantially pear-shaped and a major end 9 which is much broader and the cutting edges of which are bounded by straight lines meeting at an angle or point, the body portion connecting these ends having its sides substantially parallel. In order to secure this tooth upon its support and which support is the tooth 6, a wedge 14 has a transverse slot 15 formed therein, and which slot is broadened longitudinally of the webs and receives a bolt or pin 16, passed through the perforations 10. The proportions of the parts are such that when the pin 16 lies at that end of the slot 15 adjacent to the point of the wedge a spring-tooth 6 may be passed between the wedge and the adjacent surface of the tooth 7. If the wedge be then moved forwardly, it will impinge upon the tooth 6 and clamp it against the tooth 7. As shown in Fig. 4 of the drawings, the wedge is moved downwardly into its clamping position, and thus the rearward strain on the tooth 7 tends to force the pin 16 rearwardly of the slot 15, and thus to intensify the clamping action of the wedge. In order to assist the holding qualities of the wedge, it is corrugated longitudinally, as shown in Figs. 6 and 7. When it is desired to remove the tooth to reverse it, the wedge is knocked upwardly and the tooth is then withdrawn from its support, when it may be reversed

and applied and the wedge again driven into place.

Referring to Figs. 1, 5, and 6, 20 represents converging beams of a wheeled harrow of common form and to which are fastened spiral-spring teeth 21, having a different form of reversible teeth fixed thereto. The second form of tooth is similar in every respect to that shown in Fig. 3, with the exception that both ends 24 and 25 are pear-shaped and like the end 13 of the first-described tooth. This tooth is provided with flanges 26, which extend rearwardly from its body portion, and has a transverse pin 27 passed through perforations in these flanges and upon which is arranged a longitudinally-corrugated wedge 28. This form of tooth is adapted for application to the spring-tooth in the same manner as above described and is reversible.

It will of course be understood that the wedge-block shown may be applied in connection with any other device to which it is applicable, and it will be noted that with this construction and arrangement of the wedge it is held permanently attached to the tooth and may be rocked from one side to the other to be applied in the proper direction with respect to the tooth.

In Fig. 8 of the drawings there is shown a form of tooth which comprises a body portion 8, rearwardly-bent portions 9, having perforations 10, and a broadened end portion having cutting edges 11 and the point 12. In this form of tooth the minor end 13 (shown in Fig. 3) is omitted, this tooth never being reversible.

What is claimed is—

1. A harrow-tooth comprising a body portion, the material of which is bent at its sides to form parallel flanges, a pin mounted in the flanges, and a wedge-block having a longitudinal slot through which the pin is passed and adapted for oscillation upon the pin to project in opposite directions longitudinally of the tooth.

2. A harrow-tooth comprising a body portion having the material thereof bent at its edges to form parallel flanges, a pin mounted in the flanges, and a wedge-block having a longitudinal slot through which the pin is passed and upon which it is adapted for oscillation to lie longitudinally of the tooth in opposite directions, the exterior of the wedge being corrugated.

3. A harrow-tooth, comprising a body portion having the material thereof bent at its edges to form parallel flanges, a pin mounted in the flanges, and a wedge-block having longitudinal corrugations and provided with a transverse slot through which the pin is passed and upon which pin the wedge is reversible and movable to project in opposite directions and exert a clamping action against the tooth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIE D. WHITNEY.

Witnesses:

CHARLES BIDELMAN,  
DAN H. COLE.