

(No Model.)

W. H. PATTEN.
HORSE RAKE TOOTH.

No. 375,892.

Patented Jan. 3, 1888.

Fig. 1.

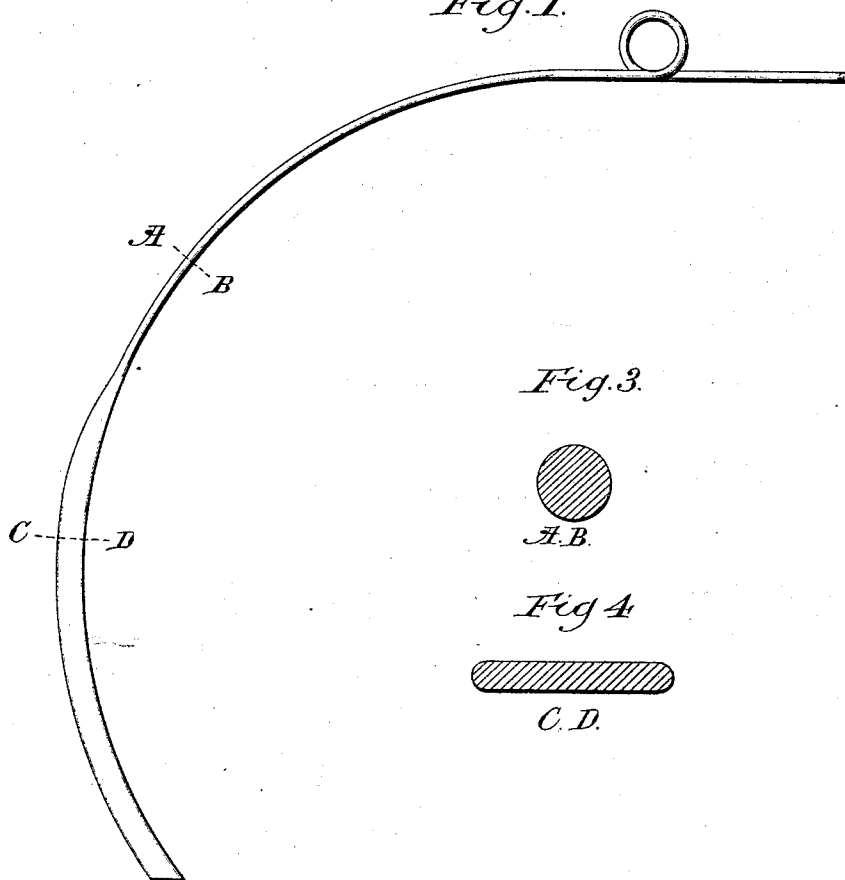


Fig. 3.

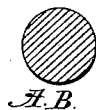
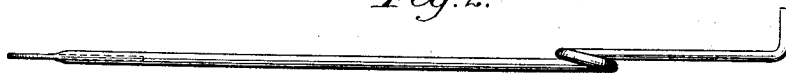


Fig. 4.



Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM H. PATTEN, OF CANASTOTA, NEW YORK.

HORSE-RAKE TOOTH.

SPECIFICATION forming part of Letters Patent No. 375,892, dated January 3, 1888.

Application filed November 11, 1886. Serial No. 218,647. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PATTEN, of Canastota, in the county of Madison and State of New York, have invented certain new and useful Improvements in Horse-Rake Teeth; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to an improvement in wheel-rake teeth, hereinafter more fully pointed out and claimed.

In the accompanying drawings, Figure 1 represents a side view of my improved tooth. Fig. 2 represents an edge view of the same. Fig. 3 represents a cross-section on line A B, and Fig. 4 represents a cross-section on line C D.

Heretofore rake-teeth have been constructed in oblong shape in cross-section, which has been found in use to be objectionable for the reason that they have not the required elasticity at the point where the strain comes, which produces excessive breakage in the teeth and renders the same objectionable in passing obstructions in raking; but the same for the reasons stated have been substantially discarded. Round teeth have also been provided and used for many years as less objectionable than other forms of teeth. These, however, are found in use to have points of objection, prominent among which are, first, a tendency to wear round at the point, and, second, the strain of the tooth in heavy raking is from the point to its head, which renders it quite objectionable when the rake is subjected to heavy work. Rake-teeth have also been heretofore provided with flattened points having a convex heel or surface on which the tooth rides when in use. Teeth of this construction are objectionable, as the convex heel soon wears off, when the same objections arise to this form of tooth as that specified and urged against round teeth in cross-section. Teeth having the points slightly flattened with a convex heel are objectionable upon the further ground that the heel soon wears off, leaving the front

edge of the flattened portion of the tooth in such shape that the tooth engages and holds fast to obstructions with which they come in contact, and where the front flattened portion of the tooth is broader than the rear or convex heel difficulty is encountered in raking damp or wet hay, the peculiar construction of the tooth being such that the hay will clog on the point.

For remedying the defects pointed out in other forms of teeth, whether round or oblong in cross-section throughout their entire length, I provide teeth partially round and partially flat in cross-section throughout their length, so appportioned as to give the proper elasticity to the tooth at the point where the elasticity is required and to remove the elasticity from that part of the tooth where it is objectionable. I attain these beneficial results by providing steel bars rolled or forged round in cross-section throughout their length of suitable size, the same being curved into shape required for use on wheel-rakes, the upper portion of the tooth having suitable convolutions, if required. At about one-third the length of the tooth from the point the tooth is widened and flattened, and the width and thickness of the flattened part are uniform throughout their length, the flattened portion of the tooth being the part next to the point, thereby reducing the quantity of stock required in a round tooth in cross-section of the same length. By flattening and widening the lower portion of the tooth in cross-section the springing tendency thereof encountered in round teeth is overcome in that part of the tooth which is flattened. The flattened portion of the tooth at the point is then cut off in a straight line, forming an acute angle at the inner point of the tooth, thereby forming a wide wearing-surface, obviating the objectionable feature of the flattened point having a convex heel. By this construction the tooth is formed with front and rear lines of the curve substantially parallel with each other from the beginning of the flattened portion to the point of the tooth, thereby preventing clogging of the hay at the point of the tooth in damp raking and enabling the teeth to be freed with ease from the hay when the rake is dumped.

By flattening the teeth upon their side from

a point slightly below their middle to the point the two edges of the flattened portion present curved parallel lines from the beginning of the flattened portion to the point, forming teeth practically without spring in the flattened portion. The teeth, being wide in cross section at their point, form a reliable wearing-surface until the teeth are worn out.

What I claim as new, and desire to secure by Letters Patent, is—

1. A round curved rake-tooth flattened on its sides from near the middle toward the point, the front and rear lines of the curve substantially parallel with each other from the beginning of the flattened portion of the tooth to the point, forming a broad section, and the point cut from rear to front in a straight line,

forming an acute angle on the inner front point of the tooth, substantially as set forth.

2. A round spring rake-tooth flattened on its sides from near the middle of the tooth to the point thereof, the front and rear lines of curve substantially parallel with each other, and having the flattened end cut in straight line from front to rear, forming an acute angle on the front point of the tooth and a wide straight wearing-surface on the lower end of the tooth.

In witness whereof I have affixed my signature in presence of two witnesses.

WILLIAM H. PATTEN.

Witnesses:

EDWIN H. RISLEY,

D. MCGUCKEN.