No. 673,423. Patented May 7, 1901.

A. M. CUPPLES.

TOOTH FOR EXCAVATOR BUCKETS.

(Application filed Oct. 25, 1900.)

(No Model.)

Fig. 1.

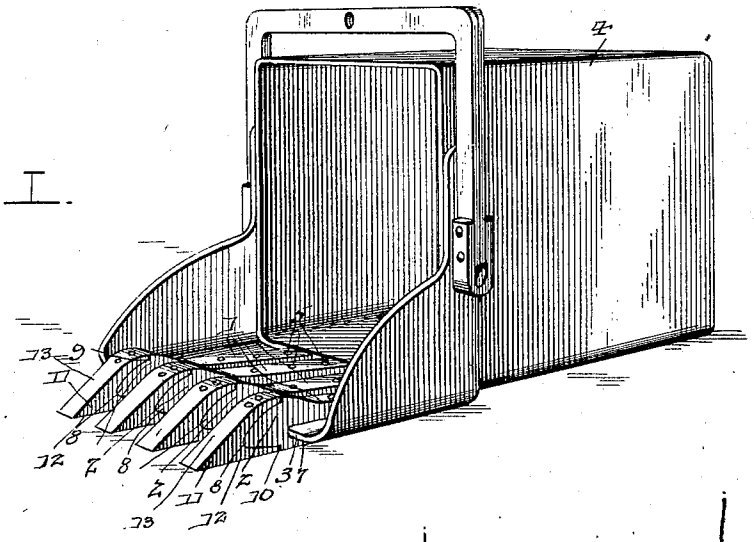


Fig. 2.

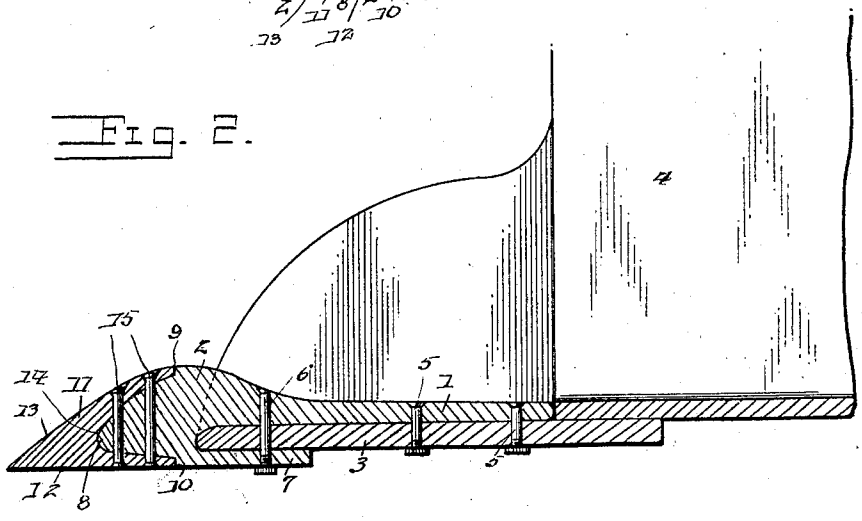
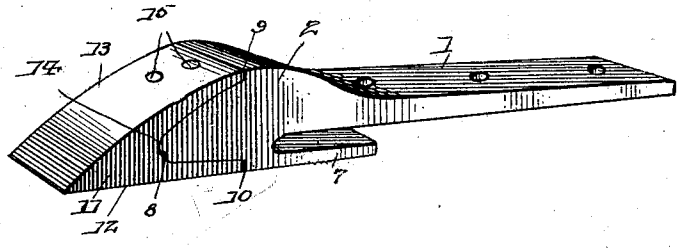


Fig. 3.



Witnesses
F. E. Allen.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANDREW M. CUPPLES, OF TYRONE, PENNSYLVANIA.

TOOTH FOR EXCAVATOR-BUCKETS.

SPECIFICATION forming part of Letters Patent No. 673,423, dated May 7, 1901.

Application filed October 25, 1900. Serial No. 34,318. (No model.)

To all whom it may concern:

Be it known that I, ANDREW M. CUPPLES, a citizen of the United States, residing at Tyrone, in the county of Blair and State of Pennsylvania, have invented a new and useful Tooth for Excavator-Buckets, of which the following is a specification.

This invention relates to excavators and dredges, and has for its object to provide an improved dipper-tooth for the excavating-buckets thereof. It is furthermore designed to arrange for replacing the point of the tooth when worn or damaged without destroying or doing away with the shank of the tooth and also to arrange the removable point so as to permit of an adjustment of the jaws thereof to properly fit the nosepiece of a bucket.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a dipper-bucket having the improved teeth applied thereto. Fig. 2 is an enlarged detail sectional view taken through one of the teeth and the adjacent bottom portion of the bucket. Fig. 3 is a detail perspective view of a tooth having the improved removable point.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, 1 designates the flat shank of the improved tooth, which is provided at its front end with a segmental enlarged head 2, the upper face of which is convex and merges into the upper flat face of the shank, while the bottom face of the head is offset below the bottom face of the shank and is flat. The shoulder formed by the lower portion of the head is slotted or bifurcated for the reception of the bottom edge of the nose 3 of the common or ordinary bucket 4, as indicated in Figs. 1 and 2 of the drawings. The upper wall of this bifurcation is flush with the under side of the shank, so that the latter may lie flat against the nosepiece or bottom of the bucket, to which the shank is connected by means of the fastenings 5, passing through the nosepiece and the shank, and the other fastening 6, passing through the shank, the nosepiece, and the offset shoulder portion of the head or jaw 7. It will now be observed that the bifurcation forms opposite jaws 1 and 7, which are designed to snugly embrace the front bottom edge of the bucket or the nosepiece thereof, as the case may be. The outer end of the enlarged head tapers outwardly into a blunt nose 8, which is reduced vertically, so as to form the upper transverse shoulder 9 and the bottom shoulder 10, which are in vertical alinement, and are also located in advance of the inner end of the bifurcated rear portion of the head, and therefore in advance of the bottom edge of the bucket.

The removable point 11 is formed of steel, so as to withstand the wear, and is substantially triangular in shape, having a flat bottom edge 12 and an upwardly and rearwardly inclined upper edge 13, which merges into the convex upper edge of the head 2. The rear or inner butt end of this point is provided with a socket 14, which is open at opposite sides and is of the same shape and size as the nose portion of the head, which is designed to fit snugly within said socket with the upper and lower rear edges or shoulders of the point abutting snugly against the respective shoulders of the head. Suitable fastenings, such as rivets 15, are passed through the removable point and the nose portion of the head, so as to firmly connect these parts.

It will be observed that by reducing the nose portion of the tooth the top and bottom of the point are flush with the corresponding portions of the tooth, so as to present no projections or obstructions to interfere with the forward progress of the bucket and prevent a free entrance of the excavated material into the bucket. Moreover, the rear end of the point terminates in advance of the inner end of the bifurcated portion of the head, and therefore the opposite jaws 1 and 7 are free to be forcibly spread or drawn together

to fit the thickness of the bottom edge of a bucket, which is an important advantage of the present form of tooth.

What is claimed is—

1. A dipper-tooth for excavator-buckets, comprising a shank, having an enlarged head, which projects at opposite sides thereof, the rear end of one projecting portion having a longitudinal bifurcation forming opposite bendable jaws, the outer end of the head having a reduced nose, forming opposite transverse shoulders located in advance of the inner end of the bifurcation, and a removable hard point, having a socket snugly receiving the nose, the opposite rear edges of the point abutting against the respective shoulders of the nose, and a removable fastening passing through the point and the nose.

2. A dipper-tooth for excavator-buckets, comprising a head, opposite rearwardly-extending bendable jaws to embrace the edge of a bucket, and a removable hard point secured to the front end of the head and terminating short of the inner end of the bifurcation, which separates the jaws.

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

ANDREW M. CUPPLES.

Witnesses:

F. J. GATES,

C. O. TEMPLETON.