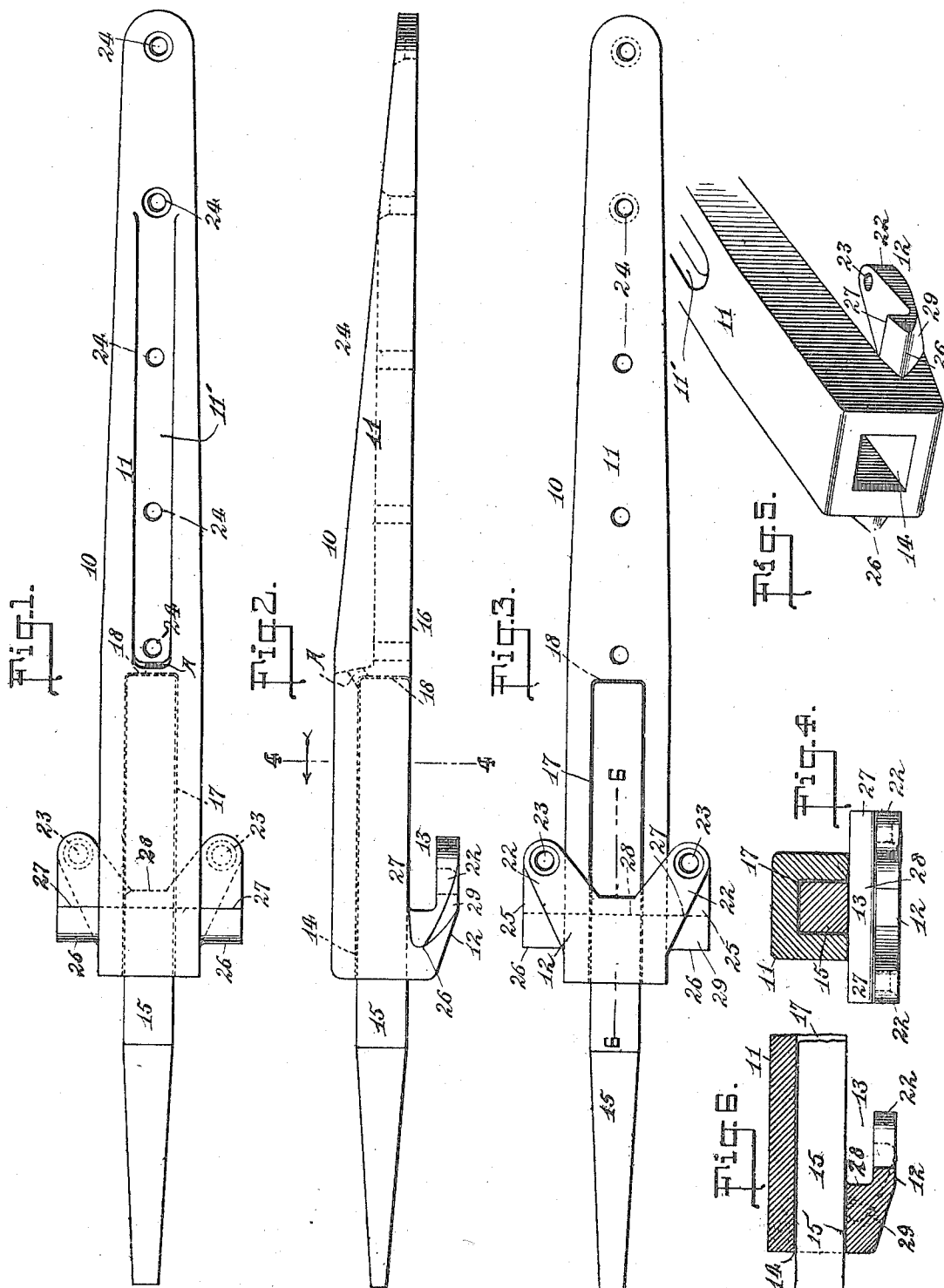


1,197,104.

Patented Sept. 5, 1916.



WITNESSES

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UNITED STATES PATENT OFFICE.

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DIPPER-TOOTH.

1,197,104.

Specification of Letters Patent.

Patented Sept. 5, 1916.

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To all whom it may concern:

Be it known that I, JOHN O'FALLON CLARK, Jr., a citizen of the United States, and a resident of St. Louis and State of Missouri, have made and invented certain new and useful Improvements in Dipper-Teeth, of which the following is a specification.

This invention relates to dipper teeth and more particularly to that type known as slag teeth.

An object of the present invention is to provide a dipper tooth, including a base and a removable point, so designed or constituted as to require no machining, allowing it to be formed of manganese or other extremely hard steel.

A further object is to provide a tooth base with a longitudinally extending aperture, the rear portion of which extends for a considerable distance beyond the rear edge of the lower jaw of the base, thus materially lightening the base without interfering with the requisite strength thereof.

A further object is to provide the lower jaw of the base with laterally extending portions, the fronts of which define cutting edges, and their rear portions forming up-standing shoulders, against which latter the front edge of the dipper abuts, materially reinforcing and preventing injury thereto.

Other objects will appear as the description proceeds, it being understood that changes in the precise embodiment of the invention can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing accompanying the specification and forming a part thereof, the preferred embodiment of the invention is illustrated, in which:—

Figure 1 is a top plan view of my improved dipper tooth. Fig. 2 is a view in side elevation thereof. Fig. 3 is a view in bottom plan of the dipper tooth. Fig. 4 is a cross-sectional view taken on the line 4—4 of Fig. 2. Fig. 5 is a view in perspective of the front extremity of the tooth base. Fig. 6 is a sectional view taken on the line 6—6 of Fig. 3.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, the improved dipper tooth includes the base 10 which is formed with an upper jaw 11 and

a lower jaw 12, the former being provided with a channel 11' extending along its upper surface whereby the entire tooth is materially lightened. A recess 13 extends between the jaws and is adapted to receive the front edge of a dipper bucket therein, to thus protect and reinforce that portion of the bucket which enters the earth or other material to be excavated.

The front extremity of the base is provided with a rearwardly extending and longitudinally disposed opening 14 into which the removable point 15 is detachably seated. The bottom wall 15' of the base opening is positioned in alinement with the lower surface 16 of the upper jaw, so that the rear portion of the base opening 14 will be formed as an open groove 17, the rear extremity 18 of which extends for a considerable distance to the rear of the rear extremity of the lower jaw, as illustrated in Fig. 2. The open groove which defines the rear extremity of the base opening provides that the lower and rear surface of the removable point will rest upon the bottom wall of the dipper bucket to which the tooth is applied, thus defining a tooth extremely light in weight and with the removable point thereof adapted to exert such forces directly upon the bucket as the latter is admirably adapted to withstand without wear or injury. In this connection, it is to be noted that the removable point and opening in which it seats are polygonal in cross-sectional contour and prevent the rotation of the point. A small opening A extends between the open groove 17 and the recess 11', allowing the removable point to be forcibly driven from its seated position within the opening 14.

The lower jaw is formed with the rearwardly diverging attaching plates 22 through which extend the rivet receiving apertures 23 providing for the securement of the base to a dipper bucket or scoop, the apertures 24, within the tapering portion of the upper jaw, being formed for a like purpose. Laterally extending members 25, project from the lower jaws and are preferably formed integral therewith, the said members being adapted to bridge the space intermediate two adjacent teeth and thus completely incase or protect the front extremity of the bucket or scoop. The laterally extending members are provided with the front cutting

edges 26 and define at their rear extremities the shoulders 27, the latter being in substantial alinement with the wall 28 of the recess 13, the shoulders 27 abutting against the front end edge of the dipper bucket are thus adapted to protect the same and at the same time relieve the holding rivets of considerable strain.

The outermost edges of the laterally extending members extend substantially parallel to the longitudinal axis of the base, so that when the teeth are assembled, a continuous knife or cutting edge will be defined by two adjacent members 24. The under or lower surfaces 29 of these laterally extending members are upwardly and outwardly curved as illustrated in Figs. 2 and 5 which further aid and facilitate the digging or cutting of a dipper or scoop upon which my improved teeth are mounted.

Having thus fully described my invention, what I claim is:—

1. A dipper tooth base comprising upper and lower jaws with a recess therebetween, said base provided with a rearwardly extending longitudinally disposed aperture, extending beyond the rear extremity of said lower jaw and adapted to receive a removable point therein.

2. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, the base provided with a rearwardly extending opening communicating with said recess and adapted to receive a removable point therein.

3. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, said base provided with a rearwardly extending opening communicating with said recess, said opening extending through the upper jaw and defining a downwardly opening groove adapted to receive a removable point therein.

4. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, the upper jaw provided with a rearwardly extending opening communi-

cating with said recess, the rear portion of said opening extending beyond the rear extremity of said lower jaw and formed as an open groove, said opening and groove adapted to receive a removable point therein.

5. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, and laterally extending members carried by said lower jaw, and provided at their front with cutting edges.

6. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, said lower jaw formed with a rearwardly diverging attaching plate, said upper jaw provided with a rearwardly extending opening longitudinally arranged and communicating with said recess and extending beyond the rear extremity of said attaching plate.

7. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, said lower jaw formed with a rearwardly diverging attaching plate, said upper jaw provided with a rearwardly extending opening longitudinally arranged and communicating with said recess and extending beyond the rear extremity of said attaching plate, the rear portions of said opening extending through said upper jaw and defining a downwardly opening groove adapted to receive the rear portion of a removable point therein.

8. A dipper tooth base comprising connected upper and lower jaws with a recess therebetween, laterally extending members carried by said base and located at the front extremity thereof, said laterally extending members provided with front cutting edges and with upwardly and outwardly sloping lower surfaces.

Signed at Chicago in the county of Cook and State of Illinois this 30 day of November, A. D. 1914.

JOHN O'FALLON CLARK, Jr.

Witnesses:

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