G. R. HANKS AND R. SOMERVILLE.

DIPPER TOOTH.

APPLICATION FILED JUNE 11, 1921.

1,419,047. Patented June 6, 1922.

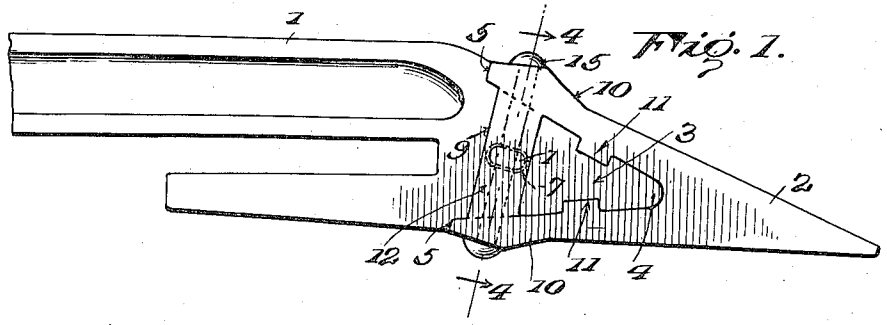


Fig. 1.

Fig. 2.

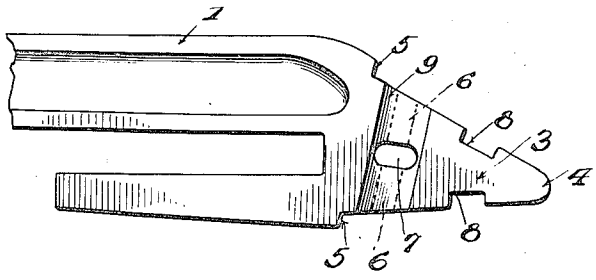
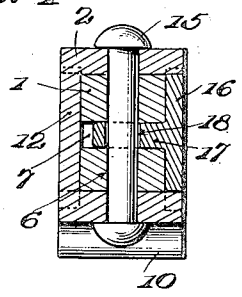


Fig. 4.



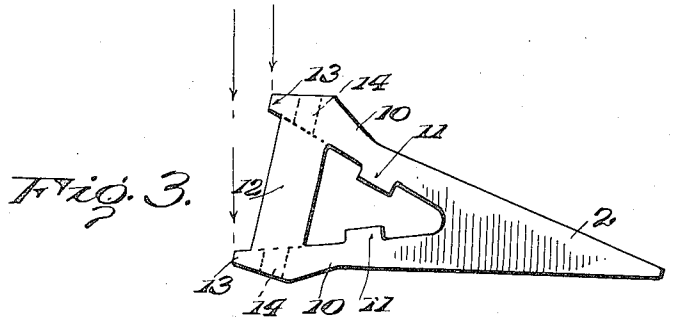


Fig. 3.

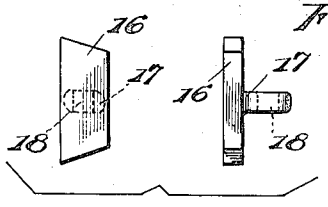


Fig. 5.

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UNITED STATES PATENT OFFICE.

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DIPPER TOOTH.

1,419,047. Specification of Letters Patent. Patented June 6, 1922.

Application filed June 11, 1921. Serial No. 476,862.

To all whom it may concern:

Be it known that we, GEORGE R. HANKS and ROBERT SOMERVILLE, citizens of the United States, residing at High Bridge, in the county of Hunterdon and State of New Jersey, have invented certain new and useful Improvements in Dipper Teeth, of which the following is a specification.

Digging teeth or so called dipper teeth are generally constructed in sectional form embodying a base or bucket-carried member and a reversible point which interlocks with the base. Most of the breakage in service is directly attributable to the failure of the base to stand up under the varying stresses imposed upon it, due to faulty design which precludes proper heat treatment.

The object of the present invention is to provide a base or point-carrying member of rugged construction and which can be properly heat treated, and to provide a point which either in the original or reversed position is rigidly locked to the base.

In the accompanying drawings forming a part hereof,

Figure 1 is a view in elevation of the improved dipper tooth.

Fig. 2 is a detail view of the base.

Fig. 3 is a detail view of the point.

Fig. 4 is a section on line 4—4 of Fig. 1.

Fig. 5 is a view in side and end elevation of the closure plate.

The improved dipper tooth comprises a base 1 and a point 2. The shank of the base is bifurcated, as is usual, for the usual connection with the bucket. Its nose 3 is of generally wedge form with a blunt or somewhat rounded apex 4 extending the full width of the nose. The nose is inclined relatively to the shank to such an extent that its apex is in a plane below the point of bifurcation so that any thrust on the apex 4 will be transferred to the longer reach of the shank. At top and bottom, the nose is offset with respect to the shank to form the shoulders 5. The nose is cored vertically, as at 6, and also transversely, as at 7, for the reception of devices hereinafter referred to. It also has two sets of slots or channels. The coring and slotting while definitely designed to afford an accurate fit and interlocking connection with the point, also serve another useful purpose in that they avoid mass of metal and make the nose more susceptible to heat treatment. The slots or channels referred to, are the slots 8 extending the full width of the nose, above and below the same, and the side notches or slots 9 immediately in advance of the shank.

The point 2 is of the side entering type, its jaws 10 having the angularly directed and confronting ribs or panels 11 adapted to the slots 8, and a bridging member or side web 12 adapted to either of the side notches or channels 9, the jaw terminals 13 engaging the shoulders or abutments 5. Each of the jaws has an eye or opening 14 which registers with the opening 6 of the nose and admits of the application of a rivet or other appropriate fastening 15.

Since the side web 12, in either position of the point, closes but one slot 9, there is provided for the temporary closing of the other channel, what may be termed a closure plate 16. This plate, which is inclined on its upper and lower edges to accurately fit beneath the walls of the point overlying the otherwise open channel, is centrally formed with a tongue 17 which penetrates the opening or passage 7 and has an eye 18 which registers with the opening 6 and hence is retained by the rivet or other fastening 15. The closure plate makes for a symmetrical finish and avoids projections and hollow portions.

Having thus described our invention, we claim:—

1. In combination, a point-carrying element having its upper and lower bearing surfaces transversely slotted and having side slots, and a reversible point having panels for slidable engagement with said transversely slotted portions and having a side bar adapted to either of the side slots.

2. In combination, a point-carrying element having two sets of slots or channels, a point having panels which slidably engage one set of channels and having a side web adapted to either channel of the other set, and a closure plate for the other channel.

3. In combination, a point-carrying element provided on its upper and lower bearing surfaces with laterally extending channels and also having side slots, and a reversible point with rearwardly extending jaws having confronting ribs to slidably en-

gage said channels and a connecting rib adapted to either of the side slots.

4. In combination, a point-carrying element cored in two directions and having transverse slots and side slots, and a reversible point having panels for slidable engagement with the transverse slots and having a side bar adapted to either of the side slots.

5. In combination, a point-carrying element cored and having transverse slots and side slots, a reversible point having panels adapted to the transverse slots and having a side bar adapted to either of the side slots, and auxiliary means for locking the point.

6. In combination, a point-carrying element cored to facilitate heat-treatment and having transversely ranging slots and side slots, a reversible point having rearwardly extending jaws with confronting ribs designed for sliding engagement with said transversely ranging slots and a connecting rib adapted to either of the side slots, a closure plate having a tongue extending into the cored area, and auxiliary point-fastening means engaging said tongue.

7. In combination, a point-carrying element having intersecting cores and having transversely ranging slots and side slots, a side entering point having inwardly directed panels to engage the transverse slots and having a marginal panel adapted to either of the side slots, a closure plate having a tongue penetrating one of the cores, and auxiliary point locking means in the other core and engaging said tongue.

8. A reversible point of the side entering type, embodying a point body having rearwardly diverging jaws with opposed laterally extending ribs or panels, said jaws having registering eyes near their extremities, and an integral side bar connecting the jaws.

In testimony whereof we affix our signatures.

GEORGE R. HANKS.
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