

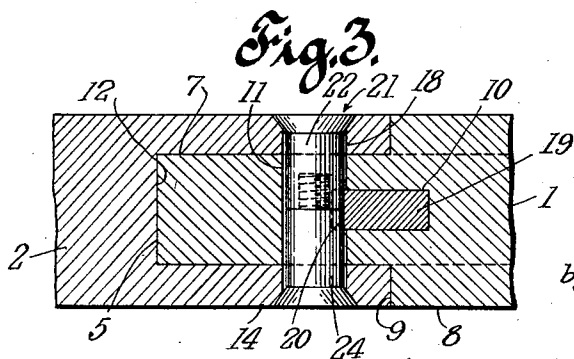
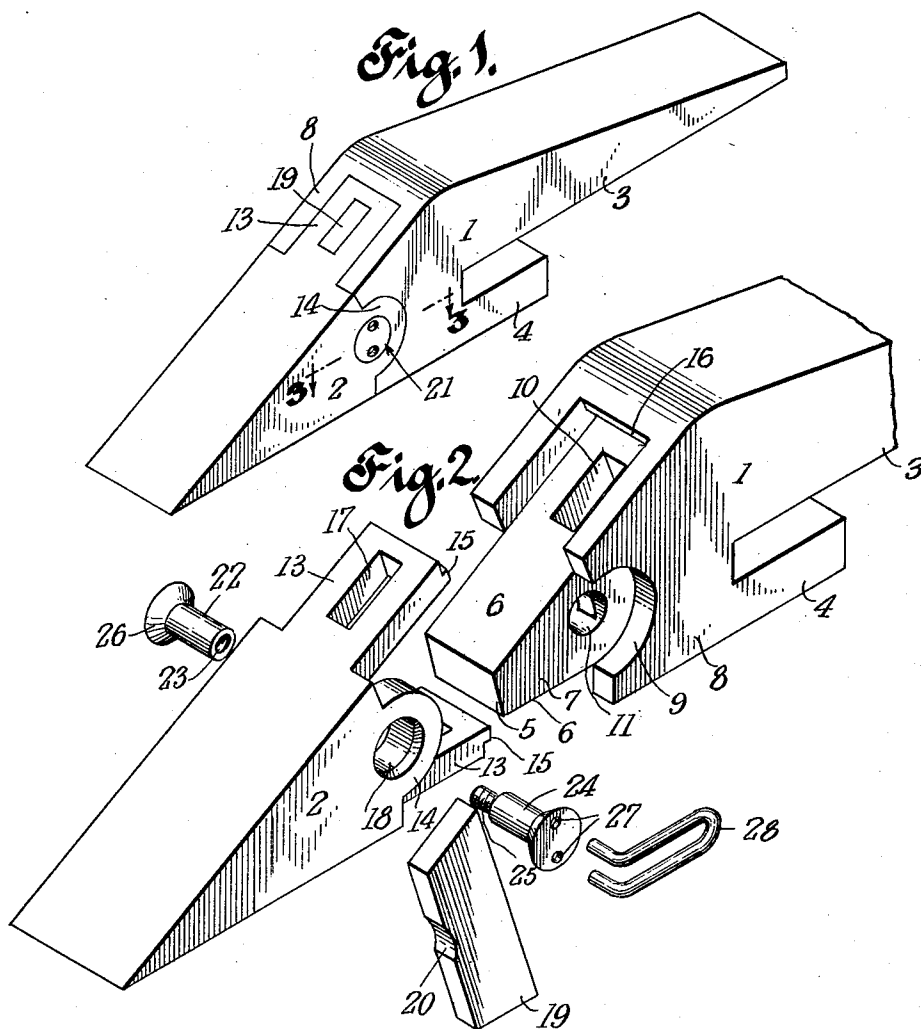
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EXCAVATOR

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EXCAVATOR

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This invention relates to a point or tooth which may be applied to the rim of the bucket or shovel of an excavating machine; and its main object is to provide a new and improved tooth which may be easily and quickly removed for sharpening or replacement.

A further object of this invention is to provide a two-part tooth comprising a body or shank adapted to be securely bolted to the bucket, a point adapted to be mounted upon the shank, and means for securing the point to the shank which shall be quick-detachable and which shall not be locked or rusted together under actual conditions of operation.

Other and further objects and advantages will become apparent from the following description of the preferred embodiment shown in the drawings wherein:

Figure 1 is a perspective view of the invention.

Figure 2 is an exploded view showing the various parts in perspective.

Figure 3 is a cross-section taken along the line 3—3 of Figure 1 and viewed in the direction of the arrows.

The tooth comprises a body or shank member 1 and a separable point member 2 carried thereby. The body member is provided with a pair of jaws 3 and 4 at its rear end adapted to receive the rim or edge of the excavator bucket (not shown) and be bolted or riveted thereto. The upper jaw 3 is extended to form a reinforcing and protective rib for the bucket.

The member 1 has a forwardly extending tongue 5 provided with inclined upper and lower faces 6, 6 and parallel side faces 7, 7. The tongue 5 is flanked by cheeks 8, 8 which are recessed as at 9 and extend beyond the surfaces 6, 6, thus providing recesses on member 1 to receive corresponding parts of the point 2. Between the cheeks 8, 8 a passage 10 is cut through the tongue 5 perpendicular to the central axis of the latter. A transverse circular opening 11 through tongue 5, perpendicular to and intersecting the passage 10 is also provided.

The point 2 has the general form of a pointed wedge; and is provided with a recess

12 to receive tongue 5. The walls of recess 12 are provided with upper and lower extensions 13, 13 adapted to fit over surfaces 6, 6 of tongue 5; and with side wings 14 adapted to engage in recesses 9 of the member 1. The panels 13 may each also be formed with a forwardly extending ridge 15 adapted to engage in a corresponding groove 16 provided in the body member 1. An opening 17 in panel 13 and opening 18 in wing 14 correspond to openings 10, 11 respectively in member 1. It is to be noted that the engaging parts of the members 1 and 2 are symmetrical about their longitudinal axes, thus permitting the reversal of point 1 when one face becomes worn through use.

The members 1 and 2 are held together by the key 19 which fits the passages 10 and 17 and passes therethrough. The key 19 is provided with a circular groove or channel at the point where passage 10 intersects passage 11. The key is locked in place by the transverse two-part bolt or spool 21 passed through openings 11 and 18 and engaging the key 19 at the cut-away portion 20. The spool 21 comprises a member 22 provided with an internal screw threaded recess 23, and a member 24 provided with a screw threaded projection 25 adapted to screw into the recess 23. Each member is provided with a head 26 in which are provided diametrically opposed pits 27. To remove or replace the spool 21, a convenient tool such as is shown at 28 is used. This tool comprises a U with the prongs bent over. The prongs are adapted to enter the pits 27. Thus to remove or insert the spool 21, one of the members is held by means of one such tool, while the other of the members 22, 24 is turned by another such tool.

The parts 22, 24 of the spool 21 are made to fit close against each other to prevent the access of dirt and water to the screw-threads. Otherwise the fit in its passage of either key 19 or spool 21, preferably the latter, may be fairly loose. As soon as the spool is removed all the other parts can be very readily separated. It is seen that the construction of the spool is such that its functioning is not easily

affected by the dirt, water, and oil to which it is subjected to in operation.

Having thus described this invention, what is claimed is:

5 1. An excavator tooth comprising a shank member, a point member mounted thereon, and means for detachably holding the point to the shank comprising a vertical pin passing through the members and having a cut-
10 away portion intermediate its ends, and a transverse cylindrical spool engaging in the cut-away portion, said spool comprising a male and female portion coupled together at their inner ends.

15 2. An excavator tooth comprising a shank member provided with a projecting tongue, and cheek portions on either side of the tongue, said cheek portions being provided with cut-away portions and extending above
20 and below the tongue to provide recesses therebetween, and a point member adapted to be mounted on the shank member, said point being provided with a socket to receive the tongue and with projections adapted
25 to register with and engage in the cut-away portions and with the recesses aforementioned.

3. An excavator tooth comprising a shank member provided with a projecting tongue,
30 and cheek portions on either side of the tongue, said cheek portions being provided with cut-away portions and extending above and below the tongue to provide recesses therebetween, and a point member adapted to
35 be mounted on the shank member, said point member being provided with a socket to receive the tongue and with projections adapted to register with and engage in the cut-away
40 portions and with the recesses aforementioned, said tongue and said projections being provided with registering passageways for the reception of securing means.

4. An excavator tooth comprising a shank member, a point member mounted thereon,
45 a central vertical pin passing through the members, and a transverse spool passing through the members and engaged with the pin, said spool comprising a male and female portion coupled together at their inner ends.

50 Signed this 27th day of August 1929.

SABBY MADONNA,
*Administratrix of the Estate of Harry
Madonna, Deceased.*

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