J. C. STONE.

EXCAVATING TOOTH.

APPLICATION FILED MAR. 30, 1918.

1,270,670.

Patented June 25, 1918.

Fig. 1

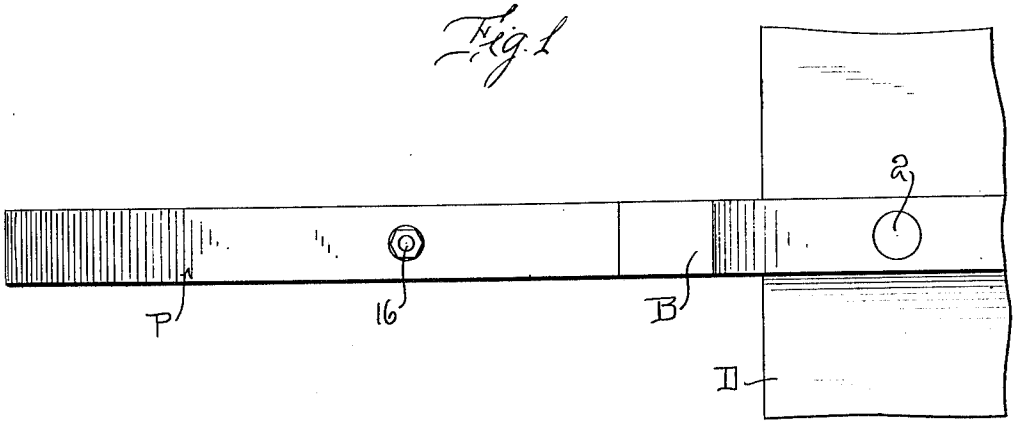
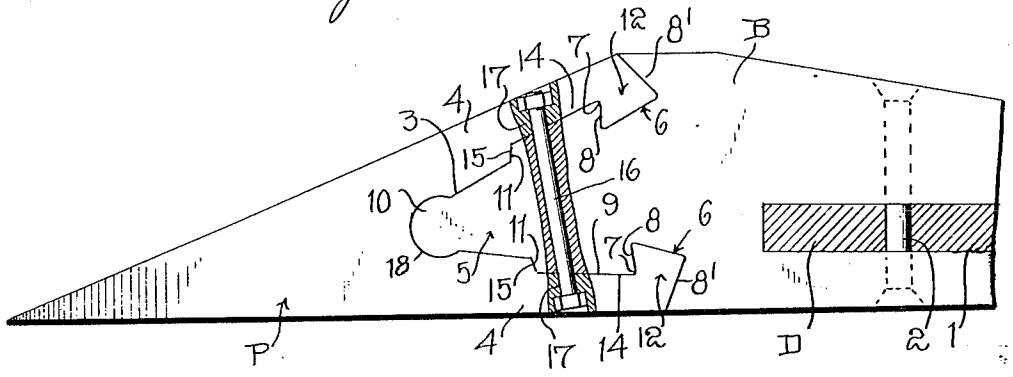


Fig. 2



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EXCAVATING-TOOTH.

1,270,670. Specification of Letters Patent. Patented June 25, 1918.

Application filed March 30, 1918. Serial No. 225,698.

To all whom it may concern:

Be it known that I, JAMES C. STONE, a citizen of the United States, residing at Russellville, in the county of Franklin and State of Alabama, have invented certain new and useful Improvements in Excavating-Teeth, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an excavating tooth of a type particularly designed and adapted for use in connection with the cutting or entering edge of a dipper or excavating bucket and it is an object of the invention to provide a novel and improved tooth including two separable parts one of which parts constitutes a removable and renewable point.

It is also an object of the invention to provide a novel and improved tooth of this general character including two separable parts and wherein said parts are provided with means whereby the same may be readily and effectively joined and maintained in assembled relation.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved excavating tooth whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a view in top plan of a tooth constructed in accordance with an embodiment of my invention, the coacting portion of a bucket or dipper being shown in fragment; and

Fig. 2 is a view in side elevation of the structure as illustrated in Fig. 1 with certain of its parts broken away.

As disclosed in the accompanying drawings D denotes the cutting or entering edge of an excavating dipper or bucket to which my improved tooth is adapted to be secured. As herein embodied my improved tooth comprises a base or body portion B having in its rear portion a slot 1 to receive the cutting or entering edge portion of the dipper or bucket D and said base or body portion B is secured to the dipper or bucket through the medium of the rivet 2. P denotes the point of my improved tooth which is wedge shape with the point thereof outwardly directed. The inner or rear portion of the point P is provided with a central transverse slot 3 which extends from side to side of the point P and affords the vertically spaced arms 4 arranged in planes converging toward the forward end of the point P. The forward end portion of the base or body portion B is provided with an extension 5 which is adapted to fit snugly within the transverse slot 3. At the point where the extension 5 joins the main body of the base or body portion B are provided the transversely extending grooves 6 of substantially dove-tail shape and having the narrow or restricted entrances or mouths 7.

The forward wall 8 of the grooves 6 terminates inwardly of the rear wall 8′ and its dimension is controlled by the thickness of the adjacent portion of the coacting arm 4 of the point P.

Each upper and lower face of the extension 5 in advance of the groove 6 is continued by the straight portion 9 and the portions 9 at the top and bottom of the extension 5 converge toward the outer end of the extension and merge into a tenon or head 10 of a form in excess of a semicircle with the maximum diameter thereof in excess of the space between the lower ends of the straight faces 9 whereby said tenon or head 10 is in effect of substantially a dovetail type. The forward or lower half portion of each of the straight faces 9 are inwardly offset resulting in the shoulders 11 and which shoulders are preferably disposed on a forward incline.

The inner or free end portions of each of the arms 4 is provided with transversely disposed and inwardly directed dove-tail rib 12 which is adapted to fit snugly within a groove 6 whereby the base or body portion B and the point P are locked against relative longitudinal movement.

The opposed faces of the arms 4 are provided with offset end portions so that said inner faces 14 may snugly contact with the straight faces 9 of the extension 5 and which also results in the intermediate shoulders 15 which are adapted to contact with the shoulders 11 so that the ribs 12 are materially

relieved of strain during a working operation and which further assures an equal distribution of the strain incident to a working operation upon both the base or body portion B and the point P. The forward end portions of the arms 4 and the intermediate portion of the point P proper have produced therein a mortise 18 of a form and configuration to snugly receive the tenon or head 10 hereinbefore referred to and whereby the joining of the base or body portion B and the point P is further facilitated by the provision for the proper distribution of strain.

The connection between the point P and the base or body portion B is such that these parts are engaged with or disengaged from each other by a relative lateral movement and the particular interlocking of the arms 4 and the extensions 5 as herein embodied permits the use of a comparatively small bolt 16 which is insertible through the openings 17 produced in the arms 4 and the extension 5 and which are in register when the point P and the base or body portion B are assembled. The outer end portions of the openings 17 in the arms 4 are enlarged so as to substantially entirely receive the head of the bolt and the nut which coacts therewith. The bolt 16 passes through the extension 5 at a point between the walls 8 and shoulders 11 and which arrangement has been found to result in a more effective re-tension of the point P upon the body B.

From the foregoing description, it is thought to be obvious that an excavating tooth constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

A device of the class described comprising a base and a point, the rear portion of the point being provided with diverging arms, the forward end of the base being provided with an extension snugly fitting between the diverging arms of the point, the edge of the extension at the inner ends thereof being provided with recesses and the outer ends of the arms of the point being provided with ribs fitting within the recesses of the extension, substantially the forward half portion of each of the edges of the extension being inwardly offset whereby a transverse shoulder is provided substantially midway of such edge, the coacting face of an arm of the point having a complemental offset portion to afford a shoulder to contact with the shoulder of the extension, the outer end portion of the extension of the base being provided with a tenon, the inner end portions of the opposed faces of the arms of the point being provided with a mortise to snugly receive the tenon of the extension, and a holding bolt disposed through the extension of the body and the arms of the point, said bolt being positioned inwardly of the shoulder formed on each edge of the extension of the body by the inwardly offset portion thereof.

In testimony whereof I hereunto affix my signature.

JAMES C. STONE.