J. D. HUSBANDS, Jr.

Saws for Sawing Stone.

No. 146,680. Patented Jan. 20, 1874.

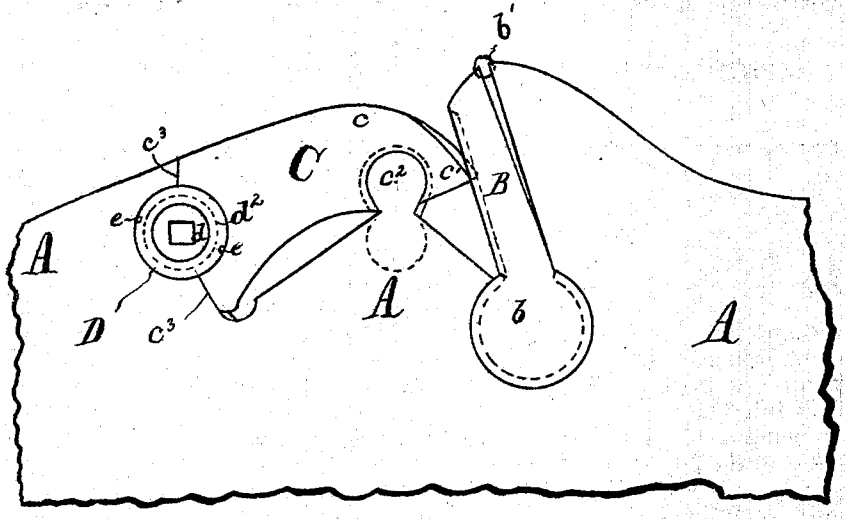

Fig. 1.

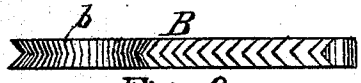

Fig. 6.

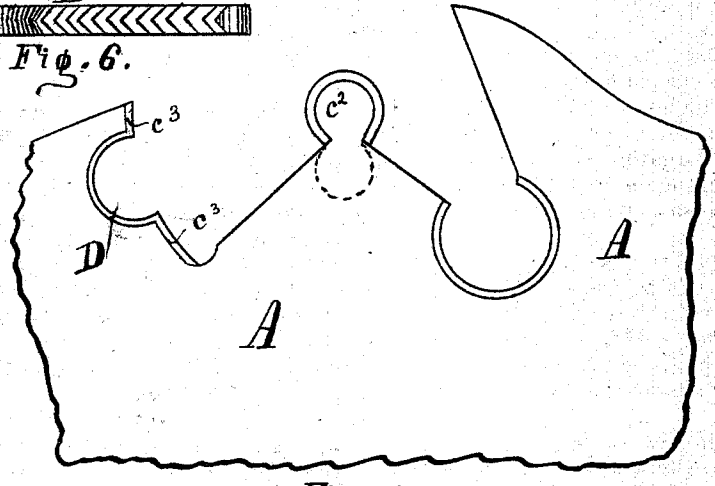

Fig. 2.

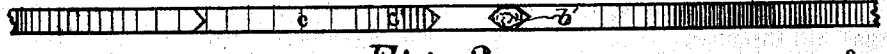

Fig. 3.

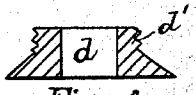

Fig. 4.

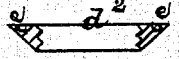

Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH D. HUSBANDS, JR., OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN SAWS FOR SAWING STONE.

Specification forming part of Letters Patent No. **146,680**, dated January 20, 1874; application filed September 2, 1873.

To all whom it may concern:

Be it known that I, JOSEPH D. HUSBANDS, Jr., of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Saws for Sawing Stone; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

It is well known that diamond or mineral points are used in saws for the sawing of hard stone; that, in order to accomplish this object most successfully, it is of the greatest importance to hold, fasten, or otherwise secure the mineral on said points.

This invention relates, therefore, to the construction of a lever, device, or holder; the manner of holding said device in the saw-plate; the manner of holding the inserted tooth with point between, to, and against the saw-plate; the combination of locking devices, holder, and tooth with relation to saw-plate, as will now more fully appear.

Of the drawing, Figure 1 is a section of a saw, showing side view of the improved parts. Fig. 2 is a side view of the saw-plate with the detailed parts removed. Fig. 3 is an edge view. Figs. 4 and 5 are detailed views of locking device. Fig. 6 is an edge view of the tooth-holder.

A is a section of the saw-plate constructed to receive the several devices now to be described. B is the inserted tooth. Said tooth is as ordinary, but having a circular shank, *b*. The shank *b* of tooth B is spread or otherwise welded or fastened in plate A, which, for this purpose, has a circular seat provided to receive said circular shank *b* of tooth, the object of this fastening in the plate A the tooth B being as far as possible to cause same to be prevented from self-disengagement. The shank *b* of the tooth B is further held in saw-plate by the manner of having the circular edge of the recess or space in said plate to be V-shaped, corresponding to the V-groove in the edge of the shank of said tooth. *b'* is a diamond or other mineral or artificial hard point, set between the tooth B and contiguous edge of saw-plate A, and so that said point shall project, as required, from the extreme edge of said plate to perform the sawing or cutting action. In order to prevent the tooth B from play, jar, or in the least being affected by the strain or jarring action brought upon the point where the cutting action takes place, I have designed the tooth-holder or lever C, as follows: Said tooth-holder or lever C is of the constructive shape shown in Fig. 1, having the segmental curve *c* terminating to a point, c^1, as shown in Figs. 1 and 3, the object of the bearing-point c^1 being to abut against the tooth B, and wedge or clamp same against the saw-plate. The edge of *c* and c^1 is V-shaped, while the contiguous edge thereto of the tooth B is V-grooved, as shown in Fig. 3. Further, to resist the strain brought against the points c^1, I form the tooth-holder C to have a bearing on the saw-plate A. The bearing, as shown in Fig. 1, consists of a circular-shaped neck, c^2, its circular edge being V-shaped, and fitted to engage the V-groove of the circular recess or space formed in the tooth-holder C, to correspond with c^2 of the saw-plate A. It is plain that, by means of the bearing at c^2, the point c^1 is prevented from play, and thus whatever undue strain is brought against the said point c^1 is resisted by the said bearing c^2. Still further, the tooth-holder C I have provided with the following locking device: The rear edge, at line c^3, of the tooth-holder C is partly a curve, and V-grooved to correspond with the part curved edge (V-shaped) of the saw-plate, as shown in Figs. 1 and 2, when the holder C is thus inserted in saw-plate A, by providing a circular opening or space, D, which divides each of said parts C and A. The circular edge of the opening or space D is V-shaped in order to receive the lock screw and nut and collar, which, jointed together, form the V-groove to make the corresponding fit. *d* is the lock screw and nut, that is formed so that its outer surface fits flush with the plate A when inserted in its circular seat D. Further, the nut has screw-threaded head d^1 (see Fig. 4) to receive the threaded collar d^2. (See Fig. 5.) The collar d^2 secures the nut *d*, and both said locking devices *d* and d^2 complete or unite the two parts—the tooth-holder C and the saw-plate A.

The parts thus constructed and arranged, it will be noticed that the strain or jar brought

to bear upon the cutting or mineral point is distributed to the several points of bearings, which act together to offer sufficient resistance to prevent the tooth B from being affected—that is, the combined action of the locking devices holding or fastening the rear end of tooth-holder, the said holder being further securely held at the bearing or saw-plate, the point of holder abutting against the tooth, or said point being wedged or clamped between the tooth and bearing of plate, and the further fact of the shank of tooth itself being welded or securely fastened in plate. All said above-mentioned points to effect the fastening of the mineral or cutting point being gained, there is no possibility of said point or points becoming lost, disengaging, or otherwise being rendered useless.

The tooth and tooth-holder can be made in sectional parts, plates, or pieces, fastened together by rivets, screws, solder, or welding, or in conjunction with the saw-plate, one-half being part of saw-plate, and the other being separate part of tooth and tooth-holder, fastened in the manner as before described.

The lock screw or nut d has a square slot for the insertion of a key or other instrument to screw or unscrew and fasten the same. Further, said collar d^2 has eye-holes e on its outside circle, into which a divider can be placed to confine the same in place, while said key operates upon lock-screw d.

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

1. A tooth-holder, C, having bearing-point c^1, circular neck or shank, c^2, either in saw-plate or tooth-holder, as and for the purpose set forth.

2. The combination of tooth-holder C, locking devices d d^1 d^2, and saw-plate A.

3. The combination of tooth B, tooth-holder C, constructed, as shown, with relation to saw-plate, and locking devices d d^1 d^2, as and for purposes set forth.

In testimony of said invention I have hereunto set my hand in presence of witnesses.

J. D. HUSBANDS, JR.

Witnesses:

CHAS. MEISNER,

CHAS. HERTHEL.