

J. CUMMINGS.
Mill-Picks.

No. 140,118.

Patented June 24, 1873.

Fig. 6.

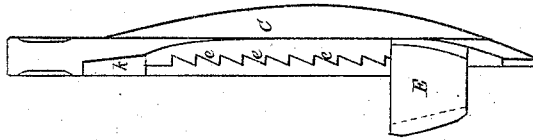


Fig. 5.

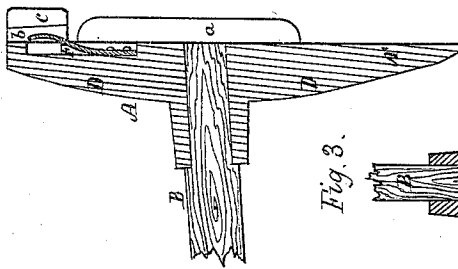


Fig. 3.

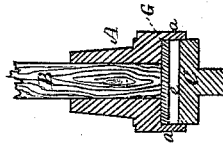


Fig. 4.



Fig. 2.

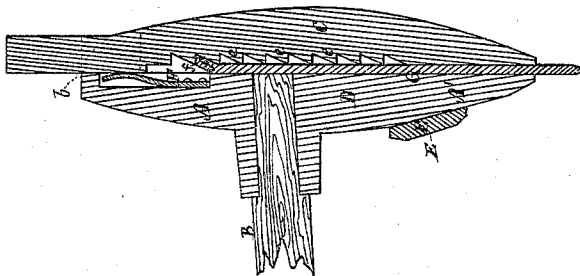
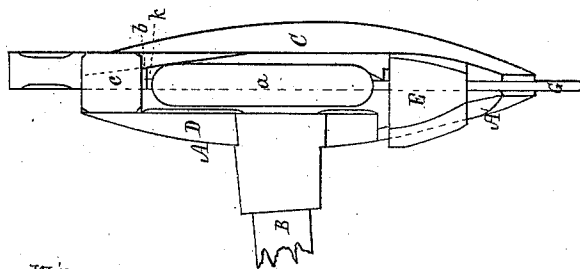


Fig. 1.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOTHAM CUMMINGS, OF WEST CHARLESTON, VERMONT.

IMPROVEMENT IN MILL-PICKS.

Specification forming part of Letters Patent No. 140,118, dated June 24, 1873; application filed April 24, 1873.

To all whom it may concern:

Be it known that I, JOTHAM CUMMINGS, of West Charleston, Orleans county, Vermont, have invented certain Improvements in Mill-Picks, of which the following is a specification:

This improvement is based upon a class of mill-picks shown and described in Letters-Patent of the United States issued to me on the 11th day of July, 1871, and relates mainly to such a construction of the pick as will enable me to relieve the strain upon the pick-blades, and lessen liability of breakage of the same; and also to obtain greater strength in the head of the picks without increasing its weight, and enable it to deliver a more effective and well-directed blow than heretofore.

The nature of the pick embodied in my Letters Patent above named consists in the employment of a flat bar, having an enlarged wedge-shaped head at one end to retain itself in place within the pick-head or stock, and a toothed rack upon one side, into one of the recesses of which the sloping end of the blade enters, the rack having the effect of preventing the blade from being driven into the head by the force of the blow upon a stone, while the wedge in its turn serves to clamp the blade firmly between it and the socket in the head in which it is situated. In this patented pick the lower portion of the socket or channel of the "stock" receives the whole force of the blow, and as the wedge which secures the blade in place exerts a powerful expanding force thereupon, I am compelled to provide a very heavy stock, the excess of its weight being at the lower end, which tends to over-balance it, and render the handle liable to turn in the hand.

The nature of my present improvement consists in dividing the pick-head into two parts, one stationary, and bearing the handle, and the other detachable, and formed upon its inner face with a series of teeth to engage the blade and prevent its being driven upward into the head, the detachable plate having a loop which embraces the lower wedge-shaped termination of the stationary block, while the upper part of the former is provided with wedge-shaped lips, which enter correspondingly-shaped notches in the stationary head

or block, the said parts being so arranged that a blow upon the sharp end of the blade tends to settle the parts together, and firmly clamp the blade between the two.

In the drawing accompanying this specification, Figure 1 is a side elevation; Fig. 2, a vertical and longitudinal section; and Fig. 3, a horizontal section of a mill-pick embodying my improvements. Fig. 4 is a front face view of the pick, while Fig. 5 is a vertical section of the stock.

In these drawings, the head or stock of the pick is shown as composed of two parts, one of which, A, is stationary, and bears the handle B, and the other, C, is detachable, and constitutes, in connection with the base A, a clamp to secure the blades firmly in place. The base A is substantially an oblong block of metal, having a convex rib, D, upon its rear side for a portion of its length, to impart the greatest strength at the center of the handle or thereabout, and formed upon its front face and at the upper part thereof, with side-edges or walls *a a* to retain the clamp C in place against lateral displacement while adjusting the blade, and at its extreme upper part with tapering or flaring channels *b b* formed in ears *c c* making part of the block, as shown in Fig. 5 of the drawings, the lower rear side A' of the head or block being a tapering wedge. The detachable or removable portion C of the stock is also a metal plate, of a size and form substantially similar to the base or head A, and, like it, is considerable thicker in its center than at its ends. This clamp-plate C bears at its lower end a clasp or loop, E, which envelops the lower and corresponding post or wedge A' of the head, while the extreme upper end of the said plate C is formed upon each side with a wedge-shaped lip, *k*, as shown in Fig. 6 of the drawings, which is a side view of the plate C, these lips entering the tapering channels or notches *b b* of the head A, and serving, in connection with the wedge A' and loop E, to force the clamp-plate with great power toward the head, and against its front face, or a spring, F, let into such face, as shown in Fig. 2 of the drawings. The inner face of the clamp-plate C is converted into a range of sloping or ratchet teeth, *e e*, &c., with which teeth the blade G

engages, this blade being a thin plate of steel, of a width about equal to that of the head A, and sloping at one end at an obtuse angle, as shown at *f*, to correspond with the slope of the teeth *e*.

In using this pick, the clamp-plate C and pick-blade G are placed face to face with the sloping end *f* of the latter engaging one of the teeth of the former, and both applied to the head A, as shown in the drawings—that is, with the clasp E inclosing or embracing the wedge A', and the lips *k k* entering the channels *b b*.

It will be seen that a blow upon the cutting end of the blade will drive the latter and the clamp-bar upward and embrace the head A with great power, the result of this construction of a pick being that the more powerful the blows of the implement upon a stone the more firmly will the blade be confined in place, while upon reversing the head of the implement end for end, and striking the opposite or upper end of the clamp-bar upon any solid object with a quick blow, both clamp-plate and blade will be released, and can at be once detached.

Owing to the frequency with which the blades of the pick, when in use, must be removed for sharpening, the facility which this construction enables this removal to be effected, adds great value to these implements.

As the blade wears, it is to be lowered, step by step, from one tooth to another of the clamp-plate, and my construction of parts en-

ables me to securely hold a blade in place until nearly worn out.

The form of the head A' and clamp-plate C, being thickest in the center or thereabout, together with the employment of the loop E and notches *b b*, provides great strength, and enables me to make the pick-head of any desirable length, while at the same time its weight is reduced as compared with previous productions. The form of the head and plate also provides a perfectly balanced implement, and enables a blow to be directed to the best advantage.

It is obvious that the wedges or lips *k k* may be formed upon the head-block A, and the ears *e e* upon the clamp-plate.

I claim—

1. A mill-pick head consisting of the stationary part A and movable part C constructed and fitted together to hold the blade between them, substantially as described, the one being provided with the lips *b*, and the other with loop E, arranged and operating to clamp the two firmly together as set forth.

2. The combination of the head A and plate C with an interposed blade, the head being formed with the flaring channels or notches *b b* and wedge A', and the plate with the lips *k k*, loop E, and teeth *e e*, &c., substantially as and for purposes stated.

Witnesses: JOTHAM CUMMINGS.

CHARLES CARPENTER,

HENRY CAMPBELL.