

(No Model.)

T. W. WILLIAMS & G. Z. EDWARDS.  
PICK.

No. 509,147.

Patented Nov. 21, 1893.

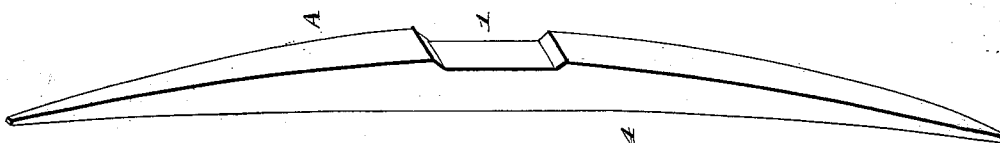
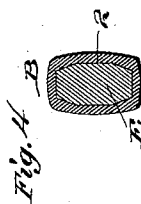
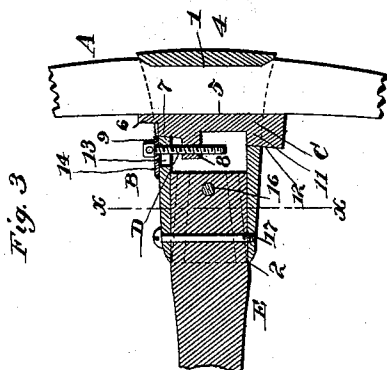


Fig. 2

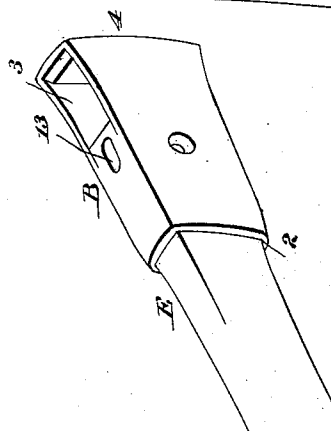


Fig. 1

Witnesses;

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# UNITED STATES PATENT OFFICE.

THOMAS W. WILLIAMS AND GEORGE Z. EDWARDS, OF GRANITE, MONTANA.

## PICK.

SPECIFICATION forming part of Letters Patent No. 509,147, dated November 21, 1893.

Application filed June 24, 1893. Serial No. 478,770. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS W. WILLIAMS and GEORGE Z. EDWARDS, citizens of the United States, residing at Granite, in the county of Granite and State of Montana, have invented certain new and useful Improvements in Picks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in miners' picks, as distinguished from the class of mill-stone picks.

The invention will first be described in connection with the accompanying drawings, and then particularly pointed out in the claims.

In the drawings—Figure 1 is a perspective view of a complete pick embodying our improvement, showing but a portion of the handle. Fig. 2 is a perspective view of the bit, the wedge and screw and the head with a portion of the handle attached, all shown apart. Fig. 3 is a sectional view through the center of Fig. 1. Fig. 4 is a section on line  $x-x$  Fig. 3.

Referring to the drawings, A is a bit, which may be curved, as shown, or straight, as preferred, and having a beveled recessed portion 1 near its center.

B is a pick-head having a socket 2 at one end to receive the handle and provided at the other end with a bit-socket 3, the width of the outer end 4 of the head being slightly beveled and equal to or a little less than the length of the recessed portion 1 of the bit. When the bit is inserted into the socket, it is moved forward until the front end of the head fits into the recess at 1 and the bit is held in this position by a wedge C of novel construction, which is inserted behind the bit and in the socket. This wedge, C, has a straight front surface 5, arranged to bear against the rear surface of the bit, and a series of steps 6, 7 and 8, the step 6 being a tongue which allows the wedge to be dropped downward and then pushed backward without letting the end of the wedge pass entirely into the center of the socket. The step 7 forms the lower clamping surface and is inclined at 9 as will be seen from the drawings. The step 8 has a hole 10

which is threaded for a purpose hereinafter described. At the other end of the wedge is a clamping-head 11, its rear surface 12 also being inclined.

The wedge is held tightly against the bit by a screw D, which passes through a slot 13 in the upper edge of the head and enters the threaded hole 10 in the step 8. A washer 14 is preferably placed below the head of the screw; and instead of having the head of the screw notched to receive a screw-driver, we prefer to provide it with a series of pin-holes 15 into which a pin may be inserted to turn the screw.

In assembling the parts the handle E is placed in the socket and fastened by two screws 16 and 17, passing through the head and handle at right angles to each other and threaded at their extreme ends in the head. The wedge is inserted in the socket with its tongue 6 projecting slightly beyond the upper end of the socket, the step 9 being arranged with its hole 10 in line with the rear portion of the slot 13, and the screw D is then inserted through the slot, its threaded end being screwed into the hole 10. In this condition the space in the socket between the front surface of the wedge and the head is sufficient to permit the ready insertion of the bit into the socket. The bit being pushed forward until the head enters the recess 1, the wedge can then be slipped forward into contact with the bit and then upward until its clamping surfaces completely fill the ends of the socket. As the clamping surfaces are slightly inclined, it is possible to drive the wedge in tightly and thereby crowd the bit strongly against the front of the head. By now tightening up the screw the wedge is held solidly and cannot work loose.

It will be apparent that by our invention the wedge need not be released from the head, but merely driven downward until loose and then pushed backward, when the bit is readily removed. By this construction all danger of loosening the wedge is avoided; moreover, the screw forms a power in itself for pulling the wedge tight.

We are aware that picks having heads, with sockets in which the bits are held by wedges

are not new, and we do not wish to claim such construction, but

What we do claim as new, and desire to secure by Letters Patent, is—

- 5 1. In a pick, the combination with a head having a tubular portion adapted to receive the handle and provided with a bit socket extending at right angles to said tubular portion, said tubular portion having a slot adjacent to said bit socket, of a bit adapted for  
10 insertion in said bit socket, a wedge adapted for insertion in said socket behind said bit, said wedge having its rear surface beveled and provided with reduced portions adapted to  
15 receive the opposite walls of the tubular portion of the head, and a screw having an enlarged head, said screw passing through said slot in the tubular portion of the head and en-

gaging said wedge, whereby the same is moved longitudinally, substantially as described. 20

2. In a pick, a slotted head having a bit-socket, a bit having a recessed portion fitting into the socket, a wedge inserted in the socket and provided with a clamping-head at one end and a series of steps at the other end, and  
25 a screw passing through the slot in the head and threaded into one of the steps, substantially as described and for the purpose set forth.

In testimony whereof we affix our signatures 30 in presence of two witnesses.

THOMAS W. WILLIAMS.

GEORGE Z. EDWARDS.

Witnesses:

WILLIAM D. DODDS,

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