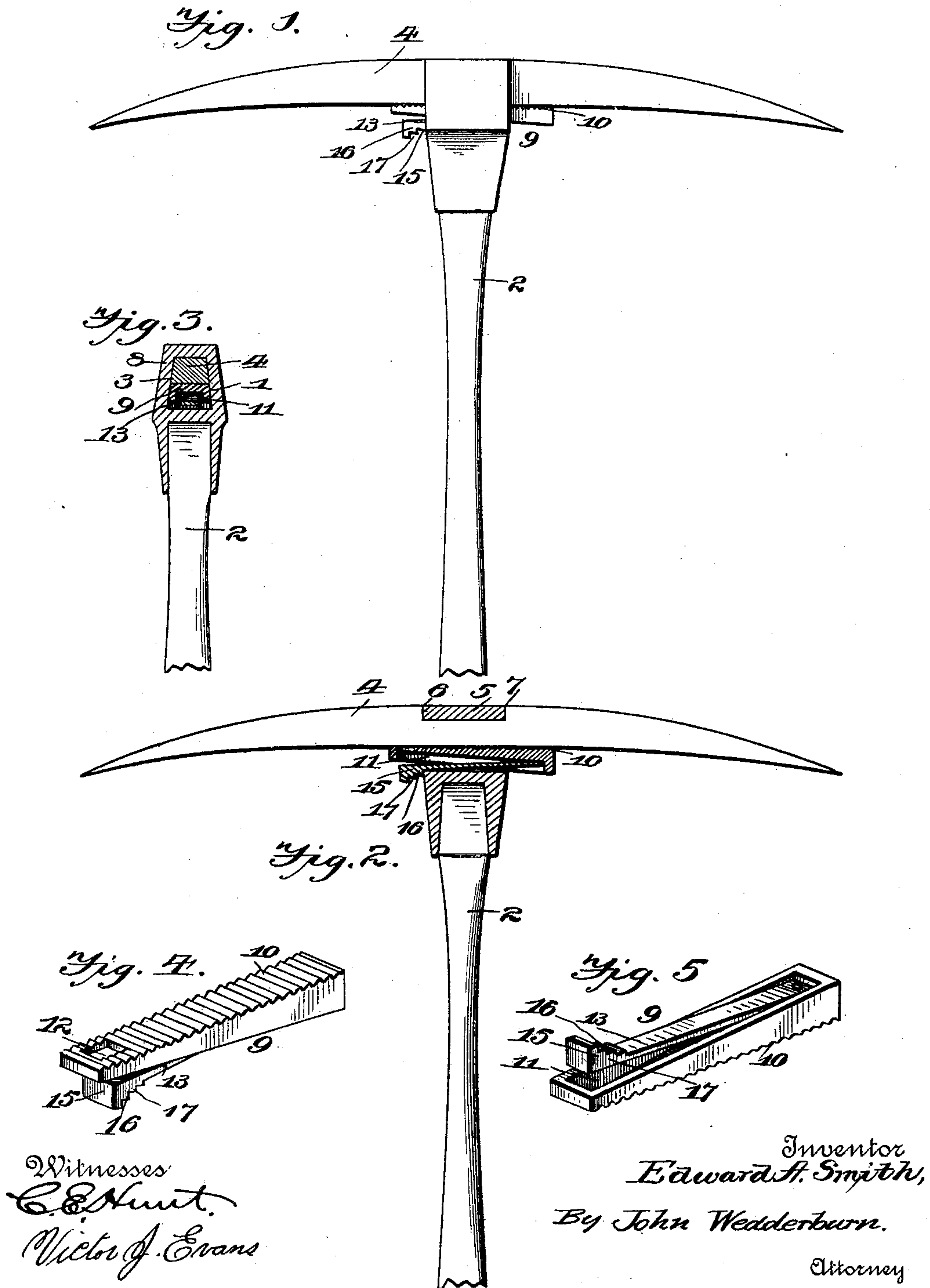


(No Model.)

E. A. SMITH.
PICK.

No. 599,949.

Patented Mar. 1, 1898.



UNITED STATES PATENT OFFICE.

EDWARD A. SMITH, OF GREELEY, COLORADO.

PICK.

SPECIFICATION forming part of Letters Patent No. 599,949, dated March 1, 1898.

Application filed April 17, 1897. Serial No. 632,569. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. SMITH, a citizen of the United States, residing at Greeley, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Picks; and I 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 ap-

My invention relates to picks that have removable points.

My object is to provide a pick which will have an eye, a detachable point, and a locking device, all of improved, cheap, and strong construction, whereby the point is tightly secured to the eye, compensation for all wear being made, and yet can be readily removed whenever desired.

Further objects are contemplated, and the same, together with the construction of the different parts, will appear more fully from the following description, and be recited in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation, Fig. 2 a longitudinal section, Fig. 3 a cross-section, and Figs. 4 and 5 detail views, of my improved locking key or wedge.

The numeral 1 designates the eye or head of the pick, the same being provided with a socket to receive a handle 2 and having a dovetailed opening 3 made therethrough trapezoidal in cross-section, the opening being narrowest at the free end of said head or eye. It is preferable to have the socket for the handle formed tapering, so that the latter will be firmly secured.

The numeral 4 designates a detachable double pick-point, which is notched or cut away at its central point 5, thereby providing shoulders 6 and 7, which are adapted to engage with the sides of the broad upper part of the eye when said detachable point is in position. It will be seen that the sides of the pick-point at its central part are beveled, as at 8, so that the point is at this part in the shape of a wedge and adapted to snugly fit within the opening in the eye.

My improved locking-key is shown at 9. This key consists of a flat piece of metal of somewhat greater length than the width of the

eye and has corrugations 10 on its upper face, where it bears against the bottom of the point, said key being located against the bottom part of the opening in the eye. The bottom part of the key is cut away into a longitudinal recess or groove 11, whose bottom slopes, as shown, and terminates in an opening 12.

The numeral 13 designates a spring-catch, which has one end fixed at 14 and its other end free and formed into a head 15, which has an inclined portion 16, provided with corrugations or teeth 17. The head is adapted to be depressed into the opening or groove in the key.

In assembling the parts the pick-point is first slipped through the opening in the eye, so that the shoulders 6 and 7 will engage with the latter at opposite sides thereof. The head of the spring is then pressed back into the key and the latter driven into the eye, the corrugations of the key lying against the smooth face of the pick-point. When the key has been driven through the opening, the spring is released and the head thereof snaps out, one of the corrugations or teeth engaging with the eye. It will be seen that as the key is driven farther in the next corrugation or tooth will engage, so that no matter how far the key is inserted the teeth will lock with the eye and prevent said key from coming out. It is desirable that the teeth be located closely adjacent, so that even the slightest wear can be taken up.

The point will of course wear away by use and become loose in the eye, and it is therefore necessary that means be employed for keeping it tightly wedged to take up for the wear. My improved key is well adapted for this purpose when used in connection with the particular form of point and eye aforesaid. It will be observed that as the point wears away and becomes loose the key can be driven farther in and push the point up into the dovetailed opening, so that a double-wedging action is had.

Whenever it is desired to remove the point, the head of the spring can be pressed back, whereupon the head of the key can be driven out of the eye. The pick is compact, and there are no protruding parts which would tend to strike against an object.

I am aware that it has heretofore been pro-

posed to provide points detachably fitted in eyes and secured by wedges having locking means. So far as I am aware, however, there has never before been employed locking means for the wedge or key adapted to secure the same no matter how far it is driven in the eye—that is, secure it at any point. It is a well-known fact that pick-points become loosened in the eye and unless tightened are practically worthless in the hands of the miner. With devices such as heretofore employed for securing the point provision is only made for holding it in position initially—that is, when the pick is manufactured—and when the point and eye become worn the securing-key cannot be fastened as it is driven farther in. Nor am I aware that there has heretofore been provided an eye having the walls of its opening inclined or converging in connection with a point having beveled portions and adapted to wedge in the eye and a wedge and locking means therefor. This construction provided by me insures a double-wedge action which maintains the point securely in position.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a pick, the combination with an eye having an opening, of a point fitted in said

opening, a locking-key having a groove or recess and snugly fitted in the eye against the point, and a spring-catch connected to the key and adapted for depression in the groove or recess therein, which catch has a free portion having an inclined face provided with a plurality of teeth, said teeth being adapted to engage with the eye and secure the point. 35

2. The herein-described pick, the same comprising an eye having an opening there- through provided with inclined walls, a double pick-point having an intermediate cut-away portion fitted in the eye and provided with shoulders which engage with the eye on opposite sides thereof, a locking-key provided with corrugations on one face and fitted in the opening of the eye and against the point, said key having a cut-away portion, and a catch made of spring metal which has one end secured in the recessed portion of the key and its free end provided with an inclined toothed face. 40 45 50

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWARD A. SMITH.

Witnesses:

H. E. CHURCHILL,
C. H. LIBBY.