

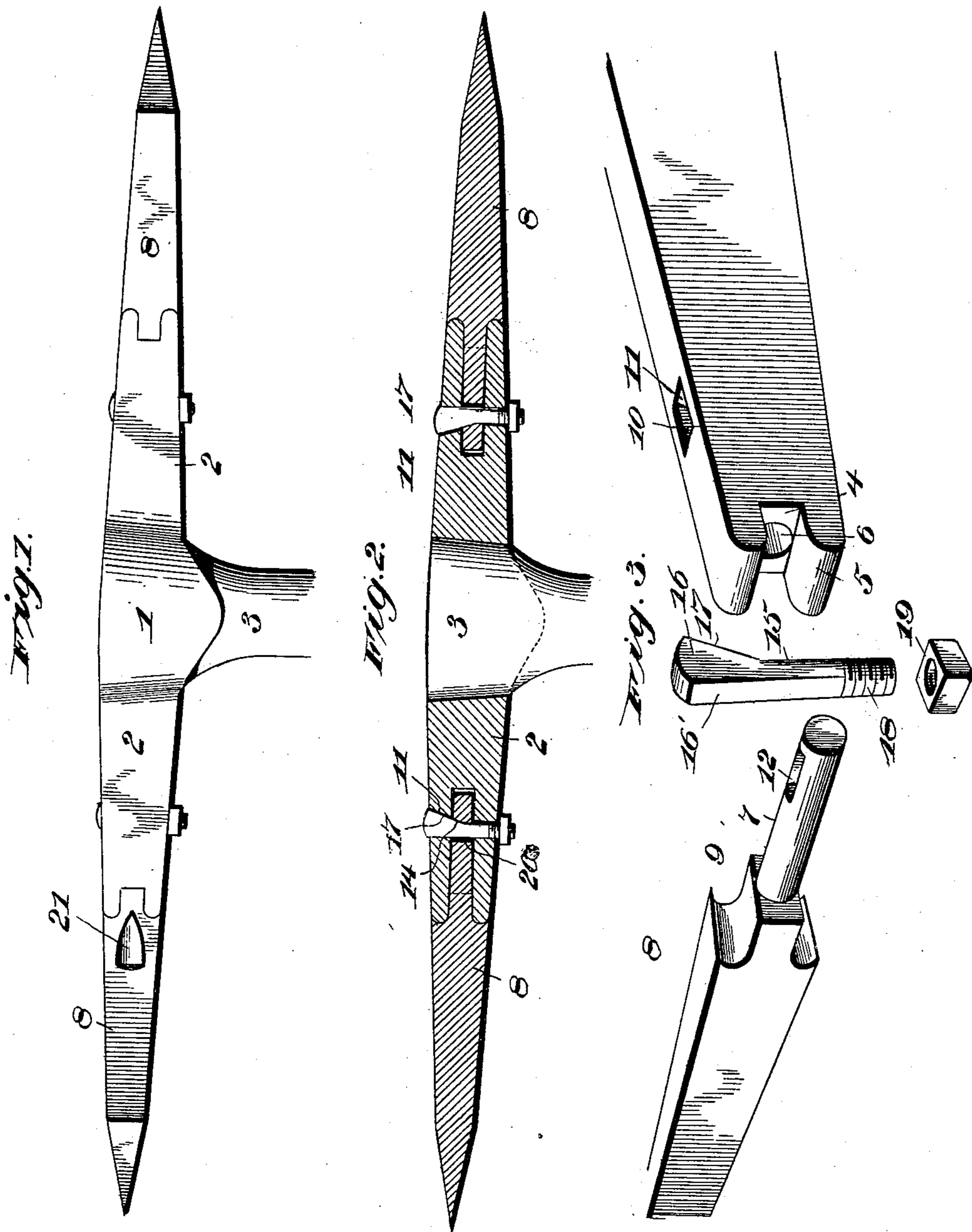
No. 682,144.

J. H. HIGGINS.
COAL PICK.

Patented Sept. 3, 1901.

(No Model.)

(Application filed Aug. 2, 1899.)



Witnesses:
L. C. Hills
N. L. Rogan

Inventor:
James H. Higgins,
By
H. C. Everett & Co. Attorneys

UNITED STATES PATENT OFFICE.

JAMES H. HIGGINS, OF WHITWELL, TENNESSEE.

COAL-PICK.

SPECIFICATION forming part of Letters Patent No. 682,144, dated September 3, 1901.

Application filed August 2, 1899. Serial No. 725,881. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. HIGGINS, a citizen of the United States of America, residing at Whitwell P. O., in the county of Marion and State of Tennessee, have invented certain new and useful Improvements in Coal-Picks, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in picks, and relates more particularly to that class known as "coal-mining" picks.

15 The invention has for its object to construct a pick of this particular class with the points thereof detachable, so they may be readily removed when desired to sharpen or replaced by a new point, should one become broken or damaged.

20 Briefly described, the invention consists in forming the outer ends of each of the prongs of the pick with a pair of shoulders and a longitudinal opening, substantially cylindrical in form, though tapering slightly toward the rear end, to receive the correspondingly-shaped shank of the removable point. The prongs of the pick and the shank of the removable point are provided with transversely-extending apertures adapted to register when the shank is within the longitudinal opening of the prong, each aperture having an inclined shoulder which is adapted to receive a correspondingly-inclined face on the securing-bolt, by means of which the removable point is 35 firmly held in position in the prong.

40 All of these features of construction, together with others entering into the combination, will be hereinafter more specifically described and then particularly pointed out in the appended claim, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference will be employed for designating similar parts throughout the several views of the drawings, in which—

50 Figure 1 is a side view of my improved pick with the parts assembled in position. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a detached detail perspective view of a part of one of the removable points, the

fastening bolt or wedge, and one of the prongs of the pick.

Referring now to the drawings by reference-numerals, 1 indicates the head or eye of the pick, which is of common construction and has the two prongs or arms 2 2 formed integral therewith in the ordinary manner, said head or eye being adapted to receive the handle 3, a portion of which only is shown in these drawings. At their outer ends these prongs or arms are provided with a transversely-extending recess 4, arranged centrally of the said ends, so as to form the two projecting shoulders 5 5 on the end of each prong or arm. These extending shoulders practically form tenons and have their engaging ends and faces rounded, so as to conform to and fit neatly within the receiving pockets or recesses provided therefor in the abutting or engaging end of the removable point. Centrally arranged in the outer end of each prong or arm 2 is an opening 6, preferably circular, as shown, and which tapers slightly toward the rear end of the prong and which is adapted to receive the cylindrical-shaped shank 7 of the removable point 8. This removable point 8 is provided on two opposite faces, at the point of intersection with the shank 7 with recesses 9 9, which are especially shaped to conform to the tenons or shoulders 5 5 of the prongs or arms 2 2, which they receive when the removable point is in position. The two prongs or arms 2 2 are further provided each with an opening or keyway 10, extending through the prong transversely to the longitudinal opening 6 and intersecting with the same. This opening 10 is provided with one straight edge, extending the entire length of the passage, while the opposite face is inclined for a portion of the passage, as at 11. The substantially cylindrical-shaped shank 7 of the removable point is provided with an elongated slot 12, extending transversely through said shank and adapted to be in registry with the opening through the prongs when the points are in position therein. This slot 12 is also provided at the outer end with a straight wall, while the opposite wall or face adjacent to the inner end of the shank is inclined for a portion of the distance through the passage, as shown at 14, which inclined

face is on a plane with the inclined portion 11 of the wall of the opening through the prongs or arms 2 2. This slot 11 through the prongs or arms 2 2 and the slot 12 in the shank 7 is adapted to receive the draw-pin 15, having its one face perfectly straight to conform to the straight wall of the passage and having its head 16 enlarged, with the opposite face thereof from the straight edge 16' inclined, as at 17, to conform to and fit against the inclined walls 11 and 14, heretofore described. The other end of this draw-pin is screw-threaded, as shown at 18, and receives the securing-nut 19, which serves to hold the said pin firmly in position after it has been inserted therein. The opening 12 or slot through the shank 7 of the removable points is of slightly greater length than the diameter of the draw-pin where the latter passes through said slot, so that while the inclined face and a portion of the pin below said inclined face engages the wall at the inner end of the slot 12 a slight space, as at 20, remains between the outer wall of the slot and the straight edge of the draw-pin. This prevents any shock of the blow against the pick-point being delivered upon the draw-pin.

For the purpose of easily removing the points I preferably provide the same on one of their sides with a slight indentation or recess 21, in which a suitable instrument may be inserted for driving the point outward after the draw-pin has been removed.

The opening 6 in the prongs or arms 2 is adapted to be of a greater depth than the length of the shank 7 of the removable point 8, so that when the latter is in position the free or inner end of said shank will not abut against the wall of the prong at the end of said opening, but the ends of the tenons or shoulders 5 5 will abut against the curved faces of the recesses 9 9 and will receive the full force of the blow, which will serve to obviate the danger of the shank being broken by the blow delivered upon the pick-point. This shank 7, as stated, is preferably tapered slightly toward its free end, so as to fit neatly within the opening 6, the latter being similarly shaped to receive said shank. It will be observed that the head of the draw-pin is countersunk in the prongs or arms 2 2 in the construction shown, so that only the rounded outer end of the head projects beyond the outer face of the prongs or arms, thus removing the danger of this head of the draw-pin catching against an object during the delivery of the blow. This head may, if so desired, be slightly more countersunk, so as to have the end of the head on a plane with or below the outer face of the prongs or arms.

I desire to call attention to the fact that with the construction shown and described

the removable points are drawn firmly into position and held, so as to effect a rigid construction and one as effectual as though the point and prong were integral with each other. The insertion of the draw-pin and the driving of the same into position causes the inclined face thereof to engage the inclined face of the wall of slot 12, so as to draw the point with the shoulders or tenons 5 5 into firm engagement with the recess 9, and when the nut 19 is placed in position the parts are securely held against displacement or loosening.

I am aware that removable points for coal-picks have heretofore been constructed, and I therefore do not claim this broadly; but

What I do claim, and desire to secure by Letters Patent, is—

In a device of the character described, a head, oppositely-extending arms made integral therewith, a pair of tenons on the extreme outer ends of said arms, rounded faces on each of said tenons, the said tenons forming a substantially U-shaped recess therebetween with right-angular corners, each arm having a cylindrical opening extending in alinement therewith, the said opening being of the same width as the said recess and tapering toward the eye of the pick, each arm being further provided with a substantially rectangular transverse opening, the front wall of which is straight and rear wall having its upper end at an incline thereto, in combination with removable pick-points having oppositely-disposed recesses, curved faces on said recesses adapted to receive the said curved ends of the tenons, a substantially rectangular portion between said recesses adapted to fit in the said U-shaped recess, a cylindrical shank tapering at its rear end secured to said rectangular portion and of the same width, said shank being of less length than the said opening in the said arms, the said shank having a transversely-extending opening, a straight front wall therein, a rear wall at an incline thereto, a draw-pin having one straight edge, and a rear edge partly at an incline, the lower end of said pin being screw-threaded, a nut for engagement with said screw-threads, the inclined edge of said draw-pin engaging the said inclined wall of the slot in the shank with the straight edge of said pin free from engagement with the opposite straight wall of the slot in the shank, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES H. HIGGINS.

Witnesses:

JAS. B. TYGART,
CHAS. A. STEWART.