

T. JOYCE.  
Stone-Tools.

No. 146,393.

Patented Jan. 13, 1874.

Fig. 1.

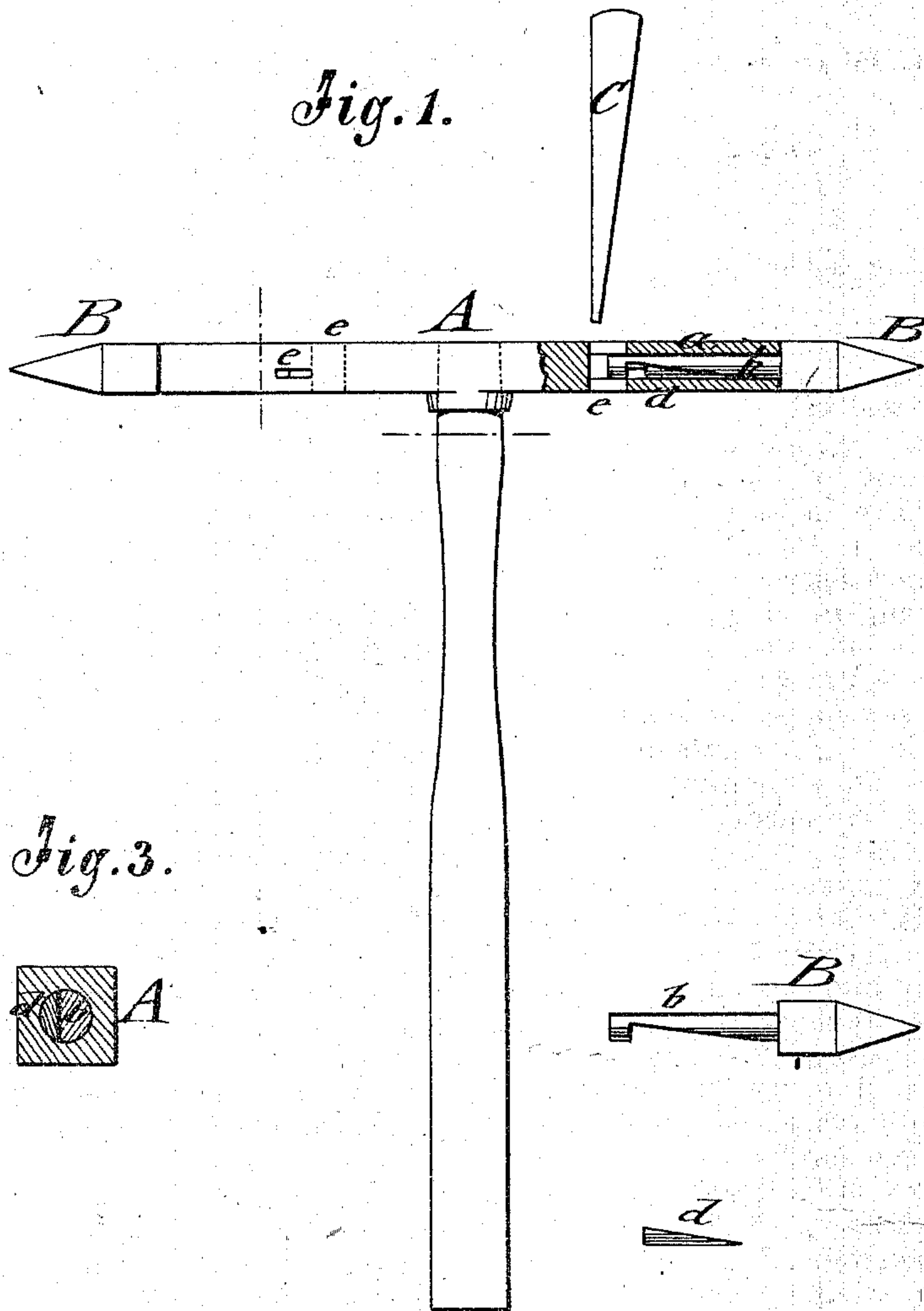


Fig. 3.

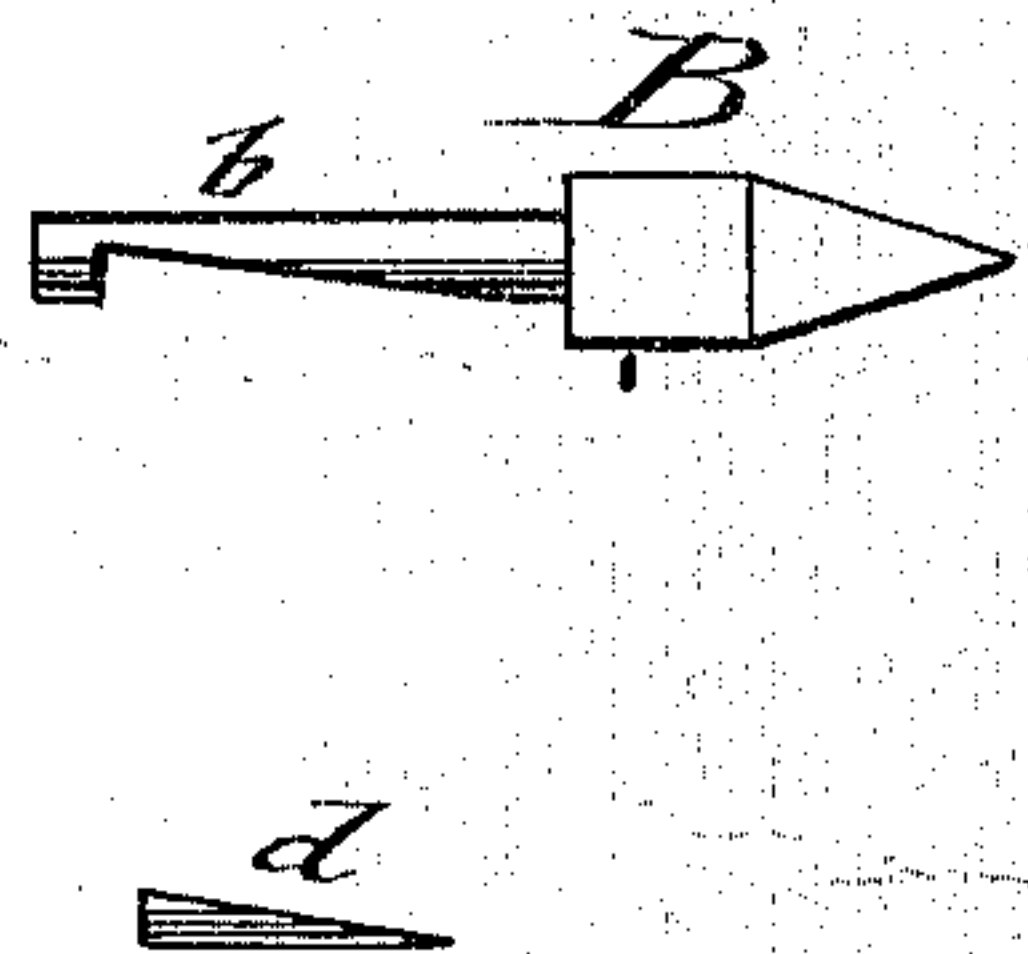
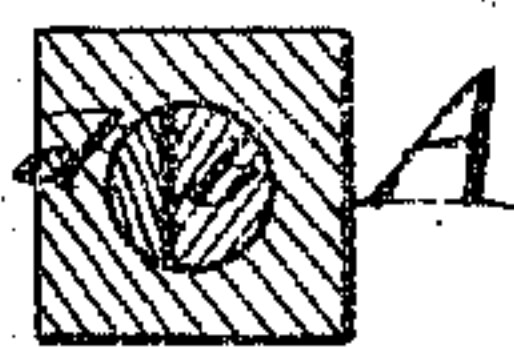


Fig. 4.

Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN STONE-TOOLS.

Specification forming part of Letters Patent No. **146,393**, dated January 13, 1874; application filed December 20, 1873.

*To all whom it may concern:*

Be it known that I, THOMAS JOYCE, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in Picks, of which the following is a specification:

In the accompanying drawing, Figures 1 and 2, respectively, represent side and top views of my improved pick, partly in section; Fig. 3, a vertical cross-section of the same on the line C C, Fig. 1; and Fig. 4 shows detail side views of pick-point and fastening-wedge.

Similar letters of reference indicate corresponding parts.

The object of my invention is to construct miners' picks, drills, and stone-cutters' tools in general, with changeable points, so that a number of different bits may be alternately inserted, as required by the work, and thereby the number of tools lessened and the trouble of carrying them to the place of work decreased. My invention consists in providing the body or main part of the pick, or other tool, at the ends with suitable socket-holes for the insertion of the bits or other tool-points, which are firmly held and retained therein by a wedge-piece. The wedge is driven forward to secure the shank of the point by a key, which is forced through a lateral slot of the pick, while a second slot under right angles to the former, at the end of the shank, serves to disconnect the same from the socket.

In the drawing, A represents a pick or other stone-cutting tool, which is provided, at one or both ends in longitudinal direction, with round, square, or other socket-holes, *a*, of suitable lengths for the insertion of the bits or points B of any desired shape. The shanks of the points B correspond exactly in shape to the socket-holes *a*, their shoulders, however, being

so formed as to fit the pick or extend around it in any suitable shape. Shank *b* is recessed, as indicated in Fig. 4, for wedge-piece *d*, the inclined recess extending from a point near the end of the shank toward the shoulder of the point. The body of pick A is provided at such distance from the socket-ends with two transverse recesses or slots, *e*, one under right angles to the other, that wedge *d* may be driven forward on shank *b* by a wedge-shaped key, C, when the latter is inserted through the slot *e*, nearer to the socket-end, while the second rear slot *e* serves to apply the key to the end of the shank, driving the same forward, and detaching thereby the points B from the pick.

For additional security of the wedge and shank connection with the pick-socket, a pin may be inserted crosswise through the same for preventing the working loose and coming out of the point.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The improvement in picks and other stone-cutting tools, consisting of the combination of the pick A, having socket-ends *a*, with changeable bits or points B, having recessed shank and wedge *d*, all arranged and applied substantially as and for the purpose described.

2. The pick A, provided with lateral recesses or slots *e*, which are placed through the same near the ends of the bit-shanks, and under right angles to each other, for fastening or detaching the points by means of the key, as set forth.

THOMAS JOYCE.

Witnesses:

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