

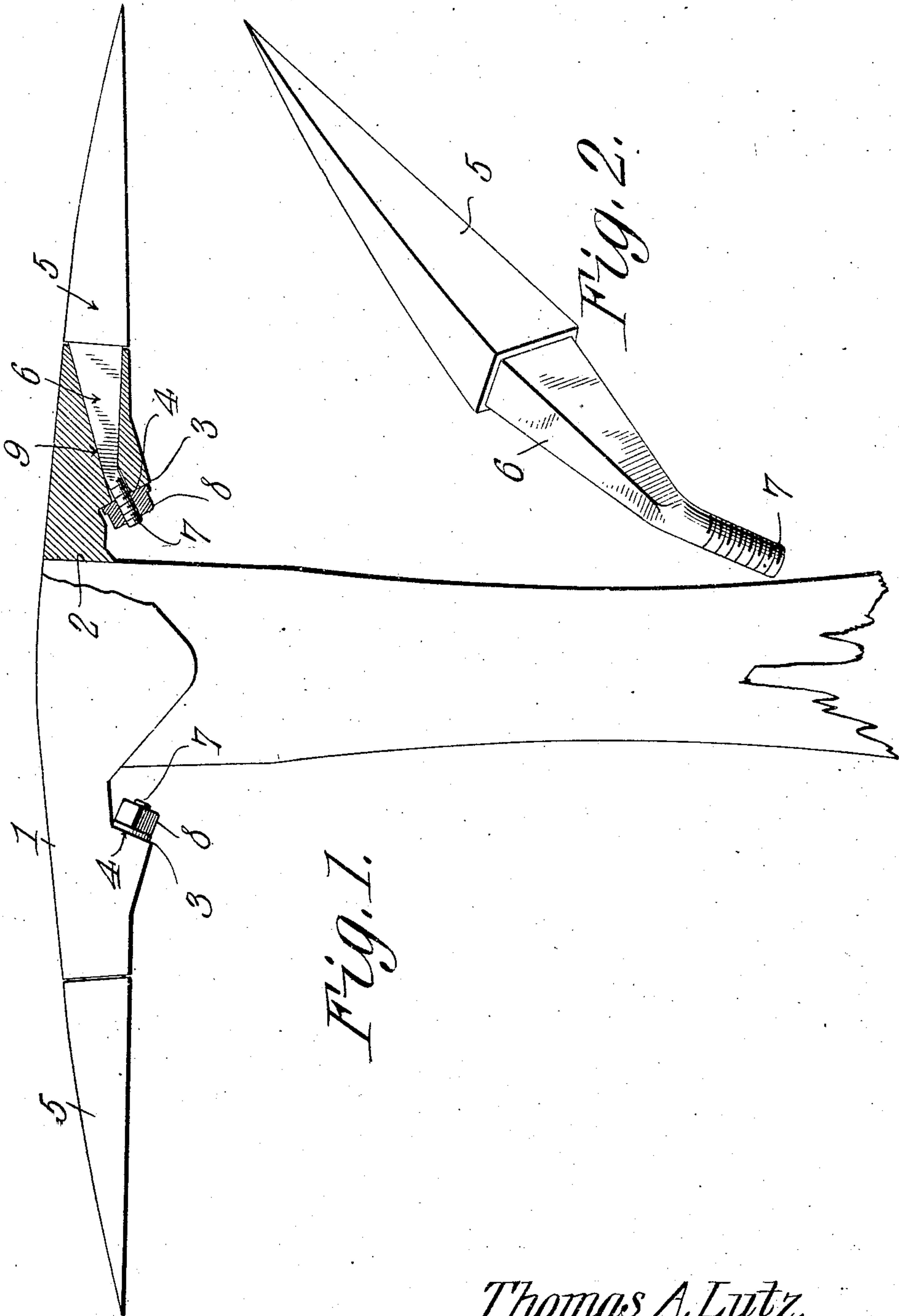
No. 845,427.

PATENTED FEB. 26, 1907.

T. A. LUTZ.

PICK.

APPLICATION FILED DEC. 10, 1906.



WITNESSES:

*E. J. [Signature]*  
*A. J. Gardner*

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# UNITED STATES PATENT OFFICE.

THOMAS A. LUTZ, OF WINBURNE, PENNSYLVANIA.

## PICK.

No. 845,427.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed December 10, 1906. Serial No. 347,134.

*To all whom it may concern:*

Be it known that I, THOMAS A. LUTZ, a citizen of the United States, residing at Winburne, in the county of Clearfield and State of Pennsylvania, have invented a new and useful Pick, of which the following is a specification.

This invention relates to certain new and useful improvements in picks; and the object of the invention is to provide a pick particularly adapted for use in coal-mines or other places where a pick is used in working hard material.

In the accompanying drawing, Figure 1 is a side view, partly in section, of a pick constructed in accordance with this invention; and Fig. 2 is a view of the same with the point detached.

Referring to the drawings, the head 1 of the pick is shown provided with the usual eye 2. The inner edge of said head is symmetrically shaped to form shoulders 3, each side of said eye with flat inner faces 4 converging toward the outer edge of the head. One end of the pick is formed with a detachable point 5, which is secured to the head of the pick by means of a reduced inner end forming a tapering shank 6, terminating in a straight screw-threaded end 7, adapted to receive a nut 8, said tapering shank being adapted to fit into a corresponding tapering socket 9, provided therefor in the head of the pick between the outer end thereof and the inner face of the shoulder upon the inner edge of said head. The screw-threaded end of said tapering shank projects inwardly from the socket in the head of the pick to receive the nut by means of which the shank is secured rigidly in its socket. By this construction a very rigid connection is made between the point and the head of the pick, and yet at any time the point of the pick may be very easily and quickly removed for reforging or grinding or for replacement.

It is not new to provide picks with removable points nor to provide such removable points with tapering shanks; but it is considered new to provide a device of this character without recesses or projecting shoulders upon the outer edge of the pick, such recesses or shoulders tending to weaken the pick structurally and to interfere in its use.

In the use of a pick operated under normal conditions the stress of the blow is downward in the direction of the length of the head of the pick; but there is also a drag-

ging movement due to the fact that the pick is drawn toward the operator, so that there is a transverse strain applied to the head of the pick tending to bend the arm of the pick-head from its normal position outward or toward a position in alinement with the handle. To resist this transverse strain on the head, it is necessary to thicken the arm of the head as it approaches the eye employed for the reception of the handle, and in order to provide for the removal of the point of the pick herein described it has been found necessary to preserve the continuity of the outer or front side of the pick-head from one end thereof to the other to form shoulders 3 practically outside of the line of the inner edge of the head, so that any dragging tendency of the end of the point will be amply resisted, such strain tending to compress that portion of the head which, as above indicated, is continuous. To aid in this disposition of the shoulder practically without the line of the inner side of the pick-head, it has been found desirable to deflect the threaded terminal portion of the shank from the axial line of the polygonal tapered portion, as clearly indicated in the drawings; but owing to the tapered socket there is no difficulty experienced in inserting the shank, notwithstanding its deflected terminal. Moreover, the terminal deflection of the shank serves to relieve the nut to a great extent of the strain or jar due to the use of the pick and insures the communication of the impact to the tapered walls of the socket.

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

1. A pick-head having a continuous outer side and provided at its inner side on opposite sides of the eye with inwardly-projecting obliquely-disposed shoulders, the ends of the arms of the head being provided with polygonal sockets tapered toward and terminating at said shoulders, and removable points having polygonal tapered shanks in said sockets and terminally threaded for engagement by nuts bearing upon said shoulders.

2. A pick-head having a continuous outer side and provided at its inner side on opposite sides of the eye with inwardly-projecting obliquely-disposed shoulders, the ends of the arms of the head being provided with polygonal sockets tapered toward and terminating at said shoulders, and removable points having polygonal tapered shanks in said sockets

and terminally threaded for engagement by  
nuts bearing upon said shoulders, the termi-  
nal portions of said shanks being deflected  
angularly from the axis of the polygonal por-  
5 tion of the shank to permit of the location of  
the shoulder practically without the inner  
line of the pick-head.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in  
the presence of two witnesses.

THOMAS A. LUTZ.

Witnesses:

L. K. REESE,  
A. V. HIPPLE.