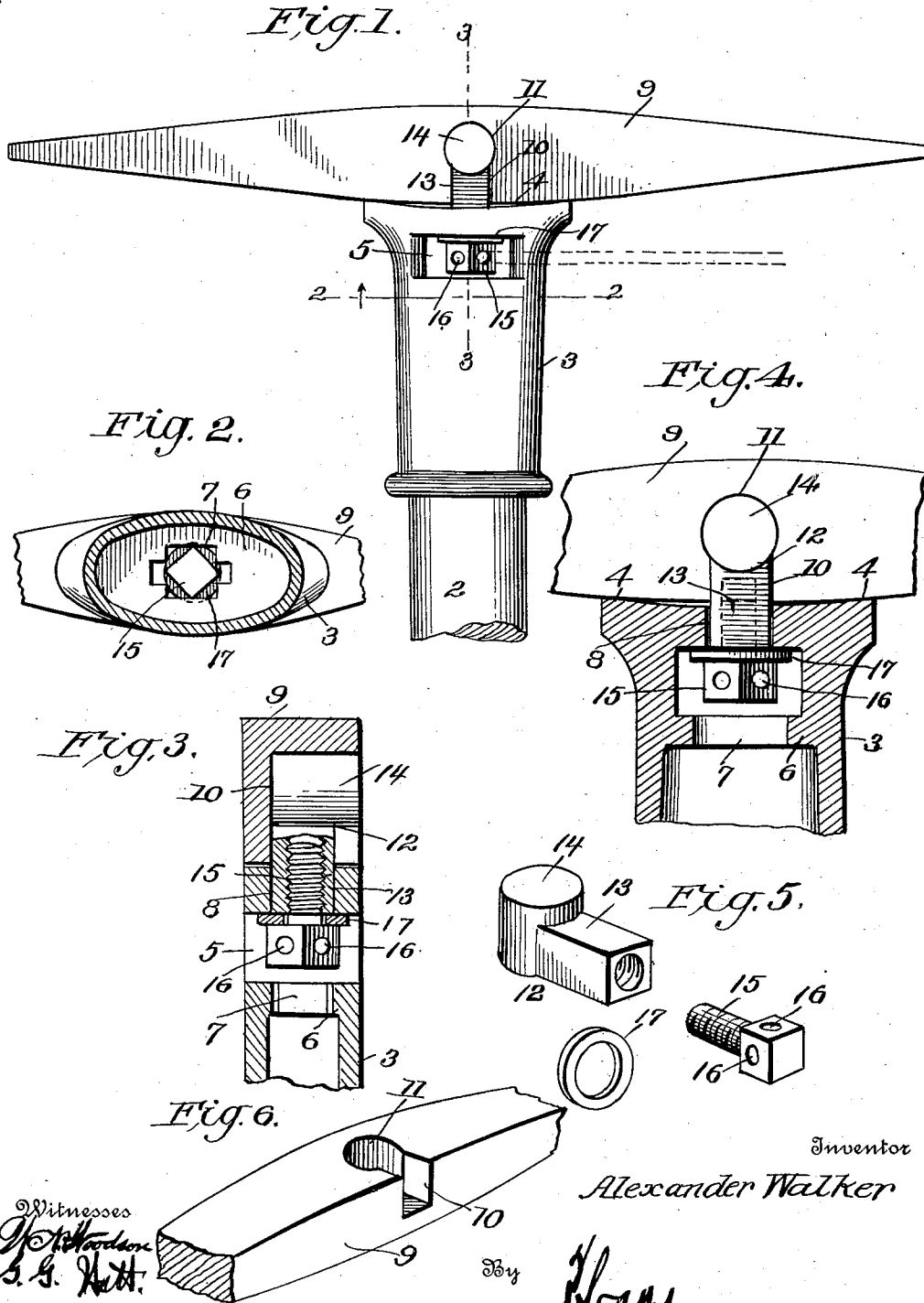


A. WALKER.
DETACHABLE PICK POINT;
APPLICATION FILED JUNE 6, 1911.

1,024,754.

Patented Apr. 30, 1912.



Inventor

Alexander Walker

Witnesses
H. H. Hutton
S. G. Hutton

By

H. H. Hutton

Attorneys

UNITED STATES PATENT OFFICE.

ALEXANDER WALKER, OF WHAT CHEER, IOWA, ASSIGNOR TO WHAT CHEER TOOL CO.,
OF WHAT CHEER, IOWA.

DETACHABLE PICK-POINT.

1,024,754.

Specification of Letters Patent.

Patented Apr. 30, 1912.

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To all whom it may concern:

Be it known that I, ALEXANDER WALKER, citizen of the United States, residing at What Cheer, in the county of Keokuk and State of Iowa, have invented certain new and useful Improvements in Detachable Pick-Points, of which the following is a specification.

My invention relates to improvements in mining picks especially used in working coal mines.

The primary object of my invention is to so construct the pick point that a worn out pick point may be removed from the handle of the pick and a new pick point replaced thereon, and a further object is to so construct the pick point and the socket to which it is applied that the pick point may not turn with relation to the socket, and further to provide means whereby the pick point may be removed laterally without the necessity of entirely unscrewing the attaching screw.

A still further object is to provide means whereby the pick point may from time to time be drawn into tight engagement with the handle socket.

My improved pick is illustrated in the accompanying drawings wherein:

Figure 1 is a side elevation of a pick head provided with my improved socket and pick point. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a vertical section on the line 3—3 of Fig. 1. Fig. 4 is a transverse section of the upper end of the socket showing the locking member and the pick point in elevation. Fig. 5 is a perspective view of the several parts of the locking member separated from each other. Fig. 6 is a fragmentary view of a portion of the pick point showing the form of the recess therein.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to these drawings, 2 designates a handle of any suitable character and 3 a socket therein, this socket being elliptical in section. One end of the socket is curved as at 4 to conform to the curvature of the pick point, and below this curved face 4 the socket is transversely cut through as at 5. The hollow interior of the socket is separated from the cutaway portion 5 by a wall

6 which is formed with a square opening 7 at its middle. The material of the socket at the outer end thereof is formed with a square opening 8. The pick point 9 is formed at its middle with a recess 10, this recess extending inward from one side face of the pick point and being enlarged at its inner end as at 11. The recess 10 opens also upon the under face of the pick point.

For the purpose of holding the pick point to the socket I provide the locking member 12 whose shaft 13 is approximately square in cross section and which fits the recess 10. One end of the shank is formed with a cylindrical head 14, the diameter of this head being larger than the width of the shank of the locking member 12. The head preferably projects at one end slightly beyond the shank of the locking member. It will be seen that the cylindrical head fits in the enlarged portion 11 of the recess 10 and that the shank fits in the contracted portion or neck of the recess 10 and that the pick point is slidable laterally onto the head 14 and the shank 13 so as to rest upon the concavely curved face 4 of the socket.

Disposed within the cutaway portion 5 is a clamp bolt or screw 15 having a relatively large diameter, and the inner end of the shank 13 is interiorly screw threaded so as to engage this bolt or screw 15. The head of the bolt 15 is formed with transversely extending intersecting passages 16 whereby a pick point or other pointed implement may be inserted into the perforation 16 and the bolt turned to draw the locking member 12 toward the socket. The opening 7 in the web or wall 6 is square as before stated and preferably has the size of the head of the bolt 15, thus permitting the bolt to be inserted through the socket. The shank 13 of the locking member fits loosely in the opening 8 but cannot turn in this opening. A washer 17 is disposed between the head of the bolt 15 and the outer wall of the cutaway portion 5.

In use, the clamp bolt 15 is screwed sufficiently to permit the locking member 12 to be moved away from the face 4 of the socket. The pick point is then slid laterally onto the head 14 of the shank 12. The clamp bolt 15 is then rotated in a reverse direction and

draws the member 12 toward the socket, thus drawing the lower face of the pick point against the concave face 4 of the socket and drawing the pick point into rigid engagement with the socket. If the pick point becomes loose, it may be readily tightened up from time to time by tightening up on the clamp bolt 15.

It is to be particularly noted that the locking member 12 does not extend through the pick point and thus the pick point is not weakened at its middle. Furthermore, it is pointed out that the shank 12 approximately fits the opening 8 and that hence the shock and jar on the pick point will be communicated to the relatively thick and heavy shank 13 without bending the screw, as it would do if the screw simply extended up through the pick point itself.

The locking member 12 cannot turn with relation to the socket for the shank of the locking member is square in section and the opening through the socket approximately fits the same. Hence the shank is prevented from turning, and inasmuch as the pick point cannot turn relatively to the shank, by reason of the cylindrical head and the flat sides of the locking member, the pick point is held rigidly in position and incapable of any turning movement. Furthermore, it will be observed that it is only necessary to rotate the screw 15 in a reverse direction to a relatively slight degree in order to remove the pick point from its engagement with the locking member and the socket. It is not necessary to entirely detach the screw from the locking member. Only very few turns of the screw are necessary in order to bind the pick point rigidly upon the socket.

It may be also pointed out that in this device the locking member does not project through the pick and the head of the clamp bolt is not located upon the outer face of the pick where it is in danger of being struck and the clamp bolt bent or the threads thereof damaged. The screw and the threads thereof are entirely protected by the fact that the screw is disposed within the hollow shank of the locking member and the head of the screw is entirely protected by the fact that it is disposed within the socket itself.

What I claim is:

1. A miner's pick including a handle socket having a many sided passage in its end, a many sided locking member disposed within and fitting the socket and having an enlarged head projecting from the socket, a pick point having a laterally extending many sided recess in its side and lower face in which the locking member engages, and means disposed within the socket for drawing the locking member toward the socket to clamp the pick point thereto.

2. A miner's pick comprising a handle

socket, a longitudinally movable, non-rotatable, interiorly threaded locking member having an enlarged head on its outer end, said locking member being disposed in and projecting from the end of said socket, a screw threaded member disposed within the socket and engaging with the interior screw threads of said locking member to draw it toward the socket, and a pick point having a transversely extending recess on one side of its under face, said recess receiving the locking member and being enlarged at one end to accommodate the enlarged head of the locking member.

3. A miner's pick comprising a handle socket having a transverse recess near one end and a longitudinally extending many sided passage in its end communicating with said recess, a pick point having a transversely extending many sided recess upon one face and opening upon the under face of the point, the inner end of said recess being enlarged, a locking member having an enlarged head engaging the enlarged end of said recess and having a many sided, interiorly screw threaded shank fitting said recess, said shank extending through and fitting the longitudinal passage at the end of the socket, and a screw having its head disposed in the transverse recess of the socket and its shank extending through the longitudinal passage and engaging the screw threads of the locking member.

4. A miner's pick comprising a hollow handle socket, the outer end of the socket having a transverse recess extending through from one side of the socket to the other, the recess being separated from the interior of the socket by a wall formed with an opening in its middle, the end of the socket being formed with a longitudinally extending, many sided passage opening into said recess, a pick point having a transversely extending, many sided recess opening upon the under face of the point and extending in from one side face of the point, said recess being enlarged at its inner end, a locking member having an enlarged head engaging the enlargement of the recess and having a many sided shank extending through the longitudinal passage in the end of the socket, said shank being interiorly screw threaded, and a screw having a many sided head disposed in the recess in the socket, the shank of said screw extending through the longitudinal passage and engaging the locking member.

5. A miner's pick including a handle socket having its outer end concavely curved, a longitudinally movable locking member having an enlarged outer end forming a cylindrical head, said locking member being disposed in and having its head projecting from the end of said socket, said head extending transversely of the socket, means

for drawing the locking member toward the
socket, and a pick point having a laterally
extending recess in its side and lower face
fitting said locking member, said recess at
5 its inner end being enlarged to receive and
fit the cylindrical head of the locking
member.

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

ALEXANDER WALKER. [L. S.]

Witnesses:

WILLIAM EDWARD WALKER,

WILLIAM A. DALZIEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
