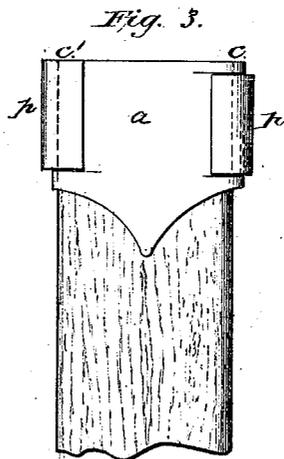
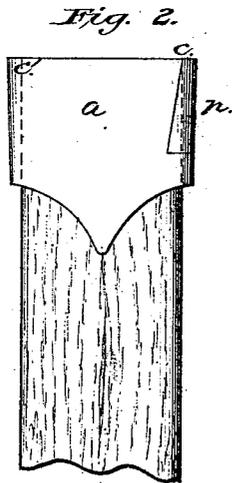
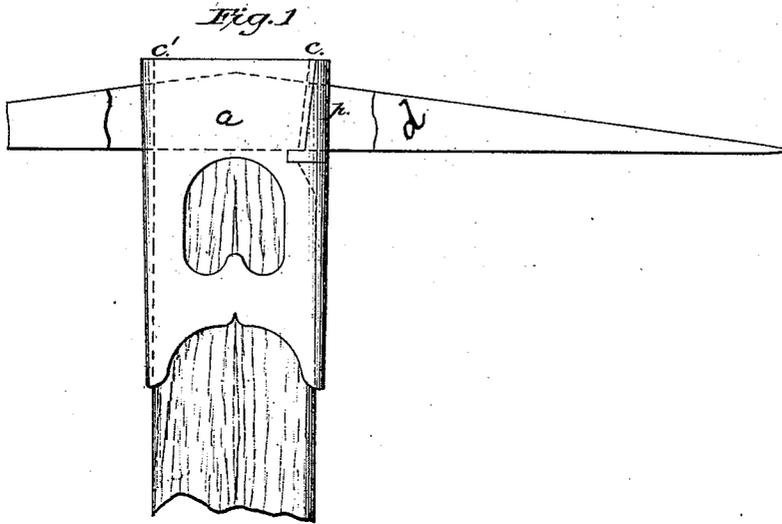


C. A. HARDY & A. E. STAYNER.

TOOL-HANDLE.

No. 179,110.

Patented June 27, 1876.



Attest:

W. Milton Locke
John Ferguson

Inventors:

Charles Atwood Hardy
Augustus Edward Stayner

UNITED STATES PATENT OFFICE.

CHARLES A. HARDY AND AUGUSTUS E. STAYNER, OF SHEFFIELD, ENGLAND;
SAID STAYNER ASSIGNOR TO SAID HARDY.

IMPROVEMENT IN TOOL-HANDLES.

Specification forming part of Letters Patent No. 179,110, dated June 27, 1876; application filed February 16, 1876.

To all whom it may concern:

Be it known that we, CHARLES ATWOOD HARDY and AUGUSTUS EDWARD STAYNER, of Sheffield, England, have invented a new and useful Improvement in Tool-Handles, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

Under the method herein described the outer end of the handle—that is to say, the end to which the tool is to be attached—is incased in a metallic shield or collar; and these shields or collars are made duplicates of each other, so that the handles, when collared, are of one size at this end and interchangeable, and all fit alike a pick-eye of proper form and size. This collar is provided with a clip or key within or upon one edge.

To attach the pick, ax, or other narrow-eyed tool to the handle, it is slipped over the outer end of the handle, and passed a few inches up, to allow of the insertion or placing of the key or clip. The pick or other tool is then passed down over said clip or key, and driven firmly thereon by striking the collared end of the handle upon the ground or any solid surface. The key or clip, being wedged firmly in place by the tool, in its turn firmly secures the tool upon the handle.

To remove the tool from the handle, the opposite or hand end of the handle is struck.

The necessary taper may be either in the collar or in the key, or both.

The key or clip may be magnetized, to make it cling to the collar to prevent loss; or it may

be hinged to the collar, as shown at *c*, Fig. 2, swinging forward, so as to admit of the passage of the pick.

Referring to the drawings, Figures 1, 2, and 3 represent different forms of the shield or collar. In Figs. 1 and 2 the key is shown solid, having, in Fig. 1, a projecting lip, fitting into a corresponding recess in the collar. In Fig. 3 the clip is semi-cylindrical in shape. Fig. 5 is a sectional view of the solid key *p*, as shown in Fig. 2. Fig. 4 is a transverse section of Fig. 3, showing the form of the clip *p*.

There may or may not be beads below or above the clip *p*. The pressure of the eye of the tool upon it is found sufficient to retain the clip in place.

The lines *c'* indicate the dimensions of the handle within the collar.

As a modification of our invention, without departing from its spirit, a second key or clip may be used on the opposite edge of the collar, as shown in Fig. 3.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of the collar *a* with clips or keys *p*, the pick *d*, and handle *b*, all constructed, arranged, and operating substantially in the manner and for the purpose specified.

CHARLES ATWOOD HARDY.
AUGUSTUS EDWARD STAYNER.

Witnesses:

W. MILTON LOCKE,
JOHN FERGUSON.