

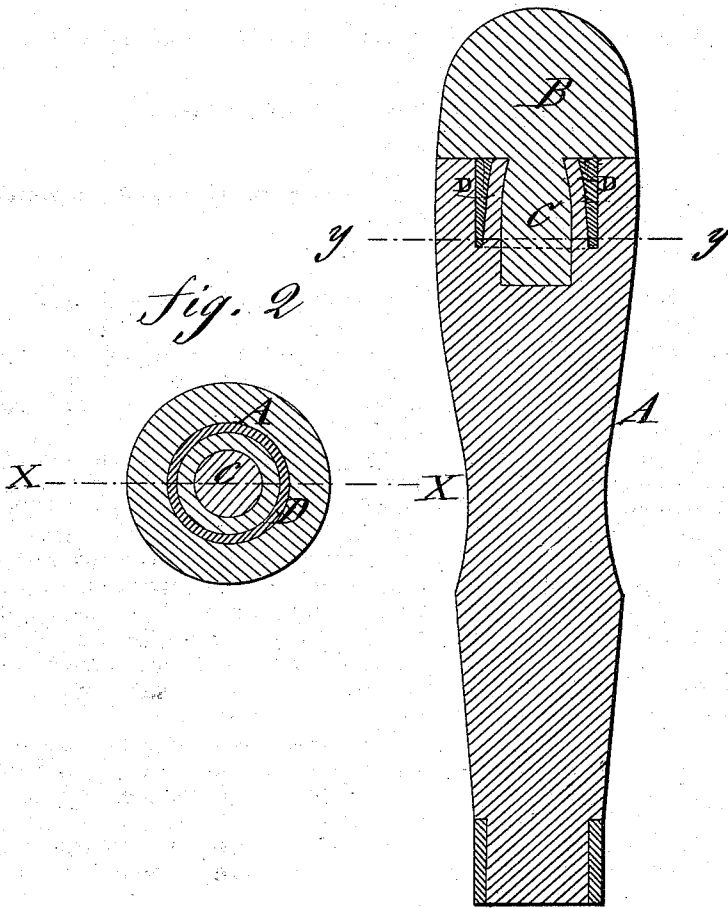
G. CARLISLE.
Tool-Handles.

No. 154,834.

Patented Sept. 8, 1874.

Fig. 1

Fig. 2



WITNESSES:

C. Neuman
Chetquid

INVENTOR:

G. Carlisle
BY *Wm. L.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE CARLISLE, OF ATTLEBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN TOOL-HANDLES.

Specification forming part of Letters Patent No. **154,834**, dated September 8, 1874; application filed July 11, 1874.

To all whom it may concern:

Be it known that I, GEORGE CARLISLE, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Tool-Handles, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

Figure 1 is a longitudinal section of a tool-handle with the tip fastened according to my invention, the section being taken on the line *x x* of Fig. 2. Fig. 2 is a cross-section of Fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the handle; B, the tip. C is the tenon, and D the metallic band. Instead of a tool-handle, to which the tip is attached, it may be a loom-shuttle, or any other article to which it may be desired to attach a tip or hardened end to withstand blows, concussions, and wear from friction. Instead of being round, the band D and the tenon may be made square, or of other form, the hole or mortise being made to correspond.

The tip B is preferably made of horn or similar hard material, having a broad shoulder and a central tenon, the tenon being of less diameter at the shoulder than at its end, and tapering or curved from the end, or near the end, to the shoulder. The hole or mortise in

the handle or other article is made of the size of the end of the tenon. The ring or band D is made of metal, preferably of steel, with its ends of equal diameter outside, but with the inside to correspond with the shape of the tenon.

Ordinarily a groove of the size of the outside of the ring or band will be made of a breadth to receive the lower or thin end of the ring, so that when the ring is started in the groove the tip, when driven, forces it down, and thereby forces inward the wood, and contracts the hole around the tenon, as seen in Fig. 1. In some cases the ring or band may be made sharp at the lower edge, so as to render a groove unnecessary, the action of the ring being the same.

The liability to split the handle or other article would be small, as the outside of the ring or band would be parallel with the grain of the wood.

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

The combination, with handle A, of band D and tip B, having tenon C, as and for the purpose specified.

GEORGE CARLISLE.

Witnesses:

W. W. SMITH,
WM. M. STONE.