To all whom it may concern:

Be it known that I, GEORGE WILFORD CAMPBELL, a subject of the King of Great Britain, residing at St. John, in the Province of New Brunswick and Dominion of Canada, have invented new and useful Improvements in Processes of Manufacturing an Ax, of which the following is a specification.

This invention relates to improvements in the process of manufacturing an ax.

In carrying out my invention it is my purpose to provide a novel method whereby an ax body or head may be easily and effectively provided with a hammer poll.

It is also my purpose to provide, in the process of manufacture, an ax head or body with means whereby a hammer poll of a harder material than that from which the ax is formed may be secured to the ax body to remain a permanent part thereof.

With the above and other objects in view the improvement resides in the construction, combination and arrangement of parts set forth in the following specification and falling within the scope of the appended claims.

In the drawing:

Figure 1 is a perspective view of an ax head showing lugs provided upon the head or top thereof;

Fig. 2 is a similar view with the lugs worked outwardly and showing the poll or hardened member being inserted between the lugs;

Fig. 3 is a perspective view of the hardened insert member or poll, and

Fig. 4 is a perspective view of the finished hammer poll ax.

In the present construction of axes, the same are made of a comparatively soft or mild steel and when formed with hammer polls, the said hammer polls are defective inasmuch as they are extremely liable to crack and spread out. With my construction and method I obviate this objectionable feature by providing the mild steel body of the ax with a cast steel poll, and in accomplishing the result I slit the mild steel body of the ax laterally from its ends and adjacent to the head thereof as indicated by the numerals 1, providing the head of the ax with oppositely disposed lugs 2. This end of the ax body 3 is then thoroughly heated and the lugs are turned by a hand hammer to the position illustrated in Fig. 2 of the drawing. The head of the body 3 is then slitted centrally between the lugs to a limited extent and the lugs are worked until a substantially V-shaped recess 4 is formed between the same and within this recess is adapted to be received the hammer poll 5.

As disclosed in the drawing the poll is substantially octagon shape and is formed of cast steel and has its lower edge substantially V-shaped to be snugly received within the recess 4 and to be embraced by the lugs 2, when the member 5 is driven into the body 3 between the said lugs 2.

The ax is now heated to the requisite welding temperature when the lugs 2 embracing the poll 5 are placed under dies on a trip hammer designed to shape and weld the said lugs and poll into an octagon shaped poll (see Fig. 4), having its bottom edges adjoining the body 3 suitably filleted.

It will be understood that by providing a cast steel hammer poll in an ax of this description, the said poll will be tempered sufficiently hard to fulfill its ordinary functions without breaking or spreading and that the result is a decided improvement over the type of axes in common use, in which type the poll receive frequent dressing by blacksmiths to keep the same in condition to perform the required functions.

It is to be understood that the nature of the improvement is such that the same is susceptible to various modifications and that I am not to be restricted to the structure illustrated and set forth in the description, but that I am entitled to all such modifications as fall within the scope of the appended claims.

Having thus described the invention, what I claim is:

1. The process of manufacturing an ax, consisting of slitting an ax blank from each side of its head end adjacent to the head thereof to provide oppositely disposed lugs, working outwardly said lugs to provide a recess therebetween, and then inserting a cast steel poll between the lugs and working the lugs around the poll to secure the poll to the lugs.
2. The process of manufacturing an ax, consisting of forming transverse grooves in the end adjacent to the head of the ax blank thereby forming oppositely extending lugs, working said grooves outwardly of the ax blank to form a substantially V-shaped recess therebetween, placing a cast steel poll having a lower V-shaped end within the recess so as to be embraced by the lugs, heating said lugs and working them around the poll to weld the said poll to the lugs.

In testimony whereof I affix my signature.

GEORGE WILFORD CAMPBELL.

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