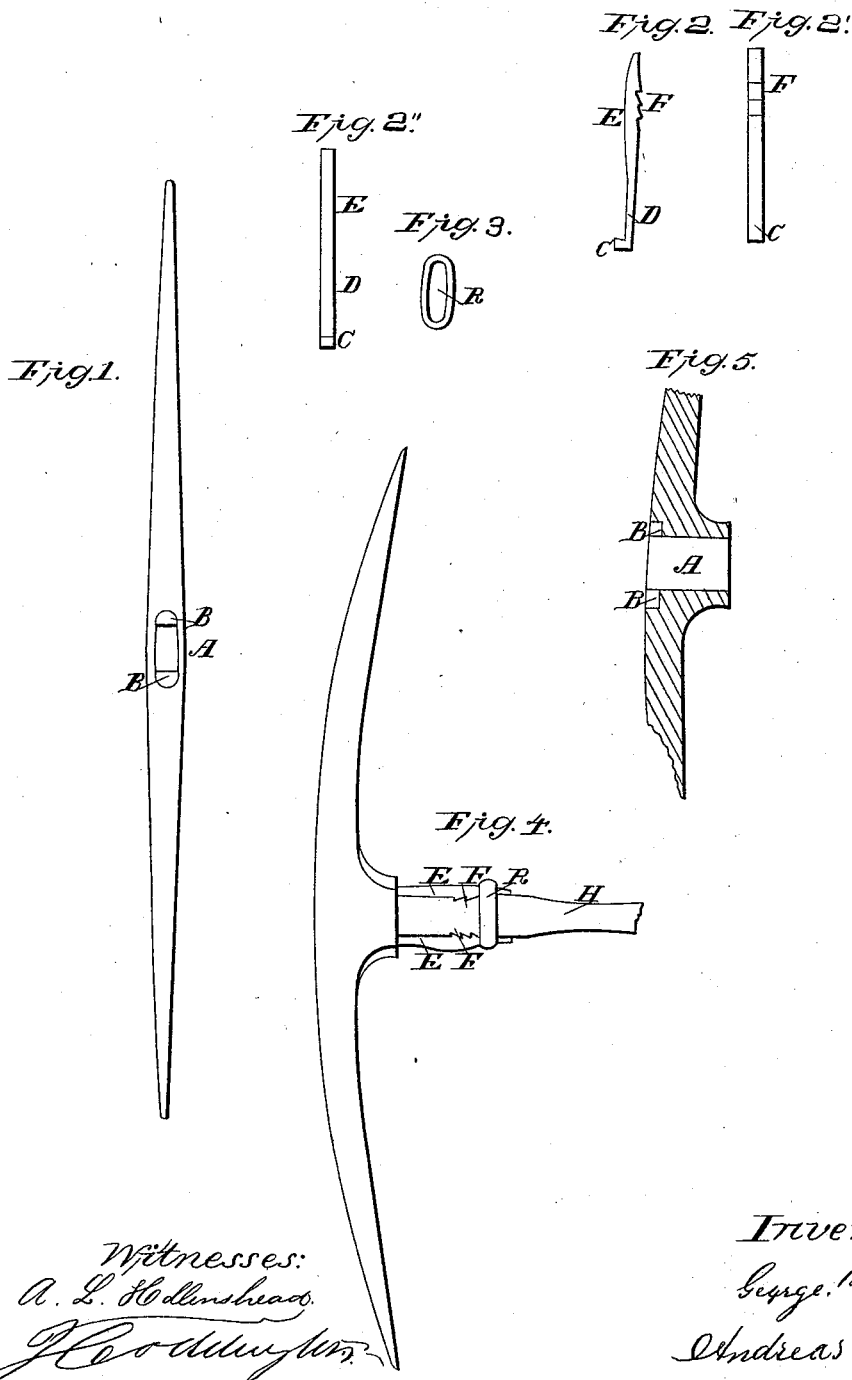


*Harris & Franz,*

*Tool Handle.*

*N<sup>o</sup> 55,096,*

*Patented May 29, 1866.*



*Witnesses:*  
*A. L. Hollinshead.*  
*J. C. Hollinshead.*

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*George W. Harris.*  
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# UNITED STATES PATENT OFFICE.

GEORGE W. HARRIS AND ANDREAS FRANZ, OF NEW YORK, N. Y.

## IMPROVED MODE OF ATTACHING HANDLES TO TOOLS.

Specification forming part of Letters Patent No. 55,096, dated May 29, 1866.

*To all whom it may concern:*

Be it known that we, GEORGE W. HARRIS and ANDREAS FRANZ, both of the city, county, and State of New York, have invented a certain new and useful Improvement in the Manner of Attaching and Applying Handles to Miners' and other Picks, Axes, Hammers, and other Tools; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a front view of the tool, with the eye for receiving the handle. Figs. 2, 2', 2'' represent three views of the keys or wedges, of which one or more may be used; Fig. 3, a ring or cam to secure the whole, and Fig. 4 a miner's pick, with the handle attached, complete; Fig. 5, sectional view of eye.

Similar letters of reference, where they occur in the separate figures, denote like parts of the handle-fastener in all the drawings.

Our invention consists in an adjustable fastener for the handles or helms of miners' and other picks, axes, and hammers of all descriptions, and other tools to which it may be applied, and which may be readily applied and detached.

To enable others skilled in the art to fully understand, use, and construct our invention, we will proceed to describe it.

A is the eye of the tool to which our invention is to be applied; B B, shoulders, against which the head C of the key bears to prevent

the tool slipping forward; D, the neck of the key or wedge, so formed as to fill the space in the eye of the tool between the metal and the handle; E, a swell upon the outer face of the key, which acts as a wedge to secure the whole when the ring R or clamp is applied; F, one or more notches, teeth, or their equivalent, which, when pressed into the wood by means of the ring or clamp R being brought to its place, secures and holds the handle in its place. All of which is shown complete in Fig 4, which represents a miner's pick with handle attached; Fig. 5, a sectional view of the eye.

The object of our invention is to obviate the swell in the eye of many tools as now made to receive the handle, the projection of the handle beyond the face of the tool, and the use of nails, wedges, washers, &c., in securing the handle in its place and facilitating the attaching and detaching of the handle to the tool.

Having thus fully described our invention, what we desire to secure by Letters Patent, and claim as new, is—

The combination of the countersunk shoulders B, the wedge or key, Figs. 2, 2', and 2'', and the clamp or ring R, as and for the purpose herein set forth.

GEORGE W. HARRIS.  
ANDREAS FRANZ.

Witnesses:

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