No. 739,136. PATENTED SEPT. 15, 1903.

R. E. APPLETON.

TOOL HANDLE FASTENING.

APPLICATION FILED JAN. 31, 1903.

NO MODEL.

Fig. 1.

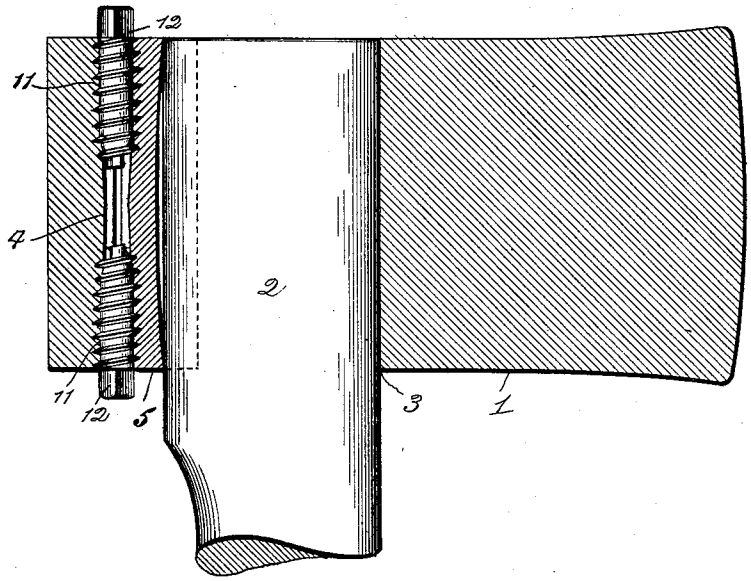


Fig. 2.

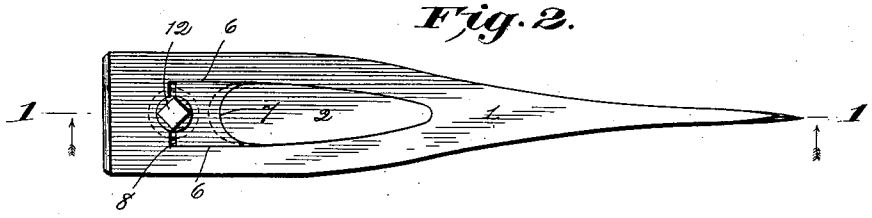


Fig. 3.

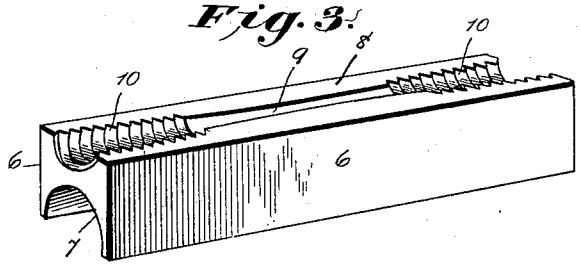
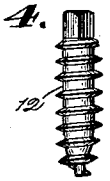


Fig. 4.



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No. 739,136. Patented September 15, 1903.

UNITED STATES PATENT OFFICE.

RALPH EUGENE APPLETON, OF ORONO, MAINE.

TOOL-HANDLE FASTENING.

SPECIFICATION forming part of Letters Patent No. 739,136, dated September 15, 1903.

Application filed January 31, 1903. Serial No. 141,352. (No model.)

To all whom it may concern:

Be it known that I, RALPH EUGENE APPLETON, a citizen of the United States, residing at Orono, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Tool-Handle Fastenings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to tool-handle fastenings, but more particularly to handle-fastenings for axes, hatchets, hammers, and the like, and has for its object to provide a device of this character which is simple in construction, cheap to manufacture, strong, durable, and efficient.

A further object of my invention is to provide a tool-handle fastening which is positive in its action and which is operated after the handle is inserted in the tool-eye.

With these objects in view my invention consists in the novel construction and arrangement of fastening means.

My invention also consists in certain combination of parts, which will be first fully described and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a vertical longitudinal section of an ax and handle constructed in accordance with my invention, said section being taken on line 1 1 of Fig. 2. Fig. 2 is a top plan of the ax and handle. Fig. 3 is a perspective view of the fastening-piece, and Fig. 4 is an elevation of one of the fastening-screws.

Like numerals of reference indicate the same parts throughout the several figures, in which—

1 is the ax, and 2 the handle. Instead of constructing the ax 1 with the usual ax-eye, I form one opening 3 therein, having a flat rear wall 4 and tapering toward the front, as shown in Fig. 2.

5 indicates my fastening-piece, which has flat sides 6 and an inwardly-curved front 7, said front being so concaved that it presents an arc when viewed in longitudinal vertical section, as shown in Fig. 1. The back 8 of said locking-piece is provided with a groove 9, which tapers from the center of said locking-piece, and at each end of said groove threads 10 are formed, which threads extend some distance along the groove 9.

It will be noticed from Fig. 1 that the flat rear wall 4 of the ax-opening 3 is rearwardly inclined from its center and that it is provided with threads 11 above and below its center.

12 indicates the fastening-screws, having tapered ends and preferably square heads, so that they are manipulated by means of a wrench or key.

Having thus described my invention, its operation is as follows: The ax-handle is inserted in the ax and its fastening-piece inserted in position. The fastening-screws are then threaded between the rear wall of the fastening-piece. Said screws are turned in in this manner, which forces the fastening-piece into engagement with the ax-handle, and by reason of the inclined backs of the ax-opening and the fastening-piece the said screws force the fastening-piece into tighter engagement the farther they are threaded in. The concaved front of the fastening-piece causes the ax-handle to be tightly engaged at the top and bottom of the ax, and as the said fastening-piece is preferably made of metal it can press the ax-handle to conform to the concavity of the fastening-piece.

It can be readily seen that the power derived from the fastening-screws is so great that it can bury the ends of the fastening-piece into the ax-handle, which arrangement will insure absolutely a perfect and positive fastening for the ax.

In order to remove the ax, the screws are simply unthreaded and the ax slipped off.

It is apparent with my fastening that I employ nothing which would tend to split the handle or weaken the same, and I wish to be fully understood as not limiting myself strictly to the construction herein described, as various slight changes may be made therein which would fall within the limit and scope of my invention, and I consider myself clearly entitled to all such changes and modifications.

What I claim as my invention, and desire

to secure by Letters Patent of the United States, is—

1. In a tool-handle fastening, the combination with the tool and handle of a fastening-piece inserted in rear of said handle, fastening-screws adapted to be threaded in rear of said fastening-piece and substantially parallel thereto.

2. In a tool-handle fastening, the combination with the tool having a handle-opening therein, and provided with screw-threads in the rear wall of said opening, a handle and a fastening-piece adapted to be inserted in rear of said handle and substantially parallel thereto and provided with screw-threads in its rear, fastening-screws adapted to be threaded into said screw-threads, substantially as described.

3. In a tool-handle fastening, the combination with the tool having a handle-opening therein; the rear wall of said opening being backwardly-inclined from its center, a fastening-piece having its rear provided with a groove which tapers from the center thereof, and fastening-screws adapted to be threaded in rear of said fastening-piece and substantially parallel thereto.

4. In a tool-handle fastening, the combination with the tool, and handle, of a fastening-piece adapted to be inserted behind said handle and substantially parallel thereto, said fastening-piece being concaved so that the center of the front thereof presents a vertical arc, and means for forcing said fastening means against the handle.

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

RALPH EUGENE APPLETON.

Witnesses:
JAMES I. PARK,
JONATHAN W. MYERS.