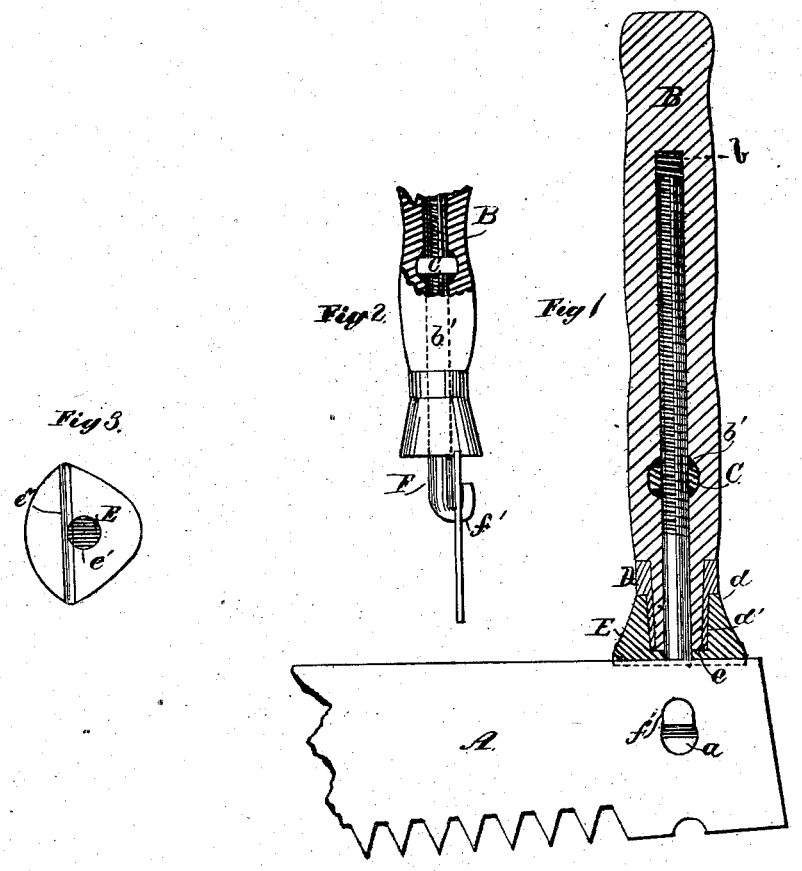
E. ANDREWS.

Handles for Crosscut-Saws.

No. 165,051. Patented June 29, 1875.



Witnesses;
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UNITED STATES PATENT OFFICE.

EMANUEL ANDREWS, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN HANDLES FOR CROSSCUT-SAWS.

Specification forming part of Letters Patent No. **165,051**, dated June 29, 1875; application filed December 5, 1872.

To all whom it may concern:

Be it known that I, EMANUEL ANDREWS, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Handles for Crosscut-Saws; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The object of my invention is such a change in the construction of handles for crosscut-saws as will make them more convenient and less liable to get out of order in use, and at the same time permit their manufacture and sale at a lower rate; and my invention therein consists in providing the straining-rod with left-hand screw-threads on its upper end, working in a corresponding threaded nut; and, further, in a movable cap of peculiar construction.

To enable others to construct my handle I now proceed to describe the same, making reference to the drawings, in which—

Figure 1 represents my handle as attached to a saw, as seen with the saw endwise. Fig. 2 represents the same, the saw being shown sidewise with the handle in section; and Fig. 3 represents the top of the movable cap.

Like letters of like kinds denote corresponding parts in each figure.

The saw A has an opening, *a*, through the blade near its end. The wooden part of the handle B has a cylindrical central opening, *b*, extending up from the bottom the greater part of its length, and at right angle to that, and at a point near the bottom another opening, *b'*, extending through the opening *b* and a little distance beyond. These openings are made most conveniently with boring-tools, and the last named is a little larger than the first named. Through this opening *b'* a nut, C, with rounded ends is driven down until its threaded central opening comes in line with the center of the opening *b*, and it is held in place there by reason of its fitting the opening *b'*, which is larger than the opening *b*, and by means of a plug, with which the opening *b'* is closed. A cast-metal ferrule, D, having shoulders *d* and tapering neck *d'*, is secured upon the lower end of the handle B, so as to make a neat fit, and the tapering neck *d'* is likewise intended to fit closely within the movable cap E. This cap is of cast metal, with a chamber, *e*, into which the neck *d'* passes, and an opening, *e'*, through which the hook-rod hereinafter described passes. The cap has a face of the form shown particularly in Fig. 3, with its greatest diameter in one direction, just outside of the opening *e'*, along which greatest diameter is a groove, *e''*. A hook-rod, F, which is made of merchant rod-iron, has its upper end *f* threaded with a left-hand thread, and its lower end turned into a hook, *f'*.

In applying the handle to a saw, the hook is inserted in the opening in the saw-blade, the threaded rod passes through the nut, and by turning the handle to the left the saw is strained, with its upper edge in the groove in the movable cap, and is ready for use. By turning the handle the other way the hook is released from the saw-blade, and the handle conveniently detached.

In using handles for crosscut-saws, all of which have been made with right-hand screw-threads upon the straining-rod, it has been found that the tendency of the hand, in drawing the saw toward the person, is to bend inwardly, the effect of which motion is continually to unscrew said rod, and to loosen the handle, which after a little is apt to come entirely off the saw, which is an annoying matter at all times, and especially when these saws are used, as they are most commonly, in the forests, in deep snows, and severely cold weather. To remedy this inclination of the hand in work to unscrew the handle there have been many contrivances; but all are expensive and none of them convenient. By my left-hand screw-thread the tendency of the hand in sawing is to screw up and bind the handle more firmly all the time.

In manufacturing handles for crosscut-saws, it has been found essential to have the straining-rod in the center of the handle, for obvious reasons; and where a cap with equal central diameters has been used with a groove to receive the edge of the saw, it was necessary, in order to bring such groove as near as possible to the greatest diameter of the cap, to use iron rods half-round at their lower ends, with the flat side next to the saw-blade, which

has been found to be expensive and also inconvenient. I remedy this defect by my peculiar shape of the cap, which has its longest diameter on one side of the center, so that I am able to employ merchantable round rod without change, except to turn a hook at one end and cut a thread in the other, and have the groove near the center of weight and strength of metal, with the greatest possible length of bearing. By making an opening in the saw-blade, into which I fasten the hook of the straining-rod, I am enabled to use a shorter and cheaper rod.

Having thus described my invention and set out some of its advantages, what I claim as new therein and my invention is—

1. The combination, in a handle for cross-cut-saws, of the straining-rod F, with its upper end cut with left hand threads, and a corresponding threaded nut, C, substantially as set forth.

2. The movable cap E, provided with a central opening and a groove upon one side of the same across its greatest diameter, substantially as set forth.

This specification signed and witnessed this 2d day of December, 1872.

EMANUEL ANDREWS.

Witnesses:
J. A. BEEBER,
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