

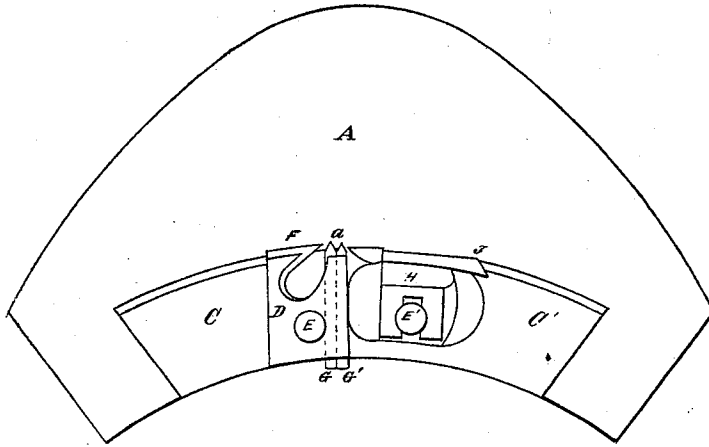
W. R. DAVIS.

Coopers' Crozers and Howels.

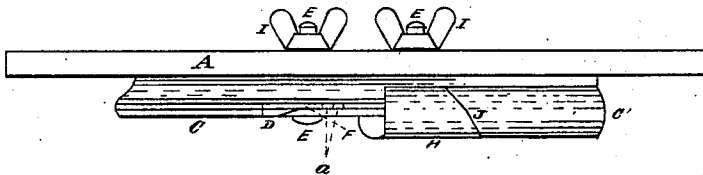
No. 142,995.

Patented September 23, 1873.

Figure, 1.



Figure, 2.



Witnesses.

L. H. Coover

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att'y

UNITED STATES PATENT OFFICE.

WILLIAM R. DAVIS, OF UNION CITY, PENNSYLVANIA.

IMPROVEMENT IN COOPERS' CROZES AND HOWELS.

Specification forming part of Letters Patent No. 142,995, dated September 23, 1873; application filed May 13, 1873.

To all whom it may concern:

Be it known that I, WM. R. DAVIS, of Union City, in the county of Erie and State of Pennsylvania, have invented a new and Improved Coopers' Croze and Howel, of which the following is a specification:

My invention consists in providing a tool for coopers' use which shall combine both a croze and a howel.

My device is shown in the accompanying drawings, which form a part of this specification, as follows: Figure 1 is a plan view of the under side of my device, and Fig. 2 is an elevation view of the working face.

My device consists of the following parts, as shown by the letters of reference: A is the hand piece or back, and C C is the knife holder or stock, which is secured to or forms a part of the part A. These parts are usually of wood. In the stock C C are attached the knives or bits by set-screws E E. These are in two groups—viz., those forming the croze and those forming the howel. The croze is formed of the following parts: colters G G', plow F, and clamping-plate D. The two colter-bits G G' are so set as to act on the wood that is being crozed like two saw-teeth. The plow is of the ordinary shape, and is placed immediately after the colters. These are held in place by the clamping-plate D, which has

an aperture for the cuttings or chips to pass away from the bits freely. The howel consists of a single bit, H, which is set in an aperture in the stock C. This bit is adjustable, also, by means of the set-screw operating in a slot in the shank of the bit. The form of the bit H is like a scroll somewhat, and its cutting-edge J is diagonal or spiral to the face of the stock. The bit itself is so arranged as to lie almost in line with the face of the stock, and can be adjusted to lie more or less so, as may be desired.

By the combination, as above shown, of a croze and howel in one tool, both of which operate conjointly, two operations upon the cask or barrel are performed at the same time, and the one assists the other. The labor is no greater in performing both together than of either one separately, and hence time and money are saved.

What I claim as my invention is as follows: The combination of the plow F, cutters G G', and howel H, having the spiral or curved edge J, when secured to the plate A, and arranged in the manner substantially as shown and described.

WILLIAM R. DAVIS.

Witnesses:

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WM. C. JACKSON.