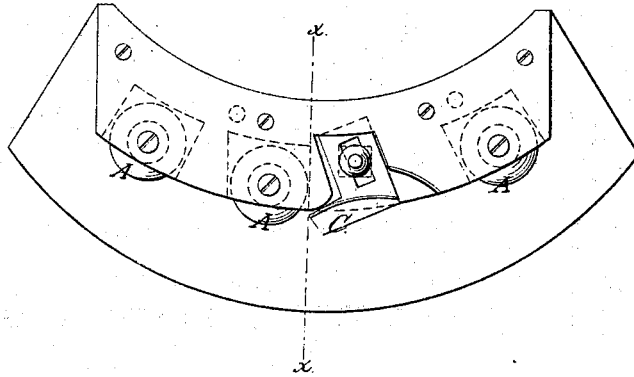


C. OLMSTEAD.  
COOPERS' GROZE.

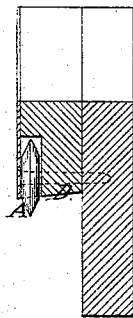
No. 182,324.

Patented Sept. 19, 1876.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*H. Rydquist*  
*John Goethals*

INVENTOR:

*C. Olmstead*

BY

*Munnif*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES OLMSTEAD, OF EAST BLOOMFIELD, NEW YORK, ASSIGNOR TO  
HIMSELF AND E. S. KELLOGG, OF SAME PLACE.

## IMPROVEMENT IN COOPERS' CROZES.

Specification forming part of Letters Patent No. **182,324**, dated September 19, 1876; application filed  
March 6, 1876.

*To all whom it may concern:*

Be it known that I, CHARLES OLMSTEAD, of East Bloomfield, Ontario county, New York, have invented a new Improvement in Crozing-Tools, of which the following is a specification:

My invention consists of a roller-gage for the cutter of a crozing-tool, the same being V-shaped rollers, located in the plane of the stationary V-shaped guide commonly used, the object being to make the tool work easier and last longer than heretofore.

Figure 1 is a top view of my improved crozing-tool, and Fig. 2 is a transverse section, taken on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the V-shaped rollers, which I

propose to employ for guiding the cutter B, said rollers being mounted in the face of the stock D, along the line of the ordinary fixed guide. These rollers wear even and work easy, whereas the other guide wears unevenly and works harder, and has to be renewed frequently.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A crozing-tool having roller-guides A, in combination with cutter C, substantially as specified.

CHARLES OLMSTEAD.

Witnesses:

T. H. KELLOGG,  
CHAS. S. LEETE.