C. W. CARDOT.

MACHINES FOR MAKING AXES.

No. 194,892. Patented Sept. 4, 1877.

Figure 2,

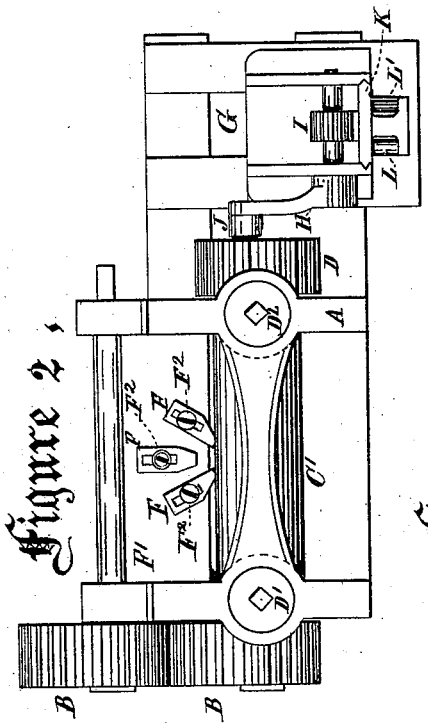


Figure 4,

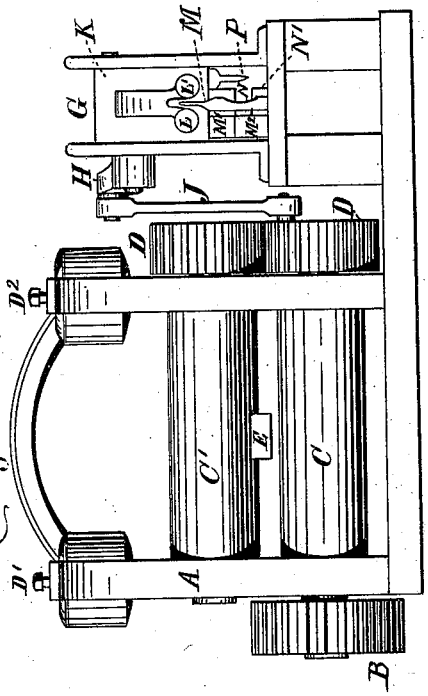


Figure 1,

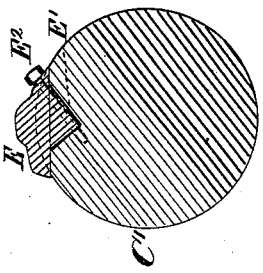
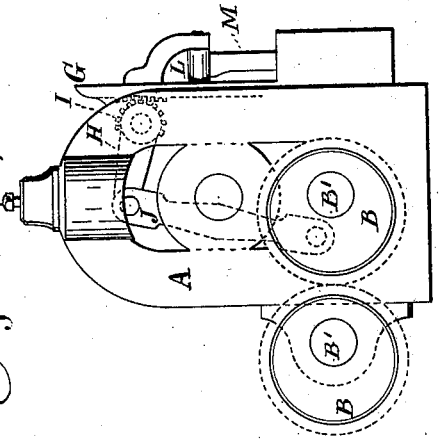


Figure 3,



Witnesses.

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Inventors.

Charles W. Cardot.

By James Sangster

Atty

UNITED STATES PATENT OFFICE.

CHARLES W. CARDOT, OF JAMESTOWN, NEW YORK, ASSIGNOR TO HIMSELF, C. L. JEFFORDS, AND JOSEPHUS H. CLARK, ALL OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR MAKING AXES.

Specification forming part of Letters Patent No. **194,892**, dated September 4, 1877; application filed April 28, 1876.

To all whom it may concern:

Be it known that I, CHARLES W. CARDOT, of Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Machines for Making Ax-Polls, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

My invention relates to machinery for making ax-polls, or that portion of the ax which forms the eye and head of the same; and it consists in the combination of eccentric gearing with the forming-rollers, the operation being such that said rollers, while doing their work, will move very slowly, and much faster afterward, thereby materially increasing the speed of the machine, so as to do more work in a given time.

In said drawings, Figure 1 represents a section through one of the rollers and a forming-die; Fig. 2, a plan view of the machine; Fig. 3, a side view; and Fig. 4, a front elevation.

A represents the frame of the machine; B B, the gearing for giving a varying revolving motion to the roller C, which is communicated to the upper roller C′ by means of the gearing D D. D^1 D^2 are set-screws for adjusting said rollers.

The gear-wheels B are eccentric, so that the motion will be slower while the blank is being pressed into shape, and faster after the die has passed it.

E represents the die for pressing the blank. It is fitted into the recess E^1 in the roller, and fastened by the screw-bolt E^2, as will be readily understood by reference to Fig. 1. Any other equivalent means will answer the purpose, the object being to hold it firmly in place.

The letters F represent adjustable guide-pieces, which are fastened to the guide-rest F^1. They are adjusted and fastened in place by means of the bolts F^2.

G is the mechanism for bending, forming, and trimming the ax poll or blank after it has been formed between the rollers. It is operated by means of the arm H, rack and pinion I, as shown in dotted lines, Fig. 3, and connecting-rod J, which is jointed to the lower gear-wheel D, and from which it receives a reciprocating movement, thereby giving the required up-and-down motion to the cross-head K.

L L′ are two rollers for bending the blank over the part M by the downward movement of said cross-head.

M^1 M^2 is the cutting device for trimming.

N N′ is an anvil and hammer, or pressing-die or its equivalent, for the purpose of further forming or otherwise bringing the blank into proper shape; and P represents a punch for a similar purpose.

I claim as my invention—

The combination of the eccentric gearing B B, rollers C C′, gearing D D, and forming-die E, as and for the purposes described.

CHARLES W. CARDOT.

Witnesses:

JOSEPHUS H. CLARK,

CHARLES LYON.