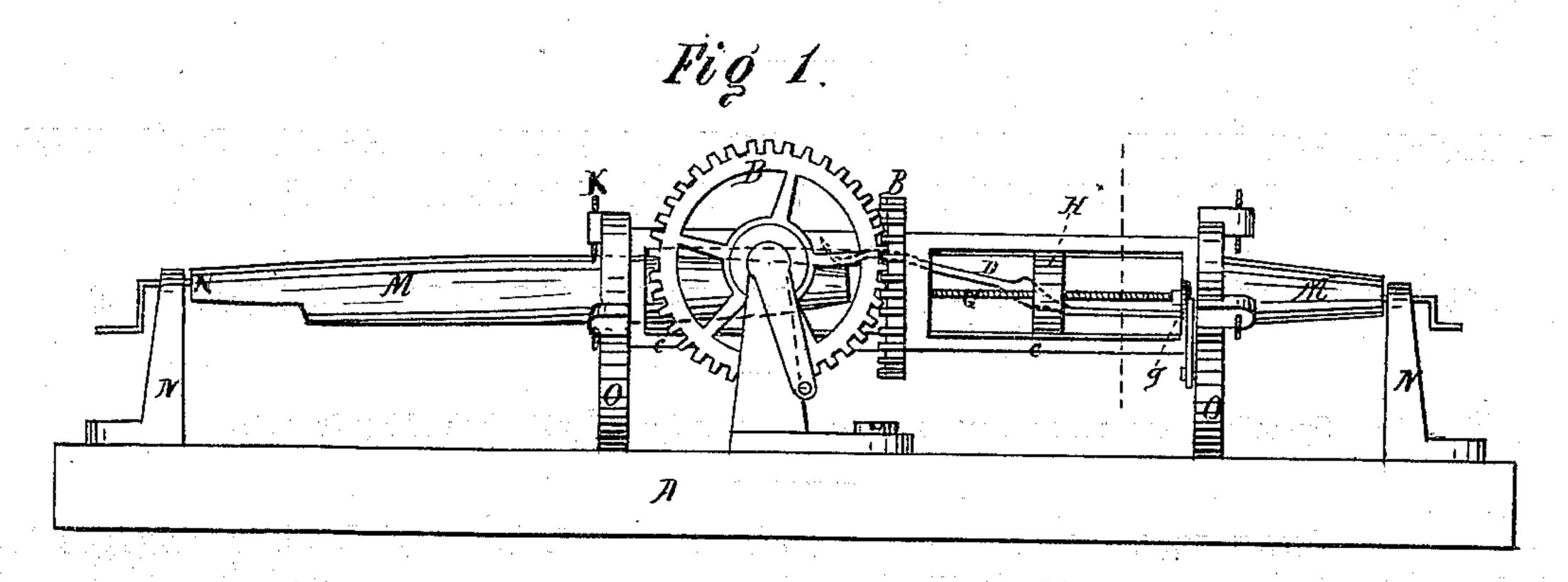
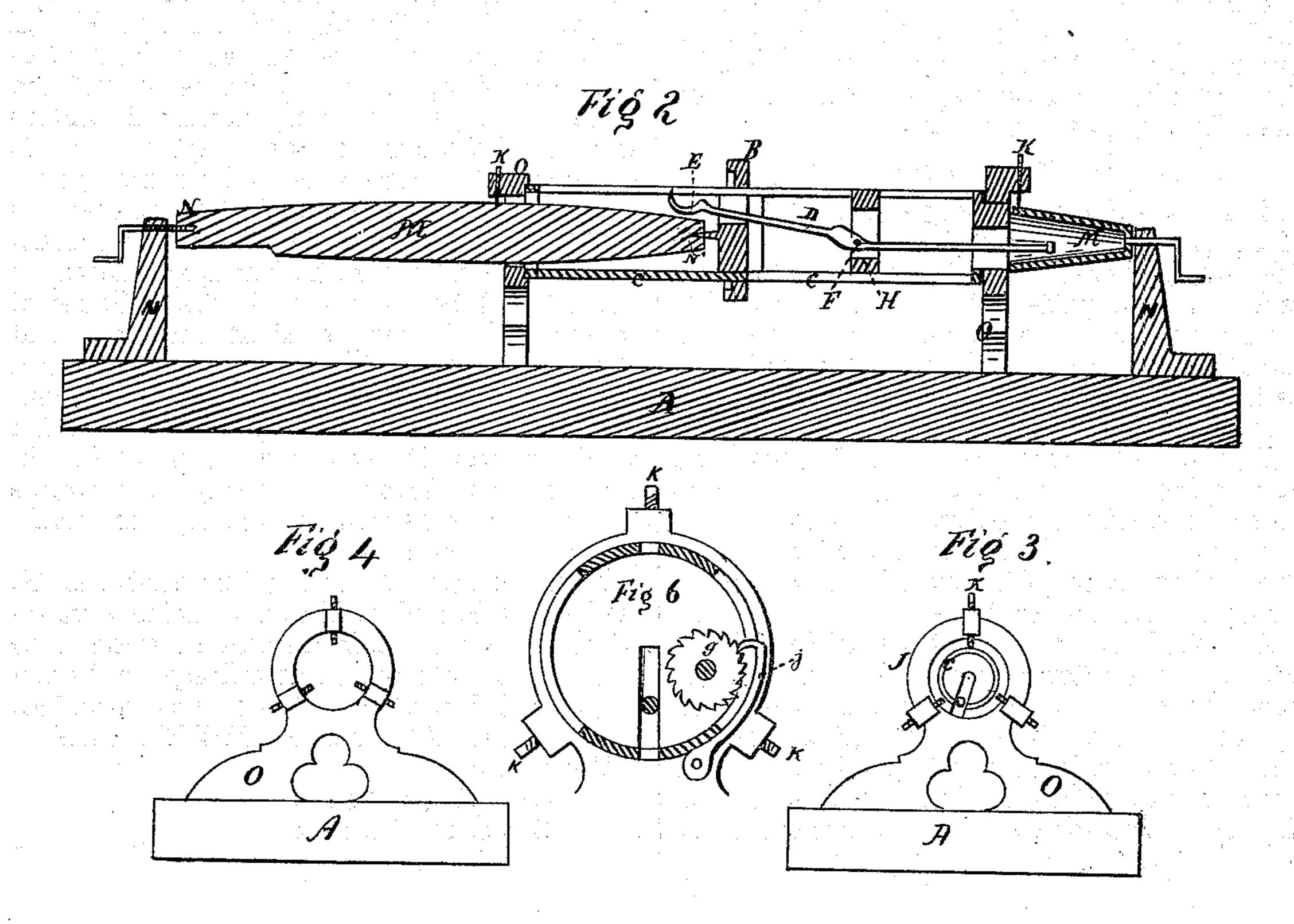
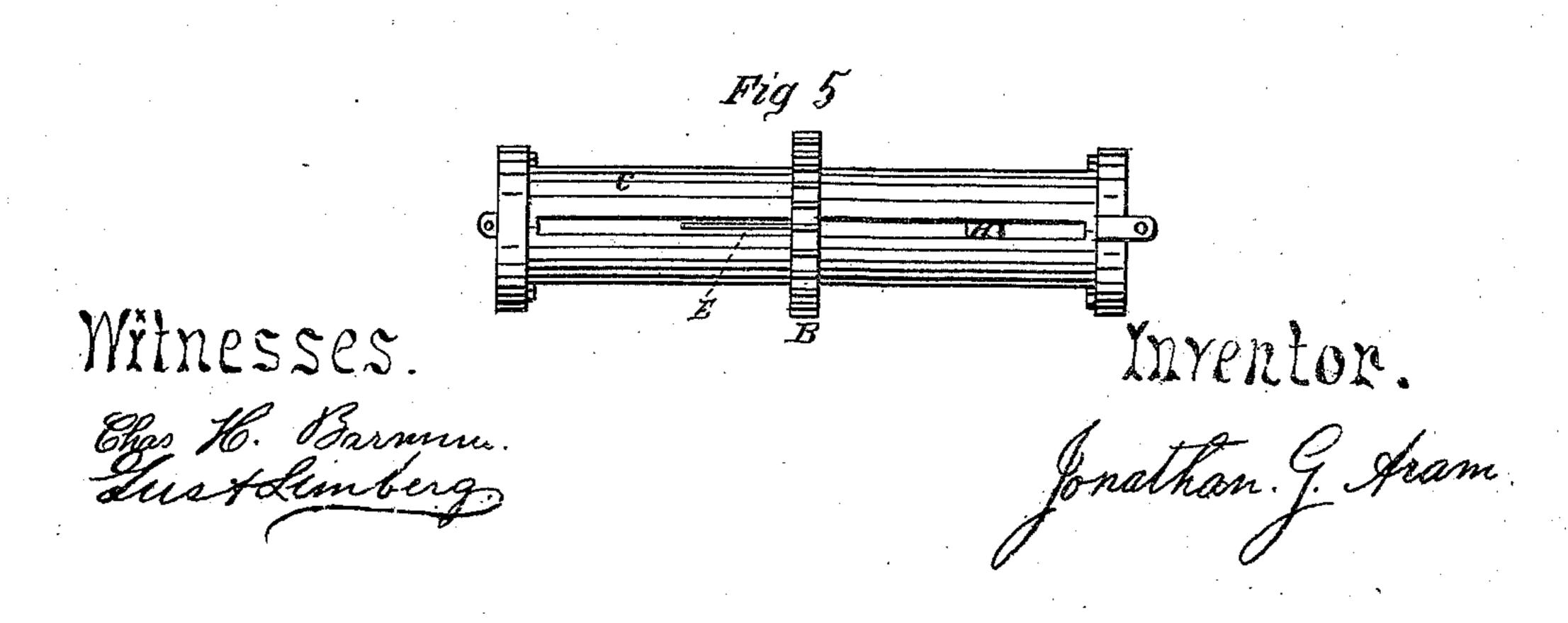
## J. G. ARAM.

Improvement in Machines for Turning Carriage-Axles.

No. 127, 211. Patented May 28, 1872.







## UNITED STATES PATENT OFFICE.

JONATHAN GRUNDY ARAM, OF CORDOVA, ILLINOIS, ASSIGNOR OF ONE. HALF HIS RIGHT TO ROBT. S. WILLIAMS, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR TURNING CARRIAGE-AXLES.

Specification forming part of Letters Patent No. 127,211, dated May 28, 1872.

## SPECIFICATION.

I, JONATHAN GRUNDY ARAM, of Cordova, in the county of Rock Island and State of Illinois, have invented an Improvement in Machines for Turning Carriage-Axles, of which the following is a specification:

Nature and Object of the Invention.

This invention consists in the arrangement of a cutting-tool, a reciprocating carriage or fulcrum, a screw-shaft and ratchet mechanism, and a suitable pattern, to the end of securing a simple yet effective machine capable of automatically producing various irregular forms, as hereinafter described.

In the accompanying drawing—

Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a transverse longitudinal section. Fig. 3 is an end elevation. Fig. 4 is another elevation. Fig. 5 shows those parts of the machine in which the slides and cutter-bar move.

A is the bench to which the machine is bolted. B B are miter gear-wheels which communicate motion to the cylinder C and the other operating parts. D is the curved or cranked cutter-bar to which the knife E is bolted. The bar D has its fulcrum at F in the sliding-block H. G is a feed-screw for moving the slide H

by means of the pawl J, which engages the ratchet-wheel g at each revolution of the cylinder. C C are the ways of the slide H. K K are set-screws to secure the substance to be operated upon and to secure the pattern M M. N N are properly-arranged centers and chucks, whose distance apart may be increased, &c. The axle to be turned is introduced into the end of the cylinder, as shown in Fig. 2, and the thimble or pattern is fastened at the right hand, as shown, so that it shall be in line with the cylinder C when the knife E is placed at the small end of the axle. Its opposite end, which carries a friction-roller, is at the small end of the thimble. The machine is then put in motion and the knife cuts its way from right to left. In turning other forms the pattern is of course changed, and other requisite changes are made.

What I claim is—

A cutter-bar, D, sliding fulcrum-block H, feed-screw G, and ratchet-mechanism arranged in a revolving carriage and in relation to a suitable pattern, substantially as herein shown and described, to operate as specified.

JONATHAN GRUNDY ARAM.

Witnesses:

Gus. A. Limberg, Chas. H. Barnum.