

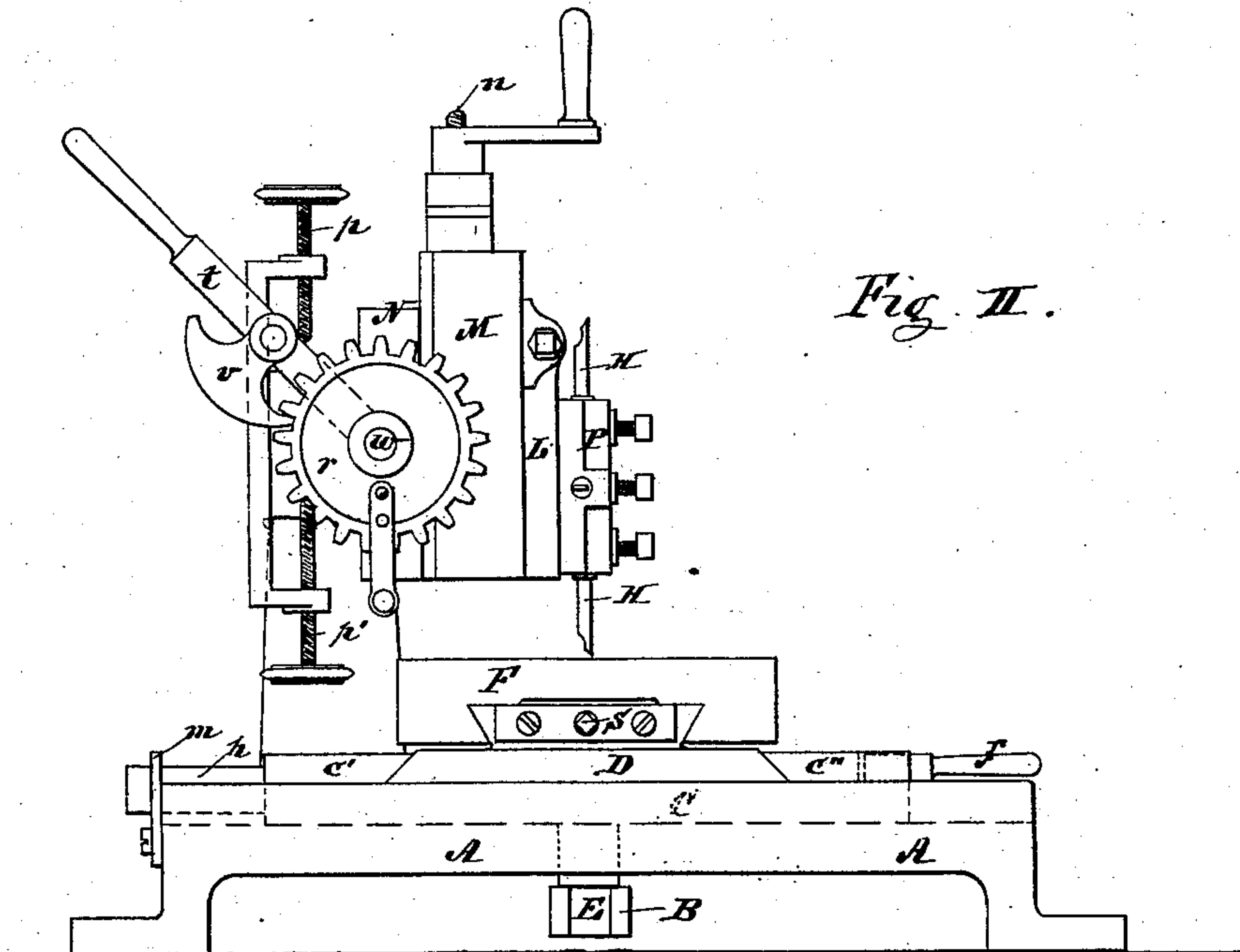
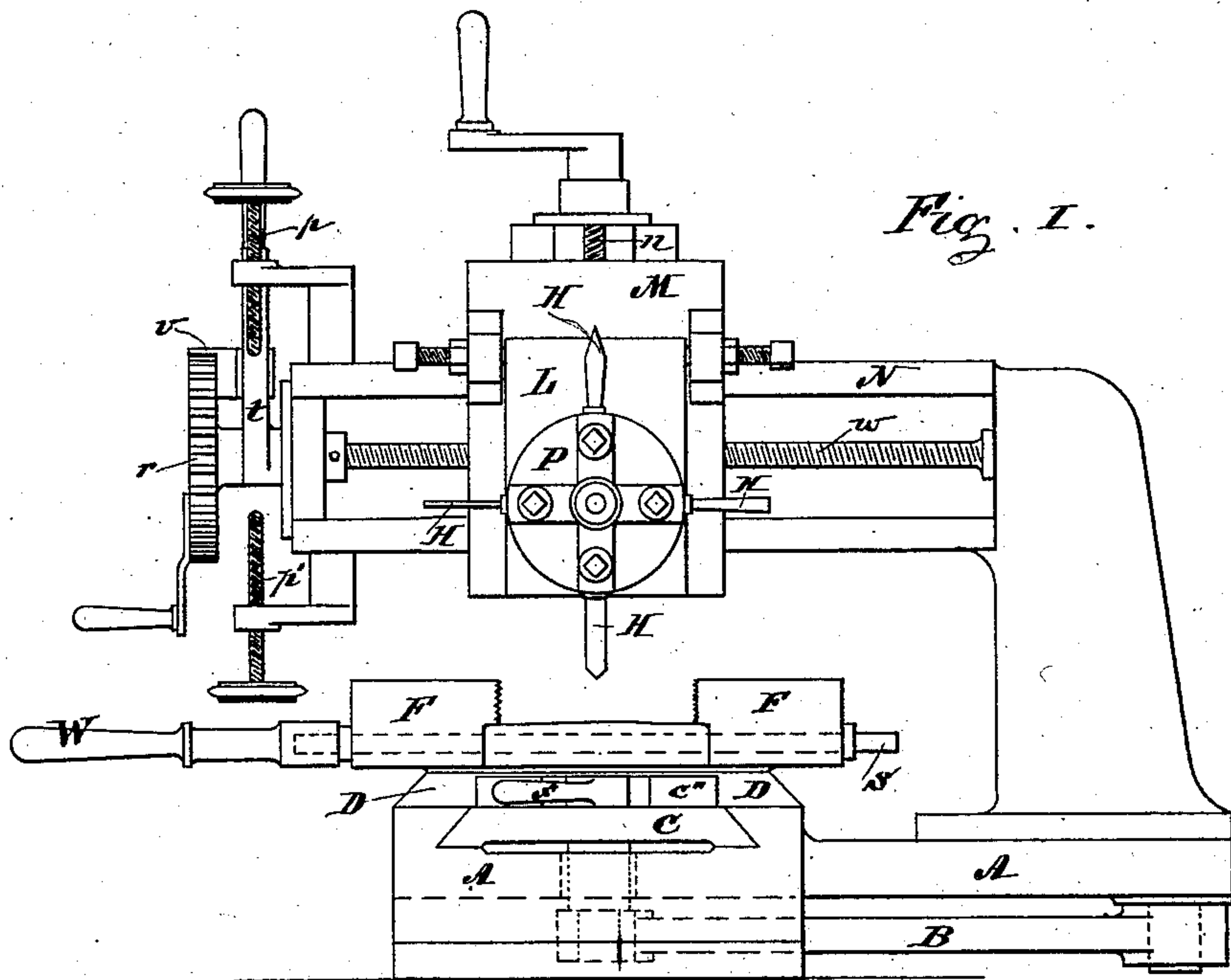
(No Model.)

2 Sheets—Sheet 1.

R. FRIEBEL.
ENGRAVING MACHINE.

No. 281,484.

Patented July 17, 1883.



Witnesses.

J. Gemmell, Jr.

Inventor.

Richard Friebel
per Henry & Rander
attorneys

(No Model.)

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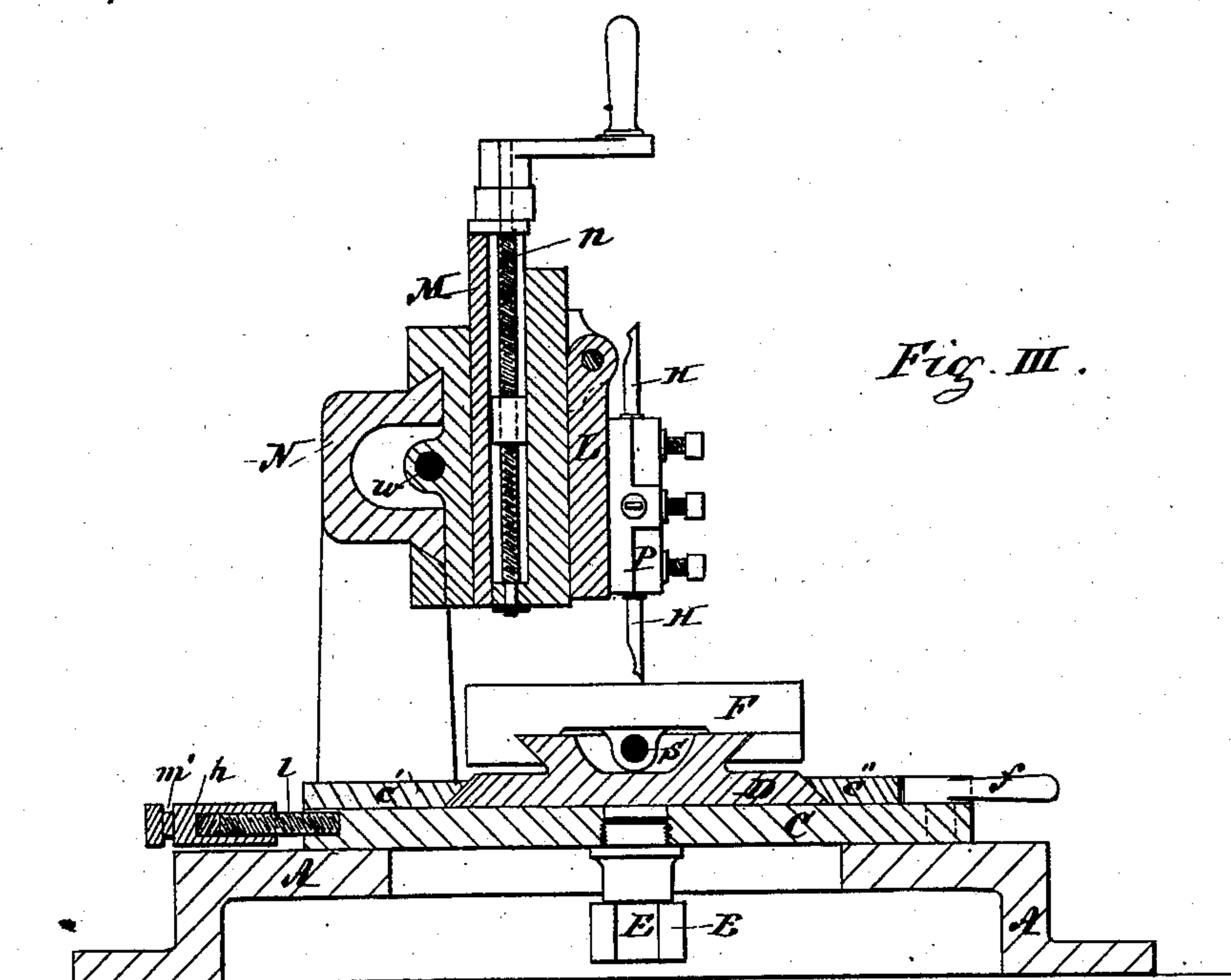


Fig. III.

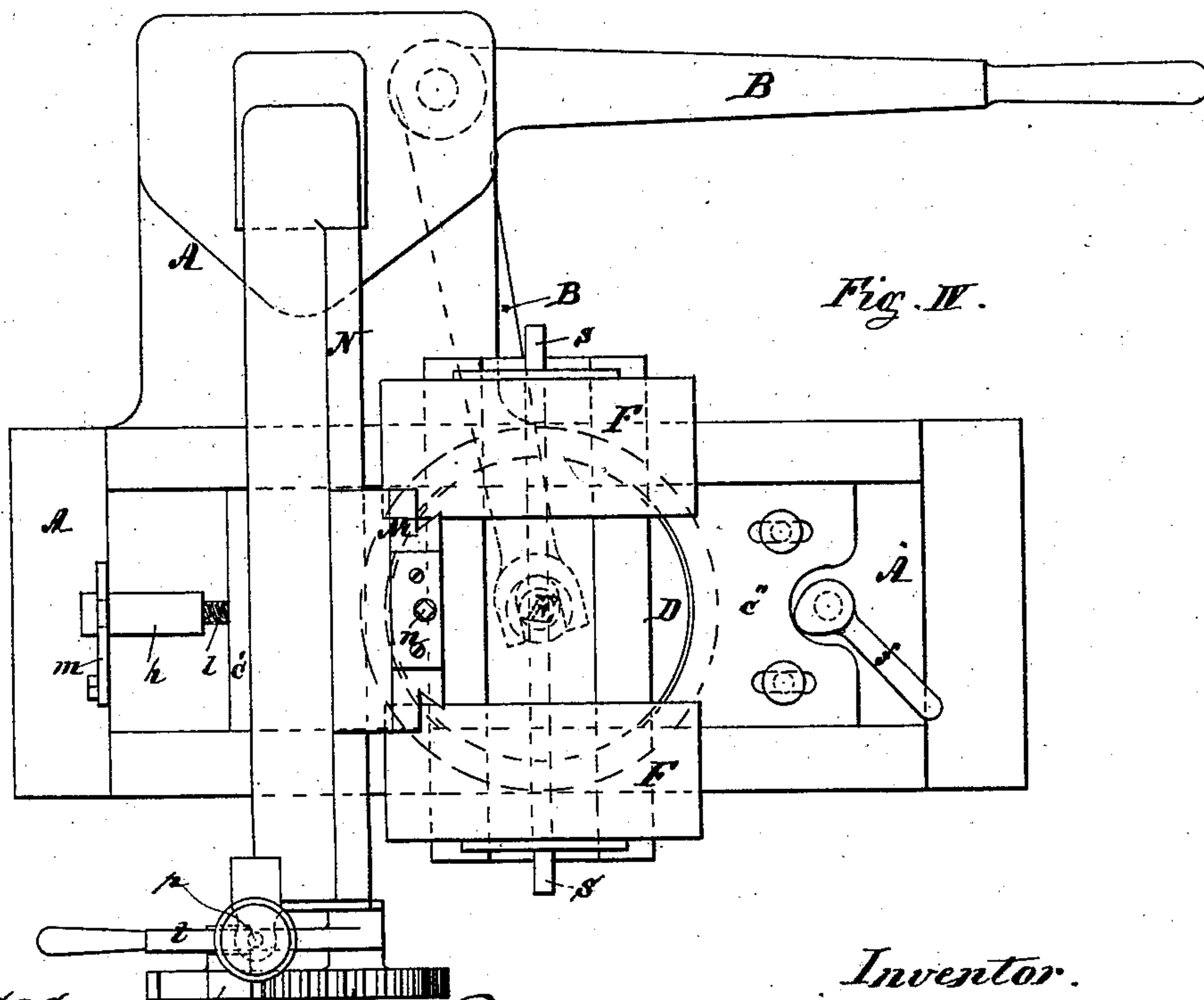


Fig. IV.

Witnesses.

J. Gammell, Jr.

Inventor.

Richard Friebel
per Henry & Radler
Attorney

UNITED STATES PATENT OFFICE.

RICHARD FRIEBEL, OF LEIPSIC-REUDNITZ, ASSIGNOR TO EMIL BERGER, OF REUDNIK, NEAR LEIPSIC, GERMANY.

ENGRAVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 281,484, dated July 17, 1883.

Application filed December 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, RICHARD FRIEBEL, a citizen of Germany, residing at Leipsic-Reudnitz, in the German Empire, have invented a new and Improved Engraving-Machine, of which the following is a specification.

The object of my invention is to plane or engrave various straight or circular line designs.

In the accompanying drawings, Figure I represents a front view of the machine. Fig. II is a side elevation, Fig. III a longitudinal section, and Fig. IV a top view of the same with the cutter-head removed.

Similar letters represent similar parts in all the figures.

A is the bed-plate of the machine, which supports the slide C, guided in suitable ways, as well as the cross-slide N for the cutter-slide head M.

Upon the slide C a disk, D, capable of turning around its center, is arranged, turning between segmental plates c' c'' . Against the front plate, c'' , a cam-lever, f , is made to act, whereby the desired friction can be put upon or against the edge of the disk D to hold the same fast in any desired position.

To the disk D the slides for the clamps F F are attached, which said clamps are capable of being moved nearer together or farther apart through the action of the screw s . Between these clamps F F the article to be planed, cut, or engraved is fastened. The disk D, together with the clamps F F and the article fastened between the same, can be turned around its center backward and forward by means of a handle, W, and the slide C is moved forward or backward by means of the lever B, the end of which engages with the pin E, attached to the under side of said slide C. The after end of this slide C has a screw-bolt, l , attached, upon which a tube, h , is screwed, in the end of which tube a recess or groove, m' , is made. A lever or catch, m , attached to the end of the bed-plate A, is made to fall into this groove m' , and whereby the position of the

slide C can be regulated and held fast, according as the tube h is moved or screwed farther in or out on the screw l . By this arrangement the slide C may be firmly fixed when ever required, and only the disk D, with the clamps F F, moved.

To the cutter-head L a revolving disk, P, is attached, to which four or more cutters, H, are attached, either of which can be brought into action by the turning of said disk P. The cutter-head L is moved upward or downward by the screw n in the cutter-slide head M, and said slide-head M receives a longitudinal motion forward or backward on the cross-slide N by means of the screw w . At the end of this screw w a wheel, r , is attached, into which a pawl, v , works, attached to the lever t , supported and turning freely on end of the screw w , and whereby any desired amount of motion can be given to the wheel r , and consequently to the screw w and cutter-head. The motion of the lever t is regulated by two stop-screws, p and p' , coming in contact with the upper and lower edge of said lever t . Through the variable position of the cutter head or slide M and of the slide C, the center of the article fastened between the clamps F F can be changed and regulated in relation to the cutter H, and any desired circle, in the desired position, cut or engraved upon the article, while by firmly fixing the disk D by means of the cam-lever f and giving a rectilinear motion to the slide C, straight lines will be cut or engraved.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the rectilinear moving slide C, with revolving disk D attached, provided with movable clamps F F, the guide-plate c'' , and cam-lever f , and movable cutter-head M L, arranged to operate substantially as and for the purpose herein described.

RICH. FRIEBEL.

Witnesses:

FRANZ HANNEMANN,
TH. DORENDORFF.