

(No Model.)

4 Sheets—Sheet 1.

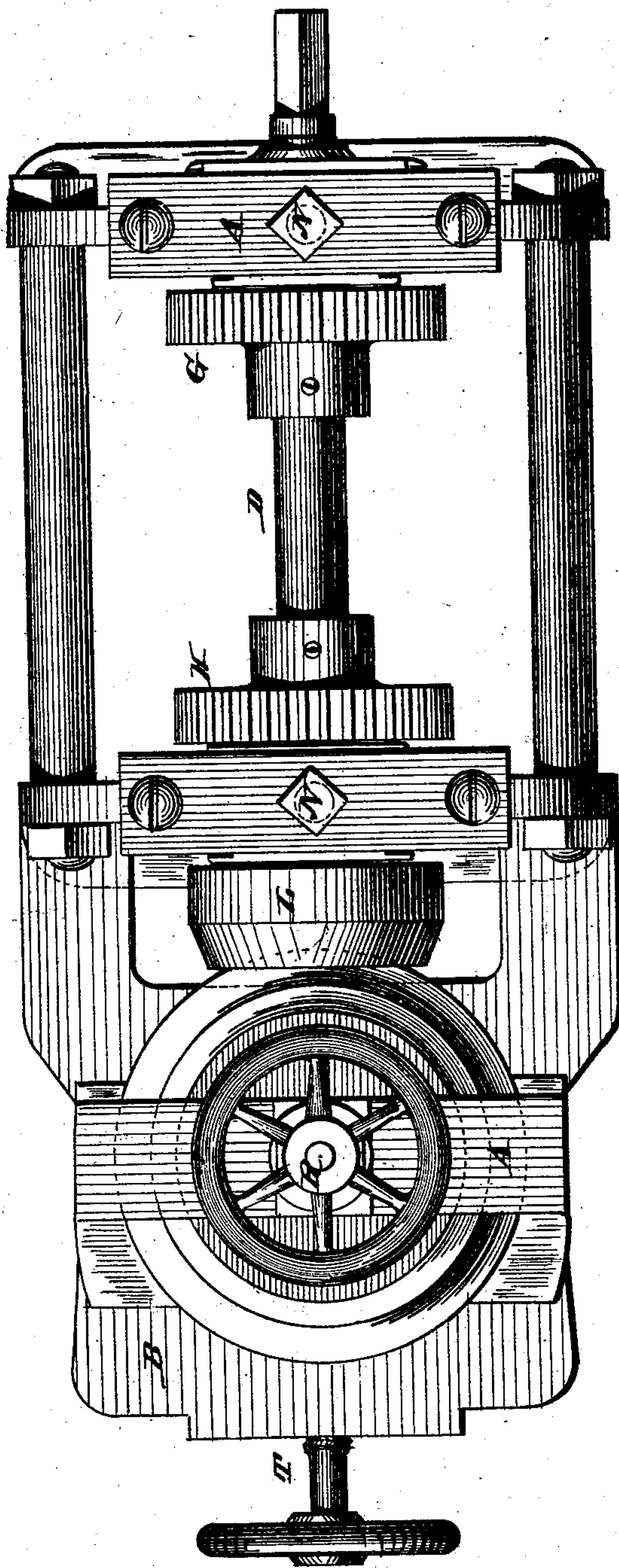
R. C. NUGENT.

MACHINE FOR BEVELING PLOW COLTERS.

No. 248,053.

Patented Oct. 11, 1881.

Fig. 1.



WITNESSES •

*Alex. L. Dieterich*  
*Ph. Dieterich*

By his Attorney

*J. J. Johnston*

INVENTOR

*Richard C. Nugent*

(No Model.)

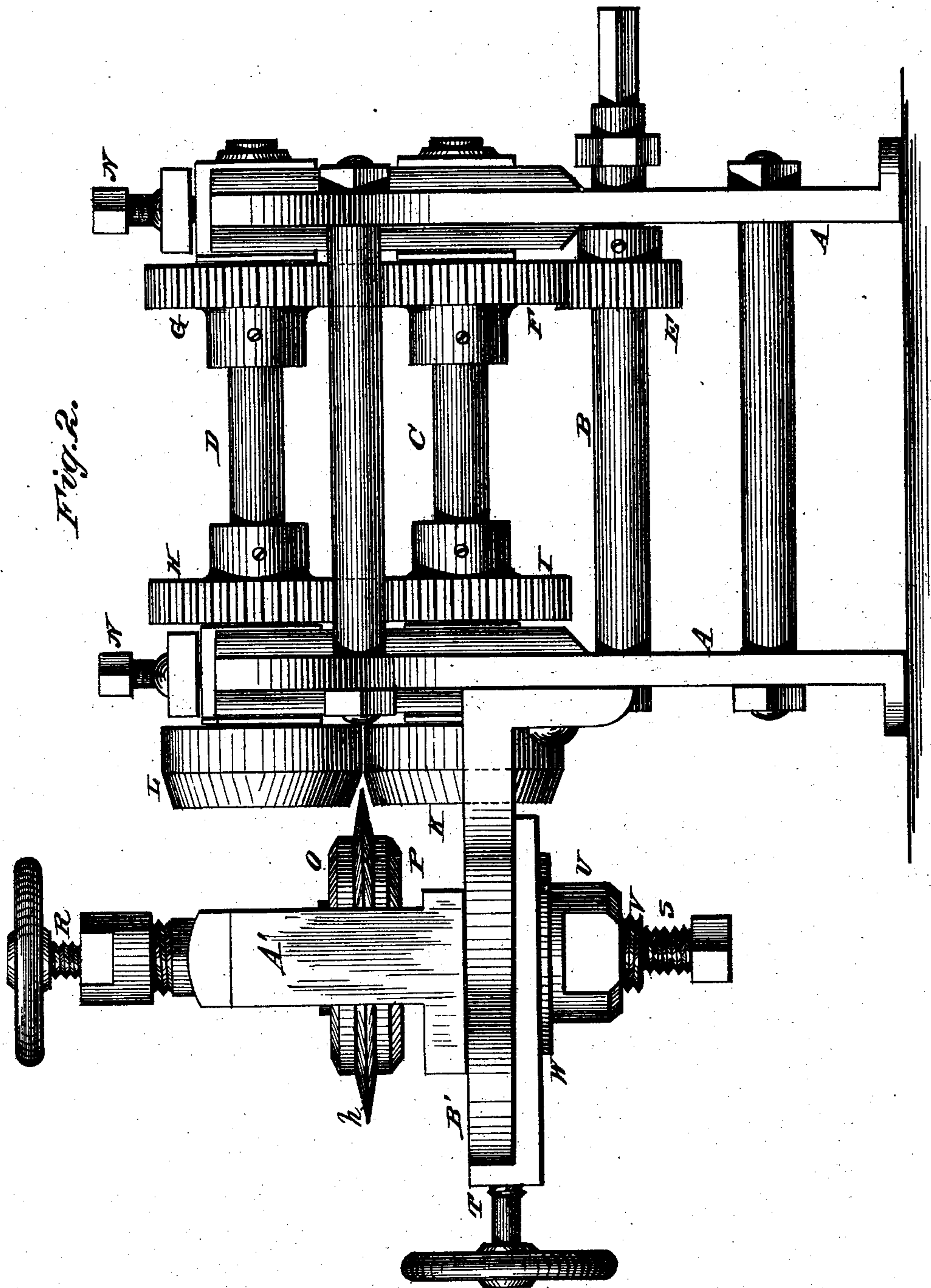
4 Sheets—Sheet 2.

R. C. NUGENT.

MACHINE FOR BEVELING PLOW COLTERS.

No. 248,053.

Patented Oct. 11, 1881.



WITNESSES

*Ad. L. Dietrich*  
*P. C. Dietrich*

By *his* Attorney

*J. J. Johnston*

INVENTOR

*Richard C. Nugent*



(No Model.)

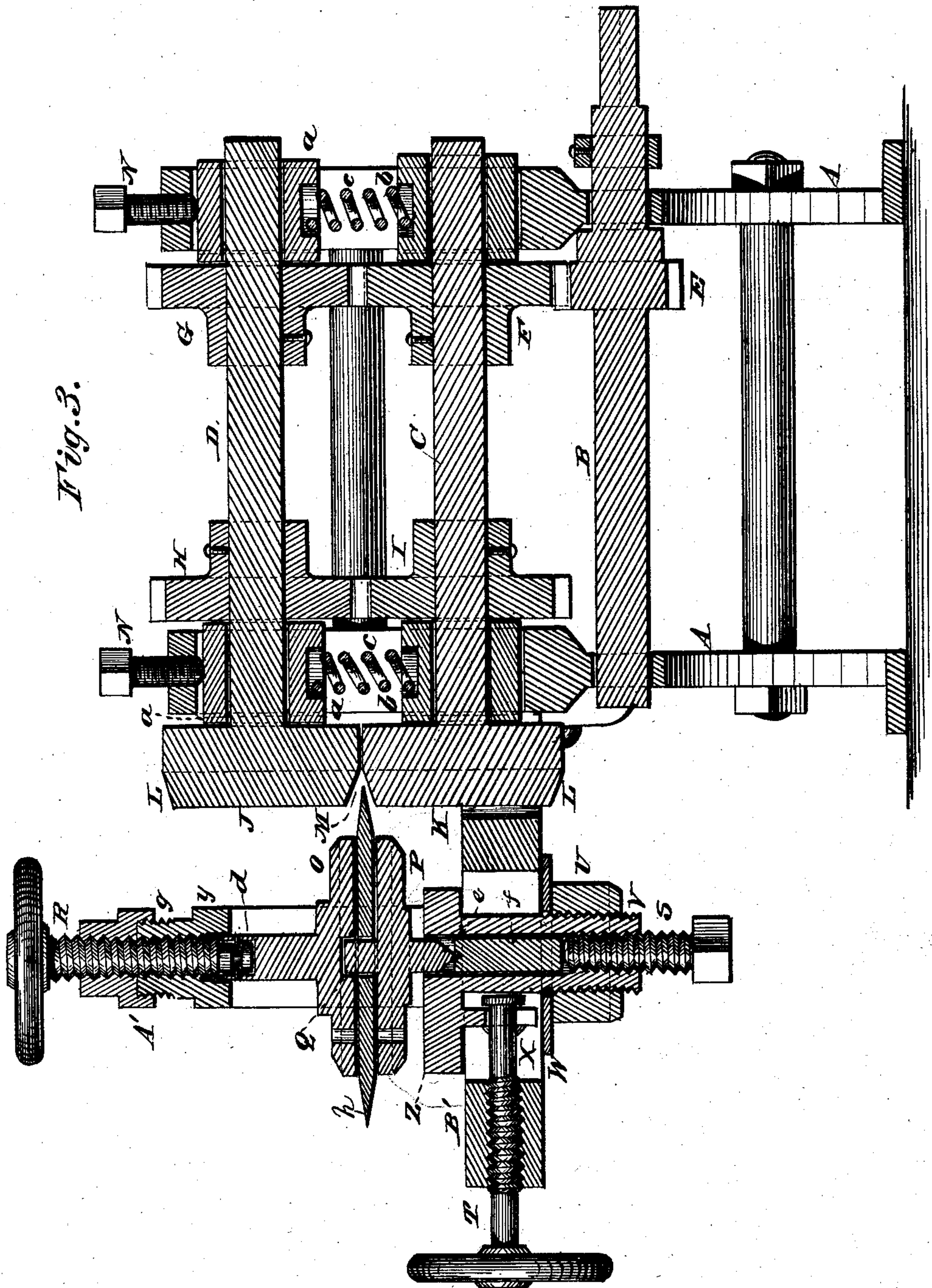
4 Sheets—Sheet, 3.

R. C. NUGENT.

MACHINE FOR BEVELING PLOW COLTERS.

No. 248,053.

Patented Oct. 11, 1881.



WITNESSES

*Wm. L. Dietrich.*  
*P. C. Dietrich.*

By *his* Attorney

*J. J. Johnston*

INVENTOR.

*Richard C. Nugent*

(No Model.)

4 Sheets—Sheet 4.

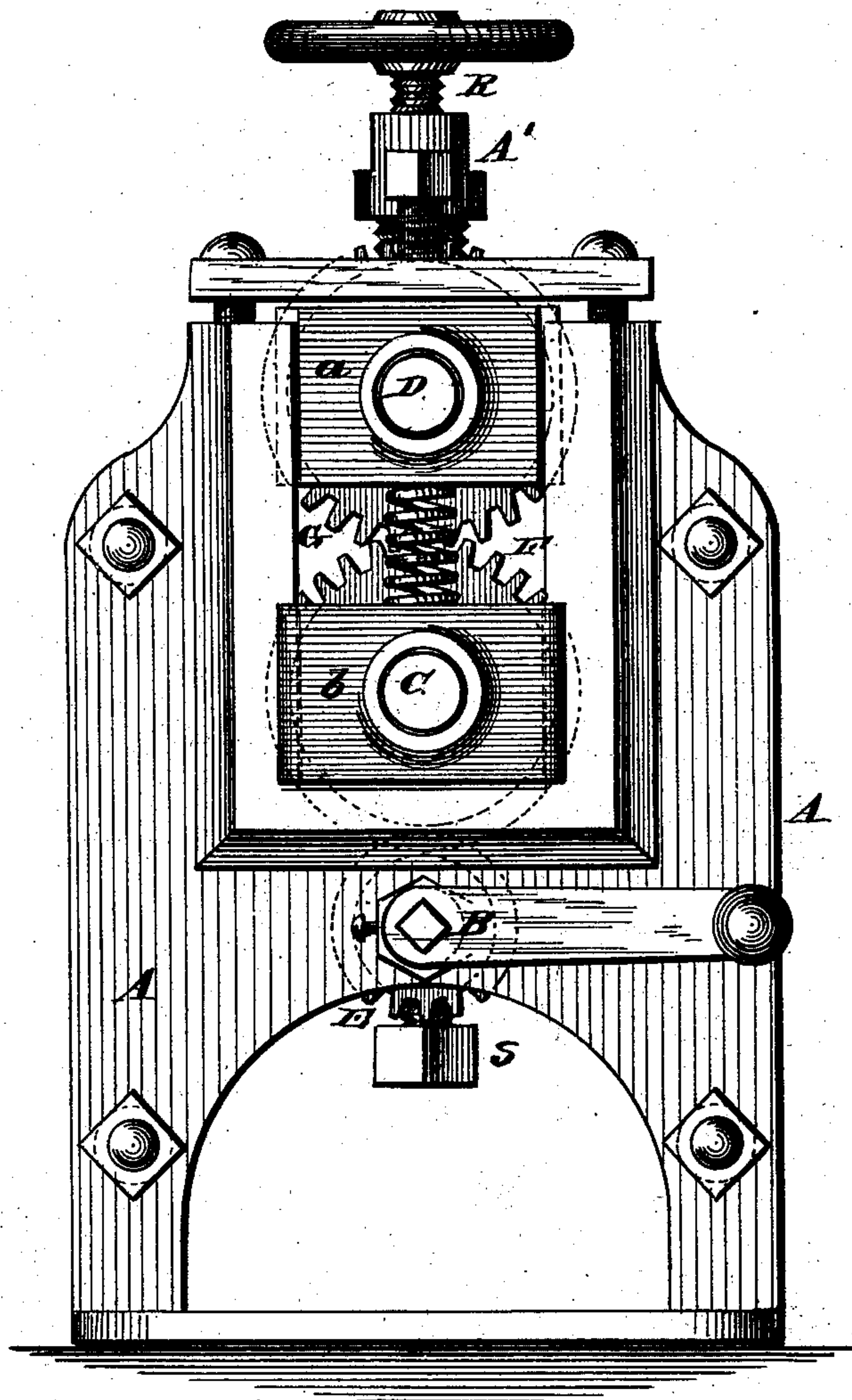
R. C. NUGENT.

MACHINE FOR BEVELING PLOW COLTERS.

No. 248,053.

Patented Oct. 11, 1881.

*Fig. 4.*



WITNESSES

*Wm. L. Dieterich*  
*P. C. Dieterich*

By *his* Attorney

*J. J. Johnston*

INVENTOR

*Richard C. Nugent*



# UNITED STATES PATENT OFFICE.

RICHARD C. NUGENT, OF PITTSBURG, PENNSYLVANIA.

## MACHINE FOR BEVELING PLOW-COLTERS.

SPECIFICATION forming part of Letters Patent No. 248,053, dated October 11, 1881.

Application filed May 27, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD C. NUGENT, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machines for Forming Cutting-Edges on Colters and other Articles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in machines for forming cutting-edges on colters or other articles; and it consists in securing the article to be finished with a cutting or beveled edge in a central position between pivoted clamping-disks held in an adjustable frame susceptible of being moved in a horizontal plane from or toward and between revolving dies, which, by compression on the periphery of the colter or other article, will rotate it and the clamping-disks, and by said compression and rotation form a uniform bevel and cutting-edge on said colter, as will hereinafter more fully appear.

The means heretofore employed for forming cutting-edges on colters and other similar articles are as follows: first, subjecting the disk to the action of a hammer or press and rotating or turning the disk with relation to the hammer by means of tongs; second, by pivoting the disk upon or by a center-pin and subjecting the disk to the action of an eccentric roll or rolls, the disk being rotated by the operator; third, by frequent passing of the edge of the blank or colter between beveled rolls; fourth, by grinding the periphery of the colter; fifth, by forming the bevel by means of a turning process, all of which methods are objectionable and have been found impracticable for many reasons, among which may be stated, first, requiring skilled and experienced labor; second, liability of warping the colter, which is usually formed from a thin disk of metal; third, a tendency to destroy the center opening of the colter, giving to said opening an oval form; fourth, a tendency to form an irregular cutting-edge; fifth, said methods requiring too much time in the production of a colter with a true cutting-edge; sixth, said methods involve a loss of time and greater expense than should be incurred in the manufac-

ture of colters and similar articles having cutting-edges.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a top view or plan of my improvement in machines for forming bevel-edges on colters and other articles. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical and longitudinal section of the same. Fig. 4 is an end elevation of the same.

In the accompanying drawings, A represents the frame of the machine, in which are pivoted shafts B, C, and D, the shaft B having secured thereon a wheel, E, which meshes into a wheel, F, on shaft C, which wheel F meshes into a wheel, G, on the shaft D. The shafts C and D are furnished with wheels H and I, which mesh into each other. On the ends of the shafts C D are circular dies J and K, having beveled edges L, which form a V-opening, M, between, corresponding to the bevel desired for the cutting-edge of the colter. The shafts C D for the circular dies J K are furnished with adjustable bearings *a b*, between which are placed spiral springs *c*. In the frame are adjusting-screws N, for moving vertically the bearings *a* of the shaft D, thereby causing the die J to impinge upon the upper and outer edge of the colter, which will cause the outer and lower edge of the colter to impinge upon the die K.

To the frame A is secured a frame, B', having in it an opening, X, in which is secured an adjustable frame, A', having detachable parts Z and Y, furnished with screw-threads *g* and *v*, and a screw-nut, U. The parts Z and Y are furnished with screws R S T. In the part Z is an opening, in which is placed a detachable cylindrical step, *f*, for the axis *e* of the detachable clamping-disk P. The upper end of the axis of the disk, P extends up into an opening in the center of the clamping-disk O, the axis of which is pivoted upon the lower end of the adjusting-screw R. The frame A' is fitted to and held in the frame B' through the medium of the plate W and screw-nut U, and is moved from and toward the dies J and K by means



of the screw T. The disks and their axis revolve on coniform centers. (Clearly shown in Fig. 3.)

The operation of the machine is as follows:

- 5 The operator, through the medium of the screw R, elevates the clamping-disk O, and then places the colter-blank *h* between the clamping-disks O and P, with the axis Q of the disk P in the opening of the colter-blank, as shown in Fig.
- 10 3. The clamping-disk O is then, by means of the screw R, lowered, so as to clamp the blank *h* firmly between the clamping-disks O and P. Motion being given to the shaft B, it will be transmitted by the wheels E, F, G, H, and I
- 15 to the shafts C and D, and thereby revolve the dies J and K. The operator then, by means of the screw T, moves the frame A' and its clamping-disks O and P, with the blank *h*, toward the dies J and K, forcing the periphery
- 20 of the blank into the recess M formed by said dies, which impinging on the blank will cause it and the clamping-disks O P to revolve, and the forward pressure caused by the screw T and the impinging of the dies J and K on the
- 25 blank *h* will form the cutting-edge on said blank, as shown in Fig. 3. The frame A' is then, by reversing the motion of the screw T, drawn back. The clamping-disk O is then, by screw R, elevated and the colter removed. The

machine is then ready for the reception of another blank. The clamping-disk P can be adjusted with relation to the recess M between dies J and K by means of the screws S. By means of the machine hereinbefore described colters can be furnished with cutting-edges 35 with great facility and diminished cost by unskilled labor.

Having thus described my improvement, what I claim as of my invention is—

1. In a machine for forming the cutting- 40 edge on colters or similar articles, the combination of the frames A' and B', clamping-disks O and P, screws R S T, dies J K, and their operating mechanism, substantially as herein described.

2. In a machine for forming the cutting- 45 edge on colters or similar articles, the combination, with the revolving dies J K, of the recessed clamping-disk P, provided with the axis Q, and the clamping-disk O, provided 50 with a recess for the reception of said axis Q, substantially as and for the purpose herein shown and described.

RICHARD C. NUGENT.

Witnesses:

A. C. JOHNSTON,  
D. H. CHAMBERS.