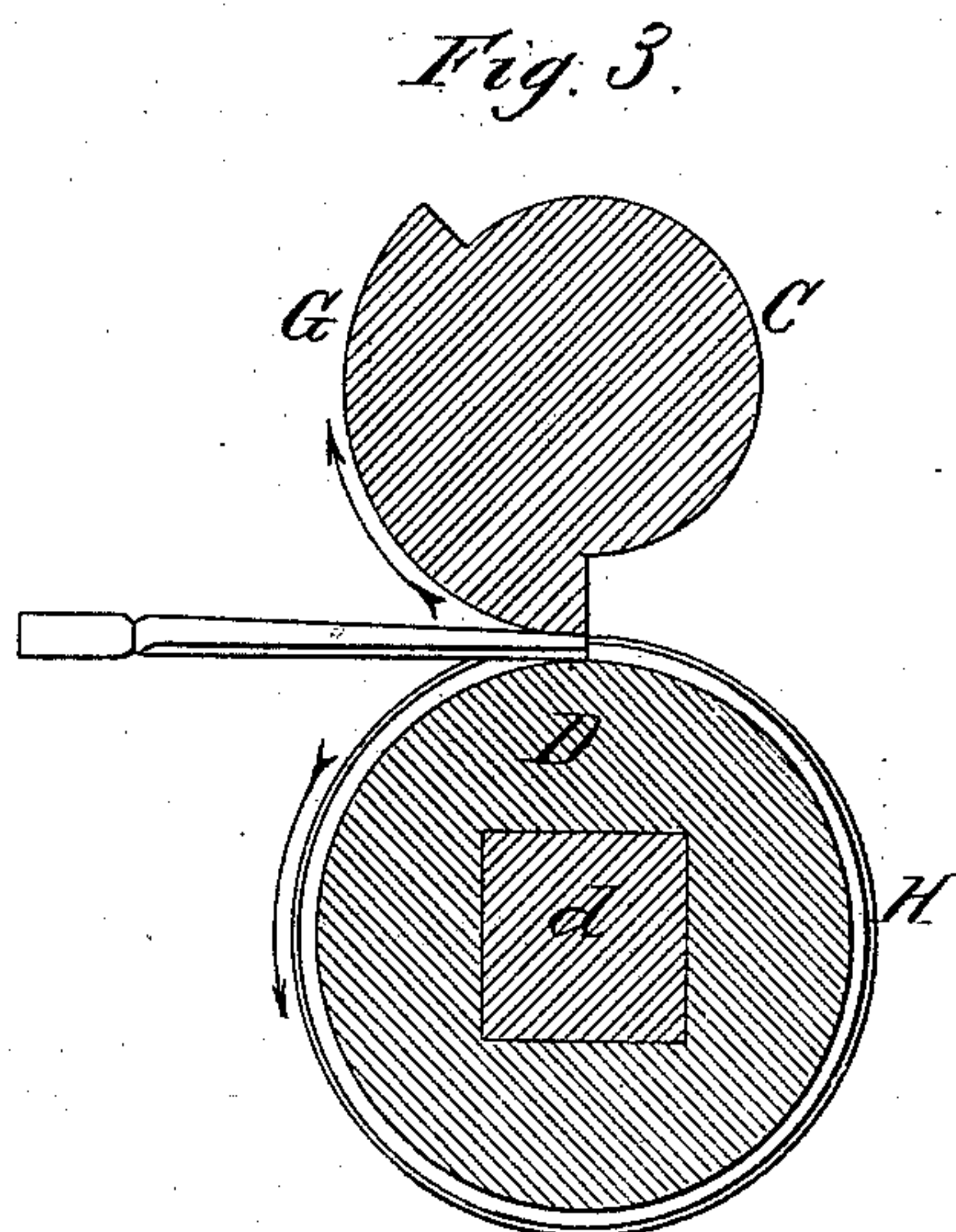
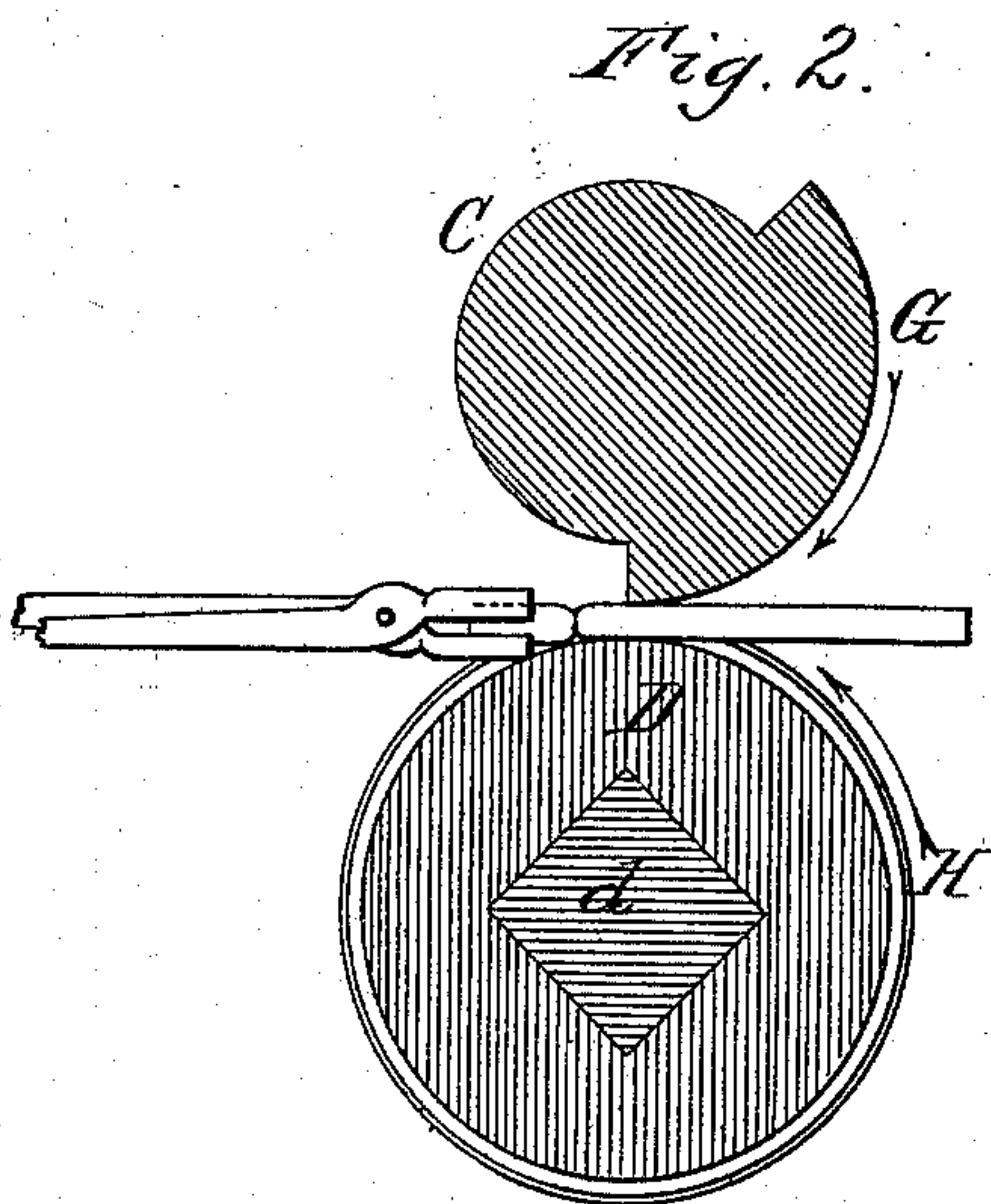
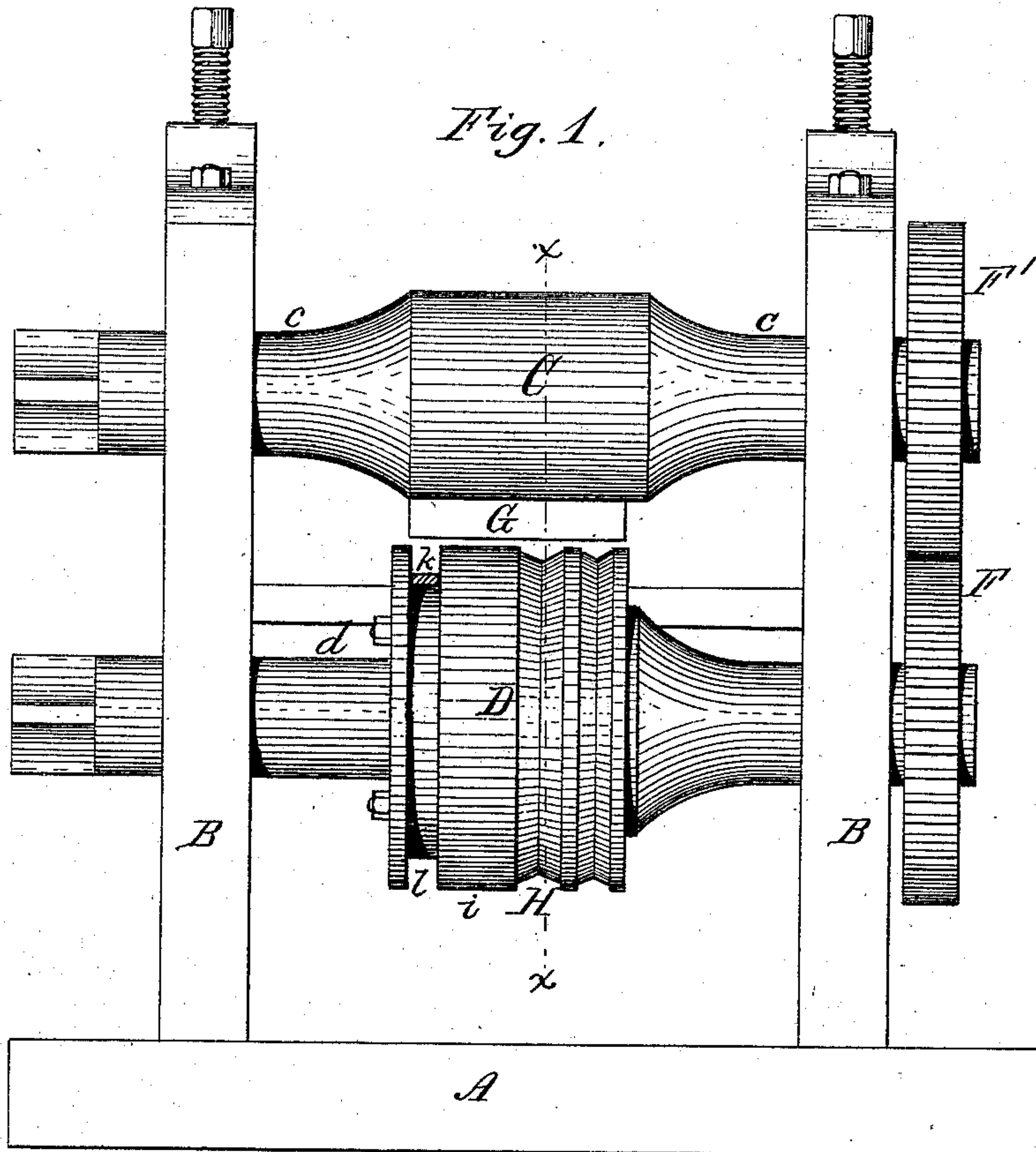


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Machine for Rolling Chisels.

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Patented Feb. 17, 1880.



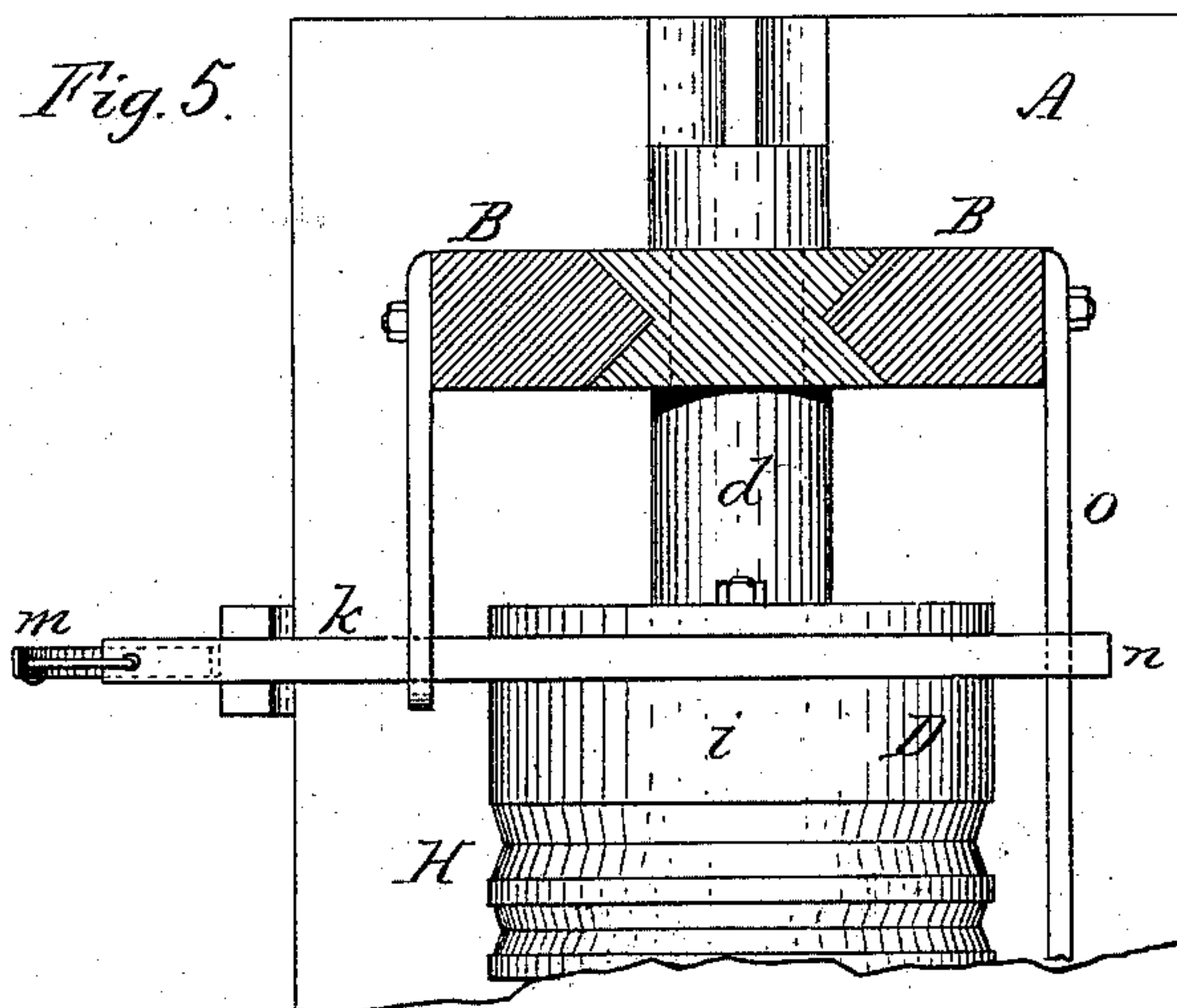
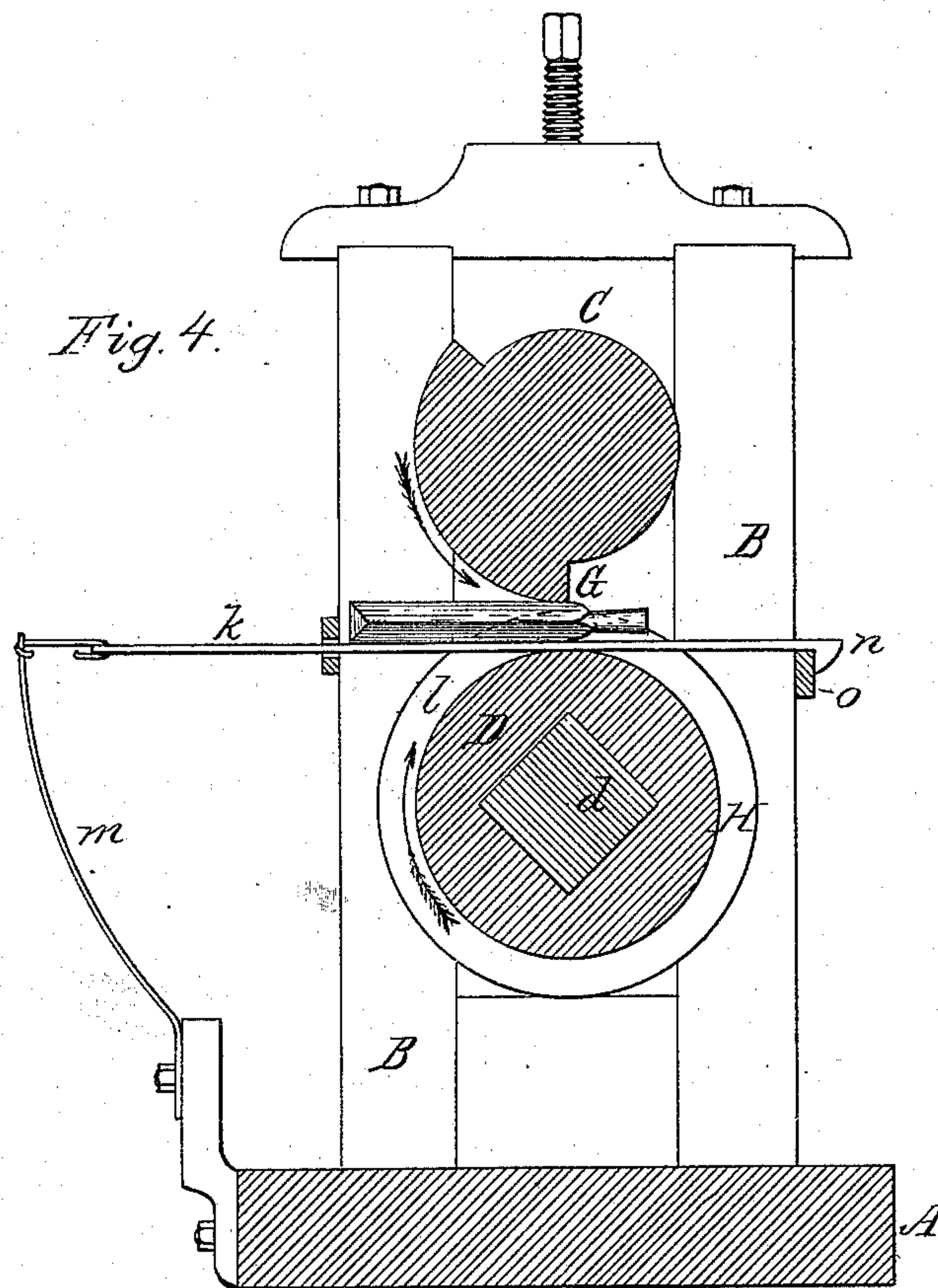
Chas. J. Buchheit.  
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# UNITED STATES PATENT OFFICE.

GEORGE PARR, OF BUFFALO, NEW YORK.

## MACHINE FOR ROLLING CHISELS.

SPECIFICATION forming part of Letters Patent No. 224,720, dated February 17, 1880.

Application filed December 18, 1878.

*To all whom it may concern:*

Be it known that I, GEORGE PARR, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful  
5 Improvements in Machines for Rolling Chisels and Similar Tools, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates more especially to a  
10 machine for making chisels, draw-knives, and other similar tools or implements by drawing out the blanks to the proper shape between rolls provided with suitable dies.

The object of this invention is to render  
15 the machine very simple in construction and use, so as to dispense as much as possible with skilled labor in the manufacture of these articles.

My invention consists in providing the upper  
20 roll with a segmental eccentric and projecting die and the lower roll with a circular or annular die, whereby the lower die is enabled to act as a support and guide in presenting the blank to the action of the upper die,  
25 thereby dispensing with the guide-bars usually employed for that purpose, whereby the finished article is discharged on the same side of the machine from which it is fed; also of a  
30 straight bar arranged in one of the annular dies of the lower roll, and traveling with said roll, for straightening and edging the articles operated upon, as will be hereinafter fully set forth.

In the accompanying drawings, consisting  
35 of two sheets, Figure 1 is an elevation of my improved machine, showing the straightening-bar in cross-section. Fig. 2 is a vertical section in line *xx* of Fig. 1, showing the rollers in the position in which the drawing out of the chisel-blank commences. Fig. 3 is a similar  
40 view, showing the rollers in the position in which the chisel-blank is completely drawn out. Fig. 4 is a sectional elevation of my improved machine. Fig. 5 is a top-plan view  
45 thereof with the upper roll removed.

Like letters of reference designate like parts in the several figures.

A represents the bed-plate of the machine; B B, the vertical standards or side frames; C,  
50 the upper roll, and D the lower roll, mounted on shafts *c d*, respectively, which are supported

in suitable bearings in the side frames, B B. The upper roll, C, is driven from the lower roll, D, by a pair of gear-wheels, F F', in the usual manner. G is the male die, secured to the upper roll, C, and made in the form of a circular  
55 segment and of a length suitable to produce a chisel, draw-knife, or other implement of the desired size. H is the female die, formed in or secured to the lower roll, D. This lower  
60 die is made circular or annular, so as to extend completely around the lower roll. As shown in the drawings, it consists of an annular groove or recess formed in the face of the lower roll. Any desired number of such an-  
65 nular dies of various sizes in cross-section may be formed in the lower roll, and the upper die may be made of such a width as to co-operate with all of the lower dies. The face of the upper die, G, is made eccentric or farthest  
70 apart from the lower die at its head, or at the point where the die first seizes the blank, as shown in Fig. 2, and it gradually approaches the lower die, according to the taper required for the particular kind of chisel to be produced.  
75

When it is desired to roll draw-knives or other implements which are not tapered longitudinally the face of the upper die is made concentric with the shaft of its roll. As shown  
80 in the drawings, the face of the upper die is plain, while that of the lower die is concave, whereby a chisel is produced which is flat on one side and convex on the other.

It is obvious that the form of the faces of the dies and their dimensions may be varied  
85 in accordance with the different kinds of chisels or other implements intended to be made. Flat and thin chisels may be rolled on the plain portion *i* of the lower roll.

*k* is a straight rigid bar, of steel, iron, or  
90 other suitable material, arranged horizontally in the groove or annular die *l* of the lower roll, and connected at its rear end with an elastic bar or spring-arm, *m*, secured to the stationary frame of the machine.  
95

The bar *k* is made a little longer than the chisel or other tool intended to be straightened on the bar, measuring from the point of contact with the lower roll rearward. As shown  
100 in the drawings, the bar *k* is provided with a forward extension terminating in a hook, shoulder, or offset *n*, which engages over a



stop or bar, *o*, and limits the rearward movement of the bar. The rear end of the bar *k* is preferably provided with an eye, so that it can be connected with the spring-bar *m* by means of a hook, thereby permitting it to be readily removed.

In operating my improved machine, the rolls are rotated in the direction of the arrows in Figs. 2, 3, and 4. A blank of suitable size properly heated is seized with a pair of tongs and placed between the rolls on the lower die. As the upper die, *G*, comes around it seizes the blank, as shown in Fig. 2, and moves the same backward, at the same time rolling it out to the desired length and shape, the finished blank being discharged on the same side of the machine from which it is fed between the rolls. The lower annular die, *H*, serves in this manner as a support and guide for the blank, and insures its proper presentation to the upper die without the employment of any other guiding device. The chisel or other blank rolled out the proper shape, as above described, is then turned on its edge and placed upon the bar *k*, as shown in Fig. 4. The upper die, *G*, as it comes around, seizes the blank and moves it backward, whereby the edges of the chisel or other tool operated upon are straightened and finished, the bar *k* traveling with the lower roll until the upper die releases the blank, when the bar is returned to its former position by the spring-arm *m*.

The rigid bar *k*, passing between the two dies with the heated blank, serves to straighten the latter, thereby dispensing with the opera-

tion of drop-forging, usually employed for that purpose. The annular die or groove *l* is made of sufficient depth to receive the widest chisel, together with a bar, *k*, of suitable thickness, for forming a rigid support for the chisel.

In rolling chisels or other tools of less width the bar *k* is removed and another one of greater thickness substituted, according to the width of the article operated upon.

In this manner chisels and other tools or implements are formed on my improved machine very rapidly and without requiring any particular skill on the part of the operator, whereby the cost of producing these articles is greatly lessened, and at the same time the quality of the articles is greatly improved.

I claim as my invention—

1. In a machine for rolling chisels and other tools, the combination, with the upper roll, *C*, having a single projecting and eccentric segmental die, *G*, of the lower roll, *D*, having a depressed or recessed annular die, *H*, of uniform depth, whereby the blank is rolled into shape and delivered on the same side of the machine from which it is fed, substantially as hereinbefore set forth.

2. The combination, with the upper roll, *C*, having a segmental die, *G*, and the lower roll, *D*, having an annular die, *l*, of the bar *k*, connected to the spring-arm *m*, substantially as and for the purpose set forth.

GEORGE PARR.

Witnesses:

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EDW. J. BRADY.