

(No Model.)

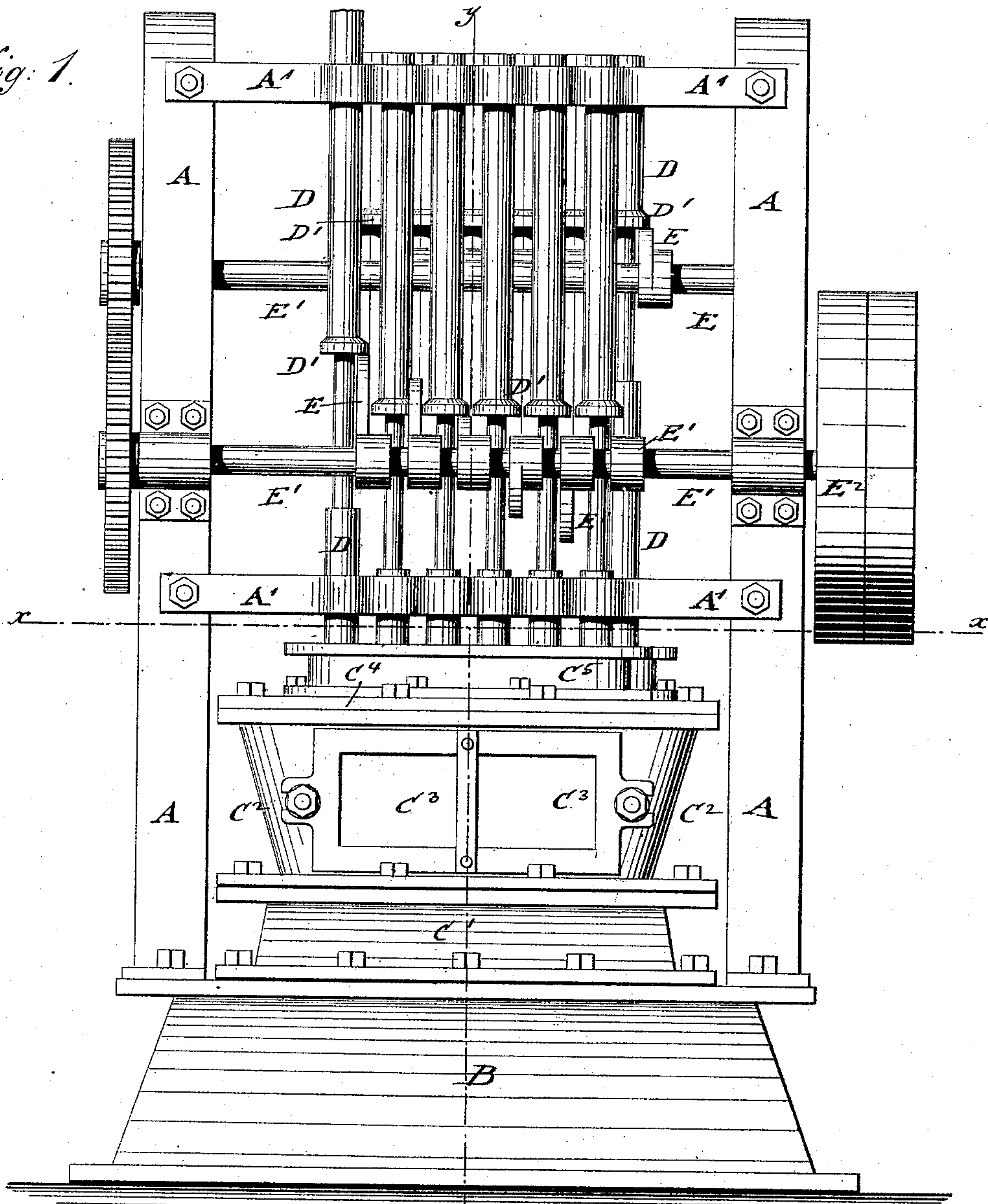
2 Sheets—Sheet 1.

W. GROSCH.  
STAMP MILL.

No. 313,587.

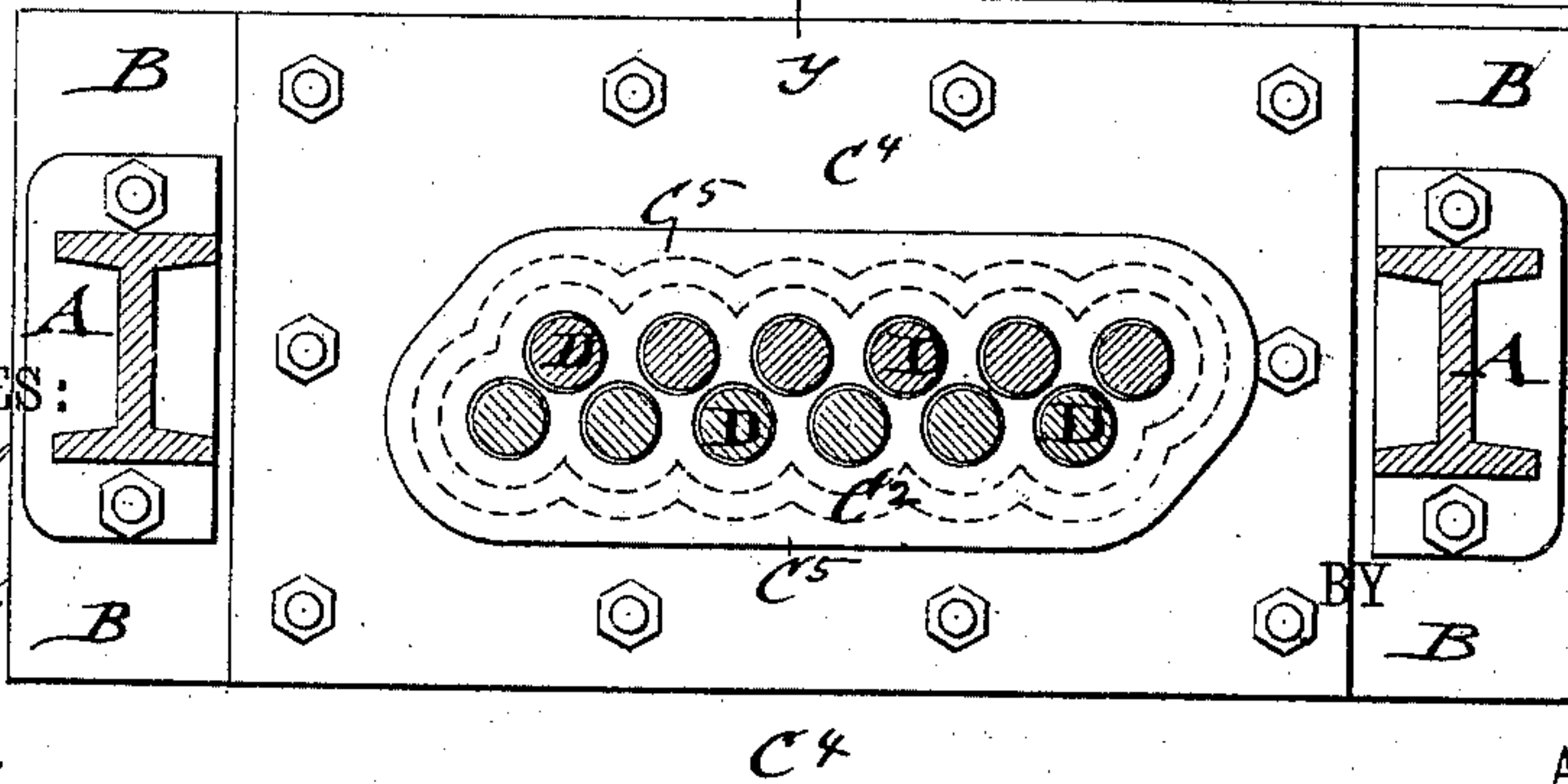
Patented Mar. 10, 1885.

*Fig. 1.*



*Fig. 2.*

WITNESSES:  
*A. Schuhl.*  
*Otto Risch.*



INVENTOR

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ATTORNEYS.

(No Model.)

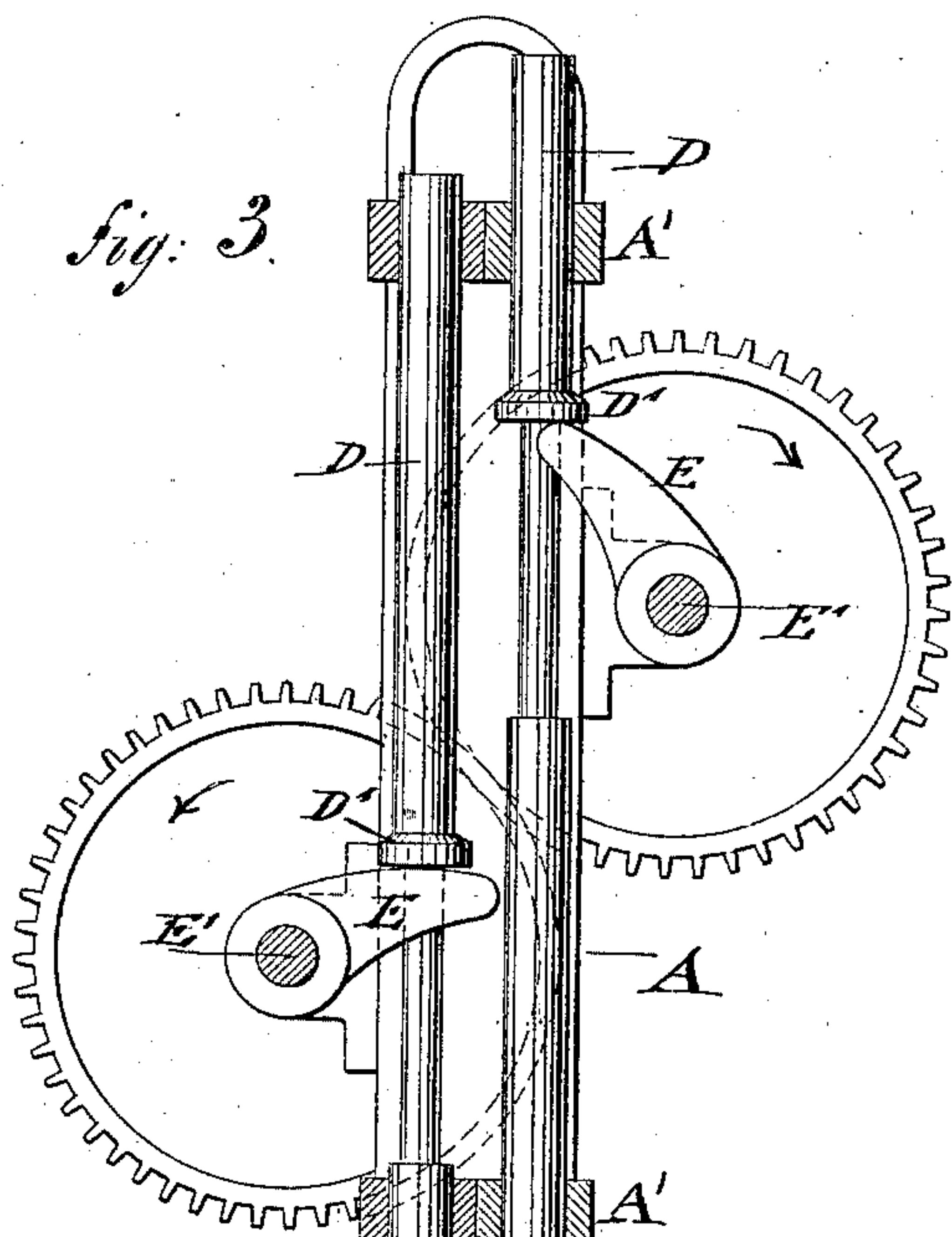
2 Sheets—Sheet 2.

W. GROSCH.  
STAMP MILL.

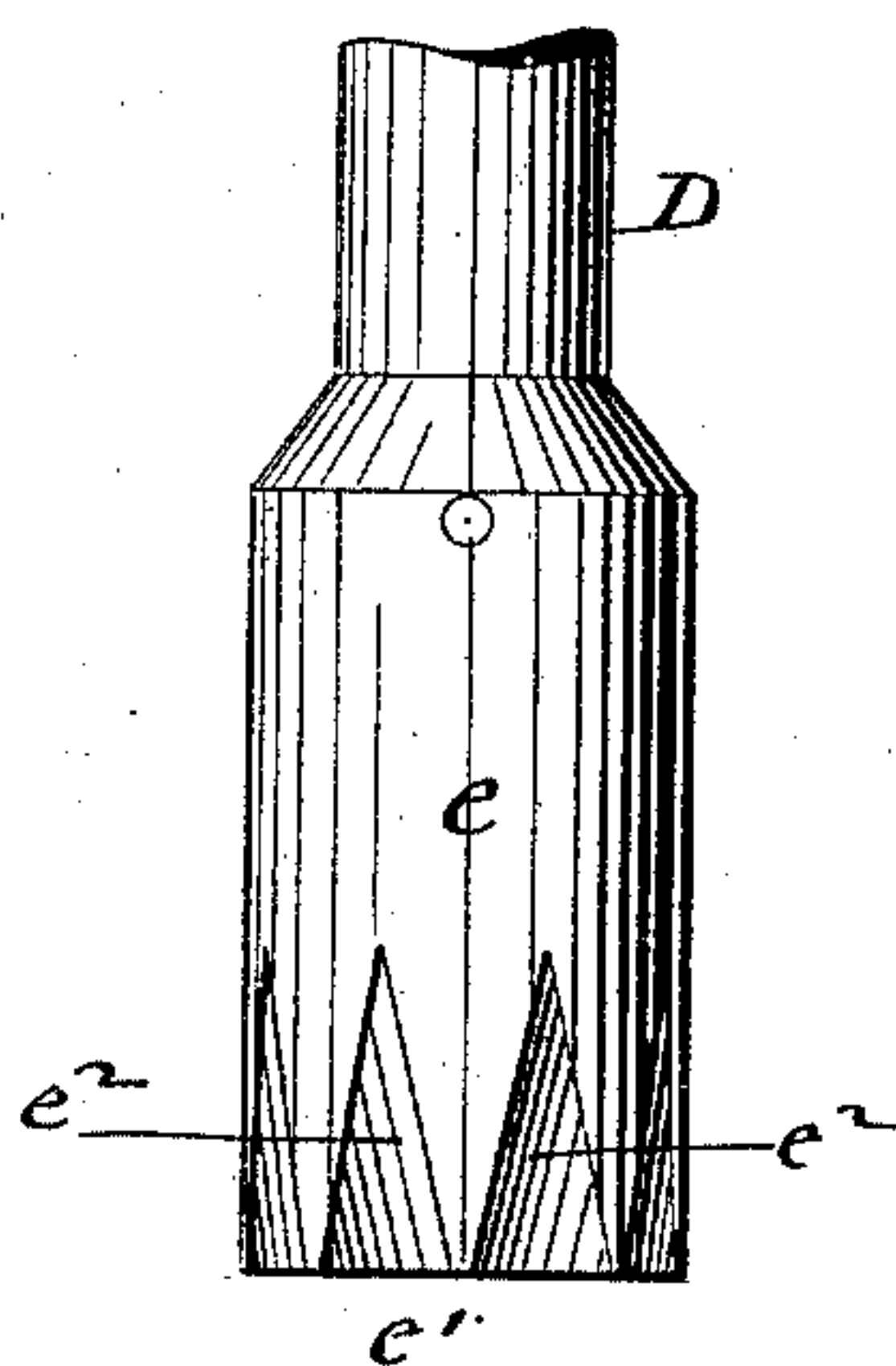
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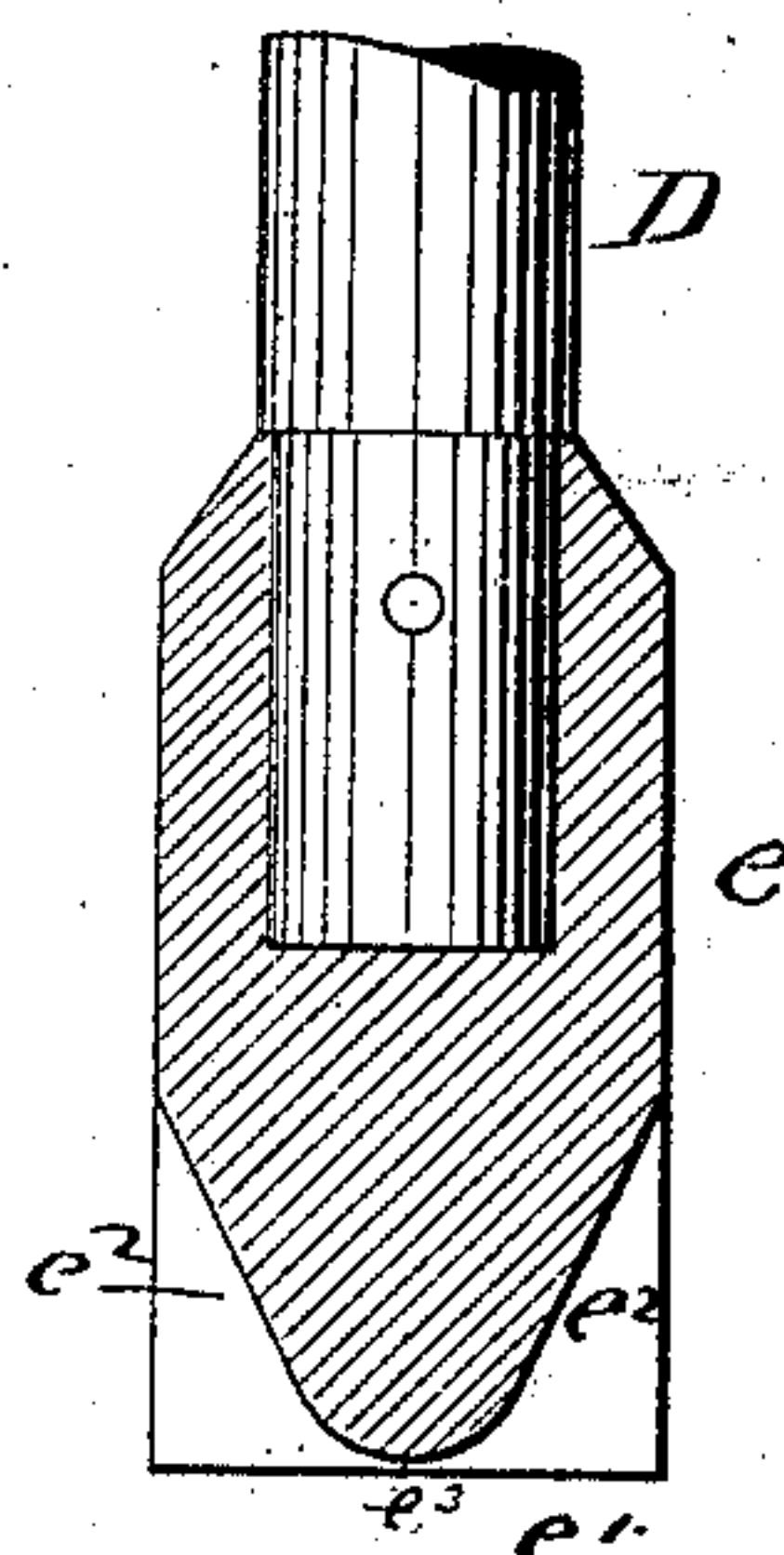
*Fig. 3.*



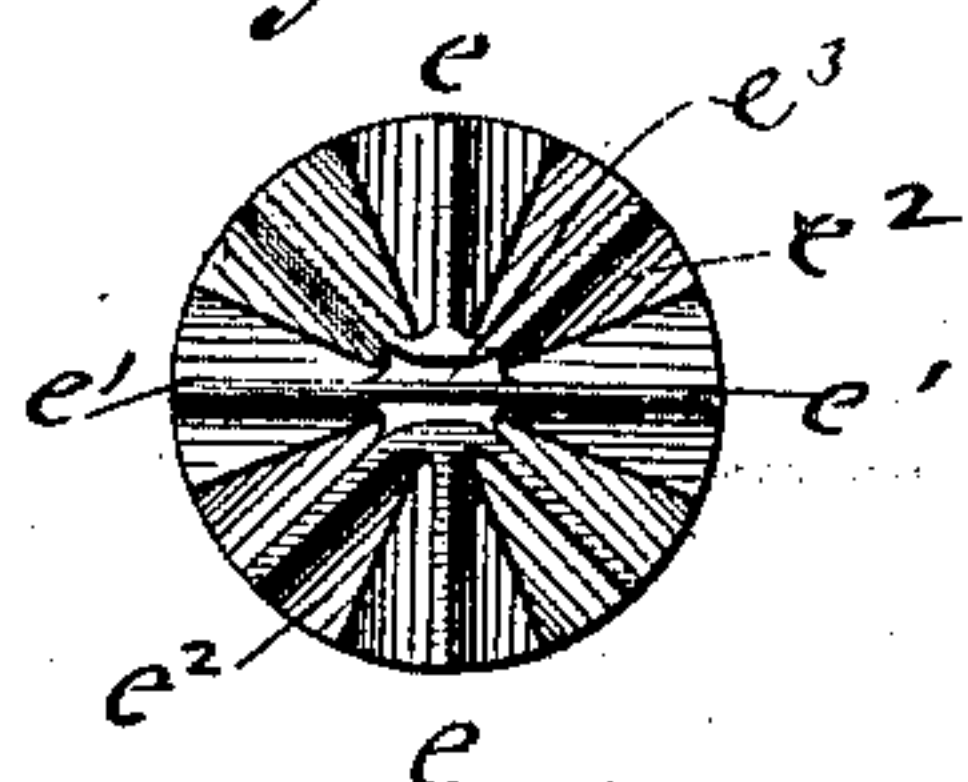
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

WILLIAM GROSCH, OF VERONA, NEW JERSEY.

## STAMP-MILL.

SPECIFICATION forming part of Letters Patent No. 313,587, dated March 10, 1885.

Application filed June 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM GROSCH, of Verona, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Stamp-Mills, of which the following is a specification.

This invention has reference to certain improvements in stamp-mills which are specially designed for stamping bronze and other colors produced from metals; and the invention consists, first, of an improved construction of a stamp-mill, and, secondly, of an improved construction of the cutting-bit, as will appear more fully hereinafter, and finally be pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved stamp-mill; Fig. 2, a horizontal section on line  $x x$ , Fig. 1; Fig. 3, a vertical transverse section of the same on line  $y y$ , Fig. 1; and Figs. 4, 5, and 6 are details of the cutting-bits.

Similar letters of reference indicate corresponding parts.

A A in the drawings represent the supporting-standards of my improved stamp-mill, which are secured to a bed-frame, B.

Upon the bed-frame B rests the steel anvil C, which is attached to the bed-frame by flanged side plates, C', and a hopper-shaped trough, C<sup>2</sup>, that projects over the anvil C, and is tightly secured thereto and to the side plates, C', by bolts passing through flanges of the trough and side plates. Between the flanges of the trough and side plates is interposed a suitable packing, so as to prevent the escape of dust. The trough C<sup>2</sup> is provided at one side with a detachable door, C<sup>3</sup>, through which the material to be pulverized is introduced into the trough C<sup>2</sup> and removed when it is pulverized. The trough C<sup>2</sup> is closed by a top plate, C<sup>4</sup>, which is provided with tightly-fitting stuffing-boxes C<sup>5</sup> for the stamps D. The inner surface of the trough C<sup>2</sup> is ribbed, as shown in Figs. 2 and 3. The stamps D pass through openings of the top plate, C<sup>4</sup>, and are guided in openings of transverse pieces A', which are attached to the standards A A. The stamps are arranged in two sets, those of one set being arranged so as to alternate with those of

the second set, as shown in Figs. 1, 2, and 3. The stamps D are provided with collars or disks D', which are engaged by curved lifting cams or toes E, that are arranged spirally on horizontal shafts E', which are rotated by gear-wheels, one shaft E' being driven by a pulley, E<sup>2</sup>, from a suitable power-shaft. The cams E engage the disks D' at one side of the stamps D, and exert thereby not only a lifting but also an intermittent axially-turning motion upon the same. To the lower ends of the stamps are secured the steel cutting-bits  $e$ , which are provided with radial cutting-edges  $e'$ , separated by intermediate tapering grooves,  $e^2$ , as shown in Figs. 4, 5, and 6, whereby the settling or packing of the pulverized material on the bits is prevented and the same kept intact for working. Two of the radial cutting-edges  $e'$  are arranged in line with each other, as shown in Figs. 5 and 6. The tapering clearing-recesses  $e^2$ , at both sides of the diametrical cutting-edge  $e'$ , are connected at the bottom of the cutting-bit  $e$  by grooves  $e^3$ , which have the advantage that the air can readily escape when the bit strikes the bronze-powder, whereby the forcible passage of air through the powder and the throwing up of bronze-dust is prevented. The pulverizing action is accomplished by the bits in an effective manner, as the axial turning of the stamps turns the cutting-bits, whereby a uniform wearing out of the surface of the anvil is obtained. New material is continually fed by the inclined ribs of the trough C<sup>2</sup> to the cutting-bits and gradually reduced by the same, as the cutting-edges are kept clear by the upward passage of the powder in the tapering grooves  $e^2$  of the bits. The anvil is kept rigidly in position on the bed-frame and the escape of dust prevented by the tightly-closed trough, packing, and stuffing-boxes.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a bed-frame, B, anvil C, inclosing plates C', trough C<sup>2</sup>, having inclined interior ribs, door C<sup>3</sup>, top C<sup>4</sup>, having stuffing-boxes C<sup>5</sup>, vertically-guided stamps D, having disks D', shafts E', having cams or toes E, which engage the disks at one side of the

stamps, substantially as and for the purpose set forth.

2. In a stamp-mill, a cutting-bit provided with radial cutting-edges, intermediate upwardly-tapering clearing-recesses, and bottom grooves extending at both sides of a diametrical cutting-edge for connecting the adjoining clearing-recesses, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

W. GROSCH.

Witnesses:

M. R. BRUECHE,  
FRANKLIN J. WILSON.