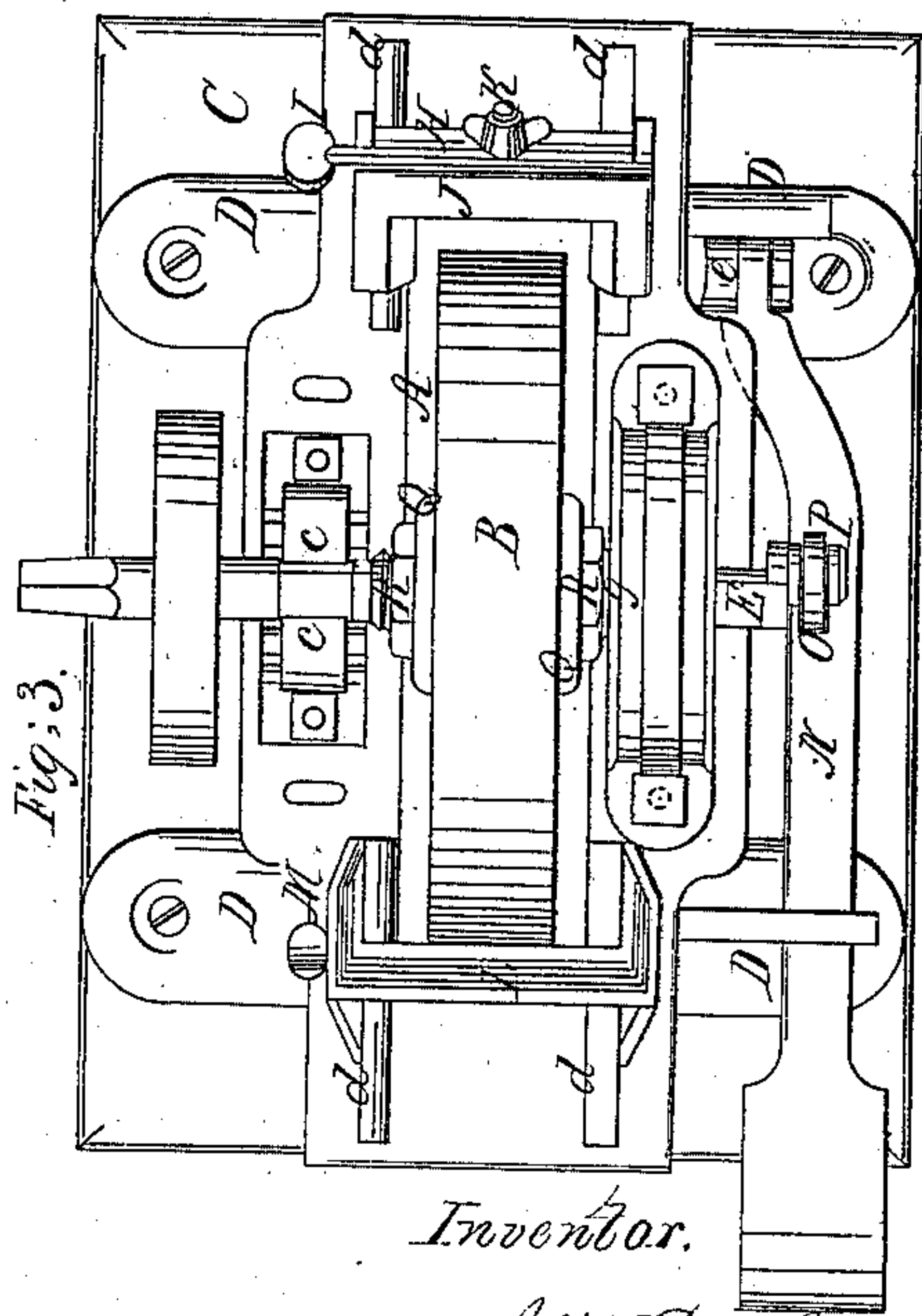
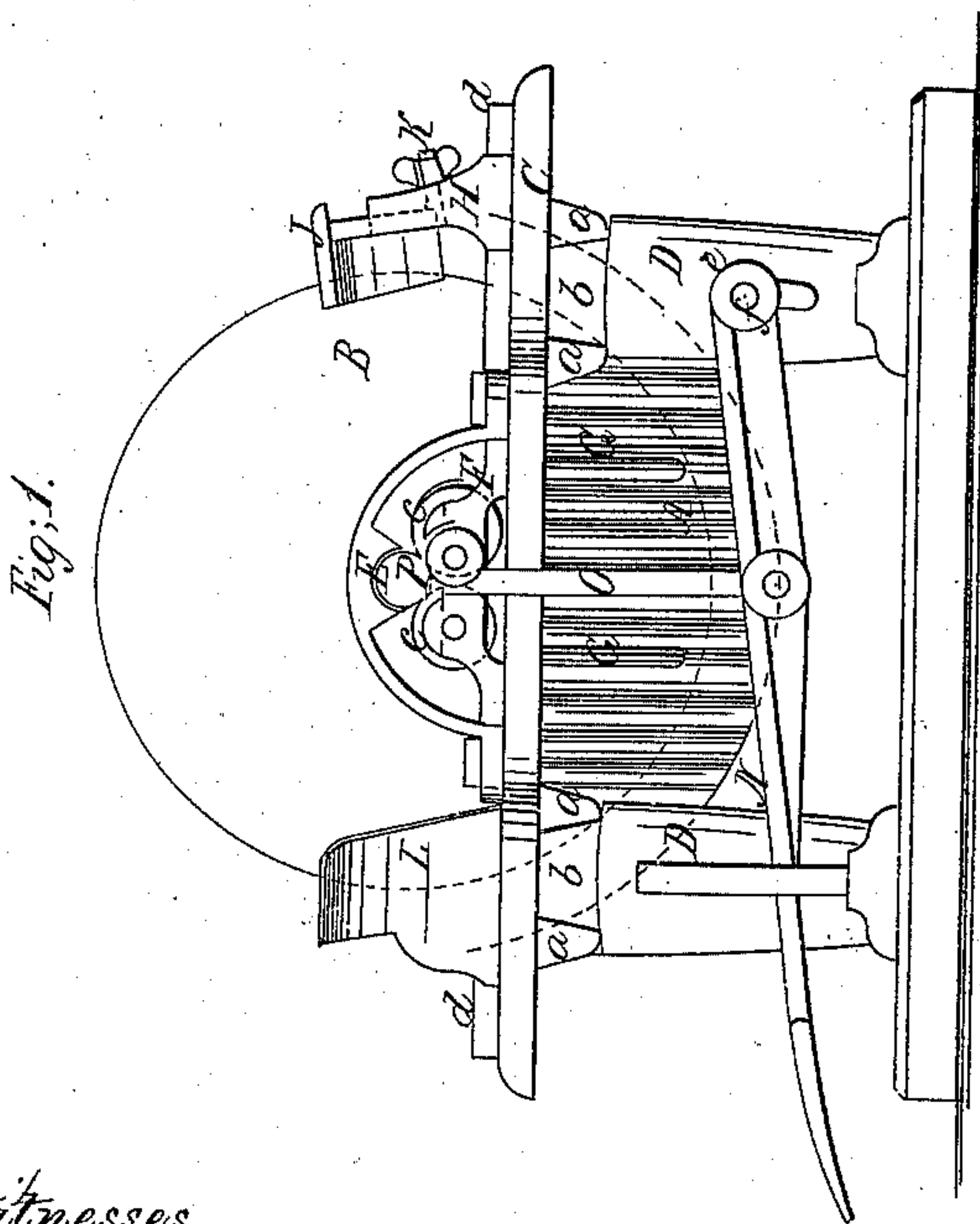
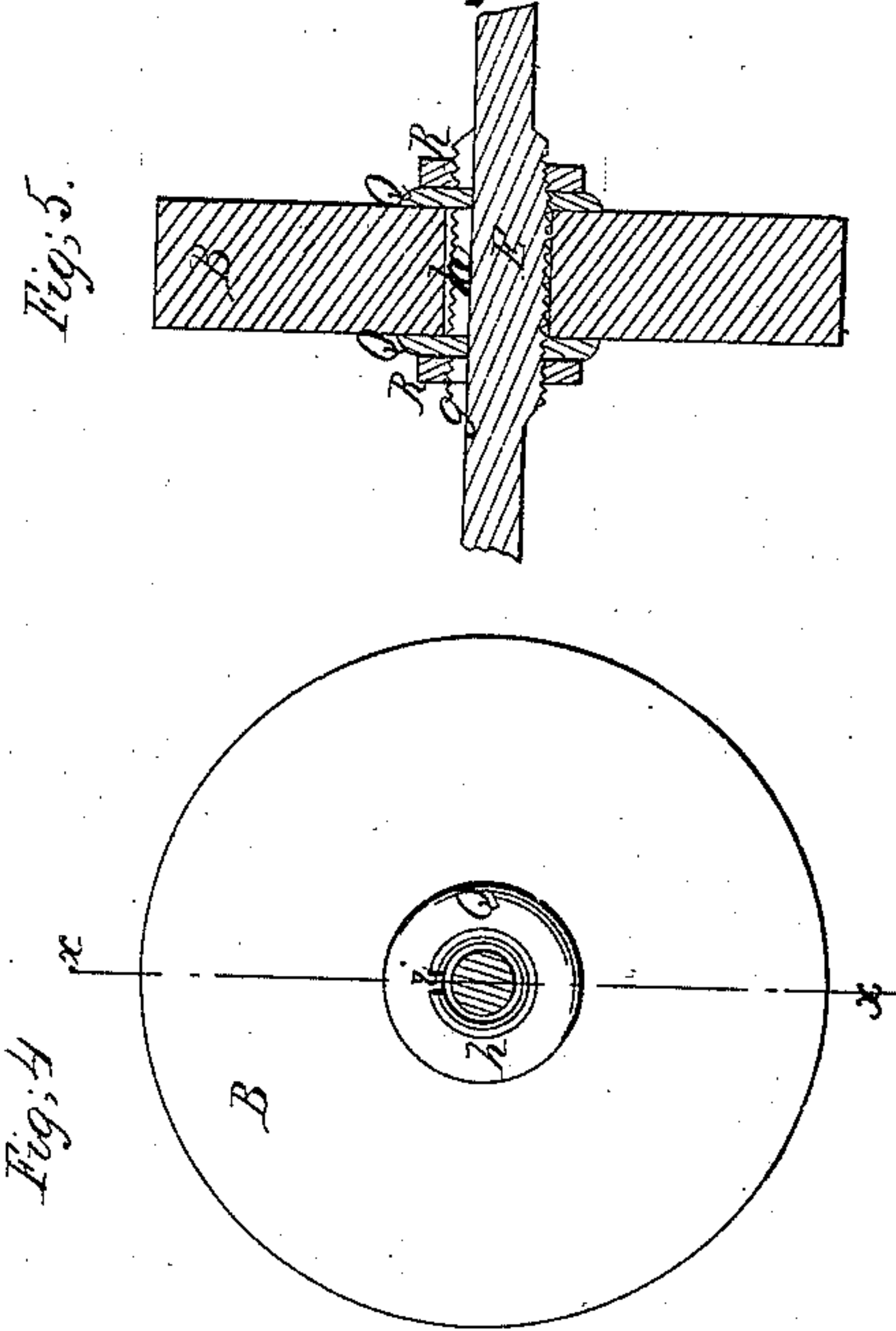
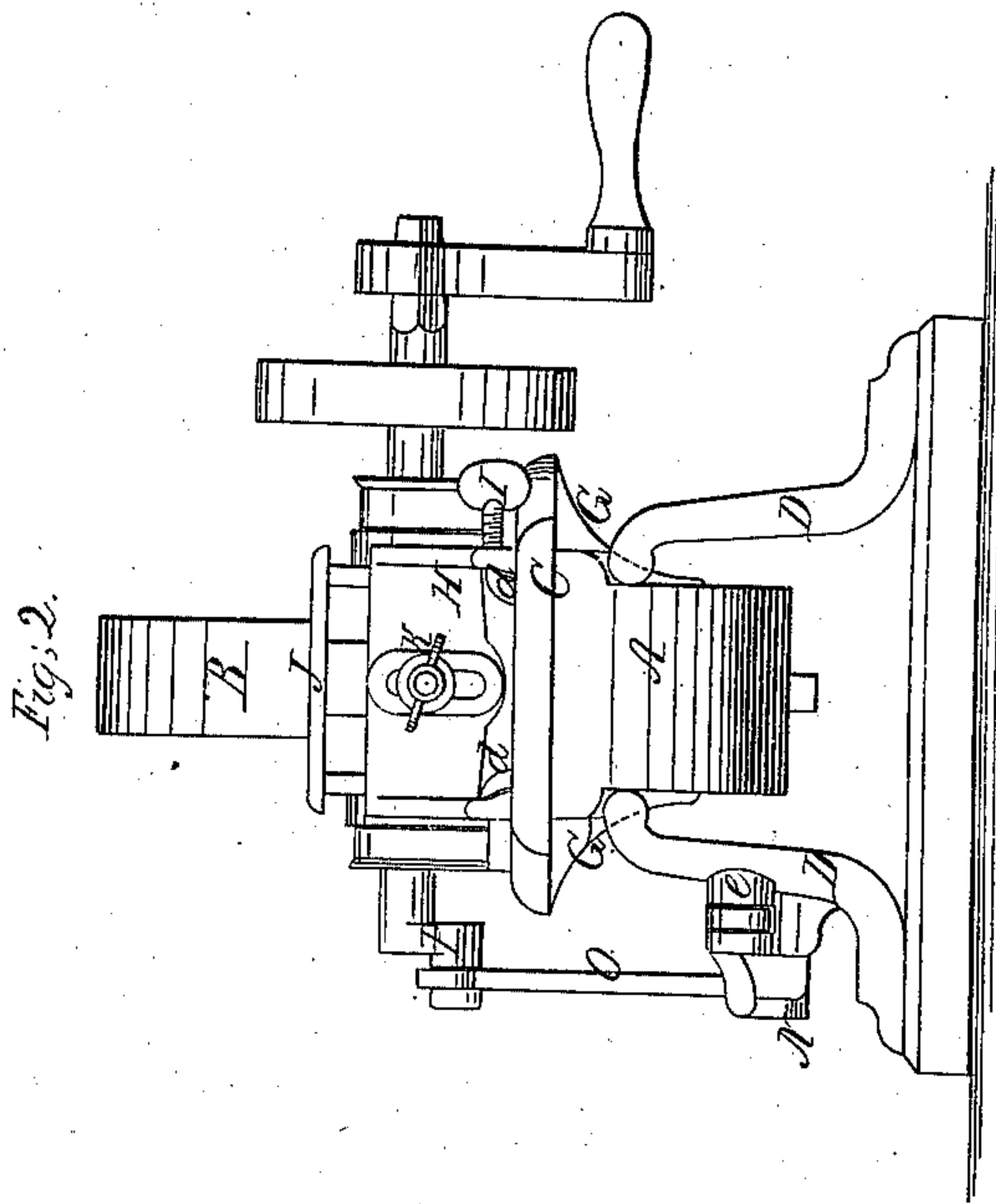


*J. W. Douglas,
Grindstone Frame.*

N^o 81,611.

Patented Sep. 1, 1868.



*Witnesses.
J. A. Shaw.
J. A. Service.*

Inventor.

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UNITED STATES PATENT OFFICE.

JOSEPH W. DOUGLAS, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO W. DOUGLAS AND B. DOUGLAS, OF SAME PLACE.

IMPROVEMENT IN GRINDSTONE-FRAMES.

Specification forming part of Letters Patent No. 81,611, dated September 1, 1868.

To all whom it may concern:

Be it known that I, JOSEPH W. DOUGLAS, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and Improved Grindstone-Frame; and I do hereby declare that the following is a full and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a new and improved cast-iron frame for grindstones; and it consists in a novel manner of constructing the same, as hereinafter fully shown and described, whereby several advantages are obtained over the frames hitherto constructed for such purpose.

In the accompanying sheet of drawings, Figure 1 is a side view of my invention; Fig. 2, an end view of the same; Fig. 3, a plan or top view of the same; Fig. 4, a detached side view of the grindstone; Fig. 5, a vertical section of the same, taken in the line *x x*, Fig. 4.

Similar letters of reference indicate like parts.

A represents the water-chamber of the frame, which has a curved bottom, forming a portion of a circle concentric with the grindstone B. This water-chamber has a longitudinal flange, C, extending all around it. The water-chamber, at each side, has dovetail flanges *a a*, two near each end, to receive the upper ends of the legs D, the latter being provided, at their upper ends, with taper lips *b*, to fit between the flanges. (See Fig. 1.)

By this means the legs may be readily attached to and detached from the water-chamber, and the detachment of the legs admits of the device being compactly boxed for shipment.

The shaft E of the grindstone rests upon friction-rollers *c*, arranged in the usual way, the boxes or frames F, in which said friction-rollers are fitted, being secured to the flange C, which is supported or sustained at these points by brackets G G, shown in Figs. 1 and 2. The water-chamber, flange, and brackets are all cast in one piece.

On the upper surface of the flange C, at each end of the water-chamber A, there are cast parallel ways or guides *d d*, on two of which, at one end of the frame, there is fitted a support or standard, H, slightly inclined from a vertical position toward the grindstone, as shown in Fig. 1. This support or standard may be adjusted nearer to or farther from the grindstone, on its ways or guides *d d*, and secured at any desired point by a set-screw, I. To this support or standard H there is attached a tool-rest, J, which is capable of being adjusted higher or lower, and may be secured at any desired point by a set-screw, K. By this simple arrangement, it will be seen that the tool-rest may be adjusted nearer or farther from the stone, and secured higher up or lower down, above or below the center of the same, as circumstances may require.

On the other ways or guides *d d*, at the opposite end of the water-chamber, there is fitted an adjustable flange or guard, L, secured in position by a set-screw, M. This flange or guard simply covers the edge of the stone opposite to the part where the tool is applied on rest J.

One of the legs D is cast with an eye, *e*, in which a treadle or foot-lever, N, is secured by a fulcrum-pin, *f*, said treadle or foot-lever being connected, by a pitman, O, with a crank, P, on the shaft E of the grindstone. The shaft E has a screw-thread, *g*, cut on it where it passes through the eye of the stone B, and this screw has a slot or groove, *h*, made longitudinally in it, extending its whole length, to receive lips or projections *i* of washers Q Q, which are fitted loosely on the screw, and are pressed against the sides of the stone by nuts R R. (See Fig. 5.)

The stone B, it will be seen, is clamped firmly on its shaft E by screwing up the nuts R R. By this means the stone is prevented from slipping on its shaft E, as the washers Q Q, in consequence of their lips or projections *i* fitting in the groove *h*, are prevented from turning on the shaft, and the washers are clamped firmly against the side of the stone, which, on account of its peculiar granular structure, will not slip between the washers.

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

1. The adjustable support or standard H, with tool-rest J applied to it, substantially as and for the purpose specified.

2. The providing the shaft E with a screw-thread, *g*, having a slot or groove, *h*, made longitudinally in it, in connection with the

washers Q Q, furnished with lips or projections *i*, to fit in the slot or groove *h*, and the nuts R R on the screw-thread *g*, all arranged substantially as and for the purpose set forth.

JOS. W. DOUGLAS.

Witnesses:

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GEO. M. SMITH.