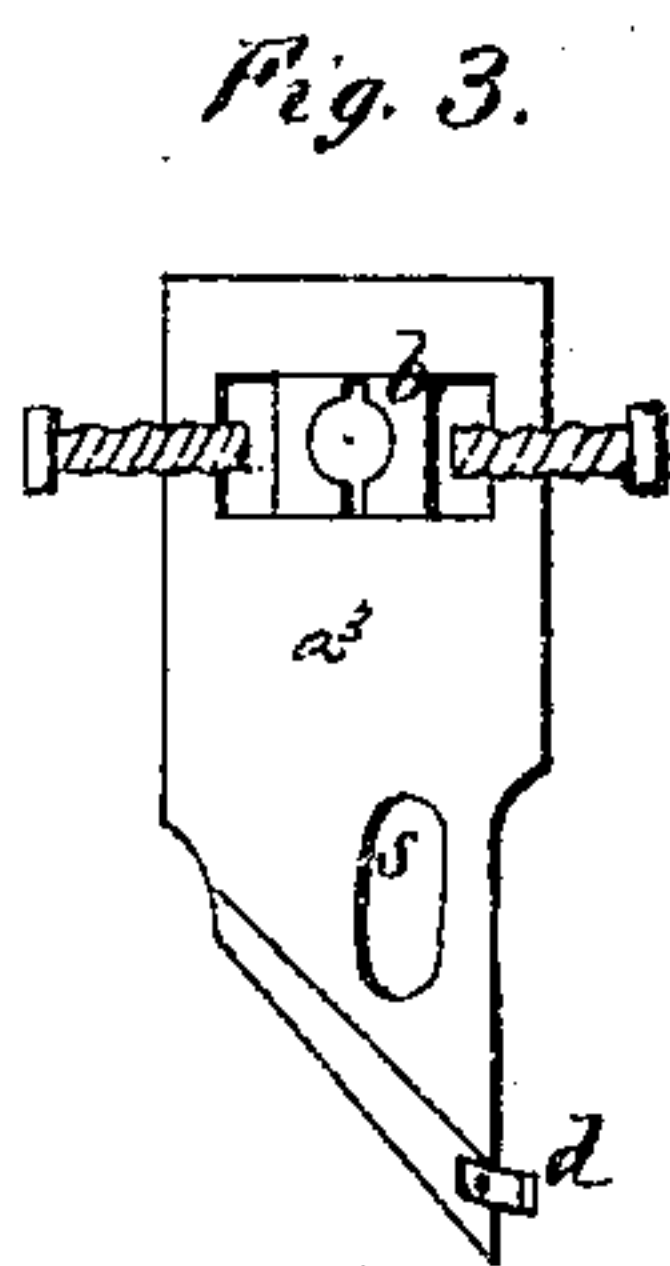
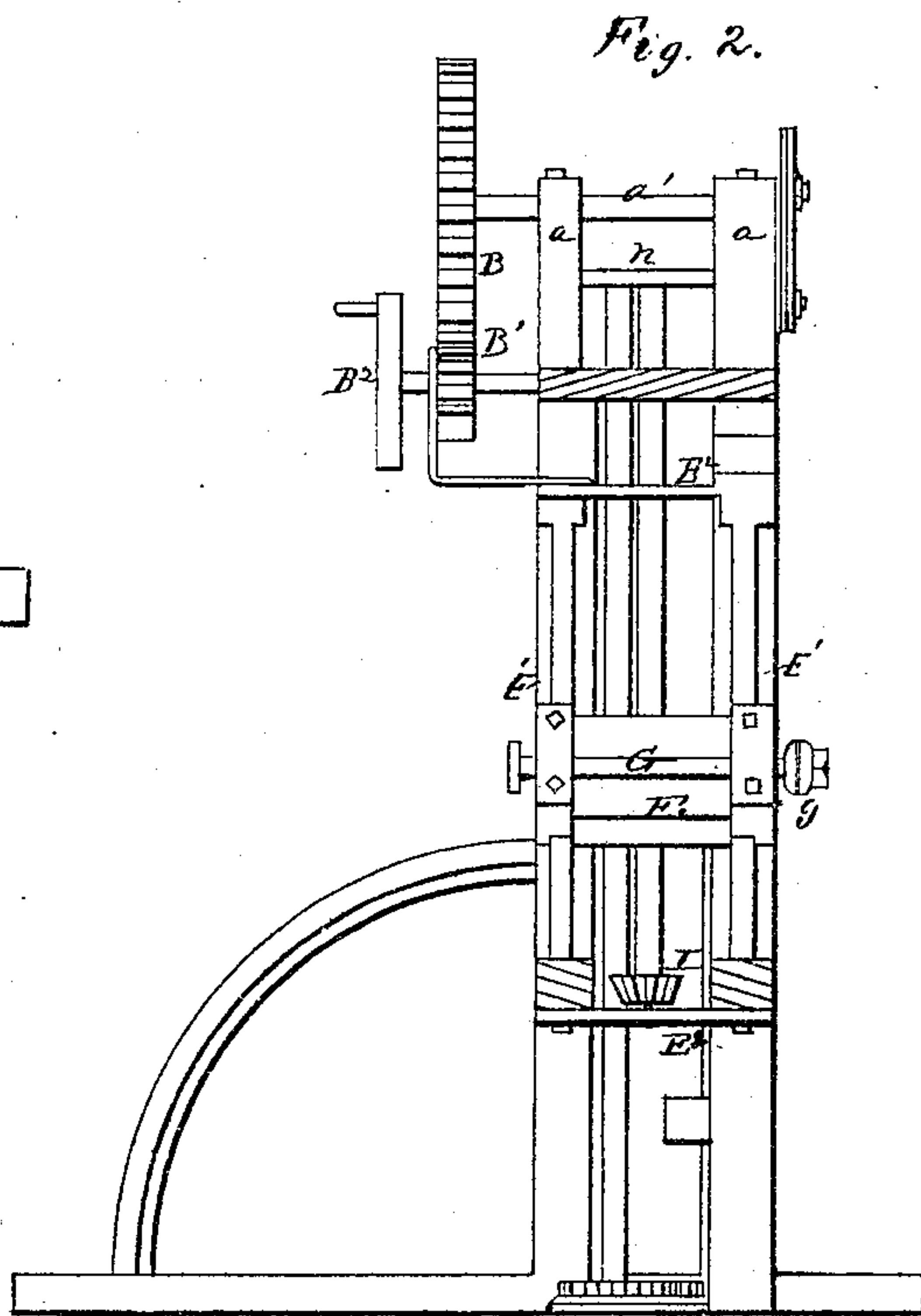
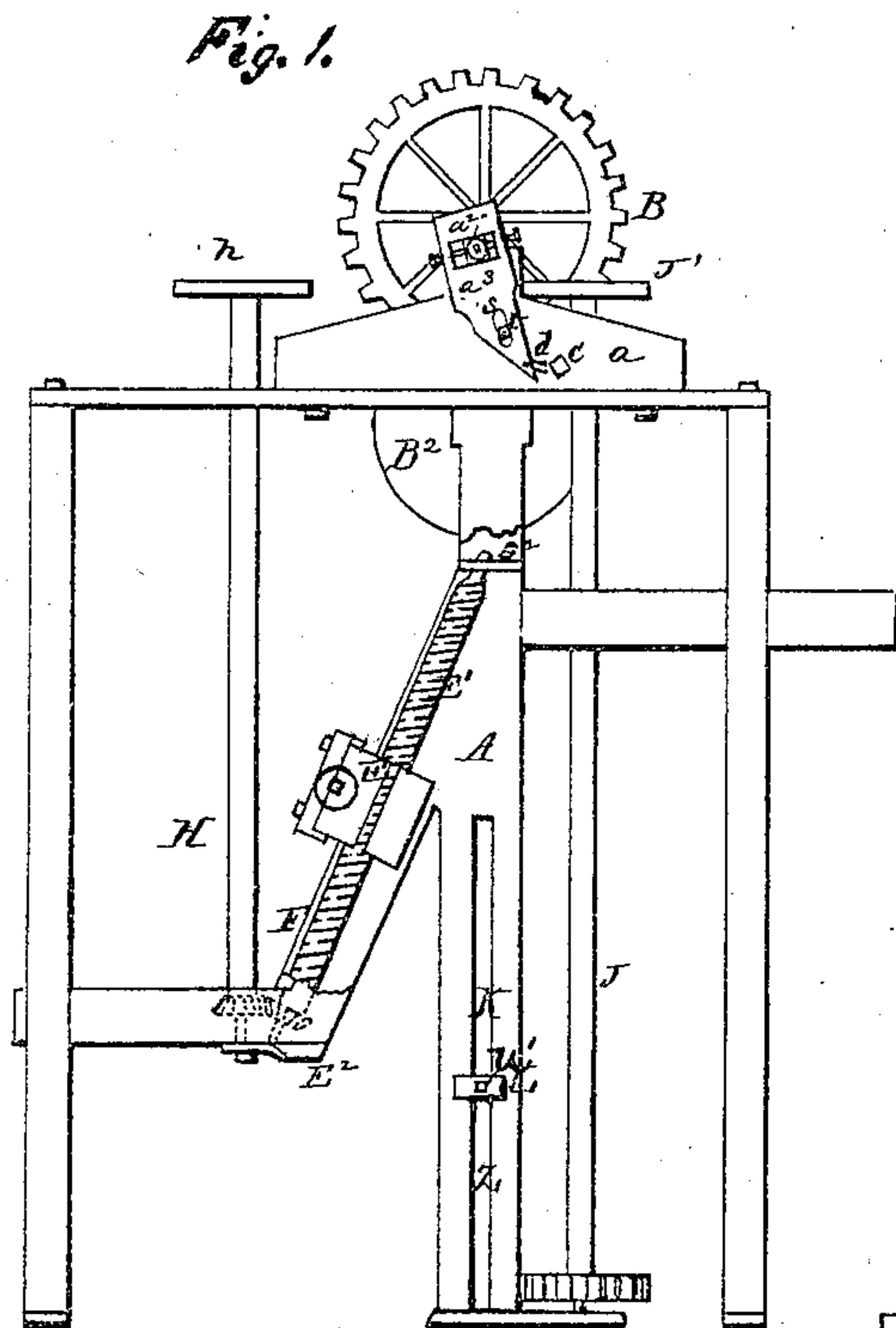


J. LUCIA.

Machines for Dressing the Teeth of Saws.

No. 141,366.

Patented July 29, 1873.



Witnesses.

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JOEL LUCIA, OF LITTLE SUAMICO, WISCONSIN.

IMPROVEMENT IN MACHINES FOR DRESSING THE TEETH OF SAWS.

Specification forming part of Letters Patent No. **141,366**, dated July 29, 1873; application filed October 26, 1872.

To all whom it may concern:

Be it known that I, JOEL LUCIA, of Little Suamico, in the county of Oconto and State of Wisconsin, have invented a new and valuable Improvement in Gouge-Tooth Swage-Machine; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my invention. Fig. 2 is a vertical transverse section of same. Fig. 3 is a detail of same.

This invention has relation to a machine for forming the gouge-teeth of circular saws; and it consists in the construction and novel arrangement of the cutting-tool, devices for operating and controlling the same, and the devices for adjusting the saw, all substantially as hereinafter described.

Referring to the drawings, A designates the frame of the machine, upon the blocks *a*, at the top of which is supported the transverse shaft *a*¹, holding the eccentric *a*², which bears and gives eccentric motion to a tool-block, *a*³, in the lower end of which is fixed the lower or convex cutter or gouge *d*. The box *b* of the eccentric is movable within a slot, but is held in place by set-screws. The curve described by the cutting-tool is regulated by the adjustment of the box *b*. B B¹ designate gearing, through which motion is communicated to the tool-block. B² is a belt-pulley, fixed upon the pinion-shaft. C designates the upper rest or tooth-holder firmly embedded in the side of the frame. E designates a grooved cross-head lying upon inclined ways E¹, at the top and bottom of which are plates E², constituting the end bearings of a feed-screw, F, which passes through said head-block, and is used for the purpose of raising and lowering the latter. The head-block bears a transverse shaft, G, with disks *g* on its end to hold a centered circular saw. The adjustment of the blocks brings the saw into proper relation to

the cutter. H is an upright shaft, having a hand-wheel, *h*, at its upper end, and connected by bevel-gearing I to the screw F. Motion is obviously communicated to the screw F by turning the hand-wheel *h*. The arbor G is allowed longitudinal play, enabling the operator to draw the saw outward in turning it, so that it may pass the dies. J is an upright shaft, bearing a hand-wheel, J', and, at its lower end, connected by gearing to a set-screw, K, upon which travels a block, L, moving between guides, and projecting through a slot, *z*, in the side of the frame. The projecting portion *u'* of said block supports the edge of and holds the saw firmly in position, when the cutter is brought down. The hand-wheel J' and attachments are for adjusting said block. In the work of forming the saw-teeth each tooth is in order placed between the cutter and holder, and the cutter is brought down against the inside face for the gouging operation.

It will be noticed that the play of the tool-block is limited by a bolt, *t*, passing through a slot, *s*.

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

1. In a machine for forming saw-teeth, the tool *a*³, armed with the under cutter *d*, in combination with the shaft *a*¹, eccentric *a*², upper die *c*, and adjustable block E, substantially as specified.

2. The adjustable block E, adjusting-screw F, gearing I, vertical shaft H, and hand-wheel *h*, combined substantially as specified.

3. The adjustable block L, shafts K J, and hand-wheel J', in combination with the slotted frame A of a machine for forming saw-teeth, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOEL LUCIA.

Witnesses:

J. HARRIS,
M. F. YOUNG.