

P. J. FRANTZE.
Lathes.

No. 156,559.

Patented Nov. 3, 1874.

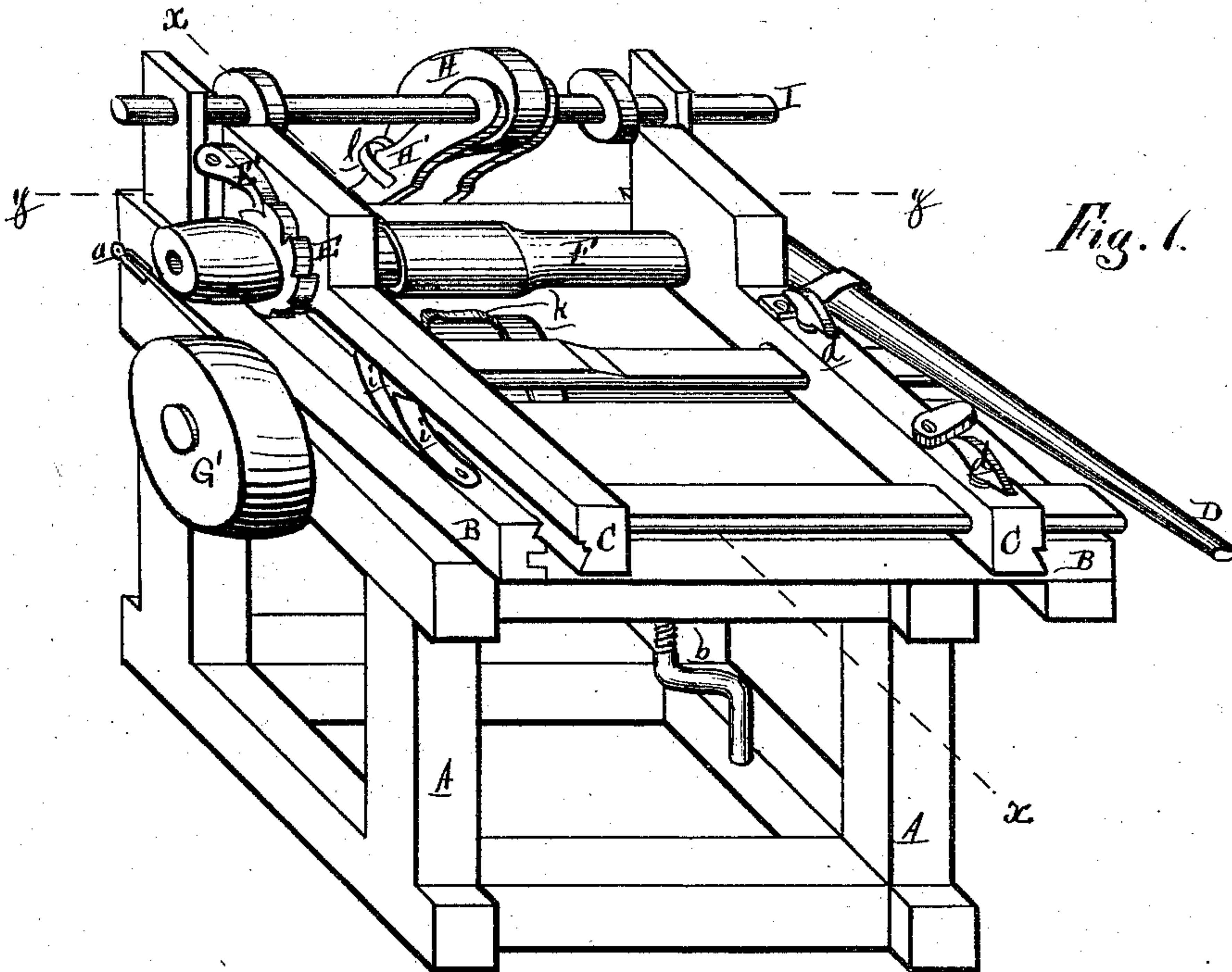
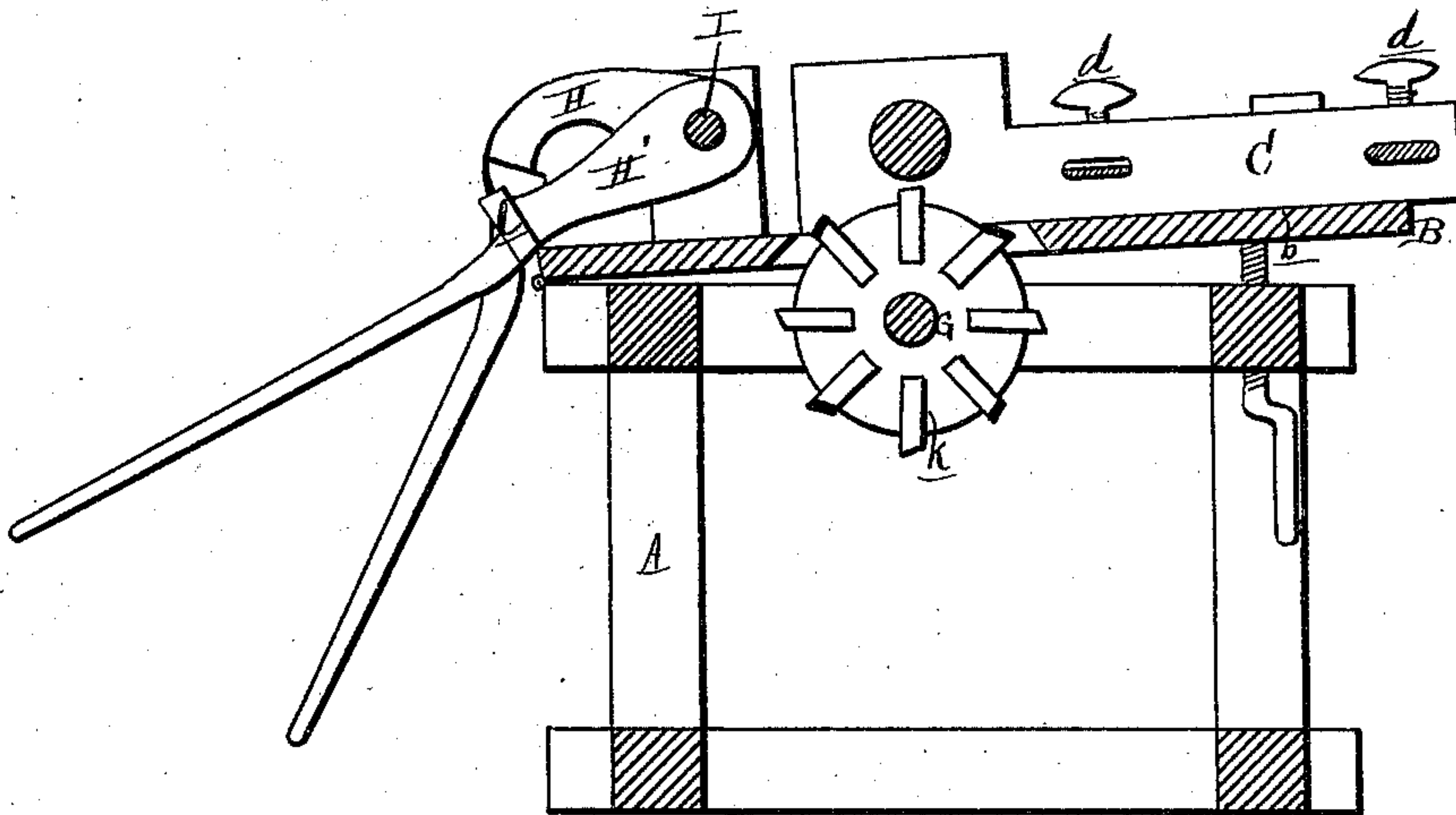


Fig. 1.

Fig. 2



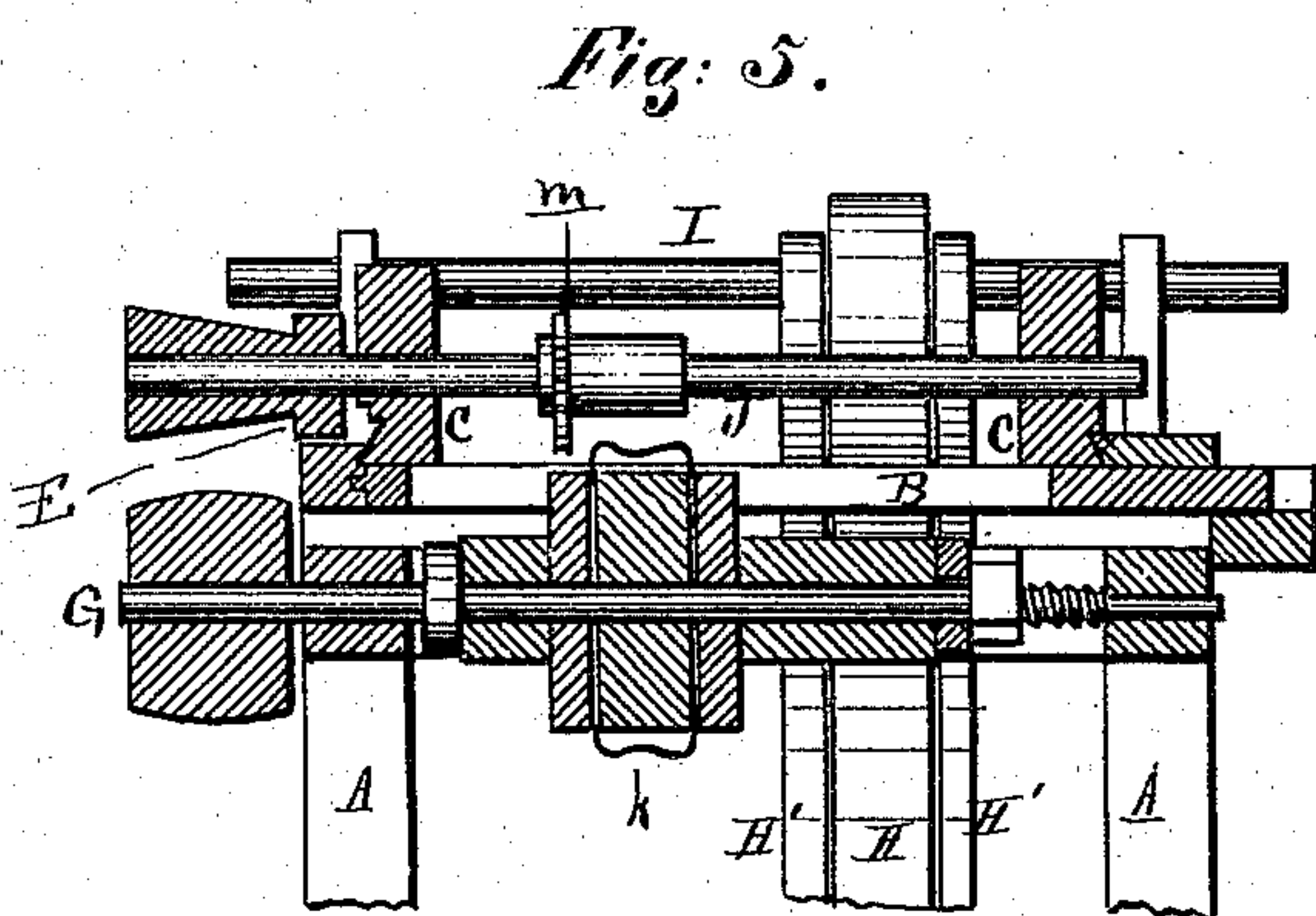
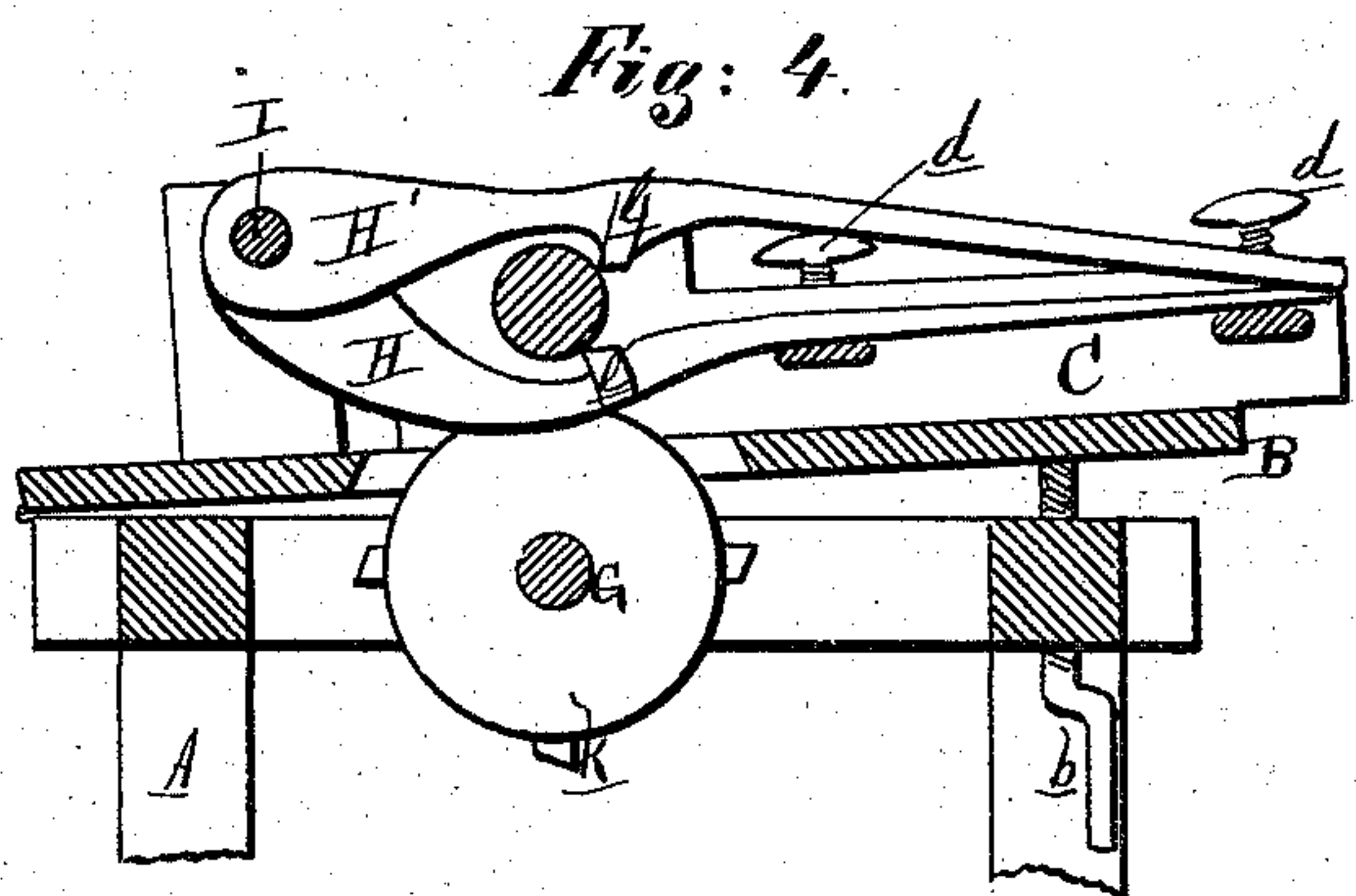
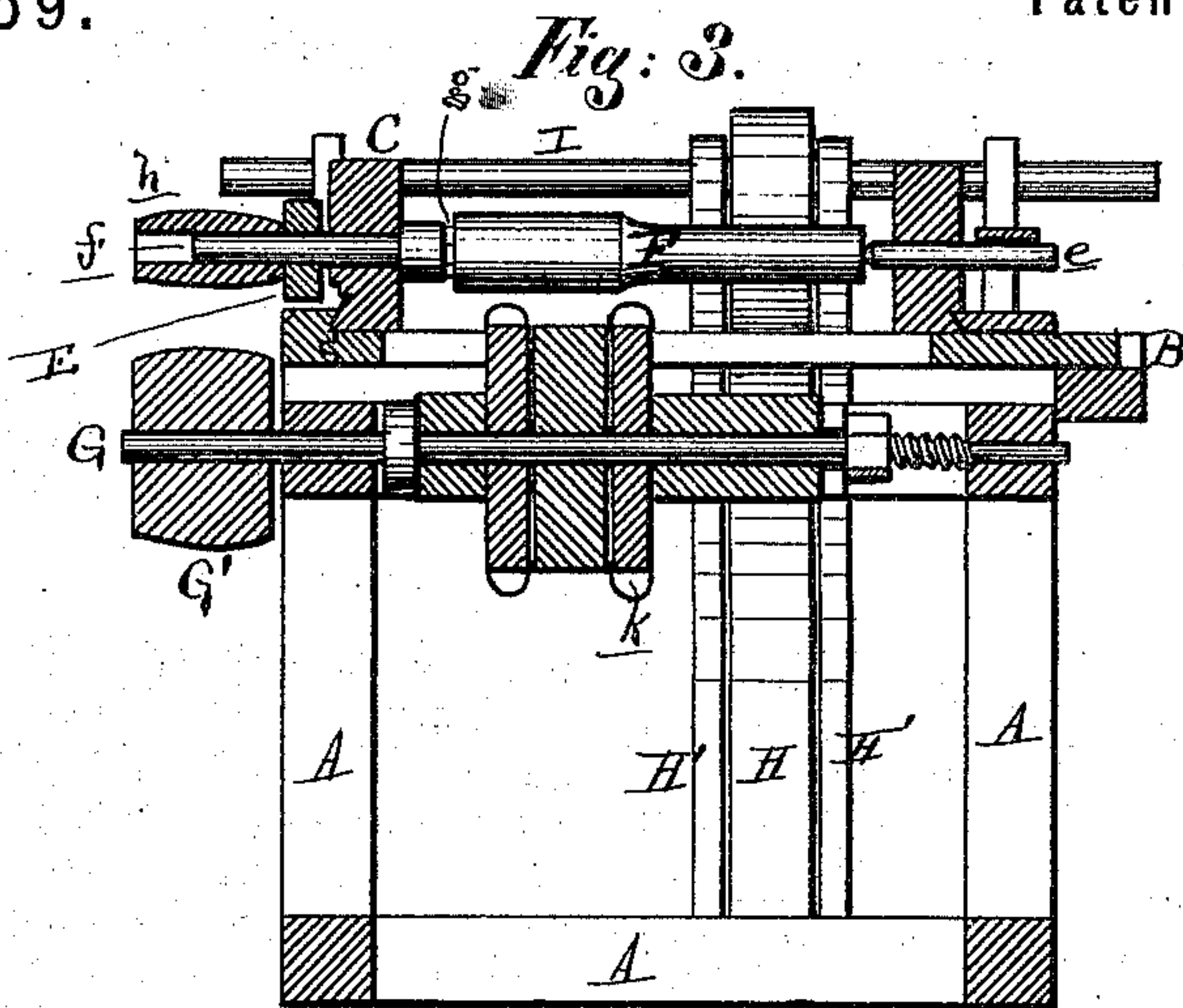
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UNITED STATES PATENT OFFICE.

PETTER J. FRANTZE, OF CHICAGO, ILLINOIS, ASSIGNOR TO LAURITZ FOSS,
OF SAME PLACE.

IMPROVEMENT IN LATHES.

Specification forming part of Letters Patent No. **156,559**, dated November 3, 1874; application filed
May 11, 1874.

To all whom it may concern:

Be it known that I, PETTER J. FRANTZE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful "Lathe" for Cutting and Turning Balusters and Sticking Moldings, of which the following is a specification:

The nature of my invention relates to a machine in which a stick of wood may be chucked and successively subjected to the action of two sets of cutters, the first of which will cut or plane any desired number of facets on the polygonal lower end of the baluster, while the second set will turn the remaining part tapering or otherwise. By substituting a feed-mandrel for the chucks the machine can be used for sticking moldings.

Figure 1, Sheet 1, is a perspective view of the machine, looking at it from the front, showing the operation of cutting the polygonal portion of a baluster. Fig. 2 is a longitudinal section of the same at *x x*. Fig. 3, Sheet 2, is a cross-section at *y y*, in Fig. 1. Fig. 4 is a partial longitudinal section at *x x*, but showing the arrangement of the cutters, as when turning a baluster. Fig. 5 is a cross-section at *y y*, showing the arrangement of the machine, as a sticker.

In the drawing, A represents the frame of the machine, on which is hinged an open-frame top, B, by hinges *a* at the back end. The front end may be tilted by a screw, *b*. C is a sliding frame, dovetailed in ways in the top B, one of which ways is made laterally adjustable on said top, so that the right side of the frame C may be extended or contracted to admit balusters of various lengths, and is secured by set-screws *d* impinging on the cross-bars, which pass through slots in the side bar of said frame, in which a horizontal pointed center, *e*, is actuated or adjusted by a lever, D. In the left side may be journaled a spindle, *f*, having a spur-chuck, *g*, on its inner end, and a driving-pulley, *h*, on the outer end, between which pulley and the frame side a ratchet, E, is keyed on said spindle. A dog, E', prevents this spindle from moving but in one direction. The baluster-blank F is

chucked on the spindle and center. *i i'* are two spring-pawls independently-pivoted to the top B at the side of the frame C in such a manner that at each retraction of the latter they will engage with the ratchet E and rotate it with the baluster one-sixth of a revolution if it have twelve teeth, or if one pawl be turned aside half that distance, the number of teeth in the ratchet governing the number of facets on the base of the baluster, which may be either straight or curved, and are formed thereon by a cutter, *k*, mounted on a mandrel, G, journaled in the lower part of the frame, being rotated by a belt passing around its pulley G'.

By sliding the frame back to bring the baluster-blank over the revolving cutter-head the latter will plane off a flat surface on the under side thereof, and in retracting the frame the blank will be partially rotated to present a fresh surface to the cutter-head, the depth of cut and diameter of cutter-head being regulated by raising or lowering the top B. The baluster is then removed from the chuck, and the middle curved lever H, carrying a cutter, *l*, is brought over onto the frame-girts. There are two similar levers, H', each having a cutter, *l*, on its inner face. These levers are sleeved at their back ends on a shaft, I, in standards at the back ends of the top B. The baluster being chucked again, and its spindle set in motion by a belt on its pulley, the remainder of the baluster is turned off by inclosing the cutters *l* upon it, and sliding it from the polygonal part to the top end, as indicated in Fig. 4.

By removing the spindle and center from their bearings, and placing therein a shaft, J, Fig. 5, having a toothed feed-roll, *m*, the machine can be used for sticking moldings, in which case the feed-roll shaft is driven by a belt on its pulley or, if preferred, by friction or toothed gearing.

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

1. The frame A, adjustable top B, sliding frame C, center *e*, spindle *f*, chuck *g*, ratchet E, dog E', pawls *i i'*, mandrel G, and cutter *k*,

all constructed and arranged to cut the polygonal facets of a baluster, substantially as described.

2. The combination of the curved levers H H' H', sleeved on the shaft I, and provided with the cutters *l* for turning a baluster rotated by the spindle *f*, substantially as described.

3. The combination, in a machine for cut-

ting and turning balusters, of the laterally-adjustable sliding frame C, carrying the shaft J, provided with the toothed feed-roll *m*, constructed as described, for the purposes specified.

PETTER J. FRANTZE.

Witnesses:

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HERMAN BISCHOFF.