P. C. Cambridge, Jr.,

Gage Lathe.

No. 15,327. Patented July 15, 1856.

Fig. 1.

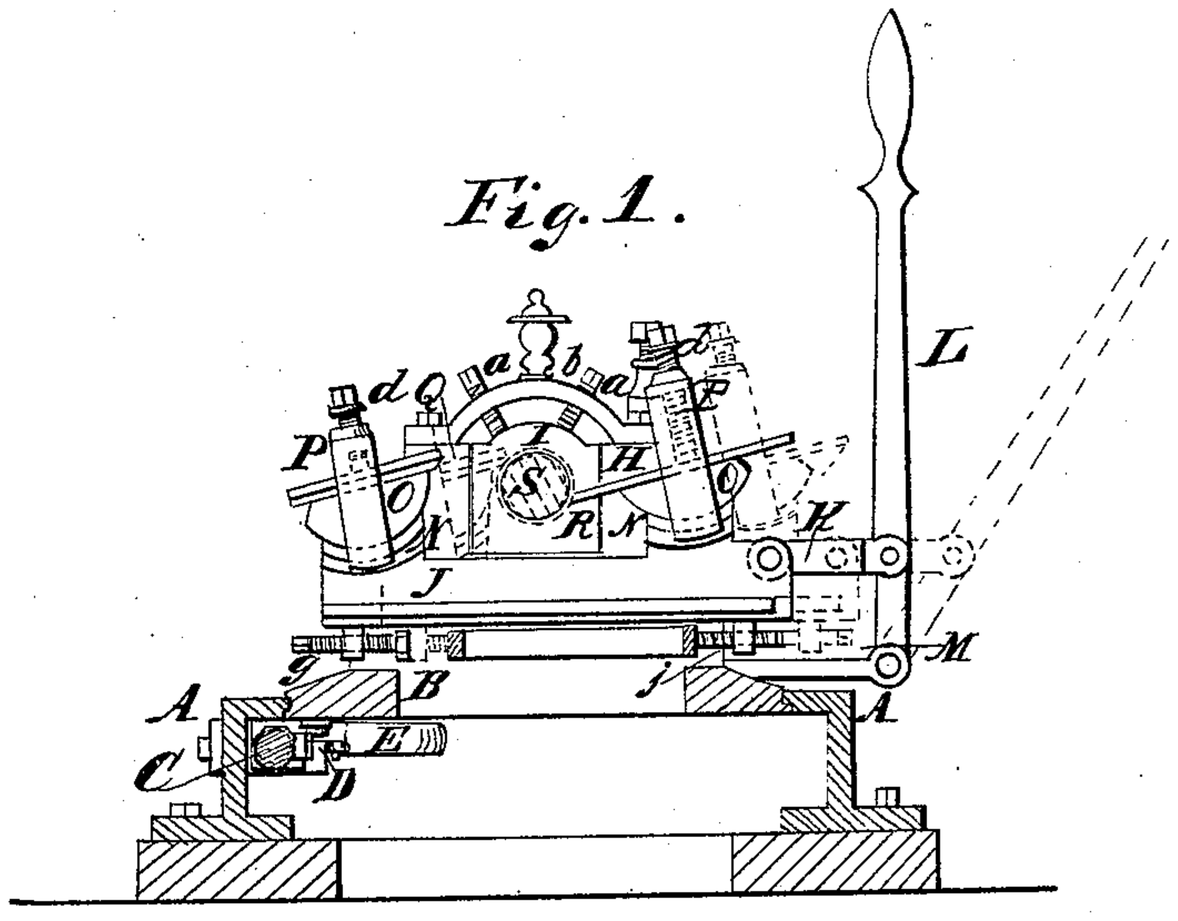
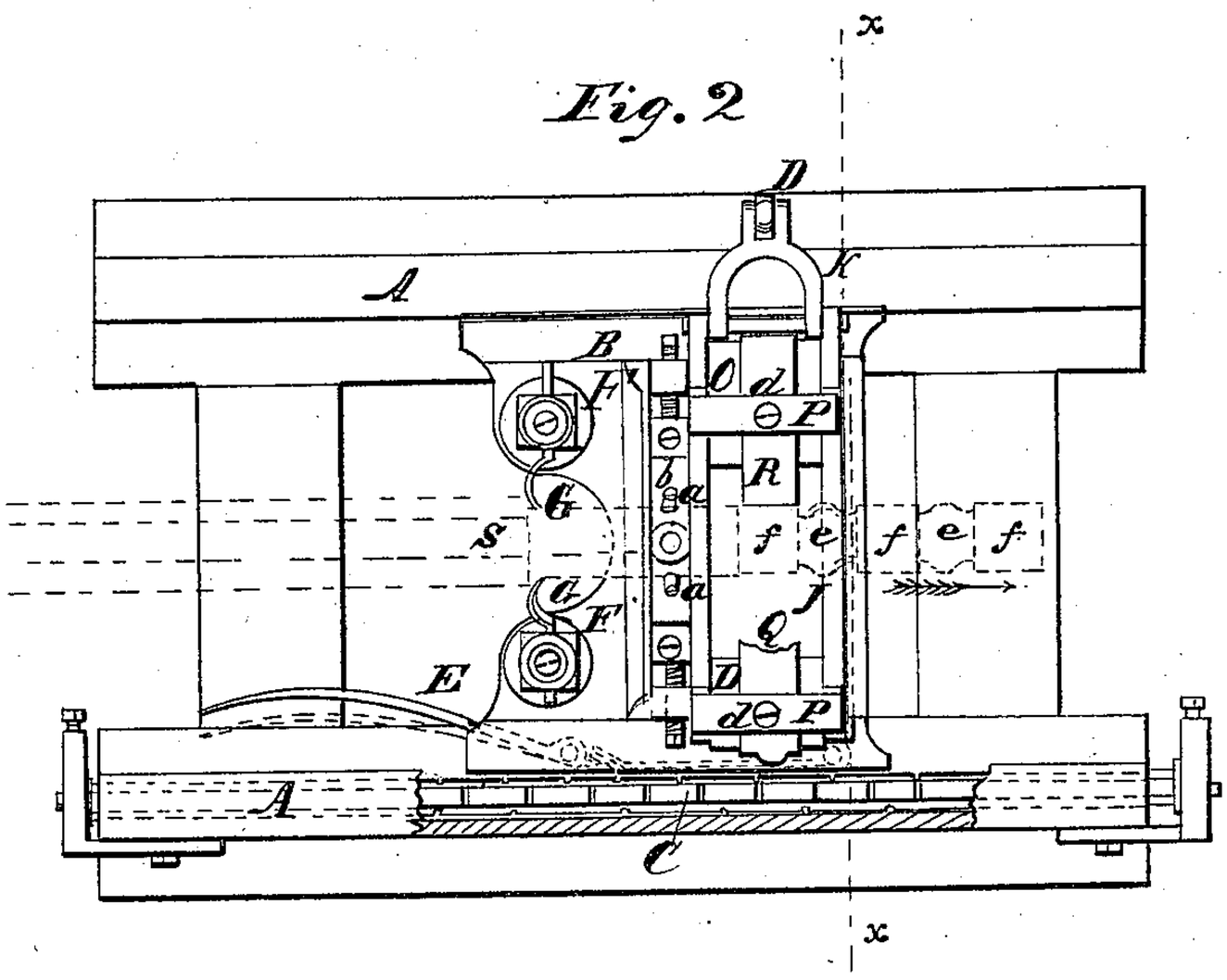


Fig. 2



UNITED STATES PATENT OFFICE.

P. C. CAMBRIDGE, JR., OF NORTH ENFIELD, NEW HAMPSHIRE.

METHOD OF TURNING ORNAMENTAL FORMS.

Specification of Letters Patent No. 15,327, dated July 15, 1856.

To all whom it may concern:

Be it known that I, P. C. CAMBRIDGE, Jr., of North Enfield, in the county of Grafton and State of New Hampshire, have invented a new and Improved Machine for Turning Beaded Work; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a transverse vertical section of my improvement, (*x*) (*x*) Fig. 2, showing the plane of section. Fig. 2, is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved machine for turning beaded work for chair stuff, furniture legs, etc.

The invention consists in the employment or use of a sliding carriage with tool holders, attached in a peculiar way, polygonal gage rack, collar, and stationary cutters, the above parts being arranged and combined, as will be hereinafter fully shown and described.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, A, represent two ways or guides, on which a carriage B, is fitted and works. To one of the ways or guides A, at its inner side, there is attached a polygonal bar C, having notches cut on its sides at varying distances apart, and a pawl D, attached to the under side of the carriage B, fits or catches in the notches of the bar C. The bar C, is hung or placed between center points, so that it may be turned, and the proper or desired side or face be presented to the pawl D. The pawl D, is a spring pawl and it is thrown out of gear with the notches when necessary, by a lever E, attached to the under side of the carriage B. On the carriage B, at one end there are placed two uprights F, F, to which "roughing off" cutters G, are attached, one to each, and an upright plate H, is also attached to the carriage B, said plate having a collar I, fitted in it, and secured therein by set screws (*a*) which pass through a box (*b*) in the upper part of the plate H.

J, represents a sliding carriage, which is fitted and works between transverse ways or guides on the carriage B. One end of the sliding carriage B, has an arm K, attached to it, and a lever L, is connected to the arm K, the lower end of the lever being attached by a joint to a projecting arm M, at the side of the carriage B. At each end of the sliding carriage J, there is attached a concave bed N, in or on which, beds O, are fitted, the bottoms of the beds O, being of convex form, corresponding inversely with the beds N.

P, P, are clamps which extend over the beds O, the lower ends of the clamps catching under the edges of the beds N, set screws (*d*) (*d*) pass through the clamps P, and bind the tools Q, R, firmly upon the beds O. One of the tools Q, is a beading tool, the other is a smooth chisel, as shown clearly in Fig. 2.

The stuff S, shown in red, is centered between the heads of an ordinary turning lathe, and the guides or ways A, A, may serve as the bed of the lathe. As the stuff S, is rotated, the carriage B, is moved in the direction indicated by the arrow in Fig. 2. The cutters G, rough off the work, and the sliding carriage B, is moved back and forth by hand, the tools Q, R, acting alternately upon the stuff, and cutting alternately beads (*e*) and smooth cylindrical portions (*f*), see Fig. 2, as the tools Q, R, cut, the carriage B, is kept stationary in consequence of the pawl D, catching into the notched sides of the bar C, the notches of course being placed at the requisite distance apart to suit the character of the work, and each side of the bar has notches cut in it, at varying distances apart, so that the proper side may be presented to the pawl D. The pawl D, is thrown out of the notches by operating the lever E, as before stated. Any proper feed motion may be given the carriage B, and set screws (*g*) are placed underneath the carriage J, by which its throw or length of stroke is regulated. The collar I, supports the stuff S, or holds it firm, preventing all tremor while the stuff is being operated upon. The edges of the tools Q, R, may be raised or lowered, so as to be placed in a proper relative position with the stuff S, by adjusting the beds O.

The above machine is extremely simple, works rapidly and well, may be cheaply constructed, and is not liable to get out of repair.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent, is—

1. The sliding carriage J, with tools Q, R, attached to it as shown, the carriage J, being fitted transversely on a carriage B, substantially as shown, for the purpose specified.

2. I further claim the carriage J, in combination with the collar I, and cutters G, G, when the above parts are placed on the carriage B, and operating as described.

3. I also claim the polygonal notched bar or gage rack C, arranged as shown, by which the movement of the carriage B, is regulated according to the character or nature of the work to be done, and the stuff beaded in the desired manner.

P. C. CAMBRIDGE, Jr.

Witnesses:

Wm. Tusch,

James F. Buckley.