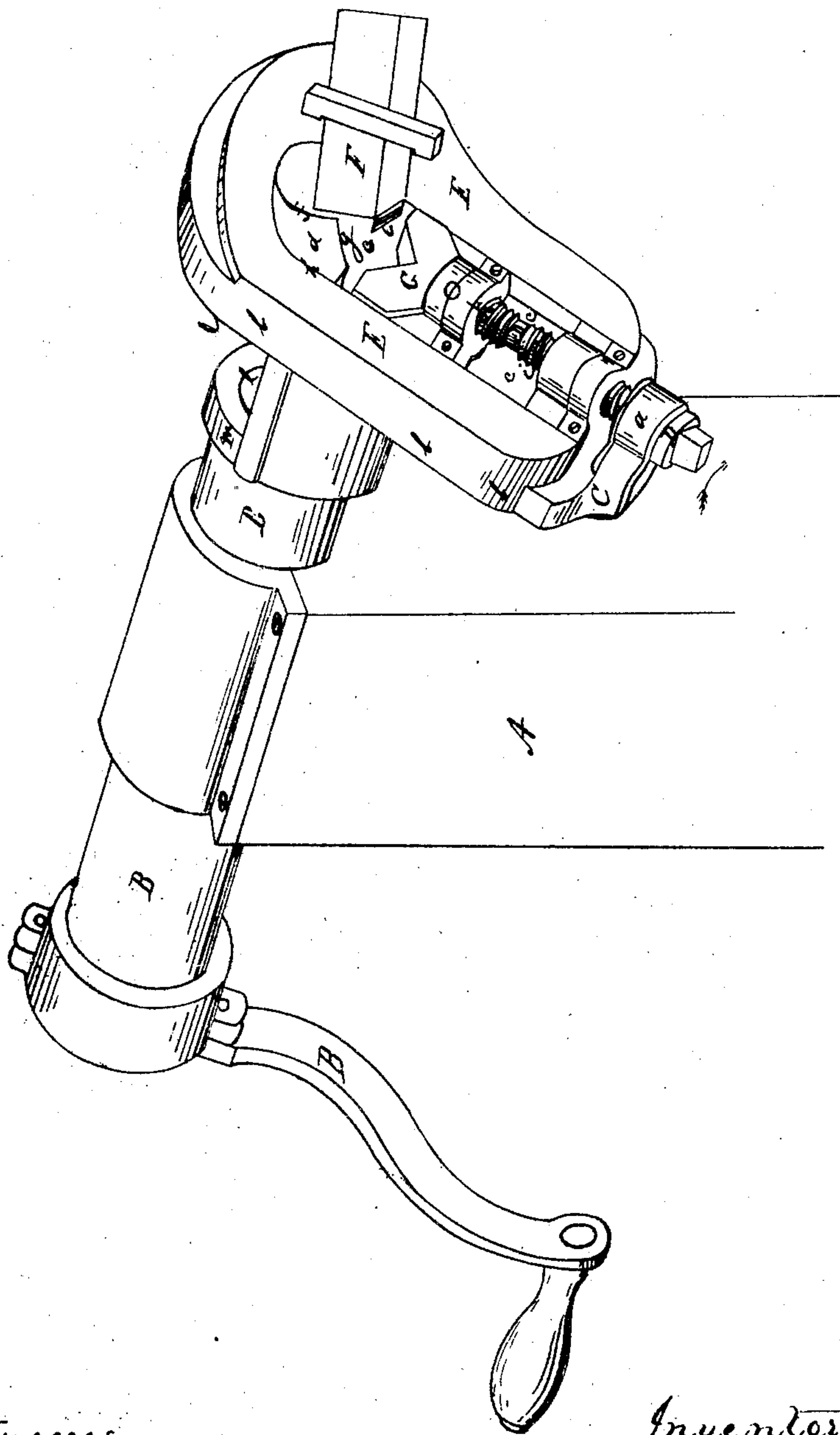


F. Kraus.

Hollow-Auger.

N^o 76205

Patented Mar. 31, 1868.



Witnesses

Jacob Henry
Louis Brodsky

Inventor

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United States Patent Office.

FREDRICK KRAUS, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 76,205, dated March 31, 1868.

IMPROVEMENT IN HOLLOW AUGERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FREDRICK KRAUS, of city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improved Device for Cutting Tenons; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawings, making part of this specification, in which the figure is a perspective view of the device illustrating my invention, which consists in means for operating the gauge-rest and bit or cutter so that they will advance or recede simultaneously, which operation is accomplished by a screw having right-and-left threads, as will be hereinafter more fully described.

In the drawings, A represents a standard arising from the work-bench or table, and forming bearings or journals for a longitudinal centre, B, rotating therein, and consisting of a hollow cylinder throughout, and provided at one end with an ordinary handle, B'. The other end is continued angularly into a block, C, whose free end receives a screw, D, which is swivelled therein. The block consists of a flat piece of suitable material projecting from the outer face of the centre, and its end is formed into an ear, *a*, for the reception of said screw D. E represents the bit-stock, consisting of an open frame, having flanges *b*, and fitting over the block C, so as to readily slide to and from the eye *a* of the block. The bit or cutter F is properly secured in place by set-screws or otherwise, and the stock is suitably enlarged at its free end to receive the cutter. The bit projects into the opening *c* of the frame, but its cutting-edge *e* is so formed as to be at or nearly right angles with the side of the opening. A rest or block, *d*, is formed in or secured to the side of the opening of the frame, at a point nearly opposite to the cutting-edge of the bit. The rest *d* is triangular, and has two sides, *f g*, free, while the third side, *h*, is secured to the frame; consequently the block projects toward the bit. In the opening *c*, I place a gauge-rest, G, which is the size of said opening, and slides freely therein to and from the cutter F. The end toward the cutter is cut out in V-shape, having the point downward. It will be noticed that if the rest is run up to the cutter and block *d*, the opening is somewhat four-sided, and into this opening the spoke is to be introduced to have a tenon formed thereon, and it will be supported upon the block *d* and the gauge-rest G while being cut.

In order to adjust the distance between the rest G and cutter, I employ the screw D, which is swivelled in the eye *a* of the block C. A portion, *i*, of this screw has its threads cut to the left, and it rotates in the end of the stock E opposite to the cutter, which is formed with threads, whereby said stock is moved to and from the eye *a*. The screw then continues a certain distance into the opening *c*, where its threads *k* are cut to the right, and enters the gauge-rest G. It is evident that if the screw D is turned to the right, the stock E will be drawn toward the screw-head, while the gauge-rest G is moved away from it; therefore the rest and bit will be brought together simultaneously and as near as may be desired; but if the screw is turned to the left, then the bit-stock is moved away from the screw-head, while the gauge-rest is drawn toward it, so that the distance between them is increased to the extent required. A portion, *l*, of the centre, B, behind the bit-stock, is cut away, so as to allow the shavings or cuttings to drop off, and the cut-out portion terminates in a shoulder, *m*, which limits the play of the centre. During the movement of the two parts, the central opening is always free, and does not become cramped during the rotation of the device. I adjust my device in half of the time ordinarily necessary, and in a simple and practical manner.

I am aware that the parts of a hollow auger or tenon-cutting machine have been made adjustable by means of a right-and-left screw; therefore I disclaim this device in itself. By having the gauge-rest G and the bit-stock E adjustable in a plane coincident with the axis of the screw D, the parts are prevented from binding under adjustment, and a free, unobstructed motion is obtained.

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

The rest G and bit-stock E, when said rest and stock are operated by a right-and-left screw, D, in the manner herein described.

To the above, I have signed my name, this thirteenth day of January, 1868.

FREDRICK KRAUS.

Witnesses:

WM. A. WIEDERSHEIM,
JOHN A. WIEDERSHEIM.