

(No Model.)

2 Sheets—Sheet 1.

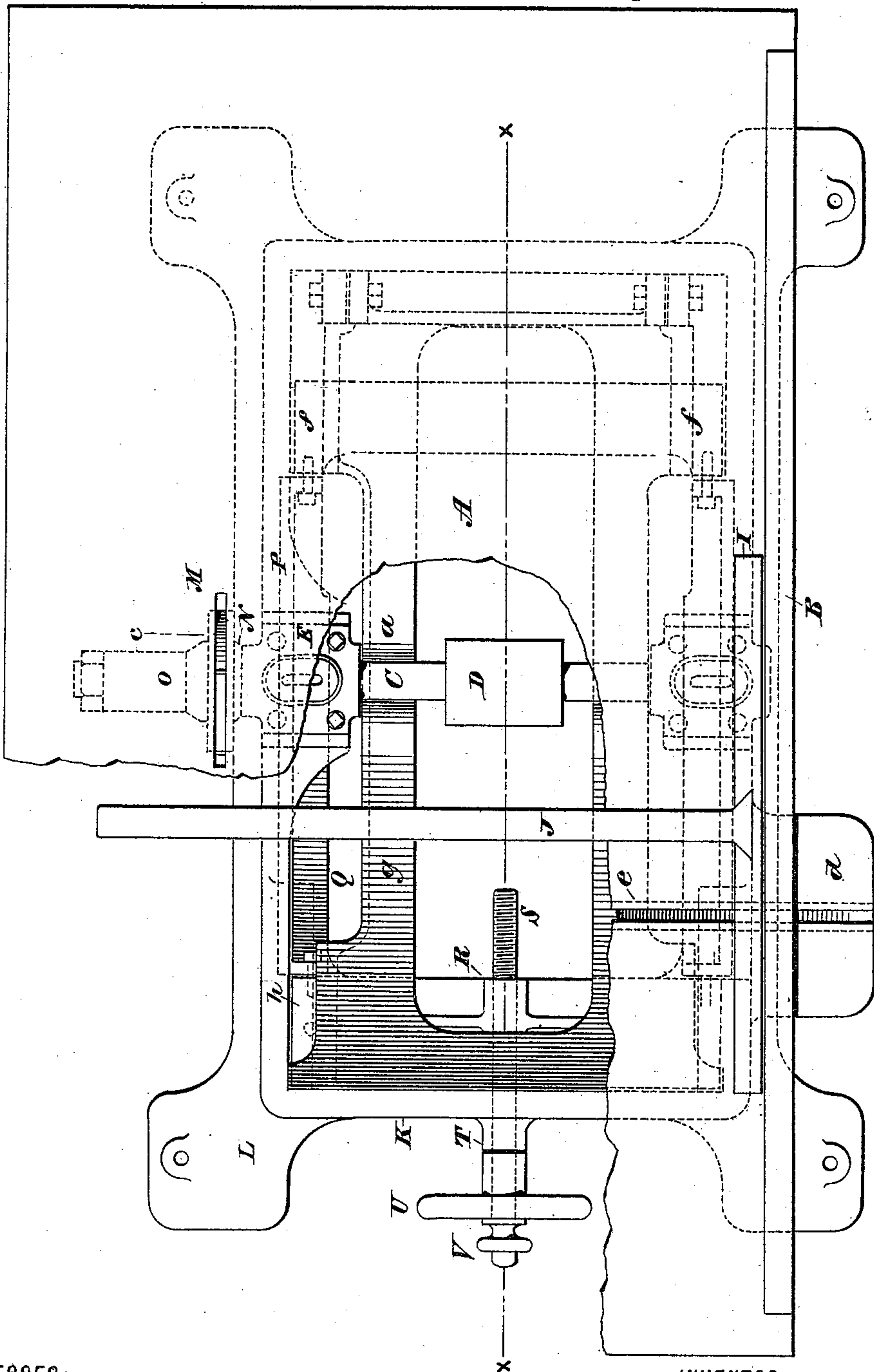
A. B. CAMERON.

WOOD CHANNELING AND GROOVING MACHINE.

No. 450,396.

Patented Apr. 14, 1891.

Fig. 1.



WITNESSES:

Gustav Dietrich
William Goebel

INVENTOR

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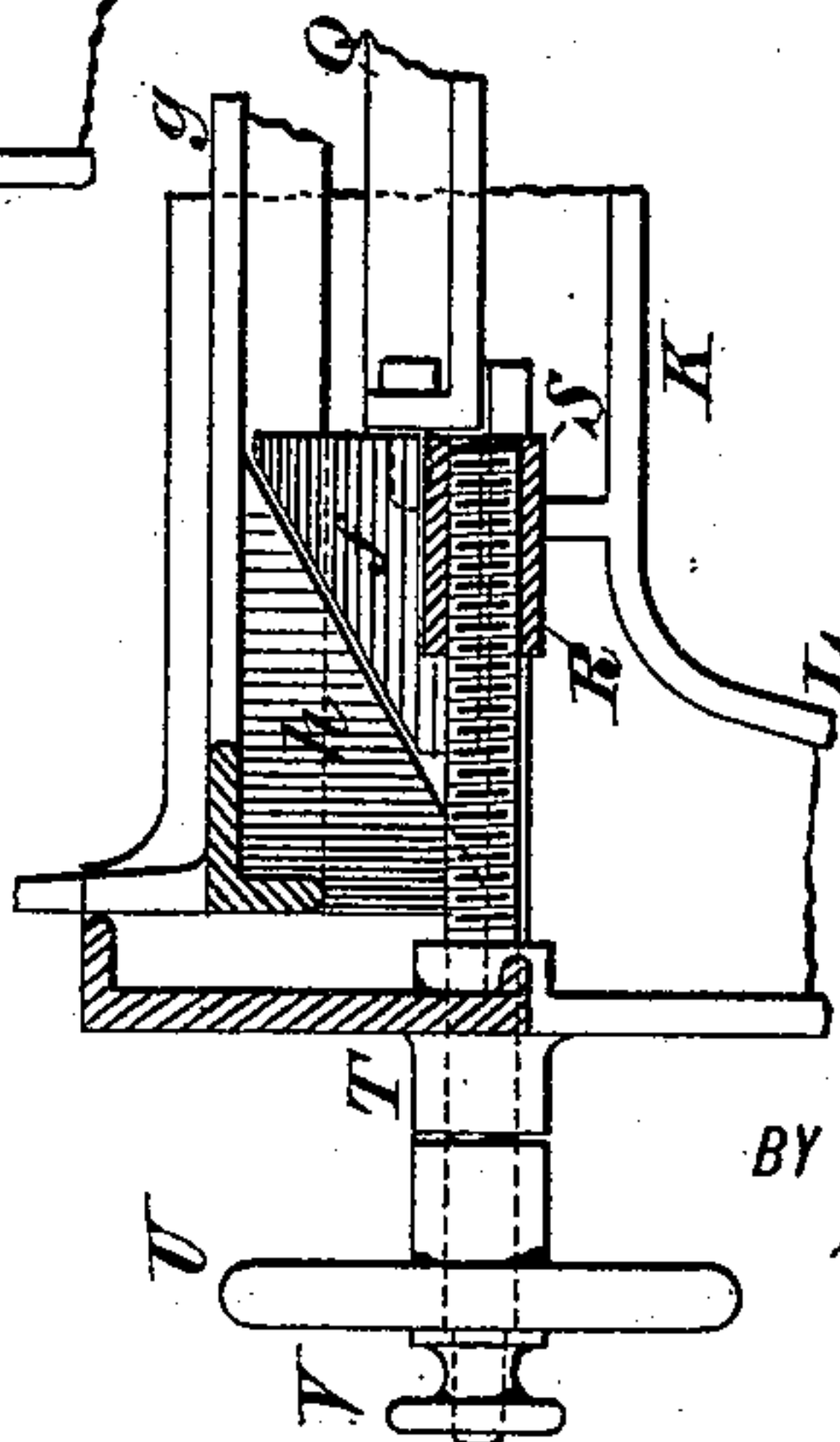
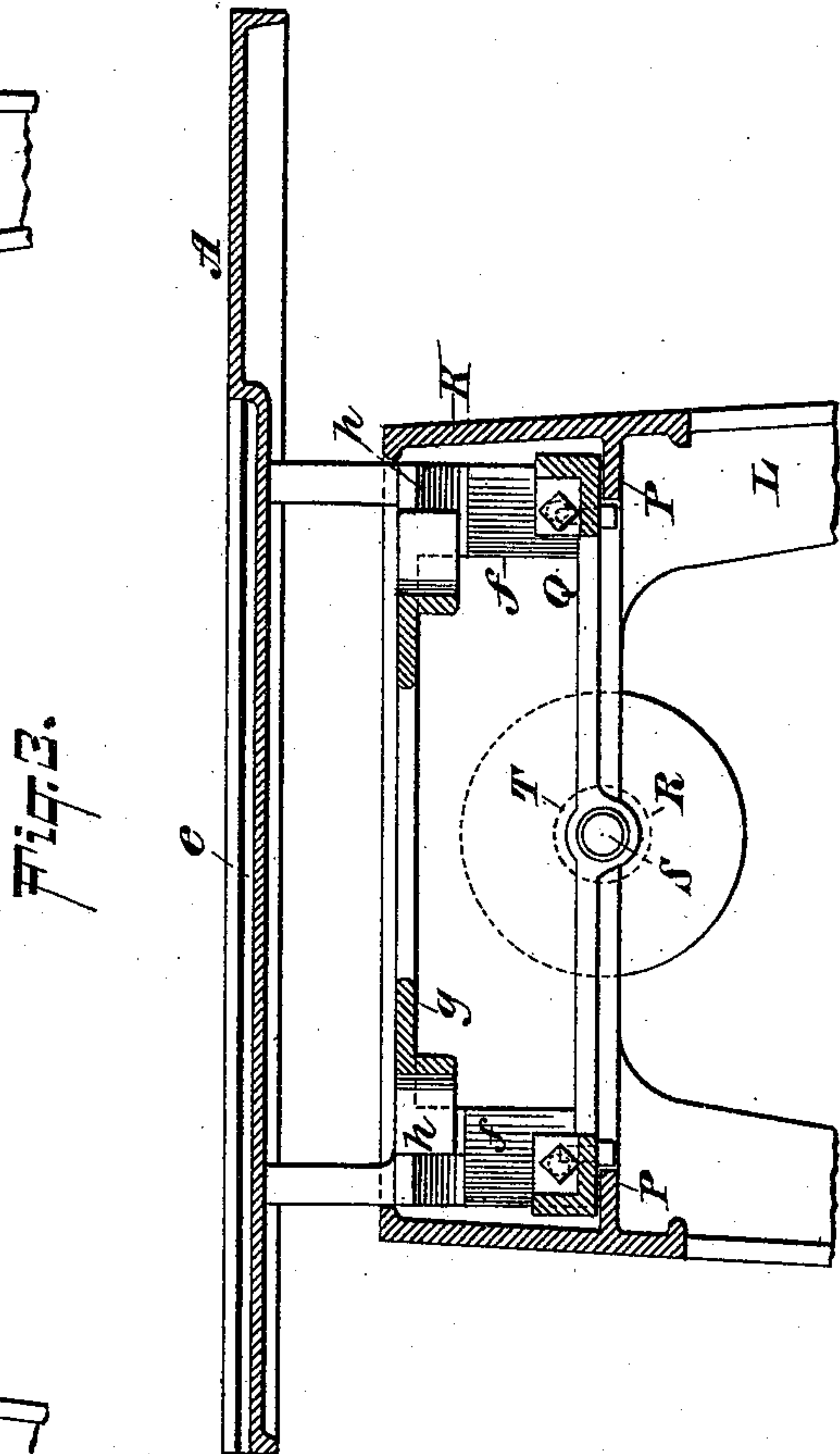
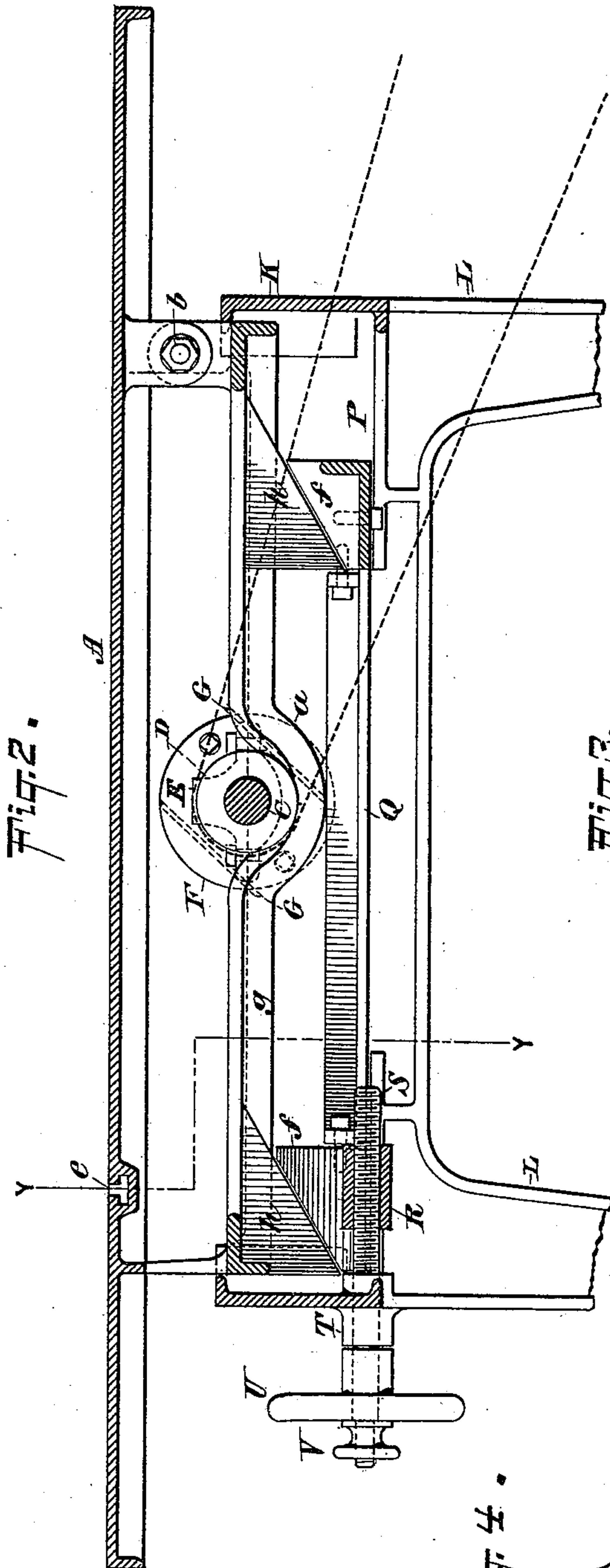
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2 Sheets—Sheet 2.

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WITNESSES:

Gustave Dietrich
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UNITED STATES PATENT OFFICE.

ALLAN B. CAMERON, OF WILLIAMSPORT, PENNSYLVANIA.

WOOD CHANNELING AND GROOVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 450,396, dated April 14, 1891.

Application filed June 30, 1890. Serial No. 357,214. (No model.)

To all whom it may concern:

Be it known that I, ALLAN B. CAMERON, of Williamsport, Lycoming county, Pennsylvania, have invented a new and useful Improvement in Wood Channeling and Grooving Machines, of which the following is a specification.

In United States Letters Patent No. 422,912, granted to me March 11, 1890, I have described and shown a machine for making grooves or channels transversely the surface of panels, &c., for the purpose of producing ornamental patterns in intaglio or relief thereon. The machine there shown embodies a table and a rotary cutter arranged below said table and operating through a suitable opening upon the work, which rests on the table and is moved by hand over the rotary cutter. In said patent I show the table provided with a fixed ledge or vertical guide-bar arranged parallel to the plane of rotation of the cutter; and I also show and describe a loose guide-bar, which is placed against the fixed ledge and from which projects a horizontal arm which extends over the table. The work is fastened to a horizontal guide-plate, which is connected to the horizontal arm so as to be adjustable in the manner described; and the attendant grasping said arm and causing the guide-bar to bear against the fixed guide-ledge moves the bar, arm, work-plate, and work simultaneously over the table. My aforesaid Letters Patent relate more particularly to the guide-plate and the means whereby it is set and held in various positions, so that the cutter may produce channels or grooves at various angles on the surface of the work.

My present invention relates to the machine itself, and consists especially in the means for vertically adjusting the work-table, and in the construction as hereinafter set forth.

In the accompanying drawings, Figure 1 is a plan view of the machine, showing a portion of the table broken away. Fig. 2 is a sectional view on the line X X of Fig. 1. Fig. 3 is a sectional view on the line Y Y of Fig. 2. Fig. 4 is a sectional view, also on the line X X of Fig. 1, showing the table in lowered position.

Similar letters of reference indicate like parts.

K is the bed or main frame of the machine,

supported on legs or standards L. Journaled in fixed bearings E on the upper edge of the bed or frame K is the transverse shaft C. On said shaft and within the main frame is secured the belt-pulley D. The shaft C carries either a dado-head F, provided with tangentially-disposed cutters G, (dotted lines, Fig. 2,) or a saw, as shown at M, Fig. 1, or a series of saws or any other rotary cutting-tool. The saw or cutter is placed against a fixed collar N, Fig. 1, and is secured on the shaft by a sleeve and nut at O (dotted lines) in the usual way.

Resting on the fixed ways P in the main frame K is a rectangular longitudinally-movable frame Q. At one end of said frame is a fixed nut R, which receives the screw S. The screw S is journaled in a fixed nut T in the main frame K, so that its longitudinal movement is prevented. Hence by turning said screw by means of the hand-wheel U the frame Q may be reciprocated on the ways P. The screw-rod is splined, so that the wheel U may be moved by the jam-nut V against the bearing or sleeve T, and the screw after adjustment is thus prevented from further rotation.

At each end of the frame Q are projections f, having similarly-inclined upper surfaces.

g is a loose rectangular frame having downward projections h, which are sloped or inclined to rest upon the inclined projections f. The longitudinal members of the frame g are curved downwardly, as shown at a, to pass beneath the shaft C.

A is the work-table of the machine, pivoted at b to an upright on the frame g. In said table is an opening c, Fig. 1, through which the cutting tool passes. At one side of said table is a projecting portion d, and extending transversely across the table is a dovetail groove e.

B, Fig. 1, is a loose guide ledge or bar resting upon the table and provided with any suitable projection entering the groove e, so that said bar may be moved laterally upon the table in the direction of groove e and clamped in position.

I is a loose movable bar, which is placed against the bar B and is provided with an arm J, which extends over the table.

To the end of the arm J a guide device or

work-plate, and also the work, may be connected, substantially as set forth, for example, in my prior patent, No. 422,912.

By providing the table with the extension
5 *d* I am enabled to increase the adjustment of the guide-ledge B.

The frame *g*, which carries the table A, is received in an opening in the bed or main frame K and is loose therein. Consequently
10 when the screw S is rotated in one direction the inclined projections *f* move as wedges under the inclined projections *h* on said frame *g*, and hence said frame *g* is raised, as shown in Fig. 2. When the screw S is turned in the
15 other direction, the projections *f* recede, and the frame *g* descends, as shown in Fig. 4.

The object of raising and lowering the frame *g*, and hence the table A, is to regulate the depth of the cut of the rotary cutting tool.
20 Of course, as shown in Fig. 2, the table is elevated considerably above the reach of the cutting-tool in the dado-head there represented. The object of giving the table so much range of movement is to allow of the
25 use of circular saws or other tools of large diameters, these replacing at will the dado-head represented in Fig. 2.

The table is hinged or pivoted at *b*, so that it may be lifted and thrown back to allow of access to the mechanism which it covers. 30

I claim—

The combination of the bed or frame K, the frame or support Q, moving on said bed and provided with inclined projections *f*, the table A, the frame *g*, having downwardly-inclined
35 projections *h* resting on said inclined projections *f*, the said table being hinged to the frame *g* at *b*, a shaft C, journaled in fixed depressed bearings upon the said frame *g* and provided
40 with a cutter-tool whose cutting faces rotate through an opening in said table, a nut R, carried by the frame Q, a nut T, secured to the main frame, a screw-shaft S, journaled in the
45 nut T against longitudinal movement and entering the nut R, a hand-wheel U, splined to a smooth portion of said screw-shaft, and a
jam-nut V on the extreme end of said screw-shaft, whereby after the screw has been rotated to raise or lower the table it may be
50 held against further rotation by the jam-nut.

ALLAN B. CAMERON.

Witnesses:

ADDISON CANDOR,
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