(No Model.)

B. G. LUTHER.

BEVEL SAW TABLE GAGE.

No. 255,302. Patented Mar. 21, 1882.

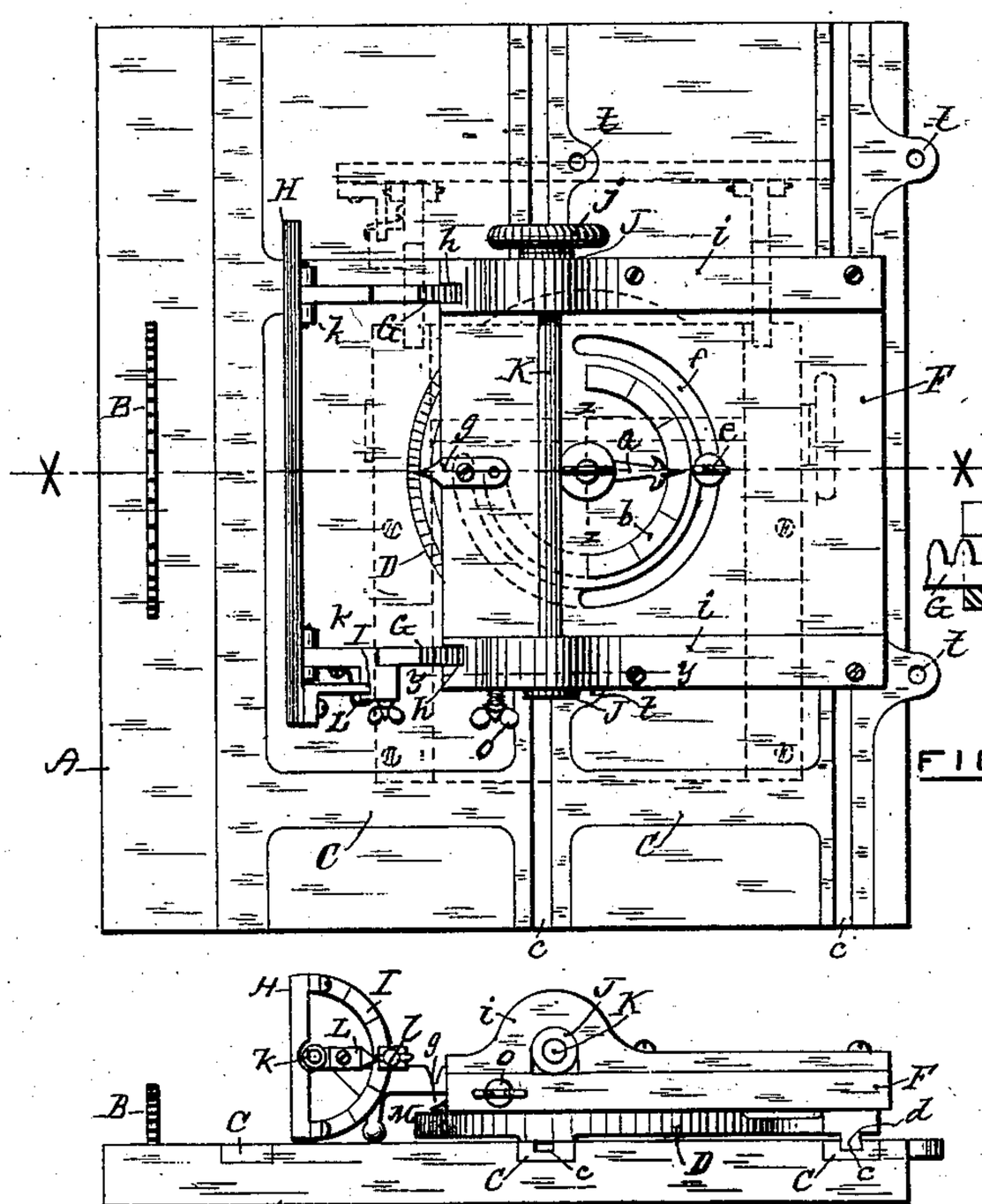

FIG. 1

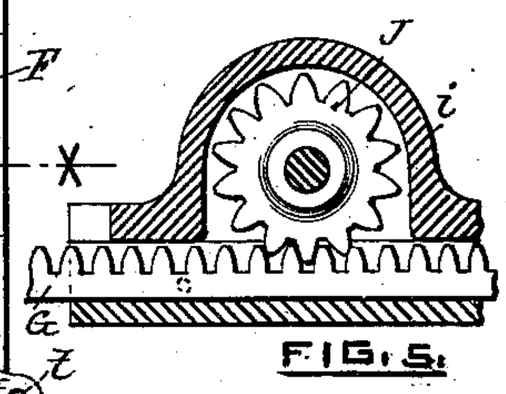

FIG. 5.

FIG. 2.

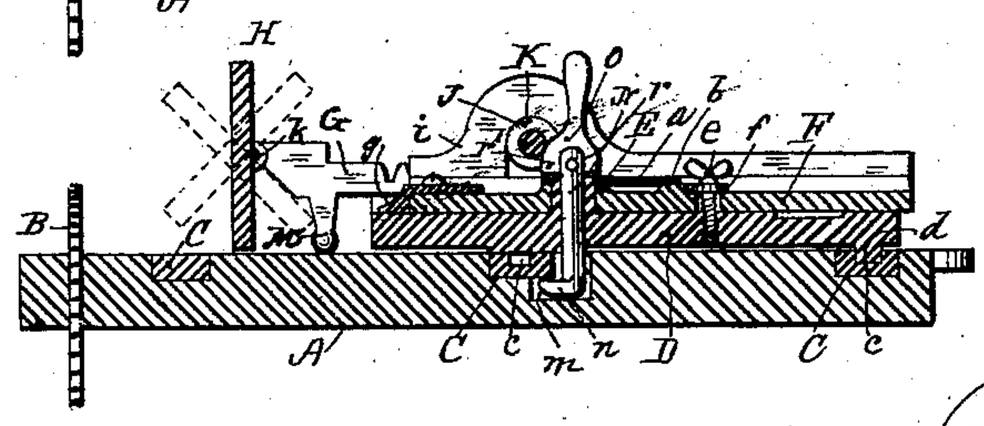

FIG. 3.

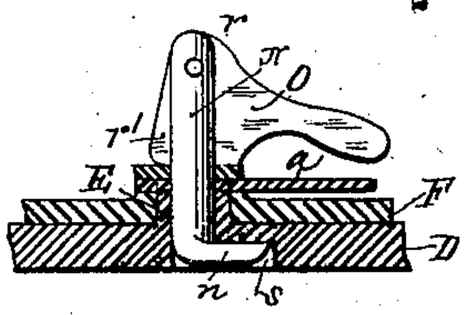

FIG. 6.

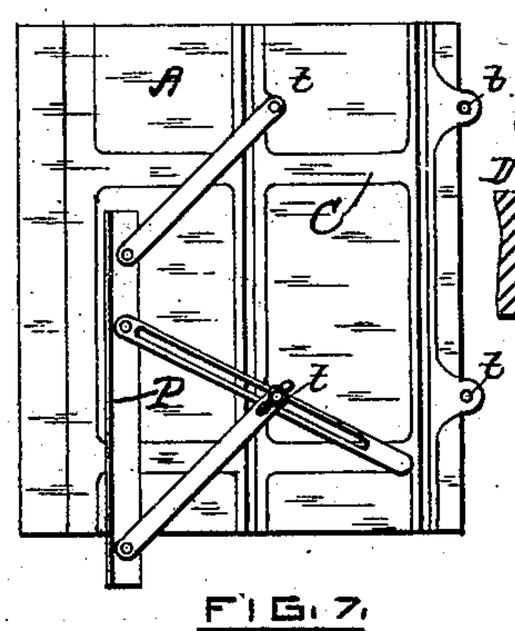

FIG. 7.

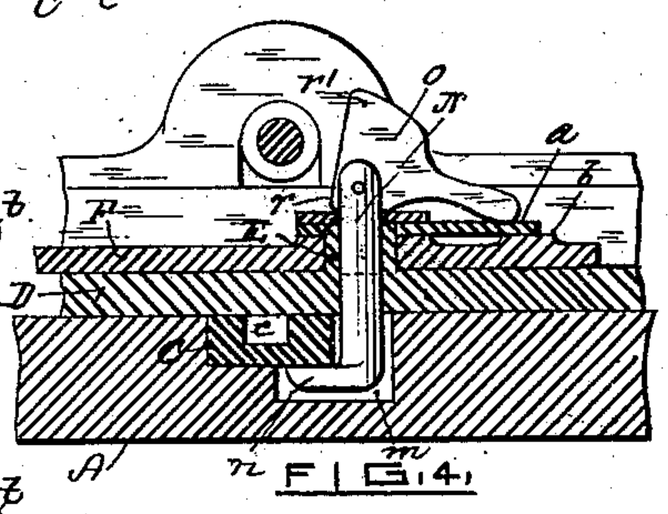

FIG. 4.

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BEVEL SAW-TABLE GAGE.

SPECIFICATION forming part of Letters Patent No. 255,302, dated March 21, 1882.

Application filed November 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN G. LUTHER, of Hebronville, in the county of Bristol and State of Massachusetts, have invented an Improvement in Bevel Saw-Table Gages, of which the following is a specification.

My invention relates to that class of bevel-gages which are used with circular saws; and it consists in a novel combination and arrangement of parts, as hereinafter fully set forth and claimed, whereby the gage may be rendered useful for a great variety of work.

Figure 1 is a plan view of my improved gage attached to the table of a circular saw. Fig. 2 is an elevation of the same. Fig. 3 is a section taken in the line *x x* of Fig. 1. Fig. 4 is a section taken in the line *x x* of Fig. 1, enlarged, showing the pivot-clamp. Fig. 5 represents a section taken in the line *y y* of Fig. 1. Fig. 6 represents a section taken in the line *z z* of Fig. 1, with the clamp-pin turned in the same line. Fig. 7 represents a plan view of an ordinary parallel gage, combined with the grooved bed-plate of the bevel-gage.

In the drawings, A represents the saw-table; B, the circular saw; C, a metallic bed-piece let into the table A, and provided with the parallel grooves *c c*.

Upon the bed-piece C is placed the sliding piece D, provided with a slide, *d*, which enters one of the grooves *c*, by means of which the sides of the plate D are retained in uniform relation to the plane of the saw B. The plate D is provided with a hub, E, upon which is pivoted the plate F, provided with a semicircular slot, *f*, to receive the thumb-screw *e*, which serves to fasten the plate F rigidly to the plate D in any required position with relation to the saw B.

Upon the upper end of the hub E is rigidly secured the pointer *a*, and the arc *b* upon the pivoted plate F is graduated to indicate a specific movement of the plate F upon the plate D. A pointer, *g*, is also fixed to the plate F, and the forward edge of the plate D is graduated to degrees, to indicate the exact movement of the plate F upon the plate D. The racks G G slide in grooves *h h* at opposite sides of the plate F, being secured therein by the caps *i i*. The racks are operated back and forth by means of gears J J, attached to a shaft, K, likewise held by the caps *i i*, and operated by means of the knurled wheel *j*. To the outer ends of the parallel racks G G is attached the guide-plate H, centrally pivoted to the ends of the racks at the points *k k*.

To one end of the plate H is secured the graduated arc I, which may be clamped in any desired position by means of the clamping-screw *l*, which enters a boss upon the side of the adjoining rack G. A pointer, L, is secured to the side of the rack, and serves to indicate upon the graduated arc I the exact angular movement of the guide-plate H. A supporting-foot, M, depends from the lower side of each of the racks G G. The guide-plate H is capable of movement in a vertical plane, as shown by the dotted lines in Fig. 3, and the combined plates F and H are capable of movement in a horizontal direction upon the pivot E, as shown by the dotted lines in Fig. 1. The face of the guide-plate H may be thus inclined vertically and horizontally with the plane of the revolving saw B, and is therefore adapted to a great variety of work. The clamp-pin N, provided upon one side of its lower end with the hook *n* and at the upper end with the pivoted cam O, serves to clamp the plate D to the bed-piece C, a groove, *m*, being cut in the wooden table A to receive the hook *n*. The cam O is made with unequal sides *r r'*, in order to serve as a clamp, first, to the bed-piece C, as shown in Fig. 4, whereby the combination-gage will be retained in a fixed position with relation to the table; and, second, to the plate D, whereby the combination-gage will be made movable over the saw-table in the direction of the grooves *c*, a recess, *s*, being made in the under side of the plate D to receive the hook *n*, as shown in Fig. 6, so that the lower side of the hook may be raised entirely above the surface of the table.

The bed-piece C is provided with screw-holes *t t*, which serve as means for the attachment of the ordinary parallel gage, P, as shown in Fig. 7, when the combination bevel-gage,

as above described, has been removed from the saw-table.

When the several parts of the bevel-gage are clamped to the table by means of the clamp N O the guide-plate H may be adjusted with respect to its distance from the side of the saw B by turning the wheel *j*, thus moving the racks G G in and out, as desired, and when the proper position has been reached the plate H may be retained in its position by turning the clamping-screw *o*, thus securing the rack G.

The guide-plate H may be set at any desired vertical angle within the limit of its movement by means of the arc I and clamping-screw *l*, and may likewise be adjusted at any desired horizontal angle by means of the slot *f* and thumb-screw *e*. The gage may also be changed from one of the grooves *c* to the other, according as the space required between the guide-plate and saw may be greater or less.

I am aware that in Patent No. 172,279, dated January 18, 1876, a saw-gage is shown similar to that herein described; but in my combination a double rack-and-pinion movement is substituted for the screw for moving the guide-plate, thus controlling the position of the ends of the guide-plate in a more positive manner, avoiding backlash or looseness, and admitting of more rapid adjustment.

I claim as my invention—

1. In a bevel-gage for circular saws, the combination of the bed-piece C, provided with a groove, *c*, sliding plate D, pivoted plate F, gears J J, secured to the shaft K, racks G G, and pivoted guide-plate H, substantially as and for the purpose set forth.

2. In a bevel-gage for circular saws, the combination of the grooved bed-plate C, sliding plate D, and pivoted plate F, with the clamp-pin N, provided with the hook *n*, and cam O, having unequal sides *r r'*, whereby the sliding plate D and pivoted plate F may be either immovably secured to the bed-plate C or secured to each other in sliding connection with the bed-plate C, substantially as described.

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