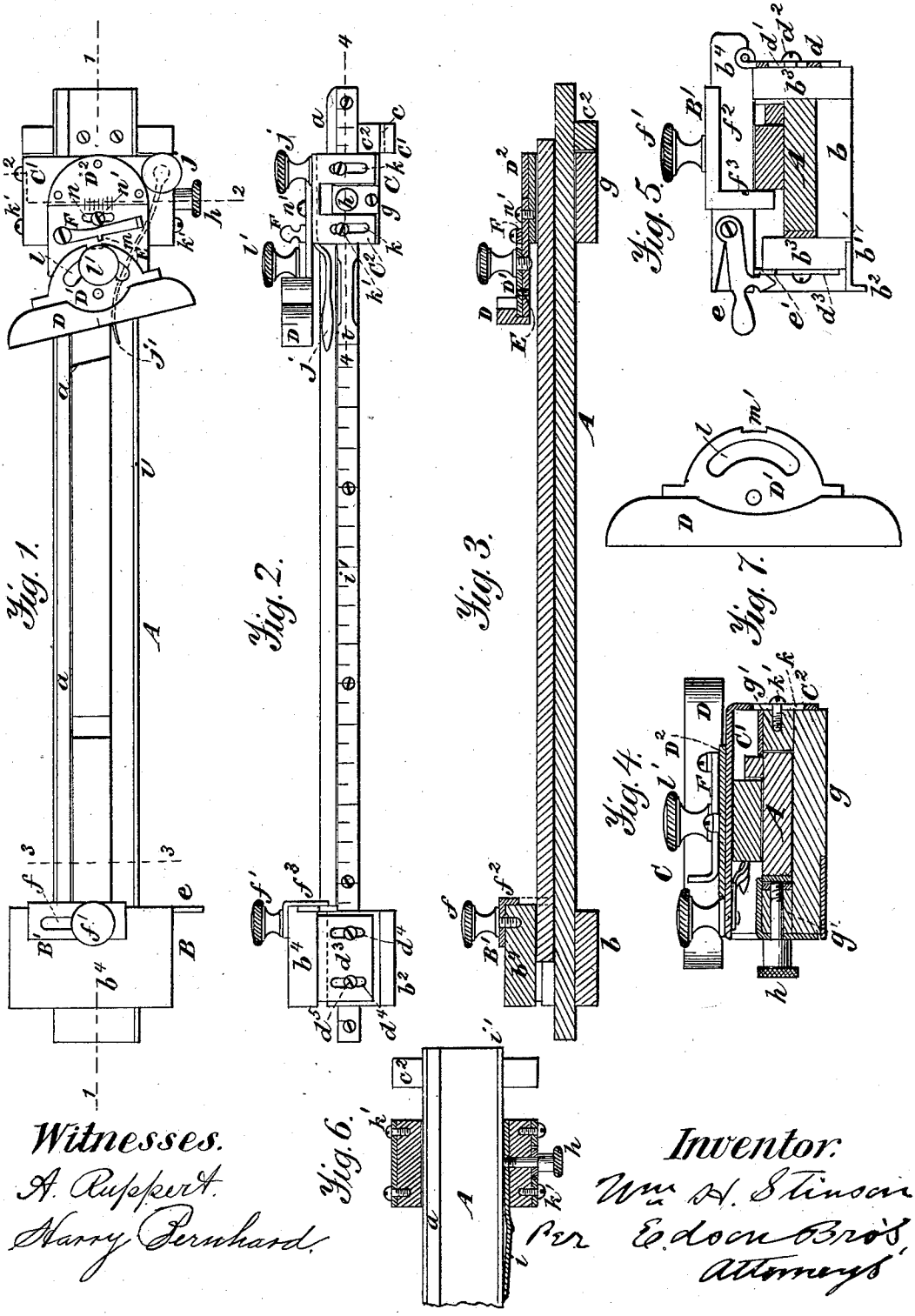
(No Model.)

W. H. STINSON.

ADJUSTABLE GAGE FOR PLANING.

No. 256,864. Patented Apr. 25, 1882.



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UNITED STATES PATENT OFFICE.

WILLIAM H. STINSON, OF SCANDIA, KANSAS.

ADJUSTABLE GAGE FOR PLANING.

SPECIFICATION forming part of Letters Patent No. 256,864, dated April 25, 1882.

Application filed January 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. STINSON, a citizen of the United States, residing at Scandia, in the county of Republic and State of Kansas, have invented certain new and useful Improvements in Adjustable Dado-Guides, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a plan view of my improved gage for planes in cutting oblique or straight mortises or bevels. Fig. 2 is a front view thereof. Fig. 3 is a sectional view taken on line 1 1 of Fig. 1. Fig. 4 is a sectional view taken on line 2 2 of Fig. 1. Fig. 5 is a sectional view taken on line 3 3 of Fig. 1. Fig. 6 is a sectional view taken on line 4 4 of Fig. 2, and Fig. 7 is a detailed view of the gage D D′.

The object of my invention is to enable, while permitting the adjustment of the device to accommodate the length or thickness of the material operated on, the setting at the desired angle and guiding of the plane in forming the groove in the material; and to this end it consists in the combination and arrangement of mechanism, substantially as hereinafter more fully set forth.

In carrying out my invention I employ a base piece or board, A, having a stop, *a*, extending along its rear edge, for the material to rest against to hold it straight.

B is a guide fixed to the base-piece A at one end, and consisting preferably of a bottom piece, *b*, arranged under the base-piece, and having affixed to it, at one end, a plate, *b′*, bent or formed with a downward-projecting portion, b^2, of two side pieces, b^3, and of a hinged top piece, b^4. The downward-projecting portion b^2 of the plate *b′*, in connection with the plate *c*, having a similar projection, *c′*, and secured to a cross-piece, c^2, attached to the other end of the base-piece A, upon its under side, both projections being arranged at the front side of the base-piece, serves to hold the base piece upon the bench or support as against rearward or lateral movement. The top piece, b^4, is hinged to a plate, *d*, capable of vertical adjustment by slots *d′* and screws d^2, passing through said slots and entering one side of the guide B. At the other side of the guide B is arranged a similar plate, d^3, also capable of vertical adjustment by means of slots d^4 and screws d^5, passing through the slots and entering the side of the guide. This arrangement permits the accommodation of the guide to material of different thicknesses. The lifting end of the top piece, b^4, has a latch or lever, *e*, adapted to engage with a catch or hook, *e′*, formed on the plate d^3, by gravity as the top closes.

B′ is a clamp, capable of adjustment upon the guide B, it having a slot, *f*, and a set-screw, *f′*, and provided with a flange, f^2, fitting on an edge of the guide B, to guide it in its adjustment, and a downward-projecting arm, f^3, which effects the holding of the material—a door-jamb, window-jamb, or other piece of work—against the stop *a* at the rear edge.

C is the sliding gage placed on the other end of the base-piece A, and having its bottom piece, *g*, recessed to receive the base-piece, and provided with plates or flanges *g′* upon its upper surface, one arranged on each side of the base-piece, and having their flanges resting upon the base-piece to permit the gage to slide thereon.

h is a set-screw for holding the gage at the desired point of adjustment, as the length of the stuff to be mortised or grooved may require. The gage is provided with a pointer or index, *i*, which is adapted to indicate the point of adjustment required upon a graduated bar or scale, *i′*, fastened to the front side of the base-piece A.

j is a thumb-piece working in the gage, and having affixed to it, under the top of the gage, a clamp, *j′*, to secure that end of the stuff against the stop *a* of the base-piece A.

C′ is the top plate of the gage, having downward-projecting side pieces or flanges, C^2, fitting against the sides of the bottom piece of the gage, and provided with slots *k*, through which pass set-screws *k′* to permit the adjustment of the gage to accommodate the thickness of the stuff.

D is also a guide or fence, which has affixed to it a plate, D′, pivoted to a leaf, E, of the gage C, and provided with a segmental slot, *l*, which receives a set-screw, *l′*, the purpose of which is to permit the adjustment of the

guide D, according as it is desired to cut a straight or oblique groove or gain in the stuff.

F is a toothed lever pivoted to the leaf E, and having its tooth *m* adapted to enter a slot, *m'*, in the convex edge of the segmental plate D', to control the adjustment of the gage C' to readily insure accuracy in cutting grooves or gains in different pieces. The leaf E has a slot, *n*, which receives a set-screw, *n'*, to enable the adjustment of the guide D centrally with the material being operated on. The leaf is graduated, as is also its adjoining plate, D^2, screwed or fastened to the gage C, to effect the ready and accurate adjustment of the gage C in inches or feet. The lever F is disengaged from the plate D' when a greater deflection from a right line of the guide D is required than it is capable of having when the lever is engaged with said plate.

This device is particularly adapted for use with the dado-plane to cut gains transversely or obliquely. It is used as follows: The material or stuff to be operated on being secured in position, as above described, the guide D is adjusted to conform to the angle it is required to give to the intended mortise, and the plane is adjusted against the guide D and the operation of cutting the mortise performed, the guide serving to guide the plane in its movement.

It will be observed that the transverse gain to be cut near the upper end of the jamb and the oblique gain to be cut at the lower end of the jamb are both made before removing the jamb, the base being of sufficient length to accommodate a door-jamb.

By means of this device the laying out by marking off the stuff of the intended gain is avoided, while the angle of the gain is readily determined and preserved, thus insuring accuracy and facility of operation and its adaptation to use by an unskilled workman.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

1. The guide B, having a hinged top piece, b^4, provided with a hinge-plate capable of vertical adjustment, in combination with the base-piece A, substantially as and for the purpose set forth.

2. The guide B, combined with the base-piece A *a*, and having the adjustable clamp B', provided with a downward-projecting arm, f^3, substantially as and for the purpose set forth.

3. The guide having the adjustable clamp provided with a downward-projecting arm, and combined with a base-piece having the stop *a* at its rear side, substantially as described.

4. The sliding gage C, combined with a base-piece, A, and having the vertically-adjustable top-piece, C', and an adjustable plane-guide, substantially as and for the purpose set forth.

5. The combination of the angularly-adjustable guide D, having its segmental plate D' provided in its convexity with a slot, with the toothed lever F, the adjustable and graduated leaf E, and graduated plate D^2, substantially as and for the purpose set forth.

6. The guide having the adjustable clamp provided with a vertical arm, the hinged top, the vertically-adjustable plates, one having a hook or catch, the gravity-locking latch or lever, and the plate having the downward-projecting flange, combined with a base-piece having a stop at its rear edge, substantially as and for the purpose set forth.

7. The sliding gage having the flanges resting upon its support, the holding-screw, the pointer or index, the clamp, the graduated and adjustable leaf, and graduated adjoining plate, the toothed lever, and the angularly-adjustable guide provided with a slotted plate, combined with the base-piece having a stop at its rear edge, and graduated face-plate, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. STINSON.

Witnesses:

WILL G. KING,

ALBERT D. MARBLE.