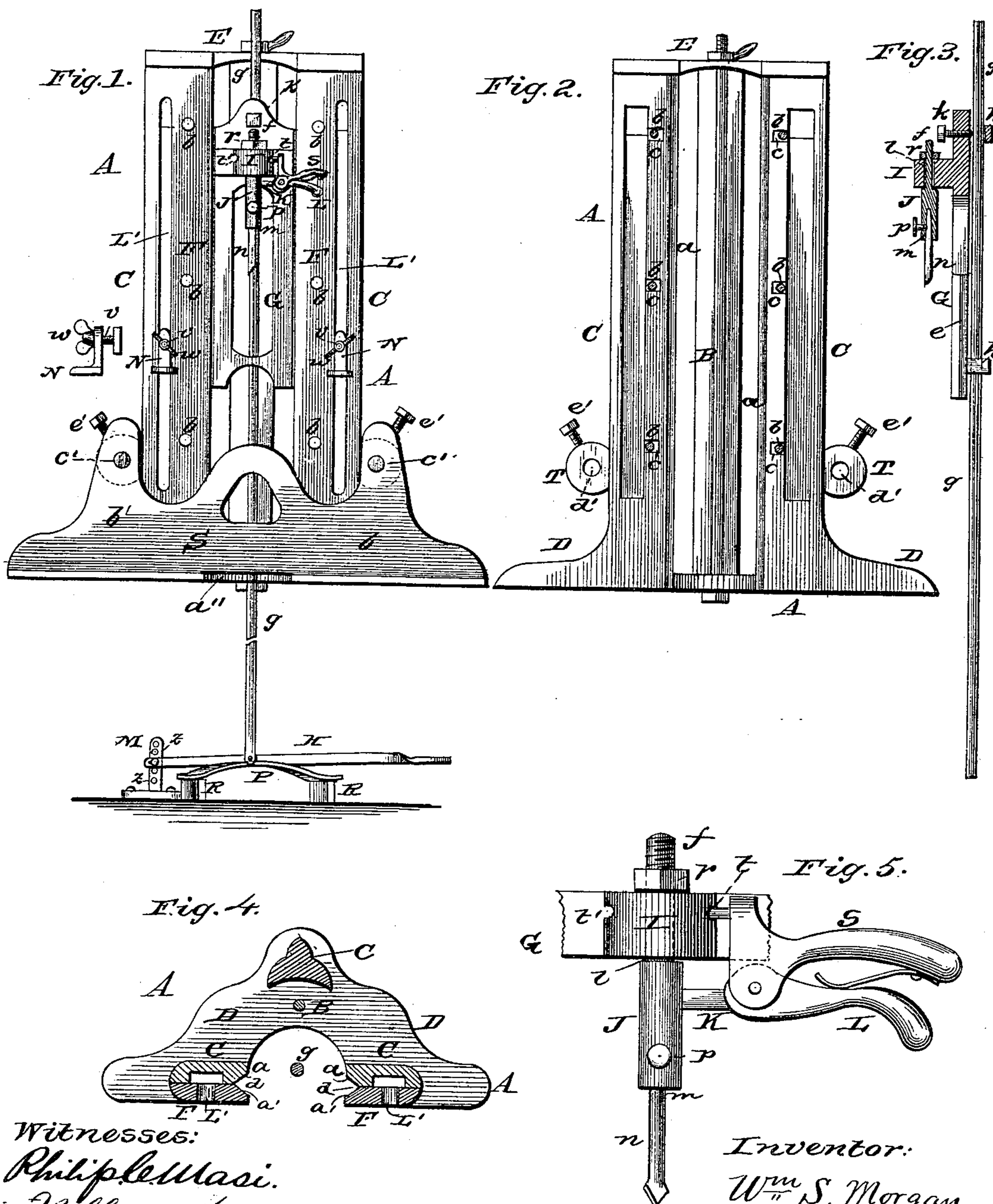


(No Model.)

W. S. MORGAN.  
BENCH MORTISING MACHINE.

No. 266,871.

Patented Oct. 31, 1882.



Witnesses:  
*Philip LeMasi.*  
*Villette Anderson.*

Inventor:  
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*by Anderson & Smith*  
*his Attorneys.*

# UNITED STATES PATENT OFFICE.

WILLIAM S. MORGAN, OF EVANSVILLE, WISCONSIN.

## BENCH MORTISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 266,871, dated October 31, 1882.

Application filed July 15, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. MORGAN, a citizen of the United States, and a resident of Evansville, in the county of Rock and State of Wisconsin, have invented a new and valuable Improvement in Bench Mortising-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a front view of my device. Fig. 2 is also a front view. Fig. 3 is a vertical sectional view, and Figs. 4 and 5 are detail views.

This invention has relation to bench mortising-machines; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, the letter A designates the frame of the machine, which is designed to be placed upon a carpenter's bench or other suitable support and bolted thereto by means of a bolt-rod, B. The frame consists of the base D, columns C, and top or head E, which is connected to the base by the columns, which are three or more in number. Two of these columns are arranged with their faces in the same vertical plane, and have their inner edges beveled at *a*. Against these two columns are placed the face-plates F, one on each side, said face-plates being secured to the columns in rear thereof by screws *b*, which pass through horizontal slots *c* of said face-plates. In this manner provision is made for the adjustment of the face-plates inward or toward each other to compensate for wear. The inner edges of the face-plates are beveled at *a'*, opposite the beveled edges *a* of the columns to which said face-plates are secured, and between the beveled edges on each side is an angular interspace, *d*, extending vertically, and serving as a guide-bearing for one edge, *e*, of the reciprocating slide G. The slide G plays up and down in the ways *d*, being moved by means of a treadle, H, which is connected to said slide by a rod, *g*, which passes through bearings *h* in said slide, and is fastened by

means of a set-screw, *k*, which passes through the slide to said rod.

I designates a semicircular projection, forming a part of the slide G, and extending from its face near its upper end. Through this projection is made a vertical bearing, *l*, in which is seated the stem *f* of the turn-holder J, said bearing being located centrally with reference to the semicircular surface of the projection I. In the lower end of the turn-holder J is formed a socket, *m*, to receive the tang of the chisel *n*, which is secured therein by means of a set-screw, *p*. The upper end of the stem of the turn-holder is threaded to receive the nut *r*, whereby it is supported in its bearing, and said turn-holder is provided with a lateral arm, K, having a handle, L, formed with a pivoted angular spring-catch, *s*, which is designed to engage a bearing, *t*, formed in the side of the semicircular projection I. A similar bearing, *t'*, is formed at the other side of the projection I, diametrically opposite the bearing *t*, and designed to engage the catch of the turn-holder J, when it is turned half around in reversing the chisel.

In the face-plates F are formed the slots or guideways *L'*, extending vertically, and serving to receive the screw-stems of the slides N, which hold the timber being mortised. Each slide N is perforated for the passage of the screw-stem *v*, which is provided with a thumb-nut, *w*, exterior to the face-plate. Near the upper end of each face-plate an opening should be made into the guide-slot of sufficient size to admit the rear nut or enlargement of the screw-stem of the slide.

The treadle H is pivoted to an iron fulcrum, M, which is designed to be screwed to the floor in proper position, and is provided with a series of bearings, *z*, to enable the height of the fulcrum-bolt of the treadle to be adjusted. Under the treadle is arranged a wooden spring, P, which is provided with bearing-blocks R, which can be adjusted nearer to or farther from the ends of said spring to regulate the force thereof to suit the operator.

In order to regulate the position of the timber according to requirement, so that the mortise will be formed where desired, a gage-plate, S, is provided, having an opening in its base

at  $a''$ , and a vertical flange,  $b'$ , against which the timber is placed. From the vertical flange  $b'$  extend to the rear arms  $c'$ , which pass through bearings  $d'$  in lugs  $T$  of the frame, and are adjustable therein, being secured in position, after adjustment, by means of set-screws  $e'$ .

This mortising-machine can be easily operated, and will do square work. It will occupy but little space in a shop, and can be carried in a tool-chest, if necessary.

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

A bench mortising-machine consisting of the frame  $A$ , slotted adjustable face-plates  $F$ , slide-holders  $N$ , engaging said face-plates, the reciprocating slide  $G$ , its turn-holder and treadle-rod, and the adjustable gage-plate  $S$ , substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM S. MORGAN.

Witnesses:

ARTHUR P. BURNHAM,  
ANDREW MANNING.