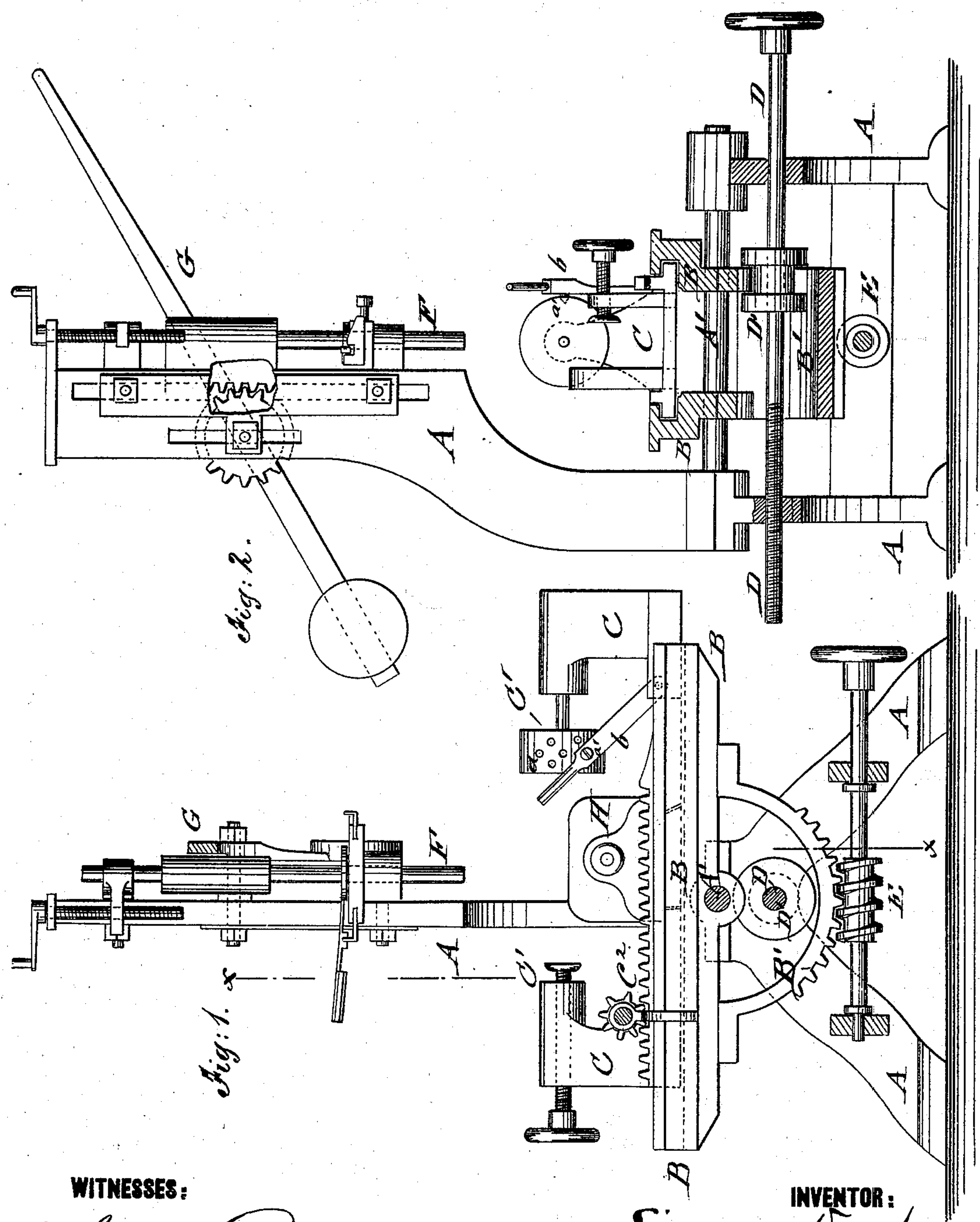


S. DUCK.  
MORTISING MACHINE.

No. 171,360.

Patented Dec. 21, 1875.



WITNESSES:

*Chas. Nide*  
*A. F. Perry*

INVENTOR:

*Simon Duck*

BY

*Mumford & Co.*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

SIMEON DUCK, OF VICTORIA, BRITISH COLUMBIA, ASSIGNOR TO HIMSELF  
AND JOSHUA DAVIES, OF SAME PLACE.

## IMPROVEMENT IN MORTISING-MACHINES.

Specification forming part of Letters Patent No. **171,360**, dated December 21, 1875; application filed  
September 4, 1875.

*To all whom it may concern:*

Be it known that I, SIMEON DUCK, of Victoria, in British Columbia, have invented an Improvement in Mortising-Machines, of which the following is a specification:

This invention has for its object the construction of a machine for cutting square and angular mortises at any desired inclination; and it consists of a tilting bed, by which the material on the bed may be carried into any desired inclination to be mortised by a vertically-operating tool. A cog-segment and worm-shaft tilt the bed-frame on the rock-shaft in longitudinal direction, while a lateral screw-shaft admits its position in lateral direction. A longitudinally-sliding frame is guided in the bed-frame, and adjusted by rack and pinion, the adjustable heads of the same holding the material to the tool. One of the heads is arranged with a rotary chuck, with holes in its periphery for a pivoted spring-clutch, that holds the material for exposing it rotatively to the action of the tool.

In the accompanying drawing, Figure 1 represents a front elevation, and Fig. 2 a vertical transverse section on the line *xx*, Fig. 1, of my improved mortising-machine.

Similar letters of reference indicate corresponding parts.

A represents the frame of the machine, on which is mounted the shaft A', with the tilting bed B. A semicircular cog-cylinder, B', is attached to the under side of bed B, symmetrically to shaft A', and geared by a worm-shaft, E, for throwing the tilting bed into any desired inclination toward the vertically-moving boring-tool F G. A screw-shaft, D, is arranged transversely to the worm-shaft E, below shaft A', and provided with a spool, D', that engages an interior projection on the bottom of bed B, and moves the same laterally. C is a frame, sliding longitudinally in grooves in the sides of the bed B, bearing the heads C<sup>1</sup> C<sup>1</sup>, which are adjustably secured thereto in the customary manner. The sliding frame C is moved into either direction on bed B by a rack and meshing pinion, C<sup>2</sup>. One of the heads C<sup>1</sup> is made with a revolving

chuck, having holes *a* on the circumference, for receiving a pin, *a'*, projecting from a spring, *b*, which is pivoted to the base of the head, and designed to hold the chuck adjustably at any point of revolution. H is a clamping device, for holding the material to be mortised when not held by the heads C<sup>1</sup>. This additional laterally-working device is removed from the tilting bed when the longitudinally-holding heads are used. The head C<sup>1</sup>, opposite to the revolving chuck, has an adjustable clamping-screw, to tighten firmly the parts between it and the chuck.

By means of the mortising-machine a wheel-hub can be mortised complete without being removed from the clamping-heads by withdrawing the spring-clutch from contact with the chuck and readjusting it to the proper hole.

The bed B should be level when mortising a hub, and the clamping device be taken out, which, however, is used for articles of long dimensions, the same being shifted longitudinally by the motion of the sliding frame.

Mortises of any angle may be made into the material by tilting the table by the worm-shaft to the required angle, and laterally by the operation of the screw-shaft.

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

1. In a mortising-machine, the combination of a tilting bed-frame, having segmental cog-cylinder, with a worm-shaft for adjusting the bed in longitudinal direction to any inclination, substantially in the manner and for the purpose set forth.

2. The combination, in a mortising-machine, of the tilting and laterally-movable bed-frame or table B, longitudinally-adjustable frame C, fixed shaft A', screw-shaft D, collar D', cog-cylinder B', and worm-shaft E, as and for the purpose set forth.

SIMEON DUCK.

Witnesses:

J. SEHL,

GEORGE W. COHEN.