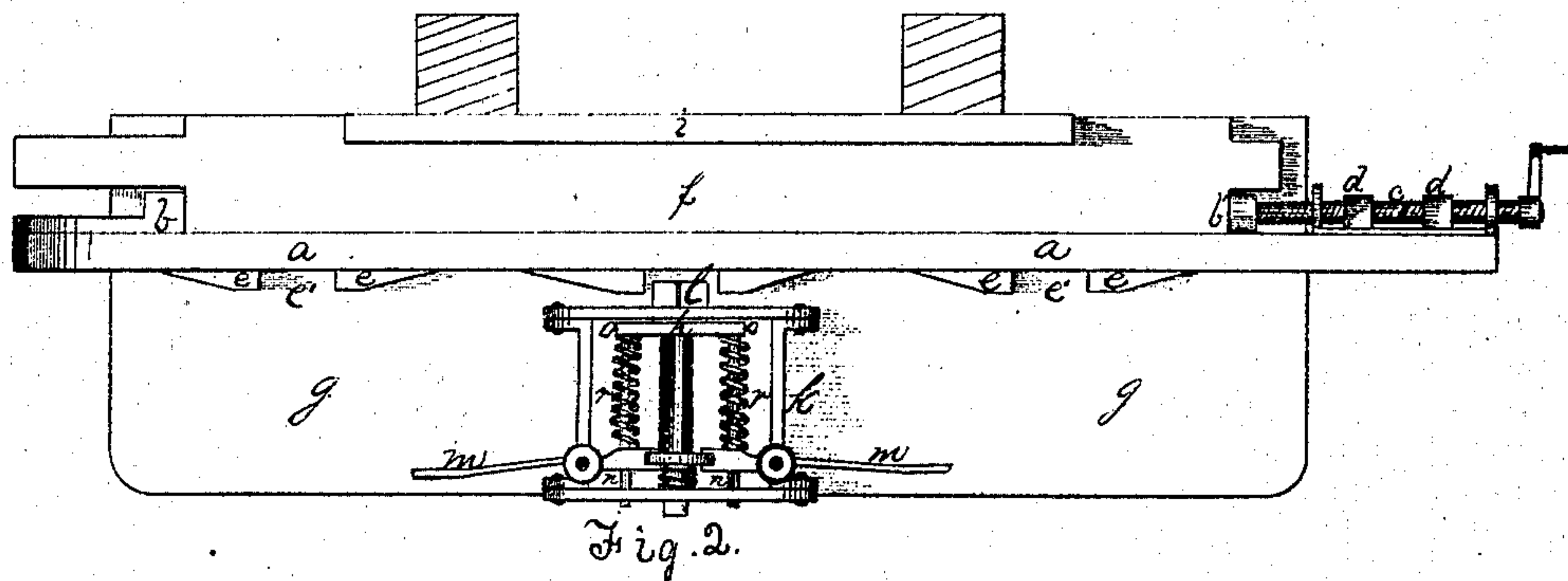
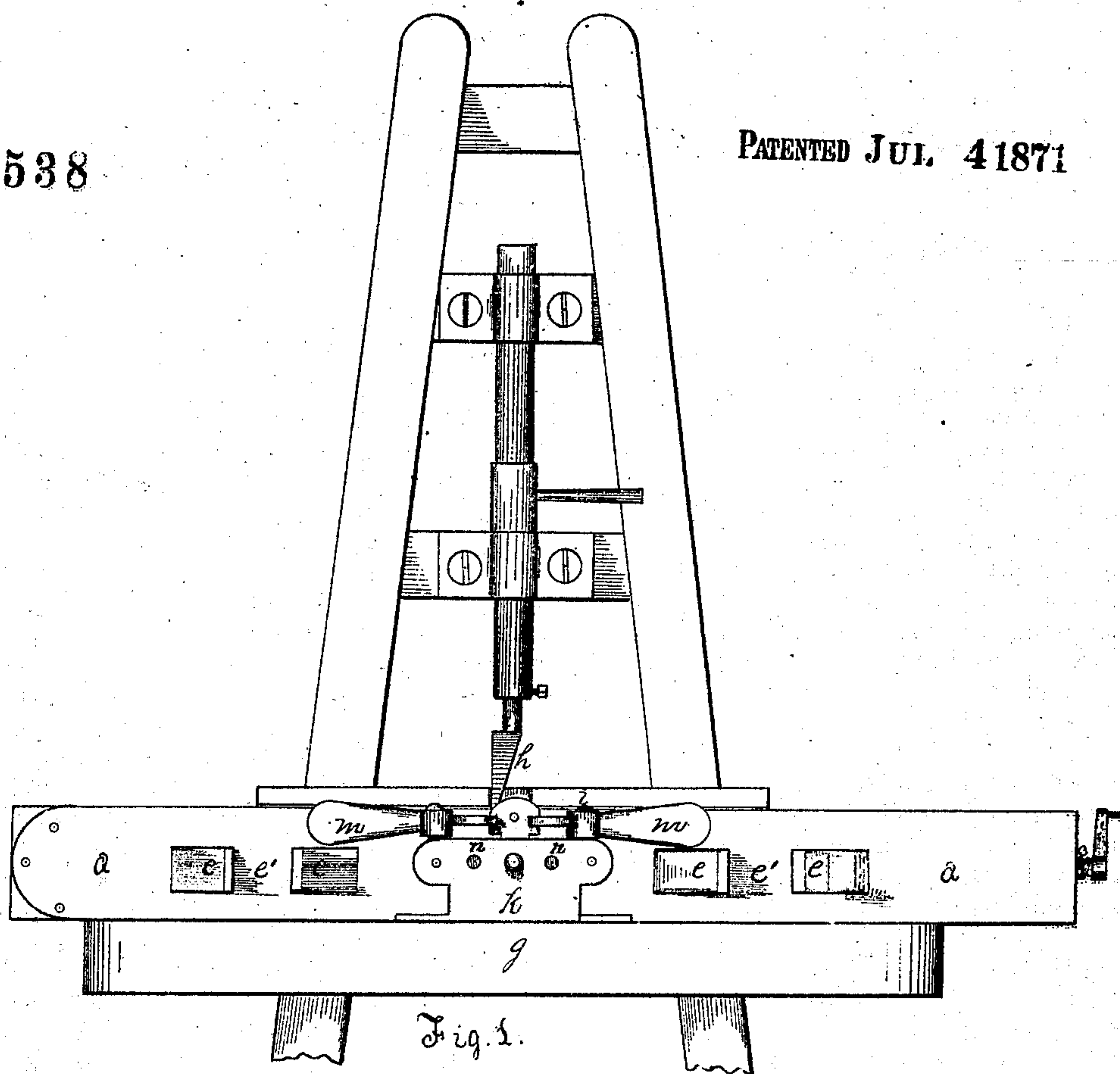


Thomas Beach: Gauge for Mortising Machine

116538

PATENTED JUL. 4 1871



Witnesses

R. Hrenskall
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Inventor

Thomas Beach

by his attorneys

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UNITED STATES PATENT OFFICE.

THOMAS BEACH, OF FREEPORT, PENNSYLVANIA.

IMPROVEMENT IN GAUGES FOR MORTISING-MACHINES.

Specification forming part of Letters Patent No. 116,538, dated July 4, 1871.

To all whom it may concern:

Be it known that I, THOMAS BEACH, of Freeport, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Improvement in Gauge for Mortising-Machine; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a front elevation of a mortising-machine, showing my improvement; and Fig. 2 is a plan view of my improvement as applied to a mortising-machine.

Like letters of reference indicate like parts in each.

My invention consists in the construction of a gauge, by the use of which, in connection with a mortising-machine, I am enabled to mortise window-sash and other such articles without first "laying them off" by rule, as has been necessary heretofore.

To enable others skilled in the art to make and use my invention, I will describe its construction and manner of use.

The gauge-board *a* is made of wood or other suitable material, with lugs *b b'*, one at each end, attached to its inner side or face. The lug *b* is rigidly attached to the board, while the other *b'* is adjustable, being fastened to the end of a screw, *c*, which works inward from the end of the board *a*, and which is supported by and works through two perforated and tapped lugs, *d*, extending out from the face of the board. On the outside of the gauge-board *a*, and placed at any desired intervals thereon, is a series of wedged-shape stops, *e*, grouped in pairs or couples, with the incline of one falling away from the incline of the other, so that the butt ends of the two are inward near each other. When the gauge is in use the piece of wood *f* to be mortised is placed against the inner face between the two lugs *b b'*, and secured there by means of the adjustable one *b'*. In window-sash it is necessary that the mortises should be exactly in place; therefore, for fear the board *a*, carrying the piece *f*, should slip, I make the stops *e* directly opposite to the place where the mortise is to be made, so that, when used in connection with a locking device, they will hold the gauge firmly in place while the mortise is being made. The gauge, when in use, is set on the bench *g* of a mortising-machine of the ordinary

construction against a guide-board, *i*, running along the side of the bench *g*, back of the chisel *h*. Attached to the bench *g*, in front of the guide-board *i*, is a spring-lock, *k*, the tongue *l* of which projects into the path of the stops *e* on the gauge-board, so that, when the gauge-board is pushed along the guide *i*, its tongue encounters the first stop *e*, slides up the incline, and drops or springs into the notch between the butt ends of the first two stops *e e*. The tongue *l* is divided into two parts, which, just inside of the frame *k*, are bent in opposite directions so as to form a shoulder, *o*, on each, and then are fastened to the stems *n n*, which project slightly through the back plate of the frame *k*. In front of the shoulders *o* is a collar, *p*, which is connected with the inner ends of two small levers, *m m*, one on each side, and pivoted to the side pieces of the frame *k*; and back of the shoulder, around the stems *n n*, are two spiral springs, *r*, which, pressing against the shoulders *o o*, force the tongues *l l* out into the path of the stops *e*. The levers *m m* are for withdrawing the tongue *l l* from the notches formed by the stops *e e*, the spirals *r r* forcing the tongues out the instant the pressure is taken off.

The gauge is used as follows: A piece of wood, *f*, is secured between the lugs *b b'*, and the gauge-board placed on the bench *g* against the guide-board *i*, and pushed along until the tongues *l* engage the first stop *e*, slide up the incline, and drop into the notch *e'*. The gauge being then held immovable the mortising-chisel is operated and the mortise made. The workman next frees the gauge-board by operating the levers *m* so as to withdraw the tongues *l l* from the notch *e'*, and slides it along until it comes to the next pair of stops, when the same operation is repeated, and so on until the whole is completed.

It will be perceived that by using a different gauge for each size, or by simply changing the relative positions of the stops *e*, any size of sash or other article may be mortised; also, that, instead of the spring-lock shown, any other known device for holding the gauge in position may be used—such as a ratchet-rack along the side of the gauge operating in connection with a tongue, such devices being merely equivalents to those shown. The tongue is made double for the more convenient and precise adjustment of the gauge under the chisel.

One of the great advantages of my improve-

ment is the small expense attending the putting it into successful operation, since it can be applied to any mortising-machine without any material alteration thereof, and with a few moments' work.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A gauge-board, *a*, for a mortising-machine, having lugs *b b'*, one at each end on one side, one at least of which is adjustable, and a number of stops, *e*, on the other side at any desired intervals, constructed substantially as and for the purposes described.

2. The spring-lock *k*, composed of the tongues *l l*, spiral springs *r r* on the stems *n*, operated by means of levers *m m*, in combination with the devices of the previous claim, substantially as described.

In testimony whereof I, the said THOMAS BEACH, have hereunto set my hand.

THOMAS BEACH.

Witnesses:

A. S. NICHOLSON,
THOS. B. KERR.