

J. H. STAHL.
Mortising-Machines.

No. 135,604.

Patented Feb. 4, 1873.

Fig. 1.

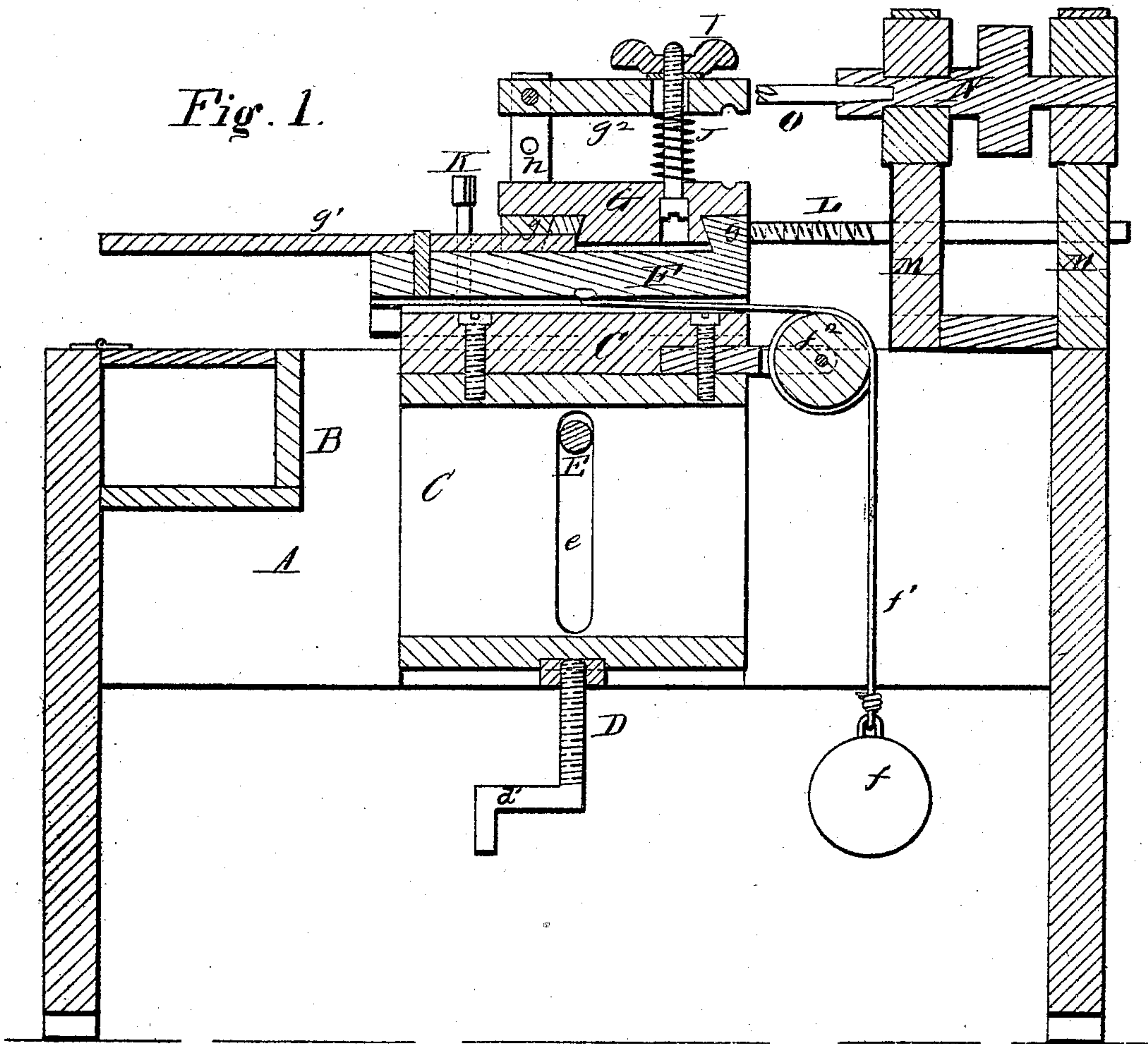
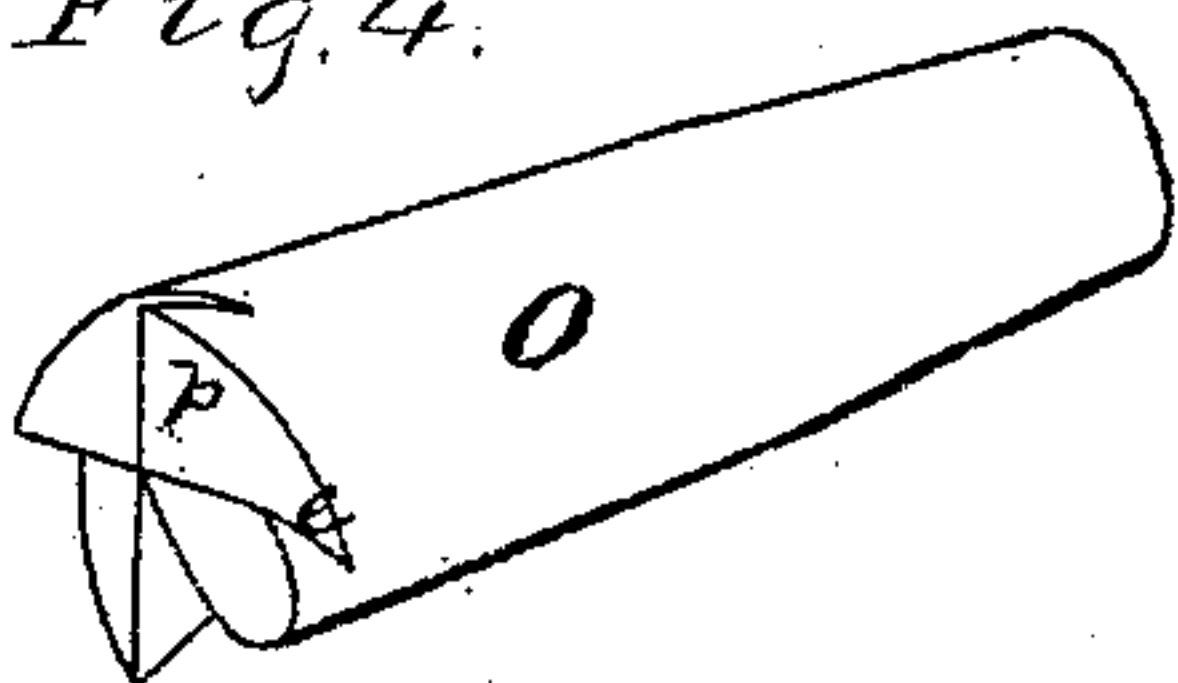


Fig. 4.



Witnesses:
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Geo. E. Upham.

Inventor:
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Fig. 2.

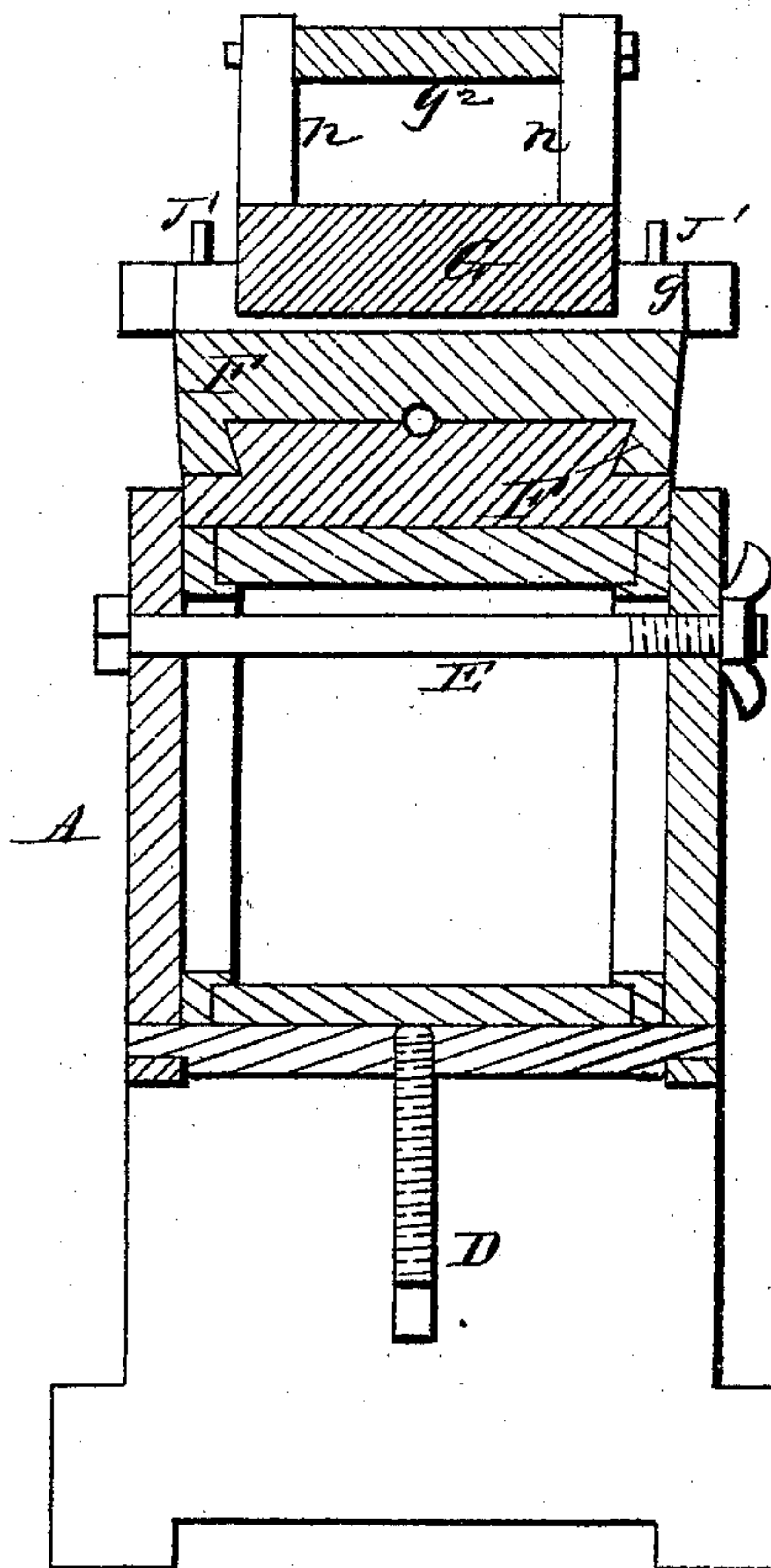
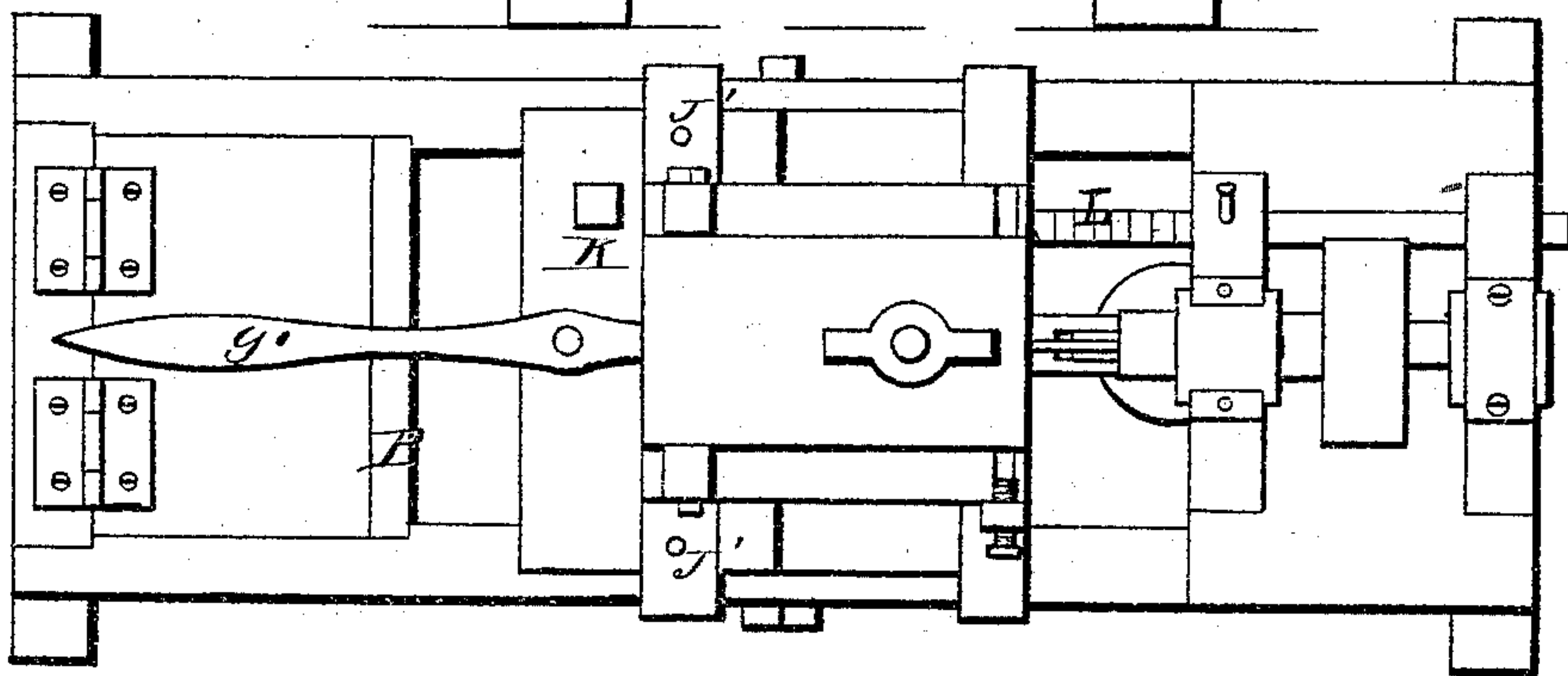


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. STAHL, OF STANTON'S MILLS, PENNSYLVANIA.

IMPROVEMENT IN MORTISING-MACHINES.

Specification forming part of Letters Patent No. 135,604, dated February 4, 1873.

To all whom it may concern:

Be it known that I, JOHN H. STAHL, of Stanton's Mills, in the county of Somerset and State of Pennsylvania, have invented a new and valuable Improvement in Mortising-Machine; 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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal section of my mortising-machine. Fig. 2 is a cross-section of the same. Fig. 3 is a plan view of the same. Fig. 4 is a perspective view of the chisel.

This invention has relation to mortising-machines; and it consists in the construction and novel arrangement of the log-carriage, the devices for moving the same and for gaging the work, all substantially as hereinafter more fully described.

Referring to the drawing, A designates the frame of the mortising-machine, at one end of which is a box, B, to contain chisels of different kinds. C is a vertically-moving frame arranged between the sides of frame A, and adjusted by means of a screw-rod, D, holding a crank, *d'*. E is a transverse bolt passing through the frame A and through slots *e* in frame C, and used for fastening the latter when set for different kinds of work. F is a horizontally-sliding table moving lengthwise of frame A on top of frame C, and carried along by means of weight *f* attached to cord *f*¹ passing over pulley *f*². By means of this table the work is fed toward the chisel. G is a laterally-moving platform arranged between ways *g* on surface of table F, and moved by a lever, *g*¹, at the back. This platform conveys the work lengthwise of the mortise, and is provided with a hinged clamp, *g*², adjustable between standards *h*, and tightened upon the log or board by means of screw-nut I. A spring, J, raises said clamp. J' are studs in the ways or way *g* used to limit the movement of the platform G and gage the length of mortise. By means of the parts

C F G the work may be adjusted to any required position. When the platform F is drawn back to let the clamp receive a log a pin, K, falls through a hole, and resting against the back of frame C prevents the platform F from traveling toward the chisel. L is an adjustable screw-rod having its bearings in standards M, and designed to gage the forward movement of the platform F, and thus regulate the depth of mortise. N designates the mandrel supported by standards M, and holding the chisel or mortising-bit O. This chisel or bit has four cutters, *p*, with their outer edges at right angles to each other, and slightly inclining toward the center of the bit. These cutters are formed by filing or otherwise producing acute angular notches, *e*, in the head of the bit, as shown clearly in Fig. 4. The re-entering angles of these notches extend at equal inclinations from the end and center of the bit to the sides of the latter, as shown. Each cutter has therefore two cutting-edges, the one nearly radiating from the center of the bit and the other formed at the angle of the side of the bit with the under or more abrupt surface of the cutter. The corner of each cutter is made very sharp, and cuts the wood very readily. An essential element in the construction of the bit is to have a central depression at the end, so that the corners of the cutters may be allowed to "bite." Sometimes I construct the bit with a recess in the center with a spring or pin inserted to be used in heavy work. The pin or spring prevents the bit from cutting clear to the center, and causes the cutters to work evenly, producing smooth work.

The improved bit above described is designed to form a smooth even mortise without holes, the form of the cutters preventing the bit from sinking beyond them.

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

1. The hinged vertically-adjustable clamp *g*², screw-nut I, spring J, and moving table G, substantially as specified.

2. In a mortising-machine, the screw D, in combination with the adjustable frame C

holding the longitudinally-moving table F and the laterally-moving table G, substantially as specified.

3. In a mortising-machine, the adjustable screw-rod L having its bearing in the standards M, in combination with the horizontal sliding table F, cord f^1 , weight f , and pulley f^2 , operating in the manner substantially as specified.

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

JOHN HENRY STAHL.

Witnesses:

FREDERICK DONGES,
ABRAHAM ZIMMERMAN.