H. K. JONES.

Machines for Marking Carpenters' Squares.

No. 147,008. Patented Feb. 3, 1874.

Fig. 1.

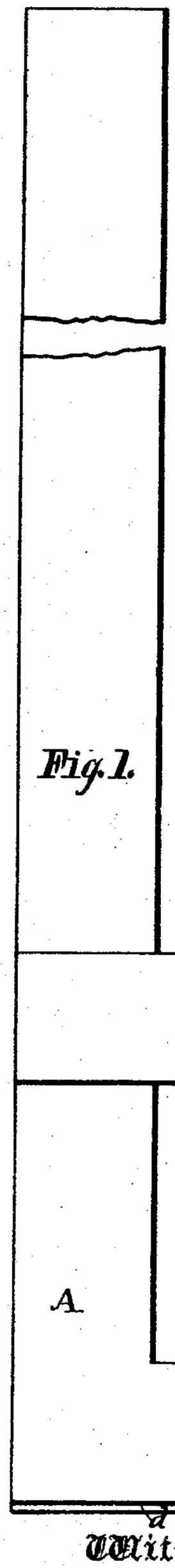

Fig. 2.

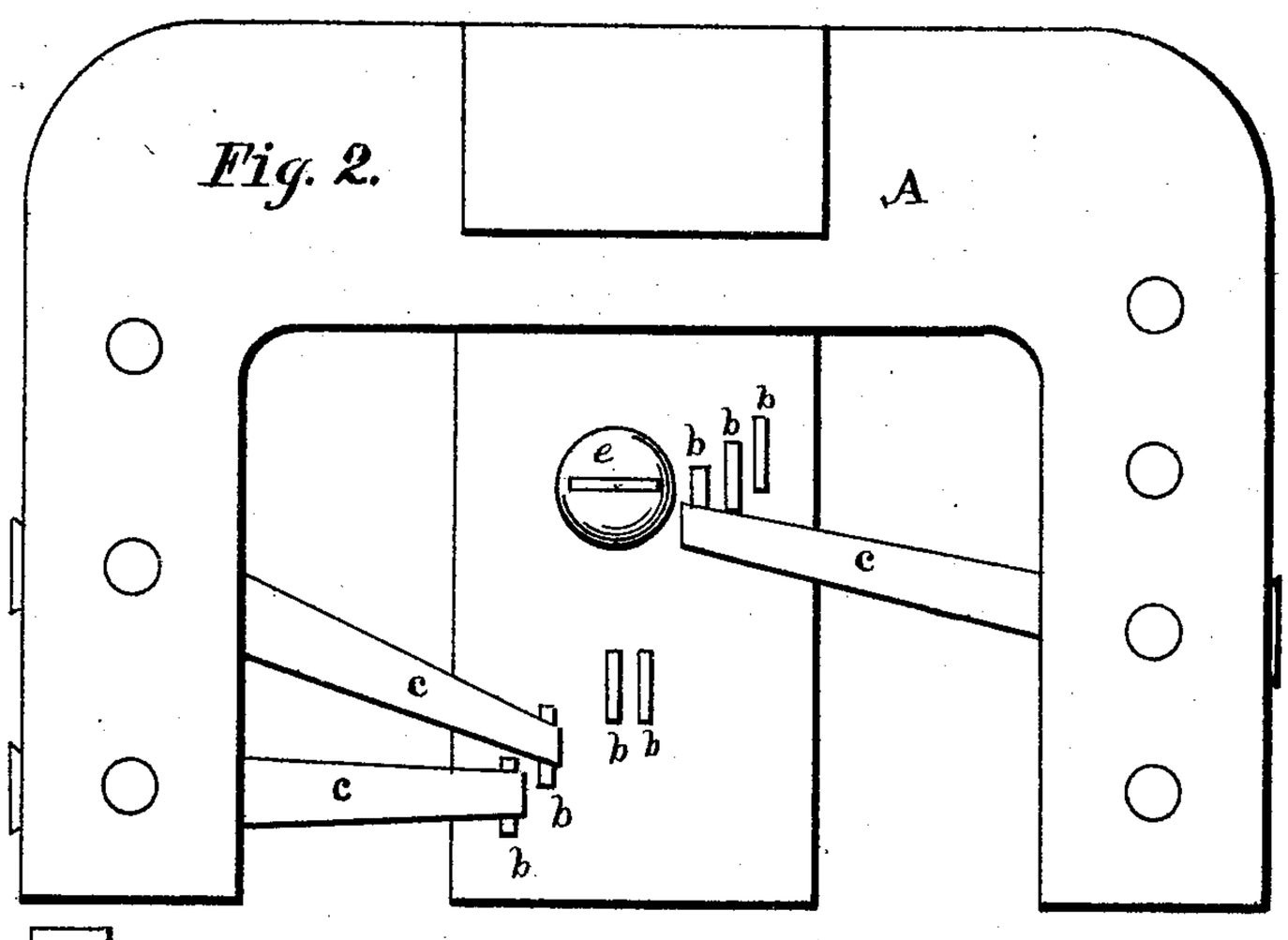

Fig. 4.

Fig. 5.

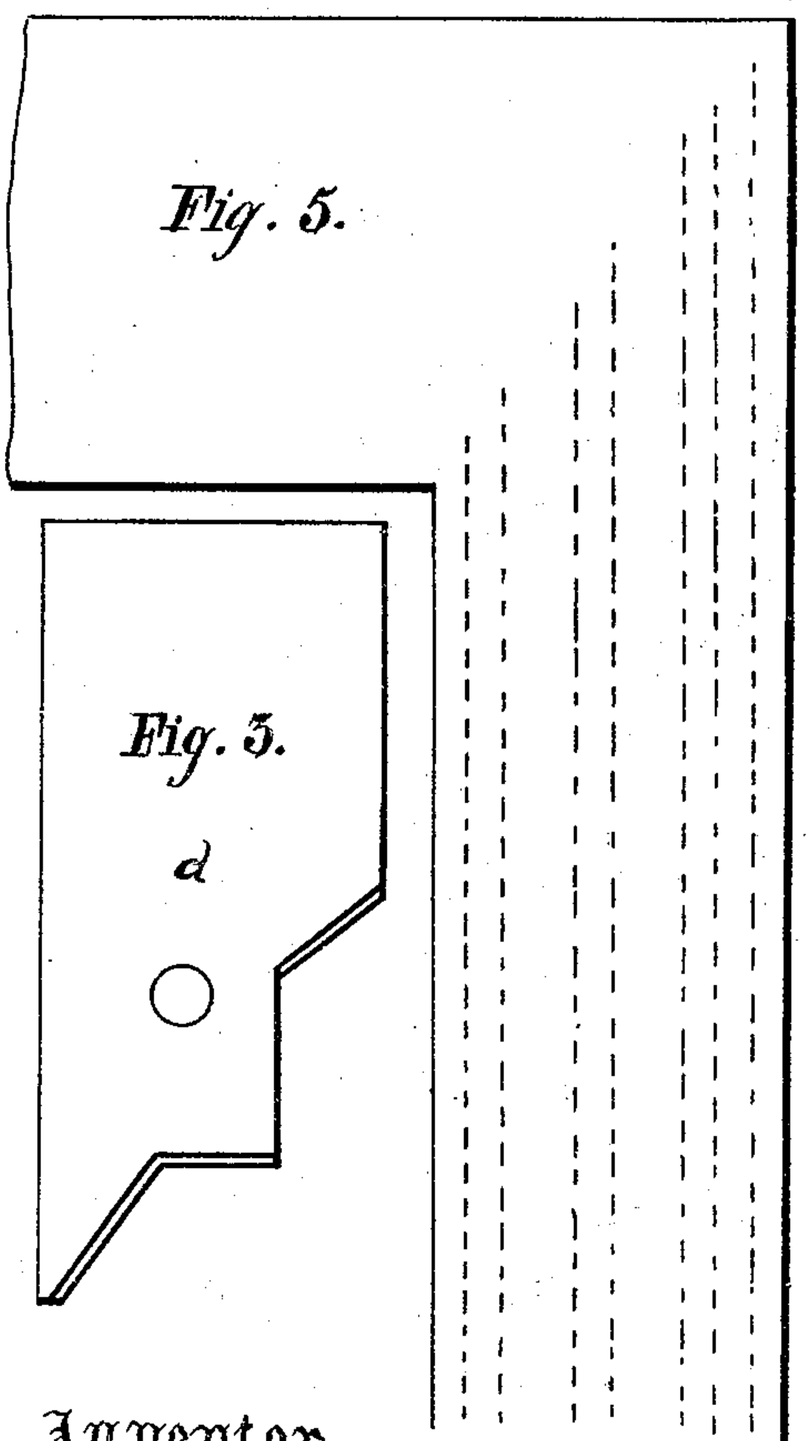

Fig. 3.

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UNITED STATES PATENT OFFICE.

HORACE K. JONES, OF KENSINGTON, CONNECTICUT, ASSIGNOR TO HART MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR MARKING CARPENTERS' SQUARES.

Specification forming part of Letters Patent No. **147,008**, dated February 3, 1874; application filed August 10, 1870.

To all whom it may concern:

Be it known that I, HORACE K. JONES, of Kensington, in the county of Hartford and State of Connecticut, have invented a certain Improvement in Tool for Lining Carpenters' Squares, of which the following is a specification:

My invention consists of a gang of gravers and springs arranged in a single frame, with each graver and its spring independent, so that the vertical movement of each graver shall be separate and independent of the others, substantially as hereafter described; also in the arrangement of the gang of gravers with the separate gravers a little in advance of each other in the proper position for each graver to commence lining at the miter-corner of a square.

In the accompanying drawing, Figure 1 is a side elevation of a lining device which embodies my invention. Fig. 2 is a plan view of the same. Fig. 3 is a plan view of the plate upon which the heels of the gravers rest. Fig. 4 is a side view of the gravers; and Fig. 5 shows part of a carpenter's square, in which the position of the longitudinal lines made by this device is indicated by broken lines.

A designates the frame, the shank of which is to be received and held in the head of an iron planer or other machine having a reciprocating bed or head. The base of the frame A is pierced with mortise-like slots, in which the gravers *b* play up and down. Each graver *b* is provided with an independent spring, *c*, said spring having a round shank which passes through a hole in the forked portion of the frame A, and is adjusted so as to press its graver downward with greater or less force, as may be desired, by means of the set-screws *f*. (See Fig. 1.) The gravers *b b* are placed one a little forward of its neighbor, so as to bring them in the proper position to commence graving or lining at the miter-corner of a carpenter's square, and thus leave the end of one line a little forward of the next line, as indicated by broken lines in Fig. 5. A plate, *d*, of the form shown in Fig. 3, is secured upon the under side of the frame A, with its oblique edge slightly projecting over the rear side of the graver-mortises, so as to catch the heel of the several gravers and prevent them from dropping beyond a fixed point.

In order to make the drawings clear, only three springs are shown, but, in practice, each graver will be provided with its own spring.

It is intended to provide a suitable gang of gravers for each different kind of lining—for instance, squares in which the inches are divided by sixteenths require more lines than those in which the inches are divided into eighths.

The square to be lined is clamped to the bed of the machine in which my device is used in such manner that the part to be engraved or lined is parallel with the line of motion of said machine. The frame A is then secured in the machine with its gravers *b* in a perpendicular position to the face of the square. The gravers are brought down and engage with the square at the corner, when the bed of the machine is moved along and the gravers each simultaneously grave a line to the end of the square, as represented in Fig. 5.

In some styles of carpenters' squares one edge is thicker than the other, and in all squares small inequalities are often found upon their faces.

Each graver *b* and its spring *c* is arranged entirely independent of all the other gravers and springs, so that the pressure of each spring causes its graver to cut a line of the desired depth, and also allows an independent vertical movement of either graver, in case any inequalities are found in its path, and therefore the lines will be of uniform depth throughout their entire length, whether the square has a plain or uneven surface.

In case a gang of gravers were arranged dependent—that is, so that a vertical movement of one graver necessitates a like movement of the others—the lines made by them would, in case of inequalities in the surface of the square, be uneven, some portions being lined very light, or perhaps not at all, while others would be lined very heavy. My improvement entirely obviates this defect.

I claim as my invention—

The herein-described gang of gravers and springs, arranged in a single frame, with each graver and its spring independent, so that the vertical movement of each graver shall be separate and independent of the others, substantially as and for the purposes set forth.

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