H. K. JONES.

Machine for Indicating Carpenter's Squares.

No. 46,191. Patented Jan'y 31, 1865.

Fig. 1.

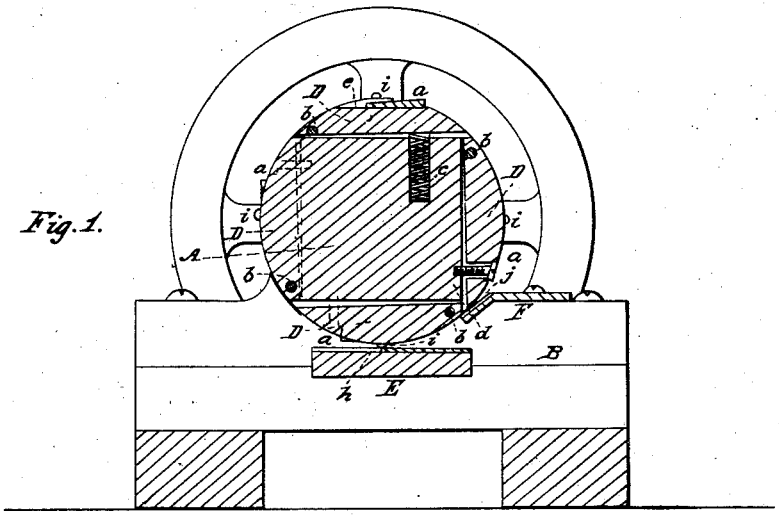
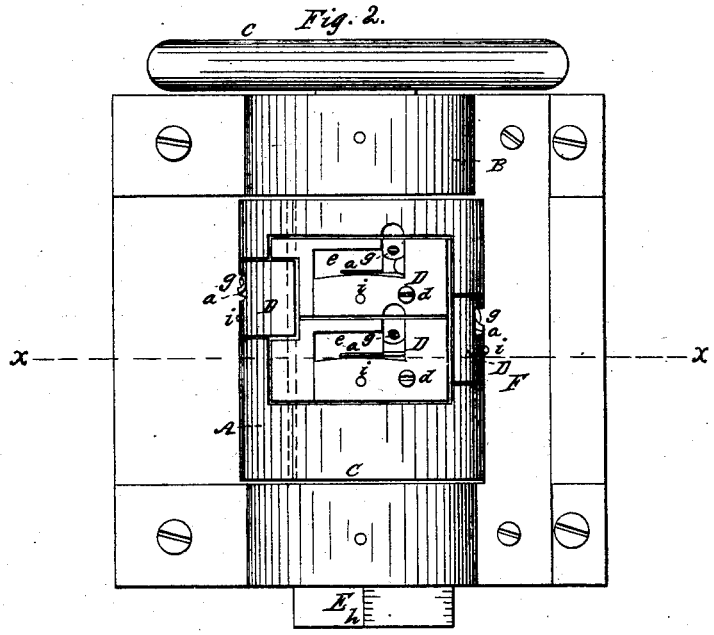


Fig. 2.



46,191

Witnesses:

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UNITED STATES PATENT OFFICE.

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

IMPROVED MACHINE FOR INDICATING CARPENTERS' SQUARES.

Specification forming part of Letters Patent No. **46,191**, dated January 31, 1865.

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 new and Improved Machine for Indicating Carpenters' Squares, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a transverse vertical section of my invention, taken in the plane indicated by the line *x x*, Fig. 2. Fig. 2 is a plan or top view of the same. Fig. 3 is a detached sectional view of one of the yielding beds, showing the manner in which the gravers are fastened.

Similar letters of reference indicate corresponding parts.

This invention consists in the use, in a machine for indicating carpenters' squares, &c., of a series of gravers arranged on the circumference of a roller or cylinder, and capable of making marks of different lengths; also, in combining with each graver a toe and yielding bed for the purpose of governing the length of the marks to be made; finally, in a clamp acting as a gage to regulate the depth of the cut and to confine the graver.

A represents a cylindrical roller or drum, made of cast-iron or any other suitable material, and mounted on an axle, C, which has its bearings in a frame, B. This roller is provided with a series of yielding beds, D, to which the gravers *a* are firmly attached. Said beds are fitted into cavities in the circumference of the roller, and they are hinged to the same by pivots *b*, as shown in the drawings; or they may be connected to the roller in any other convenient manner so that they will yield when exposed to an external pressure. Suitable springs, *c*, force out the loose ends of these beds as far as the set-screws *d* will allow, and these set-screws pass freely through countersunk holes in the beds and screw firmly into the body of the roller, so that their heads do not project above the circumference of the same, and the position of the beds can be adjusted at pleasure. Is it obvious that the beds, instead of being connected to the roller by pivots, might be made to slide in and out in suitable ways, or they might be connected to it in any other suitable manner; and I do not wish to confine myself, therefore, to the precise arrangement hereinbefore described, and shown in the drawings, but reserve the right to make any desirable change in this arrangement. Each bed is provided with a dovetailed recess, *e*, to receive one of the cutters or gravers *a*, and these gravers are made with a triangular cross-section, as clearly shown in Fig. 3, and they are retained by screw-clamps *g*. These clamps consist of simple plates, which are secured to the beds by suitable screws, and by the position of the point of the graver in relation to the outer edge of said clamping-plates the depth of the cut is determined. By making the gravers with a triangular cross-section I am enabled to keep the cutting-point sharp without much trouble or loss of time, and to hold the gravers in position with ease and facility. It must be remarked, however, that I do not wish to confine myself to this precise shape of gravers, but I reserve the right to change their form as I may see fit. The roller A is situated over the bed or platform E, which is intended to support the square or other article to be indicated, and said platform is provided with a shoulder, *h*, to retain the square or other article in position while the gravers take action. If desired, this platform or bed may be made adjustable, so that it will accommodate itself to the variable thickness of the blade or square to be indicated. The length of the marks made by the several gravers is governed by a series of toes, *i*, one of which projects from the outer surface of each of the yielding beds D, and in each individual case the length of the mark depends upon the distance of the toe from the pivot on which the bed swings, or from the point of the graver.

In rotating the roller the toes *i* come in contact with the teeth or projections *j* of a notched bar, F, which is secured to the frame A on the side of the roller, as clearly shown in Figs. 1 and 2 of the drawings. As long as the toe projecting from one of the beds is in contact with one of the projections *j*, the bed is pressed in, and the graver attached to it is prevented coming in contact with the surface

to be indicated, and not until the toe has passed said projection is the graver allowed to take action. It is obvious that the sooner the graver commences to act the longer will be the mark produced, and consequently if the toe is placed close to the point of said graver, so that it will relieve the bed nearly at the same moment when the point has passed the inner edge of the notched plate, the mark produced will be longer than it will be when the toe commences to press back the yielding bed after the point of the graver is nearly on the point of passing the notched plate.

By making the notched plate adjustable backward and forward the length of the marks may be still further regulated, so that marks for inches, half-inches, quarter-inches, and sixteenths can be made with one and the same graver.

By this machine the operation of indicating carpenters' squares can be carried on with the greatest nicety and accuracy, the number of marks made for each revolution of the roller can be increased or decreased at pleasure, and the length of the marks made by each graver can be easily adjusted, according to the width of the blade on which the scale is to be produced.

By increasing the diameter of the cylinder it may be made large enough to contain as many gravers as there are marks upon one edge of the square, each graver making but one mark, and the whole being completed at one revolution of the cylinder.

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

1. The method, substantially as described, for cutting the division-marks on carpenters' squares and rules.

2. The toes *i* and yielding beds D, in combination with the gravers *a*, applied and operating substantially as and for the purpose set forth.

3. The screw-clamps *g*, applied in combination with the gravers *a*, substantially as herein specified, for the purpose of holding them in their places and to govern the depth of the cuts.

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Witnesses:

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