J. ER.

Improvement in Dowel Gauge.

No. 123,337. Patented Feb. 6, 1872.

Fig. 1.

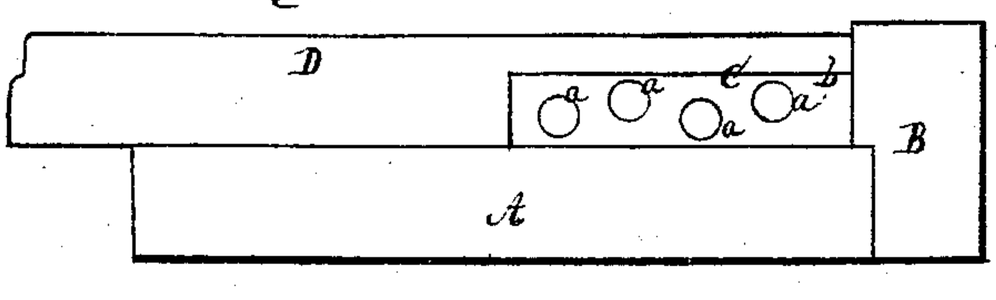

Fig. 2.

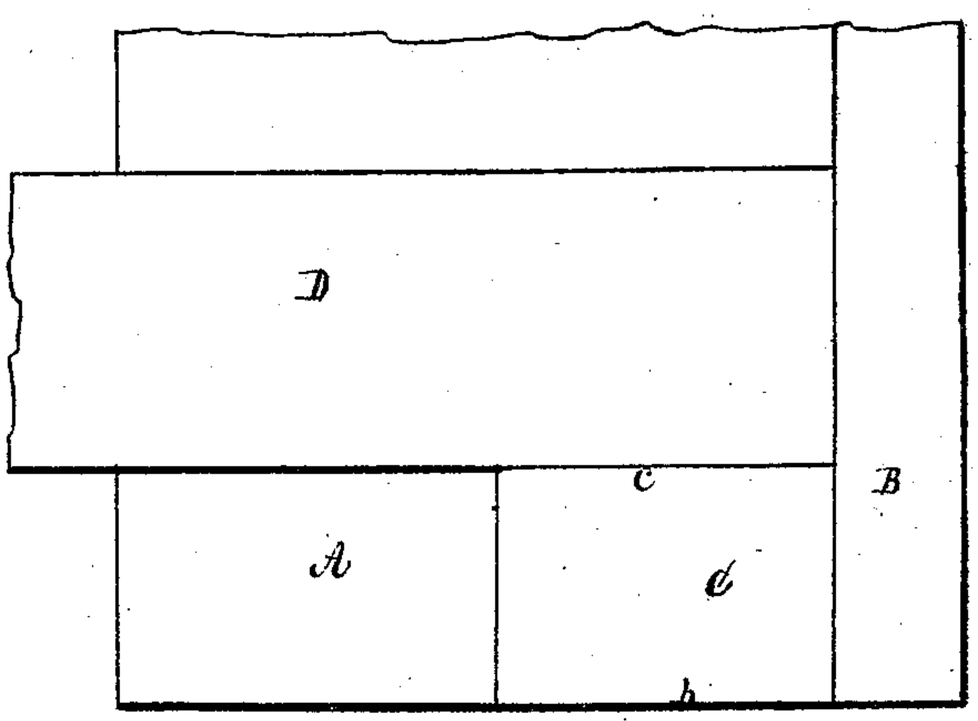

Fig. 3.

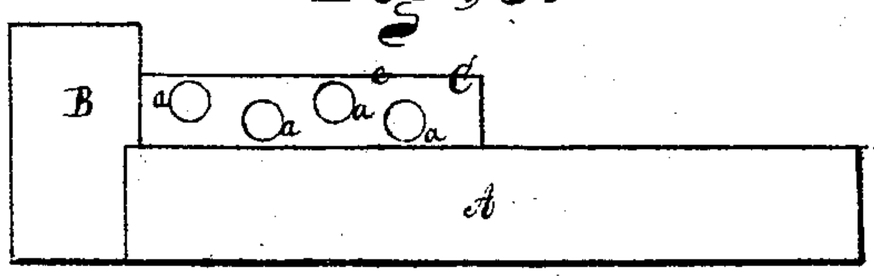

Fig. 4.

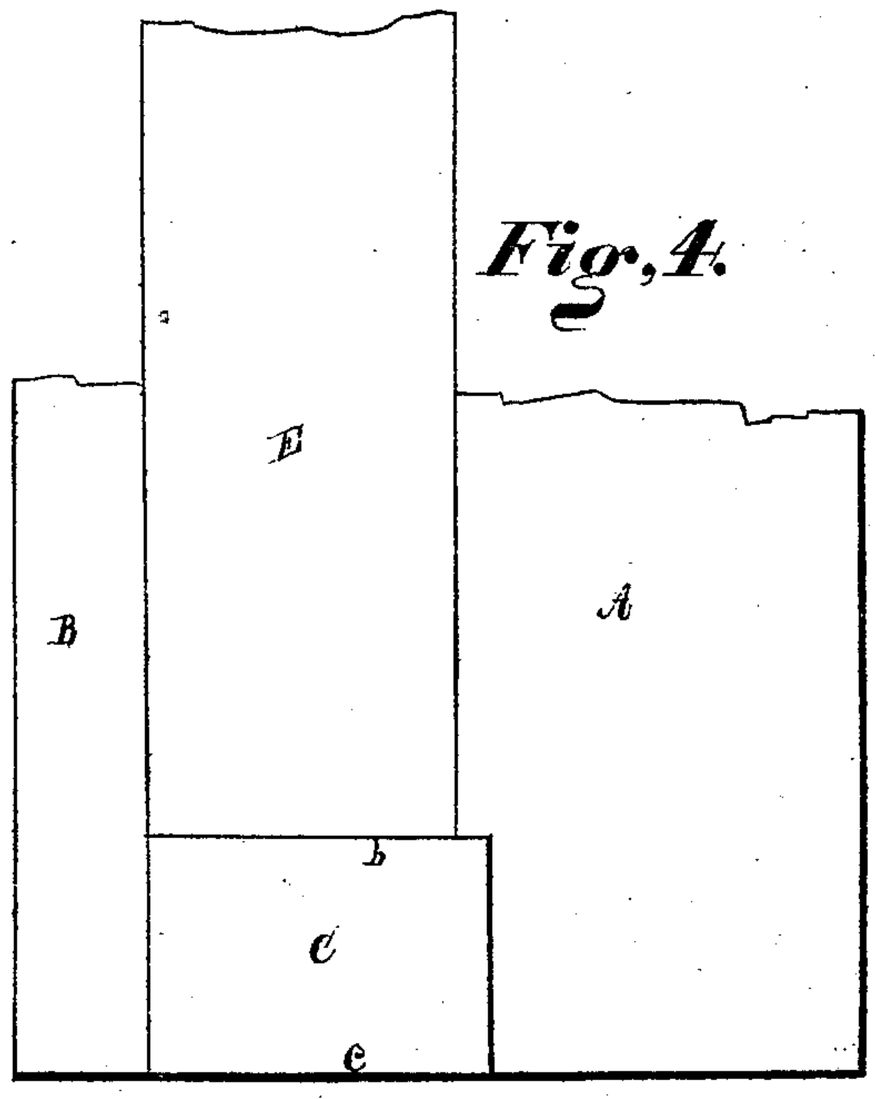

Fig. 5.

Fig. 6.

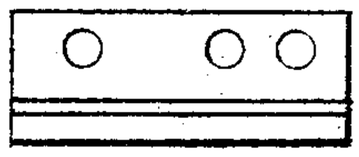

Fig. 7.

Witnesses.
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JOSEPH ER, OF CLEVELAND, OHIO.

IMPROVEMENT IN DOWEL-GAUGES.

Specification forming part of Letters Patent No. 123,337, dated February 6, 1872.

To all whom it may concern:

Be it known that I, JOSEPH ER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in a Dowel-Gauge, of which the following is a description, reference being had to the accompanying drawing making part of this specification.

SPECIFICATION.

Figures 1 and 3 are side views of the gauge. Figs. 2 and 4 are plan views. Figs. 5, 6, and 7 are views of the work done by the gauge.

Like letters of reference refer to like parts in the different views.

The nature of this invention relates to a gauge for guiding a boring-bit; and the object thereof is to enable the operator to bore dowel-holes in the legs and rails or side pieces of tables, &c., for the insertion of dowel-pins, so that the said holes in corresponding piece shall have a regular and true relation to each other for the admission of said pins, thereby forming a dowel-pin joint in the usual way, and of which gauge the following is a more complete and full description:

In Fig. 1, A represents the bed of the gauge, and which consists of a plain flat board, having on one side a flange or gauge-piece, B, so attached thereto that it can be removed and placed in other positions, for a purpose presently shown. C is an adjustable block, secured to one corner of the top of the bed-piece, in the position shown in Fig. 2. In said block are guide-holes *a* for the admission of the boring-bit, and whereby it is guided and held in proper position for boring in the manner as follows: The bed A referred to is fastened to the work-bench in such position as to bring the side or edge shown in Fig. 1 fronting the workman. A piece of stuff, D, which may represent a leg of a table, to which the side and end pieces or rails are to be attached, is laid upon the bed A, as shown in Figs. 1 and 2, in which it will be seen that one side of the square part of the leg is placed close to the back side of the block C and the end thereof against the gauge-piece or flange B, as shown in Fig. 2. In this position of the block the dowel-holes are bored therein by inserting the boring-bit in the holes *a*, which will guide and hold the bit while boring into the leg or piece of stuff D. The holes therein bored will, as a consequence, be of the same number and have the same relation to each other as to position as the holes *a* in the block C. In order to bore the holes in the end of the rail or side piece E, Fig. 4, so that they may exactly correspond in relative position to the holes bored in the leg D, and which is represented in Fig. 5, the block C is removed and secured to the opposite corner of the bed, as shown in Fig. 4. So also is the gauge B, against which the edge of the rail is placed so as to cause the hole nearest the edge to be bored the same distance therefrom as the first hole is from the upper end of the leg D, to which the side piece or rail is to be attached. In consequence of the holes *a* in the block C being in such relation to each other as shown, it becomes necessary, in order that they may correspond with the holes bored in the leg, to reverse the position of the block when changing it from one side of the bed A to the other—that is to say, the block must be turned upside down; and at the same time the edge *b* of the block, shown fronting the operator in Figs. 1 and 2 must be reversed, thereby bringing the inner edge *c*, Fig. 2, to the front, as shown in Figs. 3 and 4. This, as will be obvious, will cause an exact relation of the holes bored in the leg and those bored in the end of the side piece E to be attached thereto. This reversing the end of the block is not required when the holes are in a right line, as shown in Figs. 6 and 7, but which requires to be simply turned upside down in moving it from one side of the bed to the other for the purpose of boring the two parts to be united. The leg and side piece, when bored, are then put together by inserting dowel-pins *e* in one set of holes, which, as a consequence, will fit into the holes made in the corresponding piece, and into which they are driven, thereby completing the joint.

This joint is much more easily made than the ordinary tenon-and-mortise joint; is also stronger, and can be made in much less time.

A greater or less number of dowel-pins may be used, as the strength and size of the joint and work may require.

For light work the holes may be bored in the same line, which will not require the block

C to be reversed end for end on turning it for boring the companion piece; but for heavy work the pins should be arranged as shown in Fig. 5, which will make a much stronger joint than if the pins were all in the same right line.

Claim.

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

The dowel-gauge herein described, consisting of the reversible block C, side pieces B, and bed A, arranged and constructed in the manner as and for the purpose specified.

JOSEPH ER.

Witnesses:
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