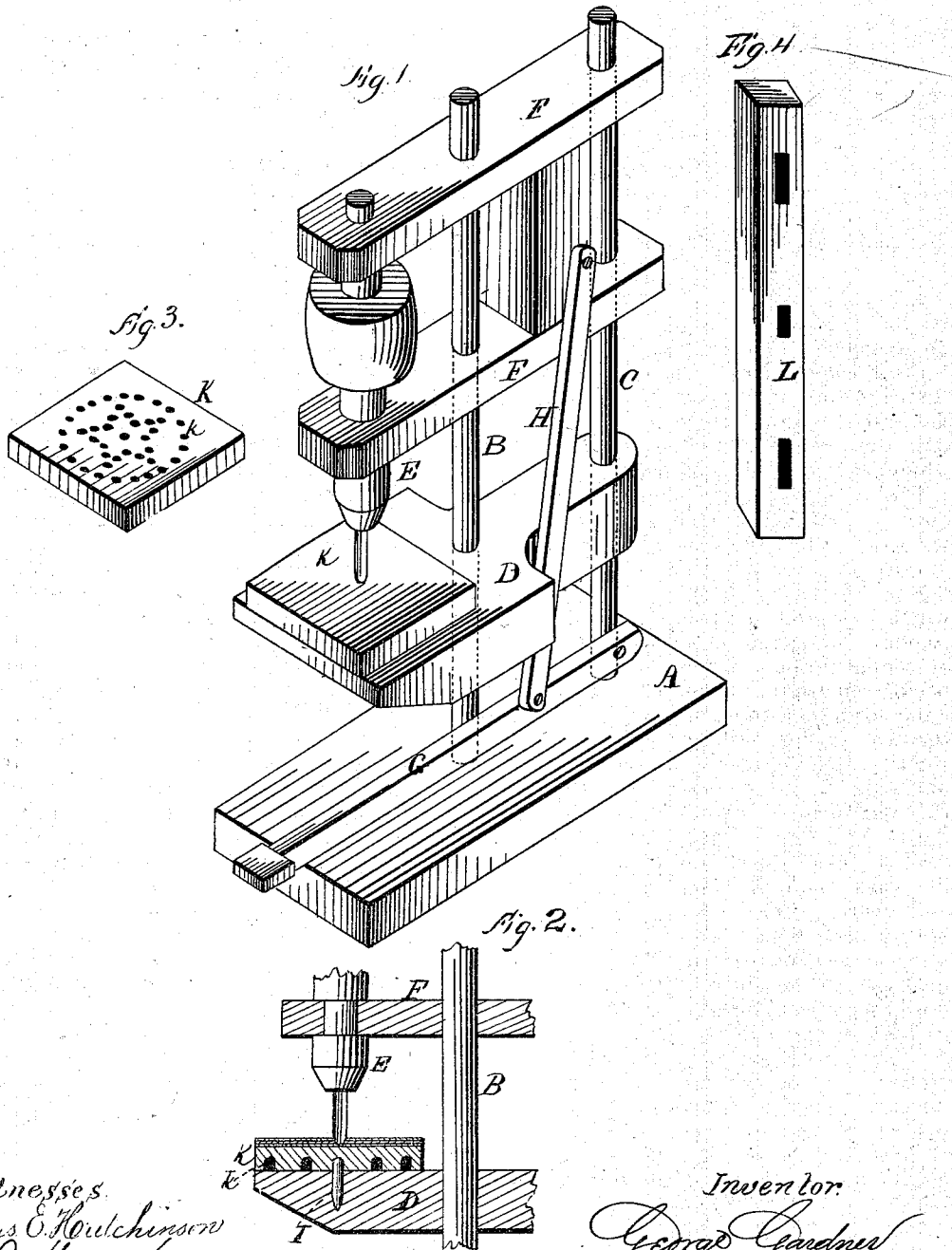


G. GARDNER.
Boring-Machines.

No. 146,246.

Patented Jan. 6, 1874.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE GARDNER, OF GLEN GARDNER, NEW JERSEY.

IMPROVEMENT IN BORING-MACHINES.

Specification forming part of Letters Patent No. **146,246**, dated January 6, 1874; application filed May 27, 1873.

To all whom it may concern:

Be it known that I, GEORGE GARDNER, of Glen Gardner, in the county of Hunterdon, in the State of New Jersey, have invented certain Improvements in Boring-Machines, of which the following is a specification:

The object of my invention is to supply a machine capable of boring or mortising designs or figures, the exact duplicates of previously-prepared patterns, without necessitating preliminary marking. My improvement, which was projected primarily with a view to provide convenient means for boring designs or configurations of holes in chair seats and backs, consists in the employment, on an ordinary boring-machine, of a center fixed upon the table in line with the axis of the boring stock or spindle, and a pattern containing the particular figure of holes to be reproduced in the chair seat or back. The pattern, having had a chair seat or back secured to it upon its reverse side, is centered by means of one of its holes upon the fixed center of the table, and a corresponding hole bored through the seat or back, after which the connected pattern and seat or back are shifted to the next hole, and so on successively until the entire design has been duplicated in the chair seat or back by the auger or drill.

Figure 1 is a perspective view of a boring-machine embodying my improvement. Fig. 2 is a sectional detail view. Figs. 3 and 4 illustrate in perspective two kinds of patterns.

The same letters of reference are used in all the figures in the designation of identical parts.

The boring-machine delineated in the annexed drawings consists of a bed-plate, A, carrying two fixed standards, B and C, a table, D, secured to the standards, and a boring stock or spindle, E, which turns in bearings on the frame F, which is capable of sliding on the standards B and C, and is depressed by means of a treadle, G, through the medium of a connecting-rod, H. A center, I, is secured upon the table D centrally under the boring-stock, being either permanently fixed thereto, or loosely set in a hole or socket therein, so as to project a short distance above the face of the table. The pattern K is provided in one side with a configuration of holes, *k*, in which the center fits snugly.

It is evident that my invention is also applicable to mortising-machines, in which the center I may take the form of a blade placed vertically under the edge of the chisel. L represents a pattern for a mortising-machine.

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

The combination of the bed-plate A, having the fixed standards B C, table D, spindle E, frame F, treadle G, connecting-rod H, center or stop I, and pattern K, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name this 24th day of April, 1873, in presence of two subscribing witnesses.

GEO. GARDNER.

Witnesses:

DANIEL O. YOUNG,
FRED. B. TUNNBOWER.

500 words.