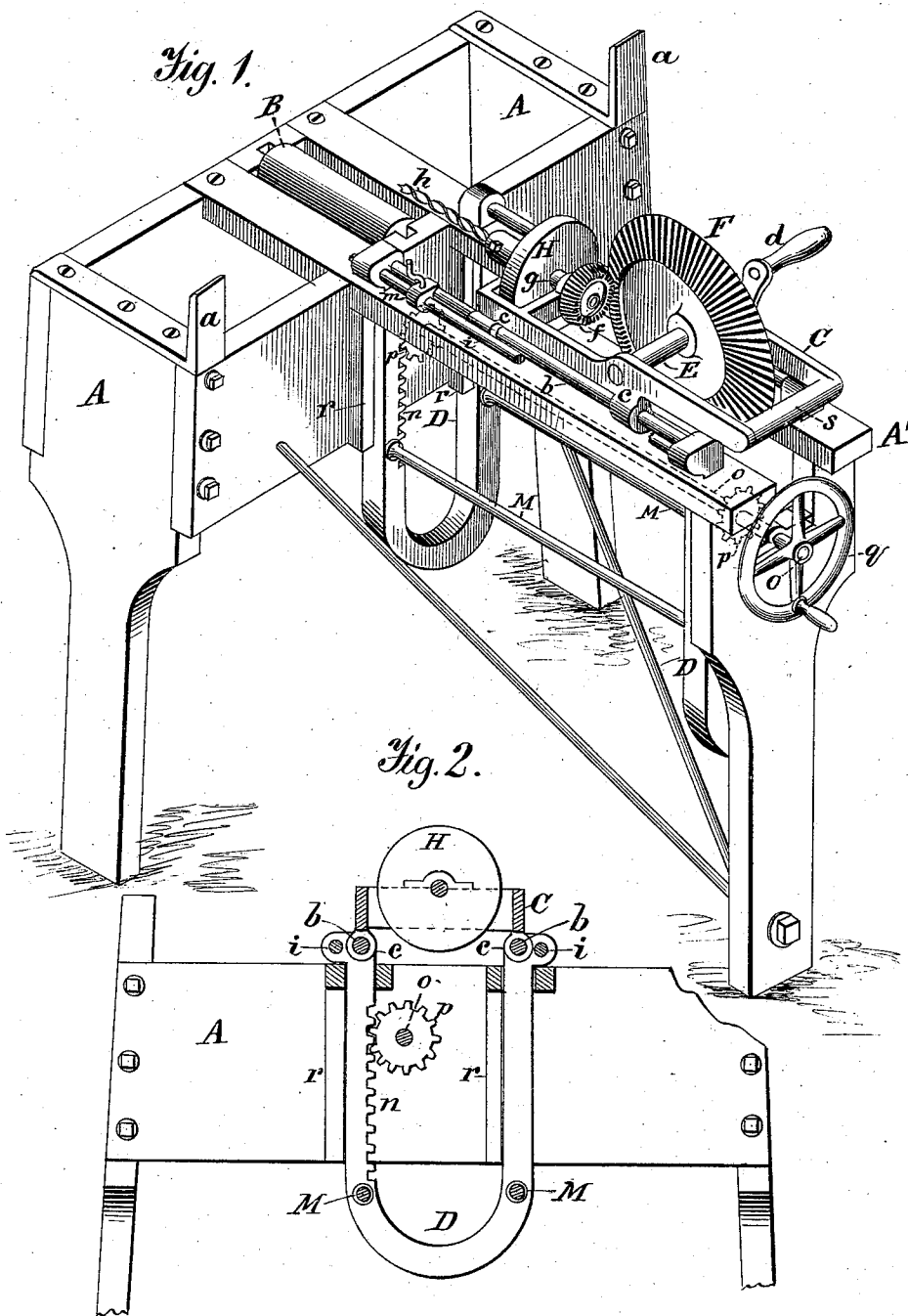


(No Model.)

R. M. McDANIEL.  
BORING MACHINE.

No. 290,339.

Patented Dec. 18, 1883.



Witnesses.  
A. Ruppert  
H. A. Daniels

*Inventor:*  
Rob<sup>t</sup> M<sup>c</sup> Daniel  
England by Blanchard  
Attys.

# UNITED STATES PATENT OFFICE.

ROBERT M. McDANIEL, OF LAFAYETTE, INDIANA.

## BORING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 290,339, dated December 18, 1883.

Application filed October 6, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT M. McDANIEL, a citizen of the United States, residing at Lafayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Boring-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to wood-boring machines; and it consists in certain improvements in the construction of the same, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a wood-boring machine having my improvements. Fig. 2 is a transverse section of the same, taken near the balance-wheel indicated by H.

A designates a table or frame, on which is placed the timber to be bored, said frame being provided with a roller, B, on which the timber rests, so that it may be easily moved lengthwise. The angle-irons *a*, fastened to the frame, are for the purpose of holding the timber in place. An additional frame, A', extends at right angles from frame A, to support the operating mechanism of the machine.

C is a frame having lugs *c*, formed with apertures, through which pass the horizontal rods *b*, which have their extremities secured to the two frames D, at the upper ends of said frames, the said rods forming guides for frame C in its movement. A shaft, E, having a crank, *d*, and bevel-gear F, has its bearings in the frame C, the gear F engaging with a bevel-pinion, *f*, on a shaft, *g*, which also has bearings in said frame.

H is a balance-wheel on shaft *g*, said shaft being provided with a clutch or thimble which holds the boring-bit *h*. Two rods, *i*, run parallel with the guide-rods *b*, and have their ends fastened to the vertical frames D, as shown. An adjustable collar, *m*, forming a stop, is placed on each of said rods *i*, and is so formed that it extends over rod *b*. The collars *m* are secured on rods *i* by means of set-screws, to limit the movement of frame C in operation. The frames D are loosely seated in the frame A', so that they may have a vertical movement in raising or lowering frame C. As be-

fore stated, their upper parts are connected by rods, and their lower parts are also connected by the brace-rods M. The said frames D are each provided with a rack, *n*, engaging with a pinion, *p*, on a shaft, *o*, having bearings in frame A', and rotated by means of a crank-wheel, *q*, the frames moving along the vertical guides *r* when they are raised or lowered by the pinions *p* acting in connection with the racks *n*.

In operation, place the timber to be bored on the frame A, so that it rests on roller B, and sets against the angle-irons *a*; turn the crank-wheel *q*, thus rotating shaft *o* and raising frames D, and consequently frame C, until the bit *h* is in the desired position; then turn crank *d*, causing shafts E and F to rotate, thus operating the bit *h*; press against the bars *s* of frame C, (continuing to turn the crank *d*,) thus pressing frame C forward until the bit becomes engaged in the timber, when it will continue to feed itself until the lugs *c* on frame C close against the stops *m*, said stops having been previously set to regulate the depth of bore. The sliding frame C is then drawn back, withdrawing the bit from the timber.

The bit is readily adjusted to any required elevation, and when the machine is properly geared the boring can be effected much more rapidly than by using a hand-brace or breast-drill. The work is also more accurate and less expensive than when done by hand.

I claim—

In a boring-machine, a horizontal sliding frame, C, having lugs *c*, and carrying a shaft holding a boring-bit, and gearing for said shaft, in combination with the vertically-moving U-shaped frames D, connected by rods *b* and *i*, and provided with the racks *n*, the adjustable stops *m* on rods *i*, and pinions *p*, engaging with racks *n*, the parts being constructed substantially as described, for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT M. McDANIEL.

Witnesses:

GODLOVE O. BEHM,  
W. H. RICHENMEYER.