E. CATHER.

MACHINE FOR BORING BLIND STILES.

No. 185,624. Patented Dec. 26, 1876.

FIG. I

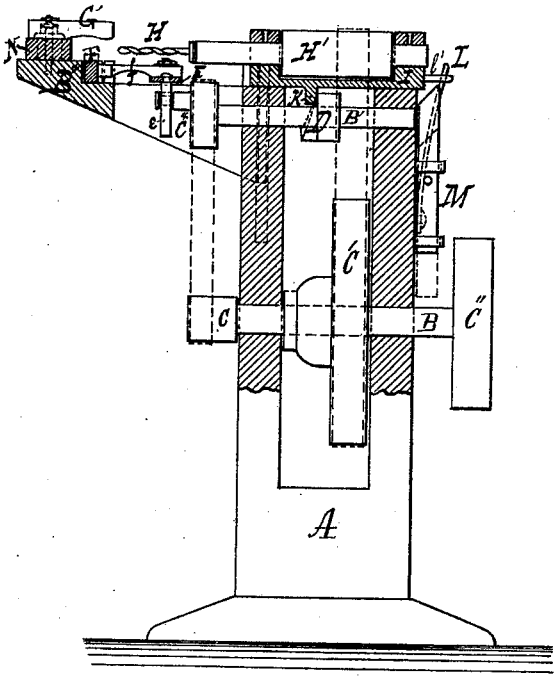


FIG. II

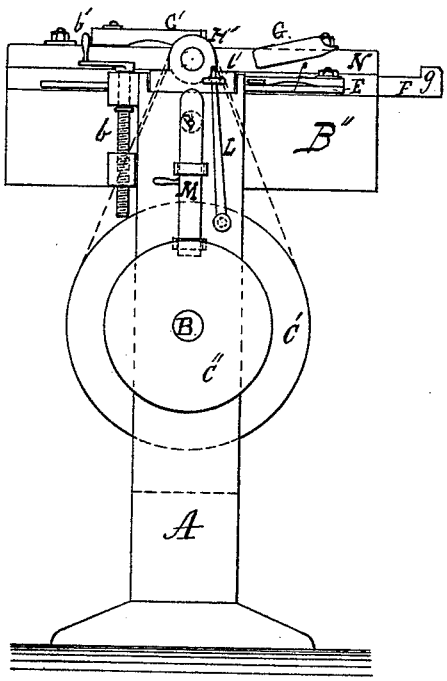
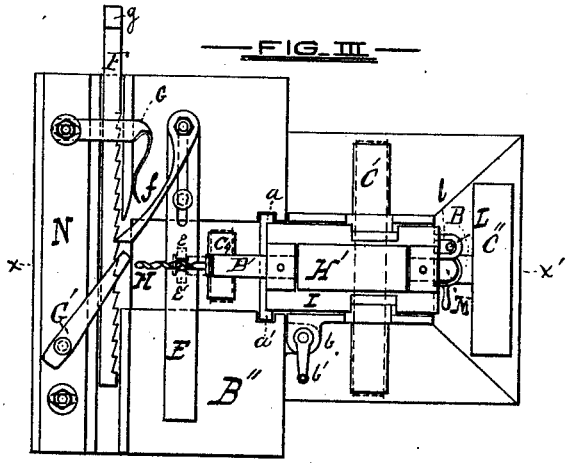


FIG. III



WITNESSES.

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UNITED STATES PATENT OFFICE.

EDWIN CATHER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JAMES R. TRIMBLE.

IMPROVEMENT IN MACHINES FOR BORING BLIND-STILES.

Specification forming part of Letters Patent No. **185,624**, dated December 26, 1876; application filed September 8, 1876.

To all whom it may concern:

Be it known that I, EDWIN CATHER, of the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Machines for Boring Blind-Stiles; and I hereby declare the same to be fully, clearly, and exactly described as follows:

The invention relates to that class of machines in use for boring holes in blind-stiles for the insertion of the slat-pivots; and consists in a combination of parts to subserve that end, as hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 represents a vertical sectional view of my machine on line *x x* of Fig. 3. Fig. 2 is a rear view, and Fig. 3 a plan view, of the device.

The main desiderata in machines of this class are, that the work shall be performed rapidly, that the holes shall be of absolutely uniform depth, and that they shall have exactly a prearranged series of distances between them; to accomplish all of which results my machine has been especially designed, and is especially adapted.

A represents a strong frame, carrying the shaft B, on which are mounted the pulleys C C′ C″. C″ is the pulley to which the driving-power is applied by belt or crank. C′ carries the belt to drive the boring-auger, and C the belt to actuate the ratchet mechanism and cam which impels the auger forward. On the sides of the frame A are mounted guides *a a′*, upon which slides the table B″, carrying the ratchet mechanism and work, and which may be raised or lowered by means of the screw *b* and crank *b′*. The forward part of the table B″ is also furnished with similar guides for lateral adjustment, to accommodate work of varying breadth. E represents a slotted piece of metal, having lugs *e e* on its under side, which pass through an opening in the table, and embrace a crank-pin on the pulley C⁴. On the upper side of the piece E is clamped the pawl *f*, which engages with the ratchet F. F represents a ratchet-piece, having its steps cut at the exact distances which it is desired to have between the holes in the blind-stile, and having a projection, *g*, at the end, against which the stile abuts. H is the auger, which is mounted in a suitable carrier, H′, which latter revolves in a piece, I, which slides in suitable guides in the top of the frame A. The carrier has on its under side a pin, K, which engages with the cam D. At the rear side of the frame A is fastened a spring, L, which enters a link, *l*, on the rear end of the sliding piece I, and keeps the pin K upon the face of the cam D. M is a beveled slide, which presses the shaft B′ and cam D forward against the pin K. When the slide M is depressed the spring I is left at liberty to withdraw the carrier, and with it its attachments on the shaft B, so that the machine is thrown out of gear. G and G′ are clamps to hold the stile to be bored laterally and vertically in place against the table B″ and ledge N.

The operation of my device is as follows: The stile is placed upon the ratchet F, with its end abutting against the projection *g*. They are then inserted at the side of the table B″ until the pawl falls into the first step of the ratchet. The slide M is then raised, throwing the mechanism into gear, and motion is communicated to the auger and to the shaft B.

The cam, in its revolution, engages with the pin K and drives the auger forward into the stile, the crank-pin on the pulley C⁴ being so placed that it is withdrawing the pawl at the time of the forward motion of the auger. When the pin K reaches the fall of the cam the spring L withdraws the auger, and at this moment the pawl makes its forward motion, and carries with it the ratchet and stile. The cam again drives the auger forward, and so on until the ratchet is run out and the stile bored.

The crank-pin is made adjustable on the pulley C⁴, to or from its center, so that the holes may be bored in the stile at any distance apart up to the diameter of the pulley. Should it be desired to bore the holes at irregular or varying distances, it is only necessary to cut the steps in the ratchet at such distances.

The speed with which my machine will work is only measured by the strength of its

materials, and in point of accuracy it leaves nothing to be desired. The spacing and boring mechanisms being geared together, the holes cannot but be bored at the desired distances apart, and the throw of the auger being at each stroke the same, the holes are perfectly uniform as to depth.

The device is almost automatic in its action, requiring no hand-labor except that necessary to introduce the stile, and even that is reduced to a minimum, since the stile is merely laid upon the ratchet-piece, and the necessity for fastening it thereupon by means of screws or otherwise is entirely done away with.

In machines of this class heretofore some such fastening has been required, resulting in the waste of much valuable time and the defacement of the work.

Instead of throwing the machine out of gear by drawing the auger back, a similar or equivalent mechanism might be used for moving the work forward out of reach of the auger. Such mere modifications of my device I consider entirely within the limits of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the shaft B′, of the slide M, substantially as shown and described.

2. The combination of the shaft B′, having cam D, with the slide M, substantially as described.

3. The combination of the slide M with the spacing mechanism and shaft B′, the latter carrying the cam D, as set forth.

EDWIN CATHER.

Witnesses:
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