J. S. WAUGH.

MACHINE FOR MORTISING AND BORING.

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2 SHEETS—SHEET 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Inventor

Johnson S. Waugh

Witnesses

Elias W. Fissell

Eliza B. Cook.
To all whom it may concern:

Be it known that I, JOHNSON S. WAUGH, a citizen of the United States, residing at Shepard, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Machines for Mortising and Boring; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of the invention is to provide an improved machine especially adapted for mortising doors for the reception of locks and for boring keyholes and holes for the spindles of latch-knobs. The invention, however, can be used for other purposes—as, for example, routing, gouging, or housing.

The invention consists in the construction hereinafter described and claimed.

In the accompanying drawings, illustrating one embodiment of the invention, Figure 1 is a view in side elevation showing the machine applied to the edge of a door in position for cutting the mortise. Fig. 2 is a top view of the same in the same position, but with some parts broken out. Fig. 3 is a view similar to Fig. 2, but showing the machine turned around to stand at right angles to the position in which it appears in Fig. 2 and moved laterally to bore, for example, a hole for the knob-spindle. Fig. 4 is a section on the line y y, Fig. 1, but on a magnified scale. Fig. 5 is a detail sectional view on the line x x, Fig. 2. Fig. 6 is a sectional view on the line z z, Fig. 3, looking up, but with remote parts omitted.

In the several views, 1 designates a frame, which in the operative position is fixed. This frame supports the master-wheel 2, which is a large internal spur-gear. The frame or slide-way, which is designated 3, for carrying the tool-holder is pivoted to rock at 4 in the frame 1. The tool or bit (designated 4) is swiveled in a slide-piece or tool-holder 5, working in the frame 3. The shank of the tool is made with a longitudinal groove 6, into which projects a pin 7 in the hub of a bevel-gear 5. The bevel-gear 5 is engaged by a bevel-gear 6, secured on a short shaft 7, upon which shaft is also secured a spur-pinion 8, that is engaged and driven by the master-gear 2. It will thus be observed that the tool can be rotated and rocked or oscillated and at the same time be moved longitudinally with respect to its carrying-frame. The tool-hold-
frame 1 are provided with holes 18 and 14d, and by which the tool is rotated, a shaft journaled in said frame concentrically with the pivot upon which the tool-holder slide way rocks, a gear on said shaft adapted to drive said pinion, and means for driving said shaft.

3. In a mortising-machine, the combination of a frame, a master driving-wheel supported therein, a rocking tool-carrying frame, a tool-holding slide in the rocking frame, a tool swiveled to said slide, gearing operated by the master-wheel to rotate said tool, divergent cams on the tool-holding slide and points of contact on the frame carrying the master-wheel for said guiding-cams one of which points is adjustable.

4. In a mortising and boring machine, the combination of a frame carrying the mortising and boring mechanism, a clamping-frame for attaching the machine to the article to be mortised and bored one member of which clamping-frame is provided with a slide-way, a frame adjustably secured to slide on said slide-way, means for hinging the mortising and boring mechanism to said last-named frame whereby the mortising and boring mechanism can be placed to mortise the edge of the door or to bore a hole in the door at right angles to such mortise.

5. In a mortising and boring machine, the combination of a frame carrying the mortising and boring mechanism, a clamping-frame for attaching the machine to the article to be mortised and bored one member of which clamping-frame is provided with a slide-way, a frame adjustably secured to slide on said way, means for hinging the mortising and boring mechanism to said last-named frame whereby the mortising and boring mechanism can be placed to mortise the edge of the door or to bore a hole in the door at right angles to such mortise, and means for locking the mortising and boring mechanism in the said positions.

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

JOHNSON S. WAUGH.

Witnesses:

U. R. Peters,

Benj. Finckel.