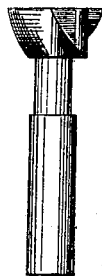
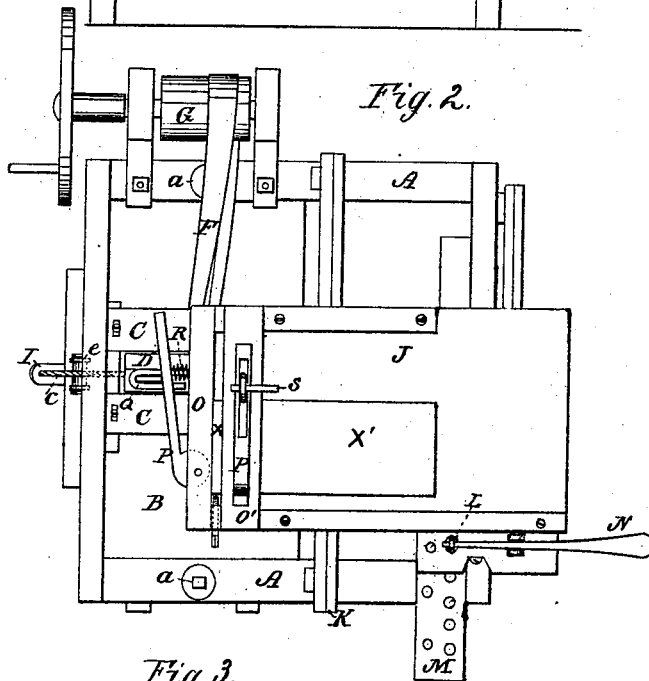
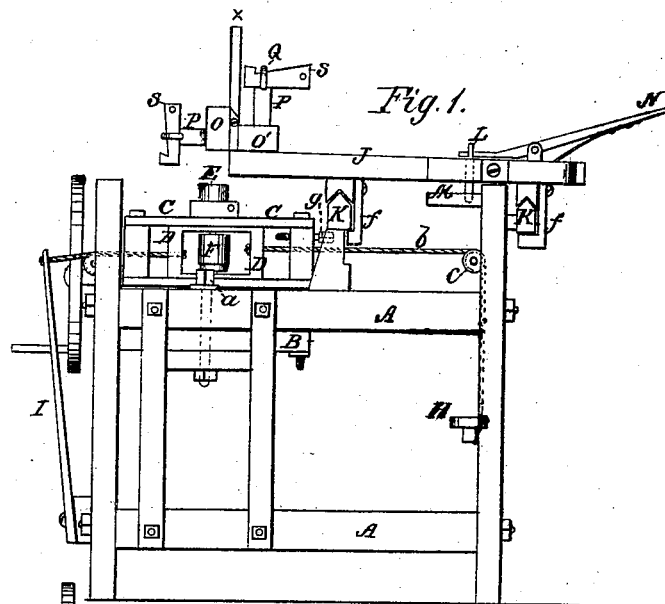


C. P. BAILE.
Dovetailing-Machine.

No. 167,727.

Patented Sept. 14, 1875.



WITNESSES:
W. W. Hollingsworth
John Kemou

INVENTOR:
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UNITED STATES PATENT OFFICE.

CHARLES P. BAILE, OF NEW WINDSOR, MARYLAND.

IMPROVEMENT IN DOVETAILING-MACHINES.

Specification forming part of Letters Patent No. 167,727, dated September 14, 1875; application filed July 8, 1875.

To all whom it may concern:

Be it known that I, CHARLES P. BAILE, of New Windsor, in the county of Carroll and State of Maryland, have invented a new and Improved Dovetailing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a plan view. Fig. 3 are details of the cutter-heads.

This invention relates to certain improvements in that class of dovetailing-machines in which the tenons and mortises are formed by a revolving cutter-head; and it consists in the peculiar construction and arrangement of parts, as hereinafter described, and subsequently pointed out in the claim.

In the drawing, A represents the main frame of the machine, made either of wood or metal. B is a horizontal bed, attached to the cross-bars of the main frame and made vertically adjustable by means of the set-screws *a a*. The said bed supports a set of guides, C, in which is contained the sliding carriage D. E is the vertical revolving spindle, that carries the cutter-head, contained in bearings in the carriage. The said cutter-head consists of a series of sharp spiral cutting-edges arranged in the shape of an inverted frustum of a cone, so as to make a dovetail cut when moved laterally. The carriage D is made in two pieces, so as to admit of the removal of the cutter-head, and also to allow the two parts of the bearing to take up the wear. The spindle E is rotated by a belt, F, and pulley G, operated either by hand through a hand crank or by any other suitable actuating-power. H is a treadle, which is connected by a cord, *b*, passing over pulley *e* with the carriage D, by depressing which said treadle the carriage and cutter-head are made to move horizontally against the boards to be dovetailed. I is a spring upon the opposite side of the carriage, and attached to the same by a cord, *c*, passing over pulley *e*. Said spring serves to retract the carriage and cutter-head after being moved up by the treadle, and in the place of the same a weight may be used to perform the same function. J is the sliding table, for holding the boards to be dovetailed. This table is mounted upon V-shaped guides K, and

is held in place by the keepers *f*. L is a locking-bolt contained within the table J, and engaging with a series of graduated holes in a subjacent bar, M, to regulate the spaces between the dovetails. Said bolt is adjustable in said series of holes, and is operated by a spring-seated lever, N. O O' are two bars containing clamping devices for the boards, to hold them in proper rectangular position. The said clamping devices consist of cams P, with lever-extensions, staples Q, springs R, and wedges S, the springs serving to hold the cams out of the way of the boards to be inserted. The machine being adjusted as to depth of cut by the screws *a*, as to length of cut by a screw, *g*, and as to the interval by means of the locking-bolt, the boards X X' are set up at right angles, and both cut together, according to any adjustment that may be desired.

I am aware of the fact that a revolving cutter-head operating upon the same general principle as mine is not new in a dovetailing-machine, and that it has been adjusted, together with a working-table, to regulate the depth and thickness of cut and the interval between the same. I therefore limit my invention to the terms of the claim, in which a vertical revolving cutter-head is arranged to move laterally and horizontally to the boards to be cut, by means of which arrangement the cutter-head is not liable to come into accidental contact with the boards in the wrong place, as may occur in machines having a horizontal cutter-head journaled in a vertically-movable frame, in which construction the gravity of the frame is liable to produce the same result.

Having thus described my invention, what I claim as new is—

The combination of the vertical revolving cutter-head, the horizontally-sliding carriage D, made in two pieces and carrying the cutter-head, the horizontal guides C for supporting the carriage, and the vertical adjustable bed B, upon which the guides are placed, substantially as and for the purpose described.

The above specification of my invention signed by me this 3d day of July, 1875.

CHAS. P. BAILE.

Witnesses:

SOLON C. KEMON,
CHAS. A. PETTIT.