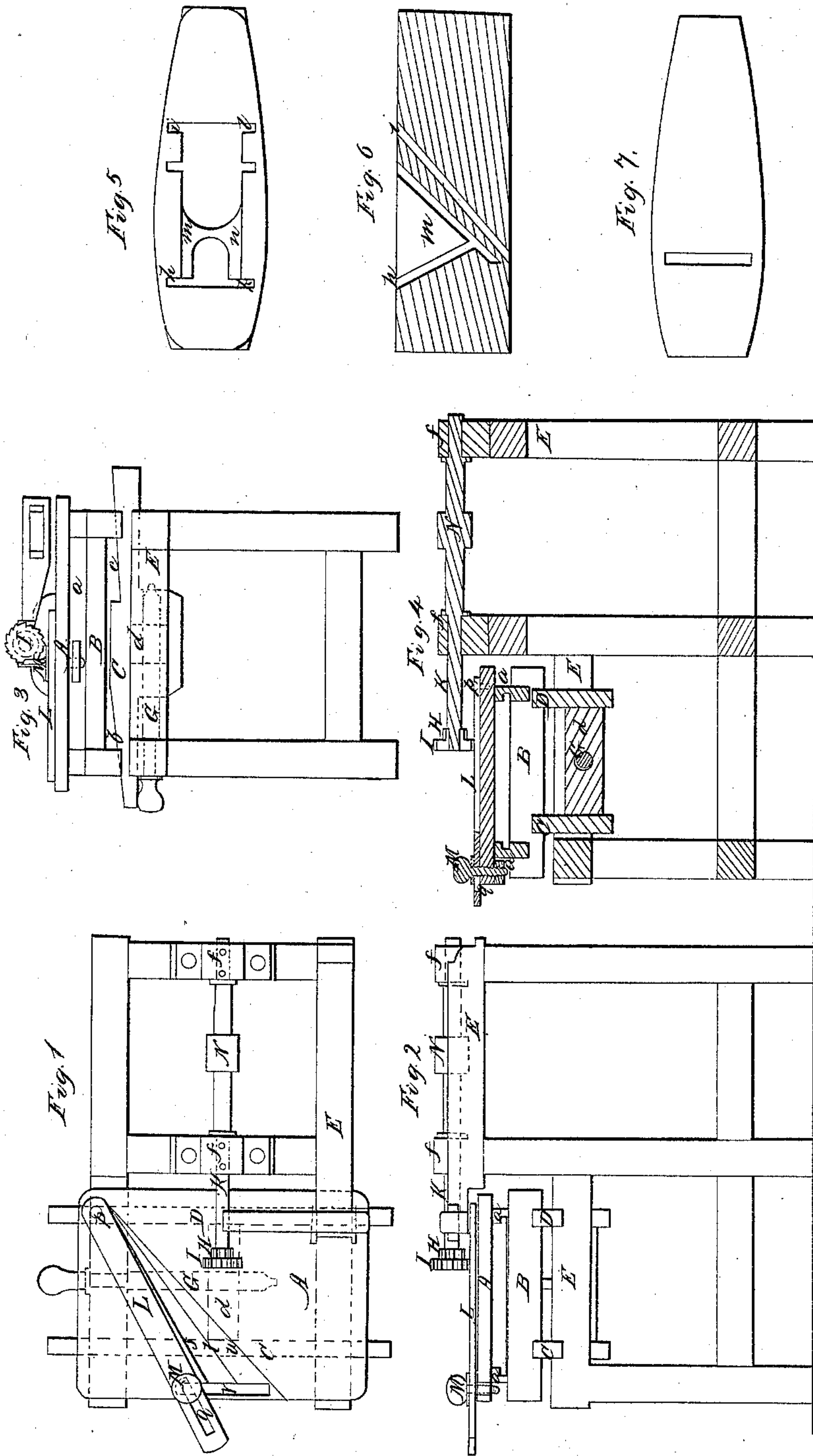


# H. S. Derrey, Mortising Machine.

No 16,954.

Patented Mar. 31, 1857.





# UNITED STATES PATENT OFFICE.

HENRY S. DEWEY, OF BETHEL, VERMONT, ASSIGNOR TO H. S. DEWEY AND L. W. NEWTON.

## MACHINE FOR CUTTING THE THROATS OF CARPENTERS' PLANE-STOCKS.

Specification of Letters Patent No. 16,954, dated March 31, 1857.

*To all whom it may concern:*

Be it known that I, HENRY S. DEWEY, of Bethel, in the county of Windsor and State of Vermont, have invented a new and useful Machine to be Used in the Manufacture of Throats in the Stocks of Joiners' Planes; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a top view of said machine. Fig. 2, a side elevation of it. Fig. 3, an end elevation and Fig. 4, a central, vertical and longitudinal section of it. Fig. 5, is a top view of the plane stock as cut by said machine. Fig. 6, is a central and longitudinal section of said stock. Fig. 7, an underside view of it.

By the aid of my machine, the greater part of the throat of a plane stock may be very rapidly and accurately formed as will be hereinafter described.

In carrying out or constructing my invention, I employ a movable table or carriage, A, which I support on parallel rolls or ways, *a, a*, affixed on a frame B, whose end timbers rest and are sustained on adjusters, C and D, each of said adjusters being formed with inclined surfaces, *b*, and *c*, on which the frame, B, rests. The two adjusters are connected together by a cross bar, *d*, and rest on a supporting frame E, they being moved endwise by the action of a screw, G, applied to their cross bar, *g*, and to the frame, E, as shown in the drawings. By moving the adjusters, C and D, longitudinally either in one direction or the other, the frame, B, may be elevated or depressed so as to adjust the movable carriage, A, to such a height with reference to the cutters as occasion may require. These cutters are shown at H and I, they being circular saws, or bars arranged side by side and fixed upon a horizontal shaft, K, supported in bearings, *f, f*, erected on the frame, F, the whole being arranged as shown in the drawings. The cutter, H, which is the smaller in diameter, I term the "shaft passage cutter," while the other cutter or that marked I, may be termed the "plane iron and wedge throat cutter" I, the inclinations of the bearing surfaces of the plane, iron and wedge throat are formed. It also serves to form that of the shaving throat, the cutter, H, at the same time operating to remove large portions of the wood

required to be removed in order to produce the two throats. In Figs. 5, 6, and 7, the paths of the cutter, I, are shown at *h, i, k, l*, the paths of the other cutter at *m, n*, the stock when cut by the machine taking the form as represented in said Figs. 5, 6 and 7.

In connection with the movable carriage A, and the cutters H, I, an adjustable ruler or bearer L, is employed. This ruler lies upon the top surface of the carriage or is arranged thereon as shown in Fig. 1. It turns at one end on a pivot or pin, *p*, and has a slot, *q*, made through it, near its other end as shown in the said figure. A, clamp screw M, works through the said slot and another such slot, *r*, made through the adjustable carriage, A, as shown in Figs. 1 and 4. Three gage lines *s, t, u*, are marked on the top surface of the table, A, as shown in Fig. 1, the same serving to indicate the positions to which the inner edge of the ruler is to be adjusted in order to enable the cutters to form the throats. To the shaft K, a pulley N, may be applied for the purpose of causing the said shaft to be put in revolution by an endless belt proceeding from some suitable motor.

In operating with the said machine, the piece of wood, of which the plane stock is to be formed should have its opposite sides parallel, the reduction of such sides, so as to impart to two of them the curved form shown in Fig. 5, being subsequently effected. In the larger sizes of planes no such reduction will be necessary. In order to reduce the stock by the cutters, H, I, it is placed upon the movable carriage, A, and against the inner edge of the ruler or bearer, L. Under these circumstances, the carriage is to be moved forward so as to carry the stock into contact with the cutters, which being put in revolution, and its carriage moved farther underneath them will cut into the stock. In operating with this machine, another cutter or bur is first employed to form by successive cuts, the main part of the shaving throat. After this cutter has done its office, the cutters H and I, are brought into use, and the object of the smaller is to cut for the shaft, a path into those parts of the wood, that are left between the cavity first cut and the channels made by the cutter I.

By successive and proper adjustments of the bearer on the carriage, so as to cause the



cutters to operate to the required inclination with respect to the bottom of the plane stock, and by properly adjusting the plane stock, I may by successive operations effect the removal of most of the wood necessary to the formation of the mouth or mouths, the stock being reduced in the manner shown in Figs. 5, 6, and 7. After such reduction has been effected, the surplus wood to be removed in order to finishing the throats may be removed by chisels and any other ordinary and well known tools.

The shaft path cutter becomes essential in order to enable the cutter to perform its functions, as without it the wood intervening between its path and the recess previously made by the cutter first used, will pre-

vent by contact with the shaft, the cutter, I, from entering farther into the wood.

What I claim is—

The combination of the shaft path cutter, H, the plane iron and wedge throat, I, the movable carriage, A, and the adjustable bearer, L, by which the inclinations of the ends of the throats may be obtained as described, the whole being in manner and for the purpose as specified.

In testimony whereof I have hereunto set my signature this twenty sixth day of September A. D. 1856.

H. S. DEWEY.

Witnesses:

ISAAC T. MORGAN,  
GEO. B. CHASE.