

W. E. PLUMMER.

SAW-TABLES.

No. 182,286.

Patented Sept. 19, 1876.

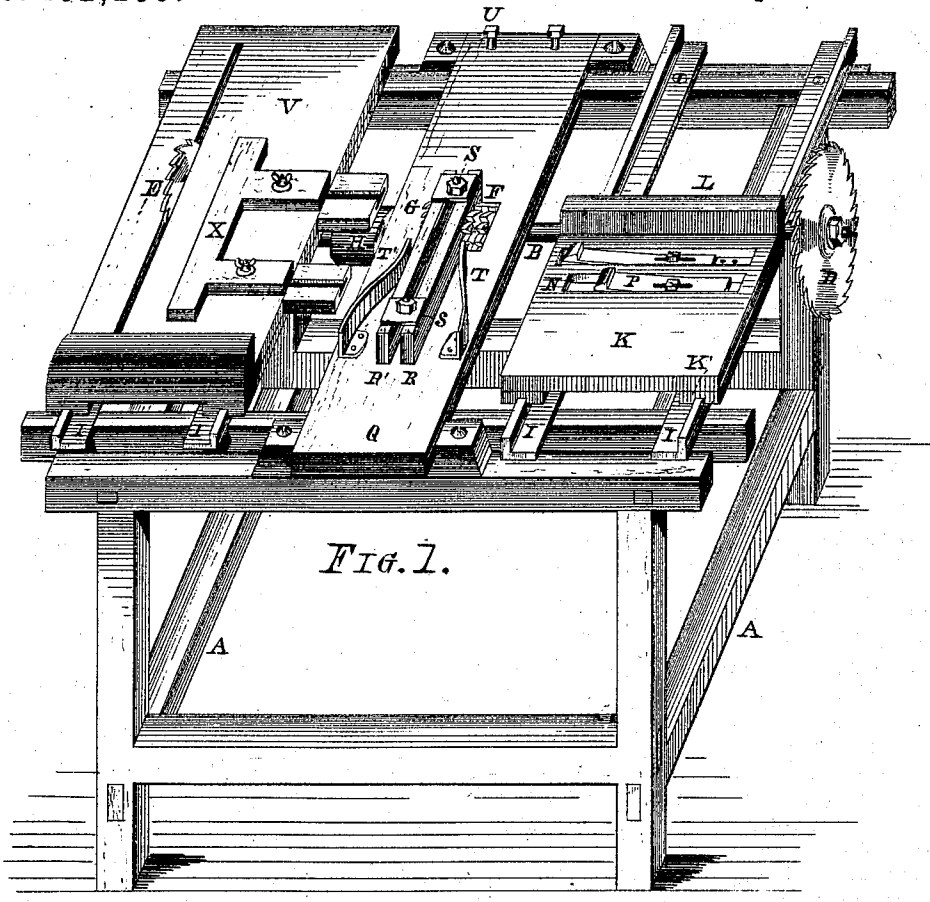


FIG. 1.

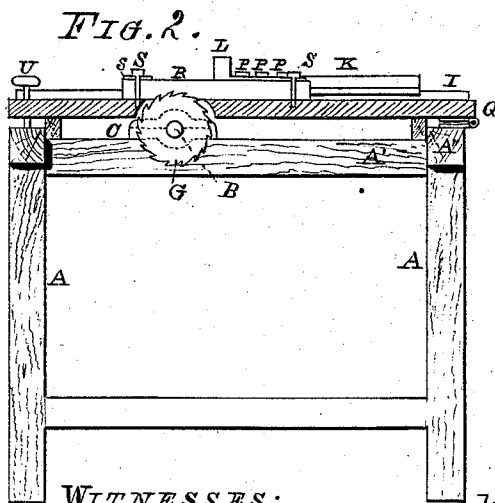


FIG. 2.

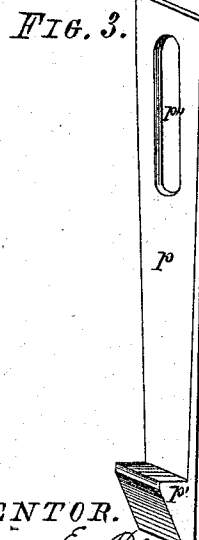


FIG. 3.

WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM E. PLUMMER, OF BUFFALO, NEW YORK.

IMPROVEMENT IN SAW-TABLES.

Specification forming part of Letters Patent No. 182,286, dated September 19, 1876; application filed July 5, 1876.

To all whom it may concern:

Be it known that I, WILLIAM E. PLUMMER, of Buffalo, in the county of Erie and State of New York, have invented a new Improvement in Saw-Tables; and I do hereby declare that the following description, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification:

This invention relates to the construction of saw-tables designed especially for packing-box making; and its object is to facilitate the manufacture thereof.

To this end it consists in the peculiar construction and arrangement of parts, as will hereinafter be first described, and then pointed out in the claims.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I shall proceed to describe its construction and operation, and thereby refer to the hereinbefore-mentioned drawings, in which—

Figure 1 is a perspective view of my complete saw-table. Fig. 2 is a transverse sectional elevation taken through the center of the matcher-table; and Fig. 3 is a perspective view of one of the gages, P, in the crosscut-saw table.

Like letters of reference indicate corresponding parts in all the figures.

A is a rectangular frame, of suitable material and construction, upon which are mounted the various operating parts of my machine. B is the main shaft or mandrel, longitudinally traversing the frame A, revolving in bearings C arranged upon the upper cross-timbers A'. Upon this mandrel are fixed, on both of its extremities, circular saws D and E respectively, the former being a crosscut and the latter a rip saw. Centrally upon the same mandrel are arranged two cutters, F and G, one of which being for tonguing and the other for grooving, and it is revolved by the pulley H from any suitable prime motor, &c. Upon the upper timbers A'' are placed two sets of guides, I, that of the right-hand side being for the crosscut table, and the opposite set for the rip-saw table. K is the crosscut-saw table, provided with slides K' engaging with the guides I. This table has a hand-railing, L, to serve as a gage and as a means for sliding

it, and is provided on its face near said hand-railing with a series of transverse grooves or recesses, N, within which are adjustably arranged spring-gages P. Q is the matcher-table, located centrally upon the frame A. Upon this table are placed two longitudinal laterally-adjustable gage-pieces, R R', secured to said table by means of the bolts S and transverse plates s. It has, furthermore, two S-shaped spring-guides, T T', and it is hinged to the frame A on its front end, and provided with adjusting-screws U or similar means on the opposite end. V is the rip-saw table. It is provided with guides I and slides K', and also with a hand-railing, L, corresponding to the crosscut-saw table. Upon its face is located an adjustable gage, X. The table V is slotted longitudinally for the passage of the rip-saw E, which protrudes sufficiently to cut the various thicknesses of boards used in the manufacture of packing-boxes and similar articles.

The operation of this machine will be readily understood.

Short logs of bass or pine, commonly known as "bolts," are first cut into boards of suitable thickness upon the usual machines constructed for that purpose. These boards are usually from two to three feet long, more or less, and are taken to the rip-saw table V and cut to proper width, and then handed over to the crosscut-saw to be cut to exact lengths for the boxes to be produced. Upon the table K of the latter saw are placed the adjustable spring-gages P, which can be set to any desired position within the scope of the table. These spring-gages are made of steel, and consist of a very thin shank, p, and a projecting nose, p', as illustrated in Fig. 3. The shank p is provided with a slot-hole, p'', by means of which the gage can be adjusted in conjunction with a series of bolt-holes and a bolt in the table K. There are from two to four or more gages P upon the table, which, when in proper position, project with their projection p' only over the plane of said table. These gages, being adjusted to the various lengths corresponding to the lengths and widths of boxes to be made, can be easily pressed below the surface of the table, so that either one may serve as a gage. The boards are first trimmed on one end without the use of any one of the

spring-gages by pressing it against the hand-railing L, and feeding it through the saw. Now the board is reversed, and the trimmed end placed against the proper spring-gage, according to the length to be produced, and the board again cut.

The spring-gages P are one of the most essential parts of my machine, inasmuch as they enable me to produce various sizes of boxes at the same time without change of gages, and because they enable the operator to see at a glance how he can most advantageously use the piece of wood by placing it against either one or the other of the said gages. He can, therefore, avoid bad or defective spots in the boards by cutting them longer or shorter, as the nature of the piece demands.

If the pieces of board are not wide enough to produce a box of a given depth, they are first ripped to best advantage and then passed over the grooving and tonguing cutters to match them, and again ripped to proper width, which can be readily accomplished upon the matcher-table, which is in close proximity to the rip-saw table. This matcher-table is provided with the adjustable gages R R' and the spring-guides T T'. Here the pieces to be matched are passed between the said gages and guides over the respective cutters F or G, and the desired result produced in a neat and dexterous manner. The gages R R' are rendered adjustable by means of the screws S and the transverse plates s, which, by being slightly loosened, allow said gages being set closer together or farther apart, according to the thickness of the stuff, without adjusting the cutters. In order to adjust the depth of the grooves and length of the tongue, the table Q is made adjustable by means of the set-screws U, or similar means, by which the table

can be elevated or lowered to produce the desired result on both cutters, which are accordingly of a corresponding diameter.

It will be observed that the rip-saw table V is slotted longitudinally for the passage of the saw. This arrangement enables me to true up one edge of the board by placing it on the outer side of the saw and then cutting it to the proper width on the inner side in conjunction with the gage X, which is a very desirable feature in machines of this description.

By the aid of a machine constructed as described the expense of manufacturing packing-boxes is reduced to a minimum, and a superior article produced at that.

Having thus fully described my invention, I desire to secure to me by Letters Patent of the United States—

1. The combination, with the table K, of the series of recesses N and the series of adjustable spring-gages P, consisting of the shank p, provided with the slot-hole p'' and the barbed head p', substantially as described, for the use and purpose stated.

2. The combination, with the table Q hinged to the transverse beam A'' on one end, and provided with adjusting-screws U on the opposite end, of the cutters F and G, guide-bars R R', adjustably secured to said table by the screws S, and transverse plates s, and the two spring-guides T T', the whole constructed and arranged in the manner as and for the use and purpose described.

In testimony whereof I have hereto set my hand in the presence of two subscribing witnesses.

W. E. PLUMMER.

Witnesses:

MICHAEL J. STARK,
FRANK HIRSCH.