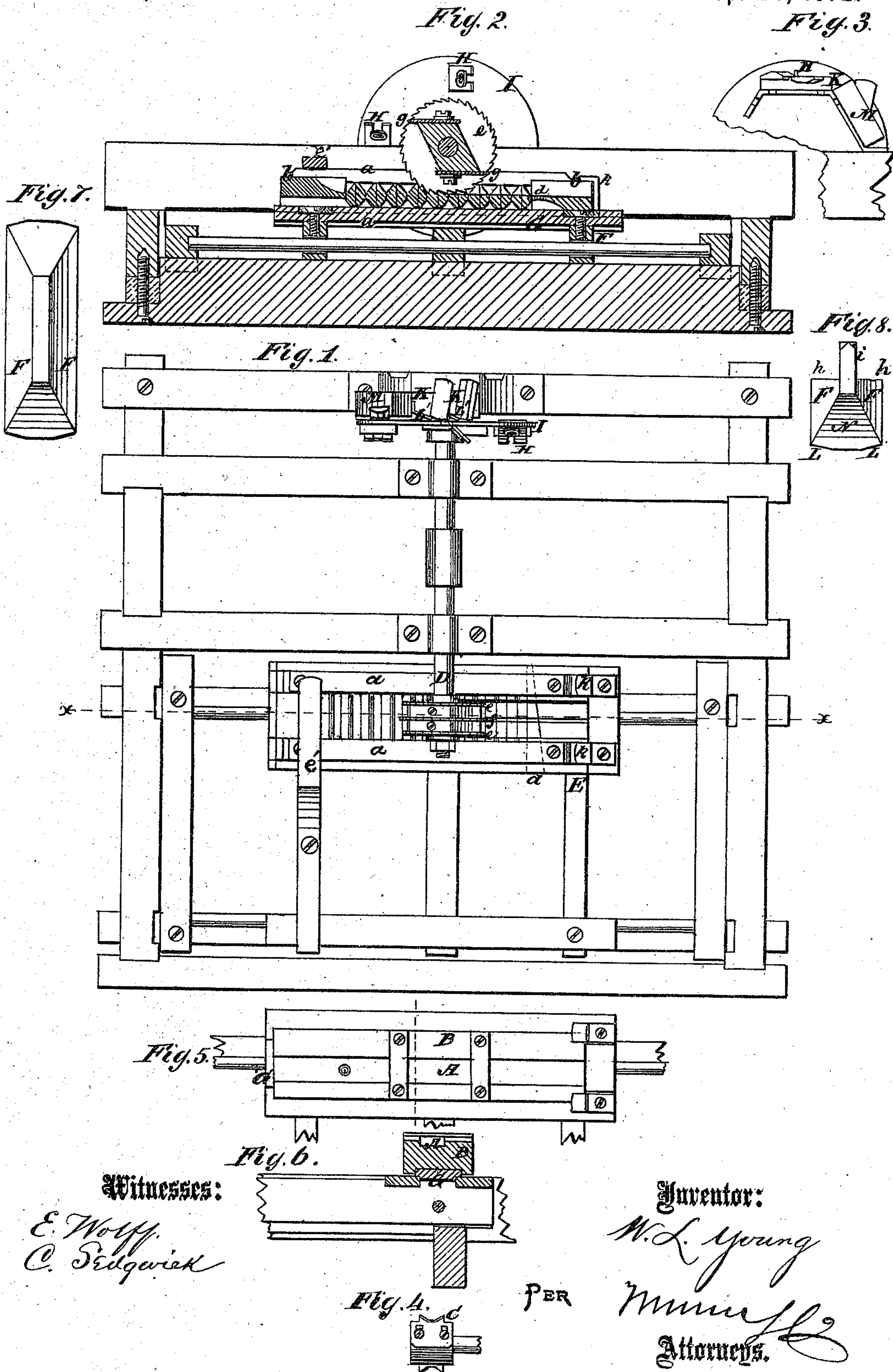


W. L. YOUNG.
Improvement in Machines for Making Boxes for Elevators.
No. 131,648.

Patented Sep. 24, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM L. YOUNG, OF MARTHASVILLE, MISSOURI.

IMPROVEMENT IN MACHINES FOR MAKING BOXES FOR ELEVATORS.

Specification forming part of Letters Patent No. 131,648, dated September 24, 1872.

To all whom it may concern:

Be it known that I, WILLIAM L. YOUNG, of Marthasville, in the county of Warren and State of Missouri, have invented a new Improvement in Machines for Making Boxes, of which the following is a specification:

My invention consists of certain arrangements of apparatus in one machine, whereby I am enabled to perform all the special operations required to make conveyer-flights by power machinery, and govern each particular operation by a standard gage, so that the flight will be much more uniform in respect of the dimensions, and finished better than when done by hand, besides being made very much cheaper.

Figure 1 is a plan view of the machine, showing the arrangements of apparatus for beveling the corners and one side of the flights; also for forming the tenons. Fig. 2 is a sectional elevation taken on the line *x x* of Fig. 1. Fig. 3 is a side elevation of the jointing-disk and the supports for holding the blanks for beveling the corners. Fig. 4 is a front elevation of the cutter used for beveling the side of the long strips from which the blanks are cut to form the backs of the slats. Fig. 5 is a plan view, and Fig. 6 is a section, of the holder of the strips when being dressed by the cutter, Fig. 4. Fig. 7 is a plan of a blank for two flights, showing its condition preparatory to forming the tenons and then separating completed flights; and Fig. 8 is a plan of the back of a completed flight.

Similar letters of reference indicate corresponding parts.

I take long strips of wood, previously prepared in any suitable way, as wide as the widest part of the flights and a little thicker than said flights are to be when completed, and dressed or planed on one side and the two edges, and pass them through the groove A of a bed-piece, B, under the cutter-head C, which is placed on the mandrel D; and the block B is placed on the carriage E for dressing said strips to the proper thickness, and beveling them at F to make the shape for the back of the flights. This block is mounted on the carriage merely because a carriage is used for another operation, which will be described further on, and because it is not desirable to remove the carriage; but said car-

riage is stationary while the strips are being planed, they being pushed along the groove A by hand, one after another. The said bed B is detachably connected to the carriage by an under-cut or dovetail-shaped groove in the bottom and a correspondingly-shaped seat, G, on the carriage, on which the bed is moved endwise in putting it on or taking it off. The object of having the bed detachably connected to the carriage is to be enabled to remove it readily and put on another holder for the blanks to perform another operation on them by another cutter-head on the mandrel B, and thus utilize said mandrel and other adjuncts for two purposes. The strips, after being dressed, as above described, by the cutter C, are sawed into lengths adapted for two blanks by any suitable sawing apparatus, and they are presented at their corners to the cutters H of an edging device in oblique gages K, first one side up and then the other, and at both ends, to dress off all the corners L of the blanks, as clearly indicated in Figs. 1 and 3. Then the back side of each end is presented to said cutters again in the gage M to form the bevels N. Stops L' are provided with the gages K K to regulate the amount to be cut off the corners. Then the blanks are clamped in a frame of four bars, *a a*, and end pieces *b b* by a wedge, *d*, as shown in Fig. 1, the said blanks being set up edgewise and placed side by side; and by this frame they are presented to the cutter-head, consisting of the saws *e e* and *f* and planing-tools *g*, by being moved along on the carriage E, on which the said frame is placed in the same manner that the bed B is, said bed being removed and the cutter represented in Figs. 1 and 2 being applied to the mandrel D, from which the cutter C will, at this time, have been removed. The blanks, being in this manner subjected to the said cutter-head, will have the shoulders *h* and one side of the tenons formed, and the connected tenons of the two will be sawed half off by the middle saw, which is larger than the others. Then, the frame being taken off, turned over, and again pushed along under the saws, the other shoulders, *h*, and sides *i* of the tenons will be formed, and the two blanks will be cut asunder and the batch completed. This frame for holding the blanks is secured on the carriage E by the plate K and button *e'*.

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

1. The combination of the guides K, stops L', gage M, and cutter H I, constructed as and for the purpose described.

2. The combination of the cutter-head (consisting of the outer saws *e e* and a middle saw,

f, projecting beyond the others) and the cutters *g g* with the holding-clamp frame *a a b b*, all constructed as and for the purpose described.

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