(No Model.)

J. CASEY & J. M. STEVENS.

BOX TRIMMING MACHINE.

No. 262,370. Patented Aug. 8, 1882.

Fig. 1.

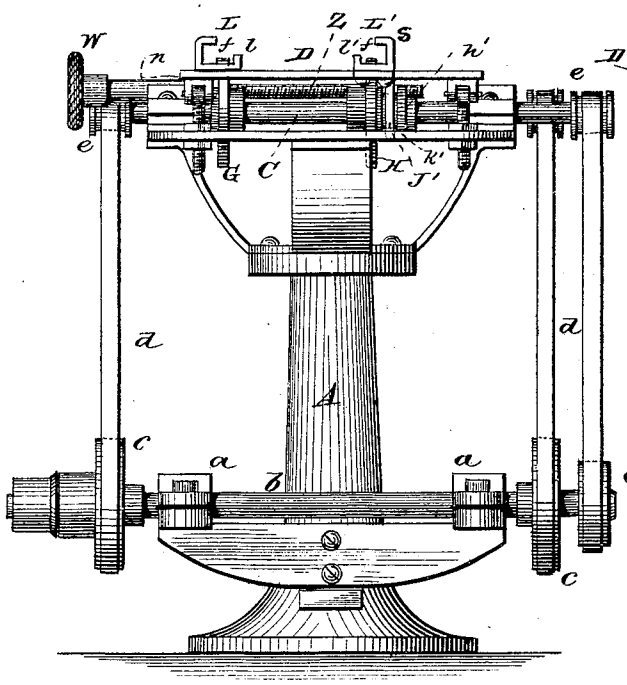


Fig. 2.

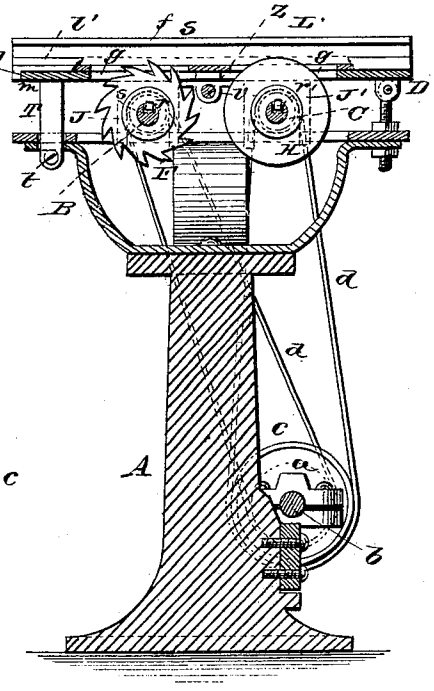
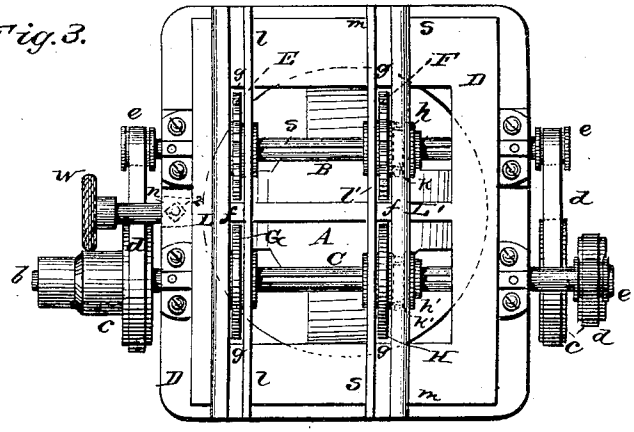


Fig. 3.



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UNITED STATES PATENT OFFICE.

JEREMIAH CASEY, OF NEW YORK, N. Y., AND JOHN M. STEVENS, OF ALLENTOWN, PENNSYLVANIA.

BOX-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,370, dated August 8, 1882.

Application filed March 27, 1882. (No model.)

To all whom it may concern:

Be it known that we, JEREMIAH CASEY, a resident of New York, in the county of New York, State of New York, and JOHN M. STEVENS, a resident of Allentown, in the county of Lehigh, State of Pennsylvania, citizens of the United States, have invented a new and valuable Improvement in Box-Trimming Machines; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of an end view of our box-trimming machine. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a top or plan view.

This invention has relation to means for trimming the edges of the walls of cigar-boxes after they have been put together in box form; and it consists in the construction and novel arrangement of a pair of planing-wheels or cutter-heads on a rotary shaft, the latter being slotted to provide for the adjustment of one or both of said wheels, the whole forming an adjustable double cutter and a pair of polishing or finishing wheels on a shaft parallel to said rotary shaft, said wheels being in line with the heads of the double cutter; of the grooved hubs or journals of the adjustable heads, and the journal-bearings attached to the gage-slide of the table and engaging said grooved hubs; of the table and slide having openings for the operating portions of the cutter-heads and polishing-wheels, and of the adjusting-screw in connection with the slide, all as hereinafter set forth.

In the manufacture of cigar-boxes the thin stock is sawed across the grain to regular measurements, while the edges which run with the grain are left full, so that when the boxes are put together these edges require to be trimmed off neatly and evenly. In order to accomplish this object, as well as to provide for trimming the edges of boxes generally, this machine has been devised.

In the accompanying drawings, the letter A designates the base, standard, or foundation frame of the machine, having near its lower end journal-bearings *a a* for the main shaft *b*, carrying the pulleys *c*, which connect by bolts *d* to the small pulleys *e* of the shafts B and C, on which, respectively, are located the cutter-heads and polishing-wheels.

D represents a hinged table or working-plate, which is designed, when the machine is in operation, to be folded down over the cutter-heads and polishing-wheels, which project through openings *g* in said table to do their work.

On the shaft B, near one end, is keyed the stationary cutter-head E. Parallel thereto, and seated on the same shaft, is the adjustable cutter-head F, which is provided with a lateral sleeve-like extension or hub, *h*, which is grooved around its cylindrical surface, as at *k*. The head F is provided with an internal rib, *r*, in its eye, which engages the longitudinal slot *s*, of the shaft B, and prevents the head from turning on the shaft, while it is allowed free movement in the direction of the length of the shaft, so that the distance between this adjustable head F and the head E can be varied to suit the exact distance apart of the box-edges which are to be trimmed.

On the shaft C, which is parallel to the shaft B, and in line with the cutter-heads E and F, respectively, are located the fast polishing-wheel G and the adjustable polishing-wheel H, the latter being adjustable by means of the slot in the shaft C, which is engaged by the projection *r'* in its eye. The adjustable polishing-wheel H is provided with a lateral hub, *h'*, having a groove, *k'*.

L represents the fixed rib or right line, bearing against which one side wall of the box moves when carried across the table; and *l* indicates a lower bearing, parallel to the bearing L, on which moves that portion of the box which is for the time the lowermost. Between these two straight bearings are the long slots or openings *g g*, through which the edges of the cutter-heads and polishing-wheels project level with the lower bearing, *l*.

S indicates the gage-slide, which forms the adjustable portion of the table, moving on the edges or ways *m* thereof. The slide is provided with a straight bearing, L', for the opposite

side wall of the box, a low straight bearing, l', for the bottom, and with openings g between the two for the cutter-head F and polishing-wheel H, which are adjustable, but must preserve a fixed relation to the gage-slide. In order to secure this relation the slide is provided with the depending yokes or journal-bearings J and J′, which, when the table is folded down over the cutter-heads and polishing-wheels, engage the grooves k and k' of the hubs of the adjustable head F and wheel H. When the table or working-plate is folded down it is firmly secured in position by means of screws t, which engage a tongue, T, of said table.

For the purpose of adjusting the slide S and securing it in position after adjustment, a long screw, Z, is provided, the same being journaled in the table, and engaging by its threaded portion the threaded bearing v in the slide. The screw is provided with a hand-wheel, W, by means of which it may be rapidly turned, and its bearing n is provided with a set-screw, z, whereby the screw can be rigidly secured after the adjustment of the slide, and the latter thereby held firmly in the required position.

The guide-ribs L and L′ have their inner or bearing edges, f, in, or nearly in, the plane of the outer walls of the cutter-heads and polishing-wheels, and when a box is passed between the guides the superfluous edge portions will be trimmed neatly.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. In a box-trimming machine, the combination, with two cutter-heads on a shaft, one of which is adjustable relatively to the other, and a pair of polishing-wheels on a parallel shaft, in line with the cutter-heads and similarly adjustable, of a table and a gage-slide thereon having guide-bearings, and openings for the operating portions of the cutter-heads and polishing-wheels, substantially as specified.

2. A box-trimming machine having parallel shafts B and C, respectively carrying fixed and adjustable cutter-heads E and F and fixed and adjustable polishing-wheels G and H, and a table over the same having an adjustable gage-slide, S, and the yokes or bearings J J′, connecting the slide to the adjustable head and wheel, substantially as specified.

3. In a box-trimming machine, the combination, with cutter-heads and polishing-wheels, of a table having a fixed side guide L and bottom bearing l, and between the two the slots g and the slide S, having the side guide L′, bottom bearing l', and the intermediate slots, g, substantially as specified.

4. In a box-trimming machine, the combination of the parallel shafts, the adjustable cutter, and polishing-heads F and H, provided with grooved hubs h h' and the folding table D, its slide-gage S, operating-screw Z, set-screw z, and the yokes or journal-bearings J J′, engaging the grooves of said hubs, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names separately in the presence of two witnesses.

JEREMIAH CASEY.
JOHN M. STEVENS.

Witnesses:
EMIL BAERS,
JOHN BAERS,
EDWARD H. RENINGER,
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