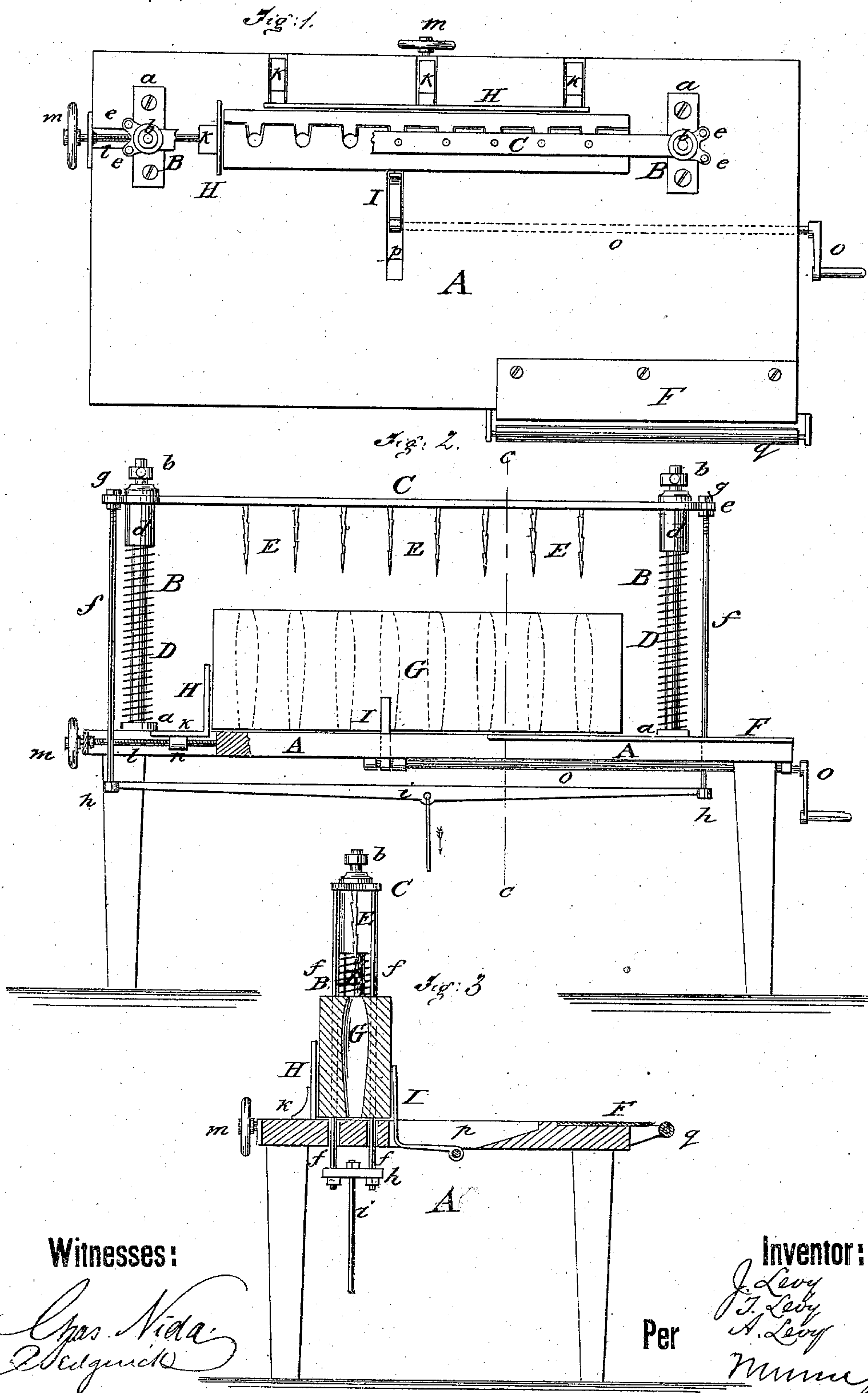


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Machines for Cutting and Perforating Cigars.

No. 137,850.

Patented April 15, 1873.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN MACHINES FOR CUTTING AND PERFORATING CIGARS.

Specification forming part of Letters Patent No. **137,850**, dated April 15, 1873; application filed March 8, 1873.

*To all whom it may concern:*

Be it known that we, JACQUES LEVY, THEODORE LEVY, and ARMAND LEVY, of the city, county, and State of New York, have invented a new and Improved Machine for Head-Piercing and Tuck-Cutting Form-Cigars, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of our machine for piercing cigars with part broken off; Fig. 2, a front elevation of the same, partly in section; and Fig. 3, a vertical transverse section on the line *c c*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of our invention is to furnish to cigar-manufacturers a machine which, by mechanical means, pierces the heads of form-cigars, and cuts at the same time the tucks of the same, improving thereby the smoking quality of the cigars and economizing the time consumed in piercing by hand.

It is well known that it is a main objection to the general use of form-cigars, that in pressing the same the head parts get packed, so that the cigars do not draw well, and consequently are not so popular as they deserve to be. Attempts have been made to remedy this defect by piercing the bunches with hand-needles before putting the wrappers on, but it consumed too much time, and frequently spoiled the heads of the bunches. Our invention is intended to obviate these difficulties and supply a machine which does the work as exact and rapid as may be desired. It consists, mainly, of a working-table, to which upright guide-bolts or standards are applied, which carry the needle-bar held by strong springs, and acting by a treadle-connection. The cigar bunches are placed under the needle-bar in the form-blocks, adjusted thereon, and pierced by the descending needles. A sharp blade at the edge of the table serves to cut the tucks of the bunches when passing the form-blocks to the needle-bar.

In the drawing, A represents the working-table; B, the vertical standards or bolts applied rigidly thereon by plates *a* and strong screws or other means. Ring-shaped heads *b* are adjusted on the top ends of standards B by means of head-screws, and prevent the slip-

ping off of the needle-bar C from bolts B, allowing also the setting of the same at the height required. The horizontal needle-bar C is guided on bolts B by vertical cylindrical pieces *d*, and connected by extension-ears *e* of the same, and adjustable bolts *f*, with the treadle arranged under the table A, conveniently for the easy working of the attendant. Nuts *g*, both above and below ears *e*, connect bolts *f* rigidly with the needle-bar C. Strong spiral springs D of standards B, between cylinders *d* and plates *a*, exert an upward pressure upon the needle-bar C as soon as the pressure upon the treadle is released. Bolts *f* are laterally connected under the table by a cross-bar, *h*, and longitudinally by treadle-bar *i*, which is centrally applied to the treadle-connection, producing thereby an even horizontal motion of the needle-bar C. Needles or perforators E are set vertically into the needle-bar C, with the points downward, and have notches cut in them, which pierce thereby not only the heads of the bunches, and carry small pieces of tobacco back with them, but produce also a channel for the passage of the smoke, which does not close up again, as is the case on piercing with smooth needles. The needles or perforators E are applied at regular intervals along bar C, corresponding exactly to the number of cigars and their distance in the forms so that the points of the perforators fit exactly the heads of the cigars. A sharp blade, F, in connection with a guide-roller, *g*, at the front part of the table, serves for the purpose of cutting the tuck of the bunches which project at the lower side of the form-block.

The attendant passes the form-block G obliquely, like a planer, across the knife, and places it with the same motion under the needles E. The blocks G are adjusted exactly under the needle-points by means of longitudinal and lateral vertical plates H, having bracketed or otherwise applied to them, under right angles, the guide-pieces K, moving in recesses of table A. By means of screws *l* and wheels *m* working into nuts *n* at bottom of guide-pieces K the exact position of the form-cases under the needle-points may be obtained. The form-blocks G are merely pushed toward plates H, and, by a lever-clamp, I, moving in a lateral



slot, *p*, of table A, either by means of a crank, O, at the side of the table, or in connection with the treadle, held firmly in position for the piercing of the heads of the bunches in the forms by the descending perforators.

The tuck-cutting and piercing of the bunches are, by the use of this machine, accomplished rapidly and accurately while the bunches are still in the form-blocks, producing thereby cigars which will fully meet the requirements of the public.

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

1. The needle-bar C having cylindrical guides *d* and ears *e*, in connection with standards B, springs D, and bolt treadle-connection *f h i*, substantially as described.

2. The notched cigar-perforators E, for the purpose specified.

3. Adjustable plates H having guides K, nuts *n* set by bolts *l*, and wheels *m*, substantially as set forth.

4. The clamp-lever I moving in recess *p* of table A, producing the rigid position of form-blocks G, substantially as described.

5. The blade F with guide-roller *q* at front edge of table, operating in combination with form-block G for cutting off tucks, as specified.

6. The combination of the cigar-perforators E, bar C, standards B, springs D, treadle mechanism form-blocks G, adjustable plates H, lever I, and table A, as shown and described.

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