

(No Model.)

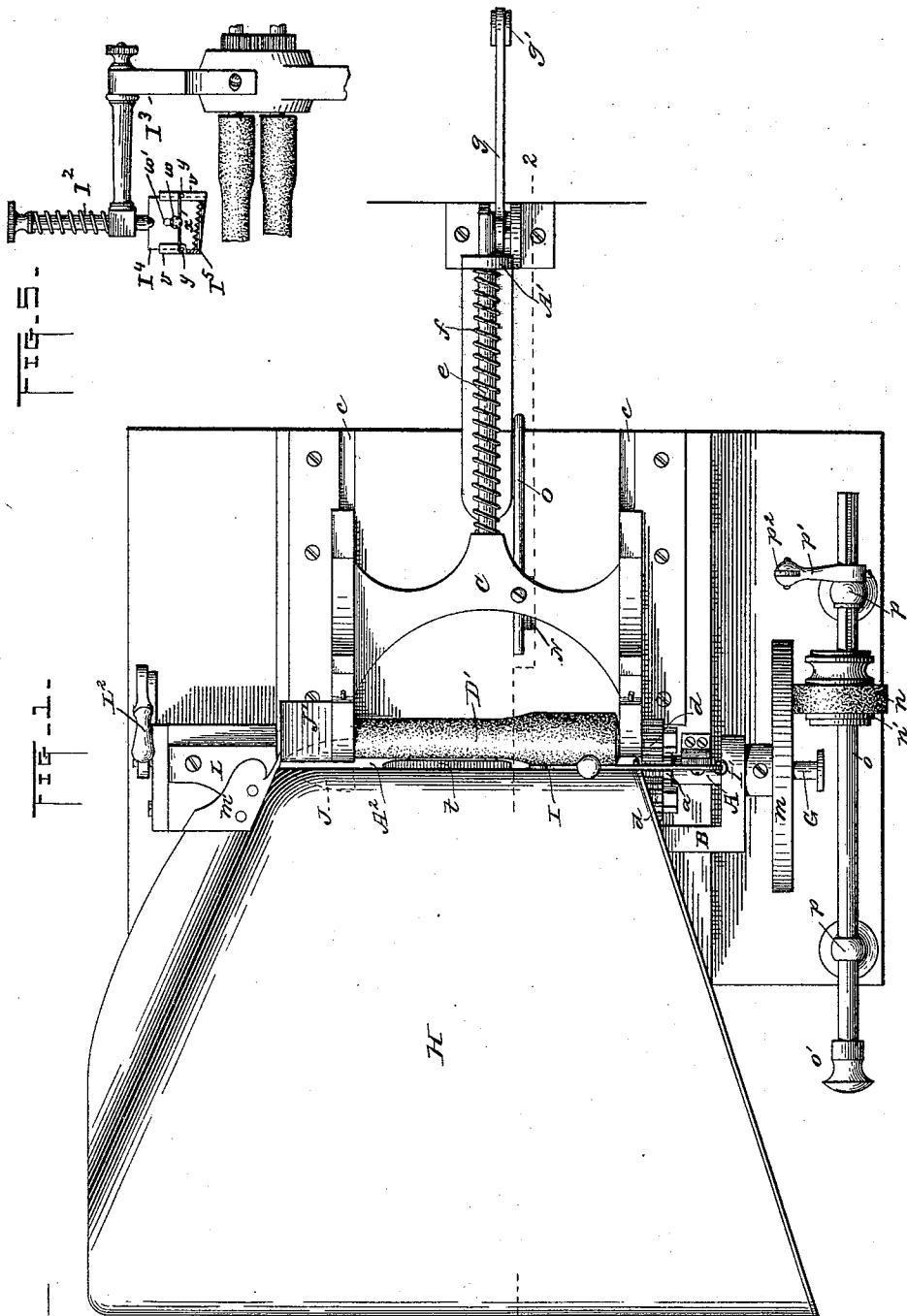
2 Sheets—Sheet 1.

C. W. BOMAN.

CIGAR WRAPPING OR ROLLING MACHINE.

No. 396,263.

Patented Jan. 15, 1889.



Witnesses.

E. B. Smith
E. C. Asick

Inventor.

Claes W. Boman
by Marshall Bailey
his attorney

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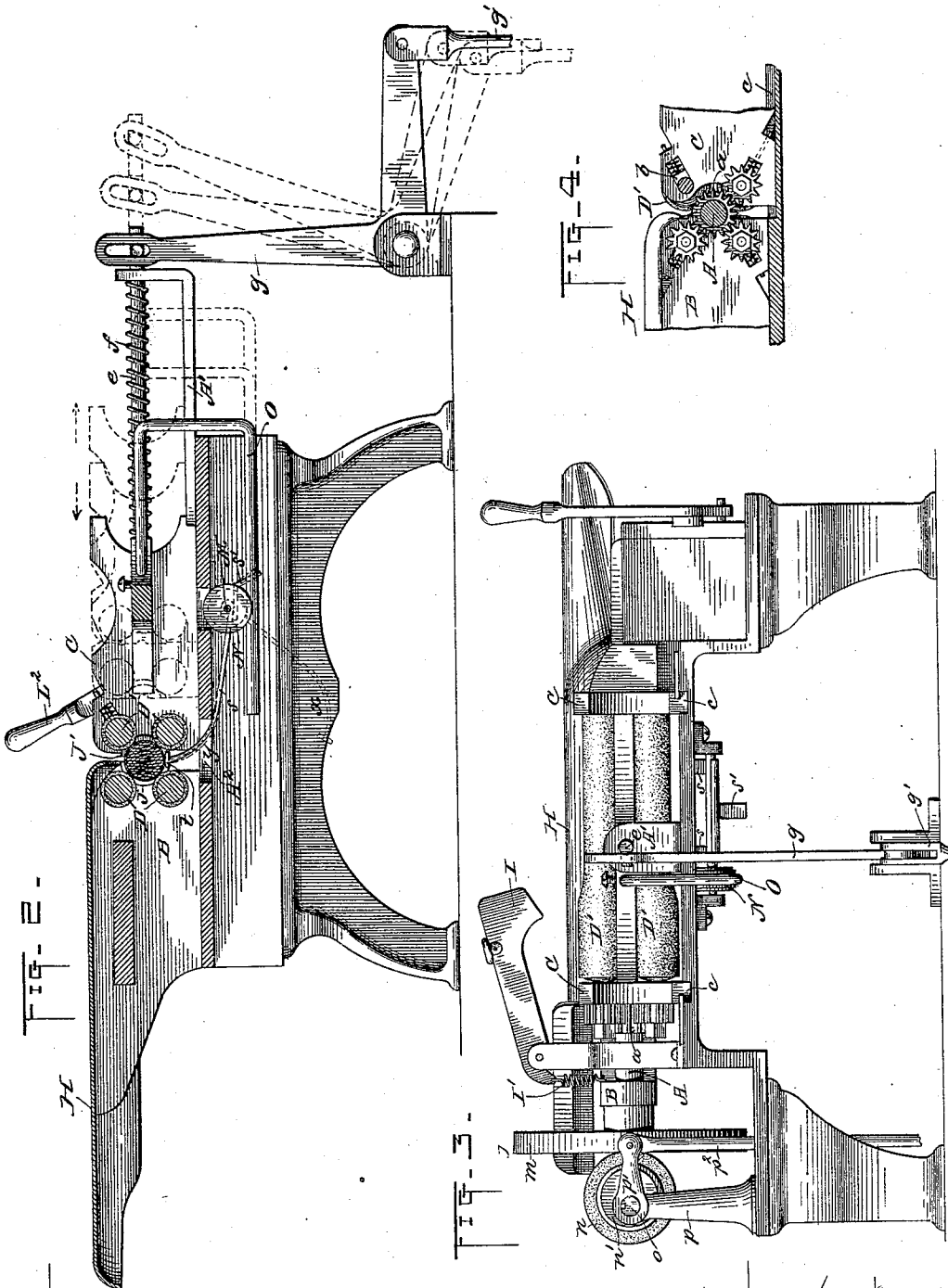
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UNITED STATES PATENT OFFICE.

CLAES WM. BOMAN, OF NEW YORK, N. Y.

CIGAR WRAPPING OR ROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 396,263, dated January 15, 1889.

Application filed September 8, 1888. Serial No. 284,918. (No model.)

To all whom it may concern:

Be it known that I, CLAES WILLIAM BOMAN, of the city, county, and State of New York, have invented certain new and useful Improvements in Cigar Wrapping or Rolling Machines, of which the following is a specification.

My invention has relation to machines intended more particularly to applying wrappers to cigars, and it can best be explained and understood by reference to the accompanying drawings, in which—

Figure 1 is a plan of the machine. Fig. 2 is a section on the line 2 2, Fig. 1. Fig. 3 is a rear elevation of the machine. Fig. 4 is a sectional detail view of the gearing and bearings for the cigar-receiving rolls. Fig. 5 is a view of a modification of the tucking-blades.

A is the driving-shaft, journaled in the frame B and driven by any suitable prime mover—in this instance by friction-gearing consisting of the friction-wheel *m* on the shaft A and the rubber-faced friction-disk *n*, loosely mounted on an eccentric, *n'*, fast to the cross-rods *o*, capable of sliding longitudinally and also of rotating in standards *p*. For the purpose of longitudinal movement it is provided with a handle, *o'*, and its rotary movement is controlled by a crank-arm, *p'*, splined on the rod *o* and connected by a rod, *p²*, to a spring-controlled treadle. (Not shown.)

The object of the eccentric mounting of the disk *n* and of the provision for rotary movement of rod *o* is that the disk may be brought into and out of contact with wheel *m*, and the object of the provision for longitudinal movement of the rod *o* is to permit the speed as well as the direction of revolution of the shaft A to be reversed. This arrangement of the foregoing parts, in connection with cigar-receiving rolls, &c., is set forth in my Letters Patent, No. 393,609, of November 27, 1888, and is not here claimed by me. Upon shaft A is the main driving-pinion *a*.

D D' are the cigar wrapping or receiving rolls, supported at each end in spring or yielding bearings *b* and carrying pinions *d*, which mesh with and are driven in unison by pinion *a*. The rolls D D' are preferably rubber-covered, and are so shaped that they in-

close a mold-space of a shape and size closely approximating that to be imparted to the finished cigar. Rolls D D' are divided vertically into two sets, one of which—viz., the rear set of rolls, D'—is bodily movable horizontally toward and away from the other set of rolls, being for this purpose mounted in a sliding carriage, C, adapted to slide back and forth in ways *c* in the frame of the machine. The carriage is spring-pressed toward the other set of rolls, D, for which purpose it is provided at its rear with a horizontal rod, *e*, passing and adapted to slide through a guide-bracket, A', attached to frame A, and a spiral spring, *f*, which encircles said rod and is compressed between the carriage at one end and the bracket at the other. The carriage is retracted against the stress of the spring, so as to open the rolls, by an elbow-lever, *g*, connected by a rod, *g'*, to a treadle. (Not shown.)

H is the table of the machine, overhanging at its inner end the top rolls between which the wrapper enters. A hinged tucking-blade, I, retracted by a spring, I', is provided for the purpose of tucking the front end of the wrapper down between these rolls.

G is a sliding presser passing axially through shaft A and influenced by a light spring to press constantly against the butt-end of the bunch or filler to which the wrapper is applied, all substantially as set forth in my aforesaid patent No. 393,609.

When the cigar is placed in the mold-space formed by the cigar-receiving rolls, its point or tip projects beyond the end of the rolls. This projecting tip is received in and supported by a two-part thimble, J J', having formed therein a conical recess or cavity of proper shape. The thimble is divided vertically into two parts. The one part, J, is fixed to the frame and is stationary, and the other part, J', is attached to and movable with the sliding carriage C.

The small end or tip of the thimble is bounded by the cutter consisting of the stationary member *m'* and the movable member L, the latter being vertically movable in its support and being actuated to move up and down by the pivoted elbow-lever L², with which it has a pin-and-slot connection.

The cutter as a whole is attached to the frame and does not move with the carriage. Its members, however, are shaped and related to each other and to the thimble substantially as set forth and claimed in my aforesaid patent No. 393,609, and therefore do not require further description here.

In the organization thus far described it will be noted that the cigar-receiving rolls are divided vertically into two sets, one of which has a movement to and from the other, and that the thimble also is vertically divided and has one of its divisions connected to and movable with the movable set of rolls. Thus when the cigar has been wrapped all that is needed is to draw back the carriage, upon which the released cigar will drop down and out from the rolls and thimble. An opening, A², in the frame is formed under the rolls, through which the finished cigar can fall into a receptacle beneath. When the rolls are opened for the reception of the cigar or filler to be wrapped, it is desirable that some means should be provided by which said filler when introduced can be supported and retained in position until it is caught by the movable set of rolls D' on their return. To this end I provide a mechanism which I term the "cigar-supporter," which mechanism consists of a retaining-arm and means whereby said arm is operated to drop when the rolls separate and to rise when they approach each other. This mechanism should be so organized and arranged that the retaining-arm will drop as soon as the rolls begin to separate, and will rise as soon as they begin to approach, for which purpose a frictional connection is required between the cigar-supporter and the part from which it derives its movement. Various arrangements of devices known to mechanics may be employed to effect this result. The preferred arrangement is illustrated in the drawings. Beneath the top of the frame of the machine is journaled a shaft, M, having fixed to it two rods, s, having attached to their free ends a horizontal strip, t. The parts s t form the retaining-arm, and they work up and down through the opening A². When lifted, they constitute a device something like a cradle, by which the cigar-filler will be held in position to be caught by the in-moving set of rolls D'.

Upon the shaft M is a stop, s', to limit the drop of the retaining-arm, and it also carries a rubber friction wheel or disk, N, peripherally grooved to receive the horizontal rod O, which runs in frictional contact therewith, and is attached to and moves with the sliding carriage C. Under this arrangement it will be noted that just so soon as the carriage C moves rearwardly the retaining-arm (by the frictional connection between N and O) will be caused to drop as far as permitted by the stop s', as indicated by dotted lines in Fig. 2, and will retain that position unaffected by the subsequent rearward movement of the car-

riage, the extreme limit of such rearward movement being indicated by dotted lines at x, Fig. 2. The instant, however, that the carriage begins to move forward (for example, by the time it travels from x to y) the retaining-arm will be raised into position, which it will maintain during the remainder of the return movement of the carriage. At the same time, by reason of the frictional connection between the parts N and O, the retaining-arm, after the two sets of rolls come together, can and will yield automatically in a downward direction, so as to permit the cigar to adjust itself to the rolls without hinderance. In this way the operator is relieved of the trouble of manipulating the cigar, whether in removing the finished cigar from the rolls, or in keeping the unfinished cigar in position during the return movement of the carriage C.

In Fig. 5 is shown a modified form of the tucking-blade. In this arrangement the blade is not hinged, but is carried by a vertically-sliding and spring-retracted stem or handle, I², mounted in a bracket, I³, attached to the frame. The tucking-blade itself is a compound blade, consisting of the serrated or toothed blade I⁴, attached to the stem I², and the other a plain-edged clearer-blade, I⁵, having on its side guides r, in which the side edges of the toothed blade can move. The two blades are united by a set-screw, w, on the toothed blade, which enters a vertical slot, w', in the other blade, so that the two blades may have a limited vertical movement relatively to each other. A spring, x, attached to the set-screws and bearing at its ends upon pins y, attached to the clearer-blade I⁵, presses the latter down so that its edge normally is below that of the toothed blade. When the tucker is pressed down, the toothed blade acts to press the end of the wrapper into the filler or cigar, so that the wrapper will be surely taken hold of by the latter, and when, after the operation is performed, the tucker is thrown up by its spring the clearer-blade remains on the cigar long enough to press and hold the wrapper down until the toothed blade rises subsequently to being disengaged from both the cigar and the wrapper.

Having described my improvements and the best way now known to me of carrying the same into effect, what I believe to be new herein and claim as of my own invention is as follows:

1. The combination of the cigar-receiving rolls divided into two sets, D D', the movable carriage C, for one of said sets, and the cigar-supporter actuated from or by said carriage at the times and in the manner substantially as hereinbefore set forth.

2. The combination of the cigar-receiving rolls D D', the movable carriage C, in which the set of rolls D' is mounted, the two-part thimble having one of its parts attached to and movable with said carriage, and the cigar-supporter actuated from or by said carriage

at the times and in the manner substantially as hereinbefore set forth.

3. The combination, with cigar-receiving rolls, of the compound tucker provided with
5 the toothed blade I⁴ and clearer-blade I⁵, capable of limited vertical movement independently of one another, and the spring whereby the clearer-blade is held normally with its spring-edge below the toothed edge of the

other blade, substantially as and for the purpose hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 29th day of August, 1888.

CLAES WM. BOMAN.

Witnesses:

CH. E. BROWN,
JACQUES LEVY.