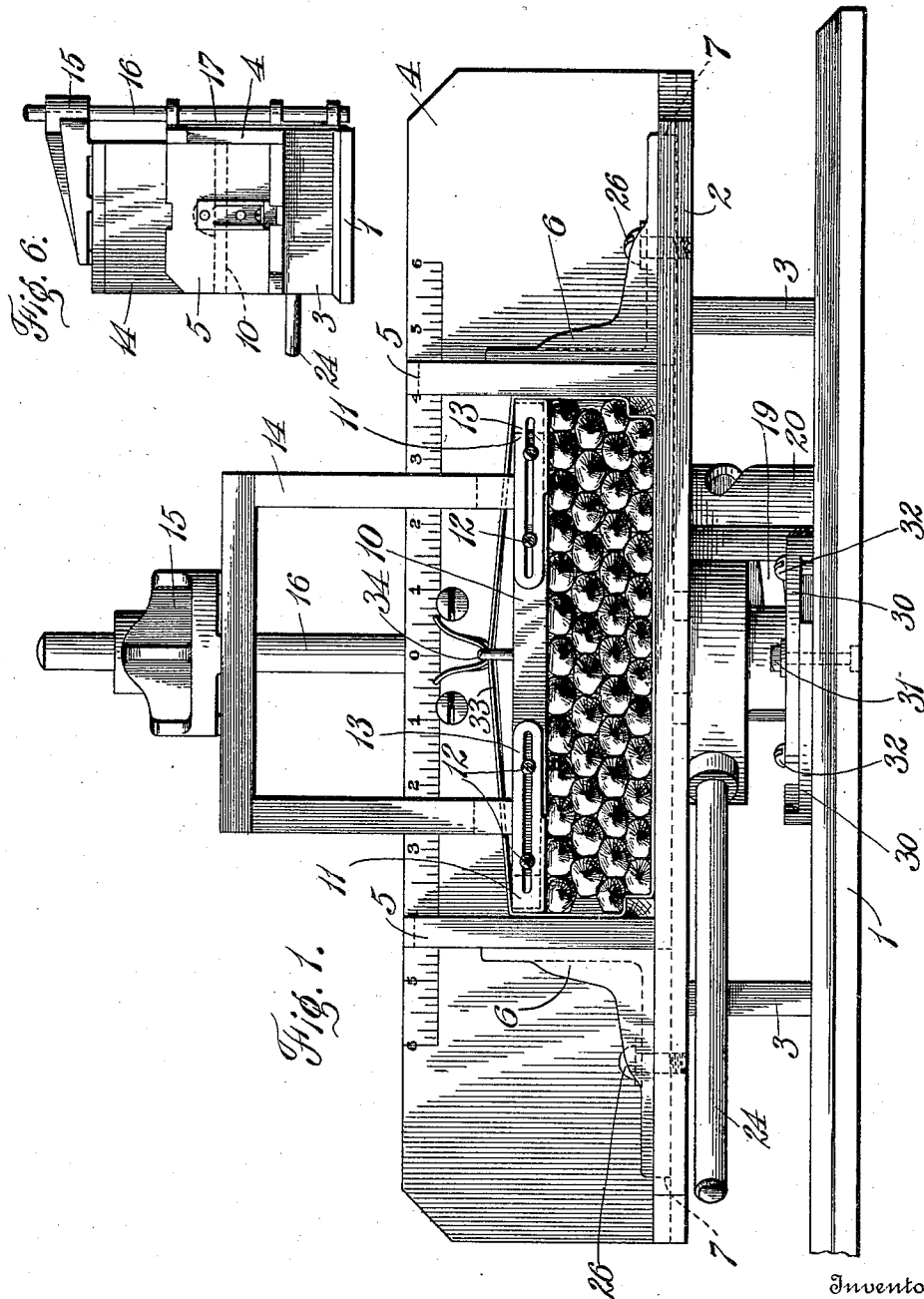


A. GORDON.
CIGAR PACKING MACHINE.
APPLICATION FILED DEC. 1, 1911.

1,054,642.

Patented Feb. 25, 1913.

3 SHEETS—SHEET 1.



Witnesses
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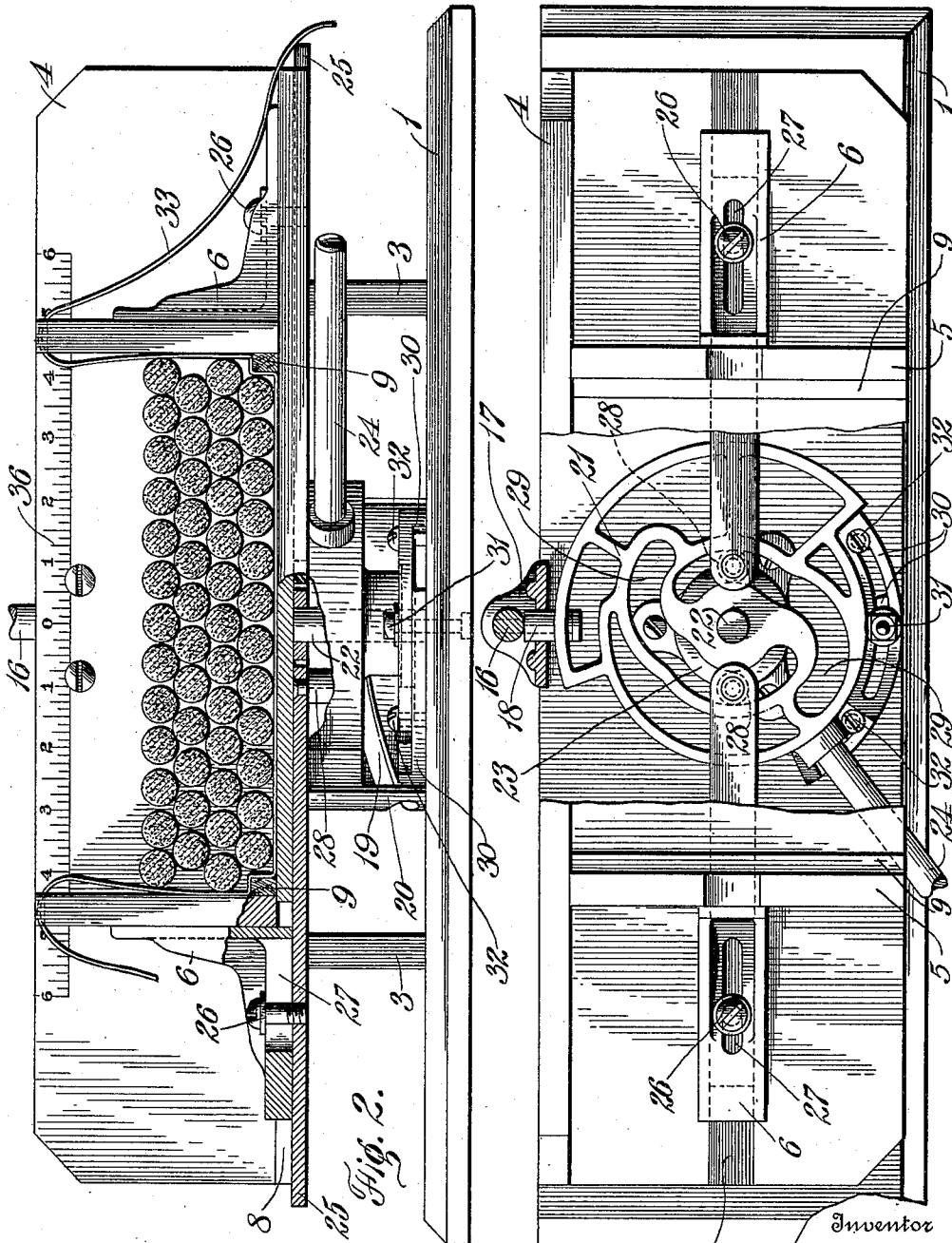
By *[Signature]*
Attorneys

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3 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

ALEXANDER GORDON, OF DETROIT, MICHIGAN.

CIGAR-PACKING MACHINE.

1,054,642.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed December 1, 1911. Serial No. 663,199.

To all whom it may concern:

Be it known that I, ALEXANDER GORDON, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Cigar-Packing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improved means for packing cigars, and its object is to provide a simple and efficient device for facilitating the packing of cigars in boxes which device will obviate the liability of injury to the cigars and prevent the boxes from being bulged by the expansion of the cigars after being placed therein.

The invention consists in the matters hereinafter set forth and more particularly pointed out in the claims, reference being had to the accompanying drawings in which—

Figure 1 is a side elevation of a device embodying the invention; Fig. 2, a similar view showing the same in open position and parts removed; Fig. 3 is a plan view with portions broken away to show the construction; Fig. 4 is a view similar to that of Fig. 2, showing the rear side of the machine; Fig. 5 is a perspective view of a formed bundle and showing the manner of placing the same in a cigar box; and Fig. 6 is an end elevation of the machine.

It is the usual practice in packing cigars in boxes, to place the cigars directly in the box in superposed rows, the last cigar in each row being forced into place by hand thus often injuring the cigars in so doing, and when sufficient rows have been placed to fill the box, they are pressed down into the box by closing the cover or by a follower. As the cigars are thus compressed within the box itself, when they expand therein, the box or its cover will be bulged outwardly, and as the pressure is applied in one direction only, the cigars are more or less flattened. The process of placing the cigars in the box, one at a time, is slow and they are liable to be injured in handling.

To provide for expansion within the box and to compress the cigars evenly upon all sides, a machine embodying the invention is provided to compress them both vertically and laterally into a bundle, the dimensions of which will be slightly less than the inside dimensions of the box, and while held

compressed, the bundle is placed in the box and then released. In the construction shown, this machine comprises a base 1 upon which a table 2 is supported by legs 3 or other means. This table forms the bottom of an adjustable baling or forming box, one side of said former being formed by a fixed vertical side 4 on the table at its rear edge and adjustable ends 5 are provided to slide on the table longitudinally thereof and are guided and supported by brackets 6 each having a tongue 7 on its lower side to engage longitudinal slots 8 in the table. The side of the former box opposite the side 4 is open so that cigars may be readily placed between the ends 5 in superposed horizontal rows with their ends abutting said side 4 and in order that the cigars will naturally arrange themselves with the cigars of one row lying opposite the spaces between the cigars of the adjacent rows, corner blocks 9 are secured to the ends 5 in the angles formed by the meeting of said ends and the table, and these blocks are each substantially equal to the diameter of a cigar in height and one half the diameter in thickness so that together they take up the space of one cigar in the bottom row and the cigars of the next row above will arrange themselves opposite the spaces between the cigars of the bottom row with the end cigars of the second row overlying these blocks.

A follower board 10 is provided to fit within the former between the ends 5 and rest upon the cigars when the desired number of rows have been placed. This board is provided with end members 11 which may be adjusted to increase the effective length of the board and they are held in adjusted position by screws 12 passing through longitudinal slots in side flanges 13 on said members into the edges of the board. When the follower board is in place, a presser yoke 14 is placed thereon and an arm 15 adjustably secured upon a vertical rod or post 16 is swung laterally over and into engagement with said yoke. The rod 16 is mounted in a bearing frame 17 secured to the rear face of the wall or side 4 of the table to slide vertically in its bearings on said frame and near its lower end said rod or post carries a roll 18 extending laterally therefrom into engagement with an inclined slot 19 cut in a depending semi-circular flange 20 on a spider 21 which is carried by a stud 22 jour-

naled in a suitable bearing member 23 mounted on the base 1 beneath the table. The spider is thus supported to be rotated about the axis of the stud 22 by a handle or lever 24 projecting laterally therefrom with the upper end of the spider close to the lower side of the table which is provided with the longitudinal slot 8. This slot forms a guide way for two bars 25 to which the brackets 6 are adjustably attached by means of screwbolts 26 passing through longitudinal slots 27 in the brackets and drawing said bars firmly against the lower side of the tongues 7 on the brackets. Said bars are provided upon their adjacent ends with rollers 28 to engage cam slots 29 in the spider so that when the spider is turned by means of the handle 24, the rolls traveling in said cam slots will move the bars longitudinally and thus slide the ends 5 toward or from each other along the table. At the same time when the spider is so turned, the arm 15 is raised or lowered by the engagement of the roll 18 with the inclined slot 19 in the flange on the spider and thus a pressure may be put upon the follower board simultaneously with the inward movement of the ends 5 to compress the cigars both vertically and horizontally. Stops 30 are adjustably secured by a bolt 31 and screws 32 to the base 1 to be engaged by the ends of the flange 20 and limit the turning movement of the spider so that the ends 5 will be moved only the desired distance when the spider is turned.

Before the cigars are placed in the former, a ribbon 33 of fabric or other suitably flexible material is placed therein, lying upon the bottom or table and extending over the ends 5, and after the desired number of cigars have been placed, the follower inserted and the follower and ends moved by the turning of the handle 24 to compress the cigars into a bundle of the desired form and size, and before the follower is released to release the bundle, the free ends of the ribbon are brought over the follower and made fast to or wrapped around a hook 34 on the top of the follower to hold the bundle in compressed form after being released and to lift the same from the form. The follower and bundle are lifted from the former by the operator taking hold of the hook and holding the ends of the ribbon at the same time, and while held in this manner, the bundle is placed in the box 35, as illustrated in Fig. 5. After the bundle has been so placed in the box, the ends of the ribbon are released, the follower removed, and the ribbon then drawn out.

A bundle of the proper size to fit any desired box may be formed by adjusting the ends 5 relatively to the bars 25, a scale 36 being provided on the side 4 to aid in such adjustment, and the amount of compression

is determined by the adjustments of the stops 30 which limit the throw of the spider 21 and the resultant movement of the ends 5. The former is preferably so adjusted as to form a bundle, the dimensions of which are somewhat less than the internal dimensions of the box to be filled so that the box or its cover will not be bulged by the expansion of the cigars, and a very neat appearing package will be assured.

As the former is open at one side, the cigars may be placed therein with ease and facility and without danger of injury, as the desired number fit loosely therein when the former is in open position. By a single movement of the handle, the cigars are compressed into a perfect bundle which is held and removed from the former by the ribbon and follower.

Obviously, changes in the form and construction of the device may be made without departing from the spirit of the invention and I do not wish to limit myself to the particular arrangement shown.

Having thus fully described my invention, what I claim is:—

1. In a device of the character described, the combination of a forming box comprising a table, a fixed side at one edge of said table and ends movable longitudinally of the table toward and from each other, a follower in the upper open side of the box, a vertically movable member extending over the follower to move the same, a cam member rotatably supported beneath the table and provided with a cam slot engaged by the vertically movable member to actuate the same vertically and also provided with cam slots for simultaneously moving said ends along the table, means connected to said ends and engaging said slots, and means projecting from beneath the table for turning said cam member.

2. In a device of the character described, the combination of a forming box comprising a table having a longitudinal slot, a fixed side and movable ends, bars engaging said slot and attached to said ends, a vertically movable member, a follower in said box, an arm extending laterally from said member over said follower, a rotatable member beneath the table and provided with cam slots and an inclined slot, means on the vertically movable member engaging said inclined slot, and means on said bars engaging the cam slots.

3. In a device of the character described, the combination of a forming box having movable ends, a follower to fit within said box, a member beneath the box rotatable upon a vertical axis and having cam slots and a depending flange formed with an inclined slot, means engaging said cam slots and connected to said ends to move the same, a vertically movable member at one

side of said box, an arm on said member extending laterally therefrom over said follower, and means on said member engaging said inclined slot.

5 4. In a device of the character described, the combination of a forming box comprising a table having a longitudinal slot, a fixed side at one edge of said table and ends movable longitudinally of said table, bars 10 guided in said slot and adjustably secured to said ends, a bearing member secured to the fixed side, a vertically movable member mounted in bearings on said bearing member, an arm adjustably attached to said ver- 15 tically movable member and extending lat-

erally over said box, a follower in said box actuated by said arm, a rotatable spider beneath the table having cam slots and a depending flange having an inclined slot, a roll on the vertically movable member en- 20 gaging the inclined slots, rolls on said bars engaging the cam slots, a handle to rotate said spider, and adjustable stops to limit the rotation of said spider.

In testimony whereof I affix my signature 25 in presence of two witnesses.

ALEXANDER GORDON.

Witnesses:

DARWIN T. SMITH,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."