(No Model.) 3 Sheets—Sheet 1.

J. W. & G. F. McINDOE.

CIGAR PRINTING MACHINE.

No. 394,987. Patented Dec. 25, 1888.

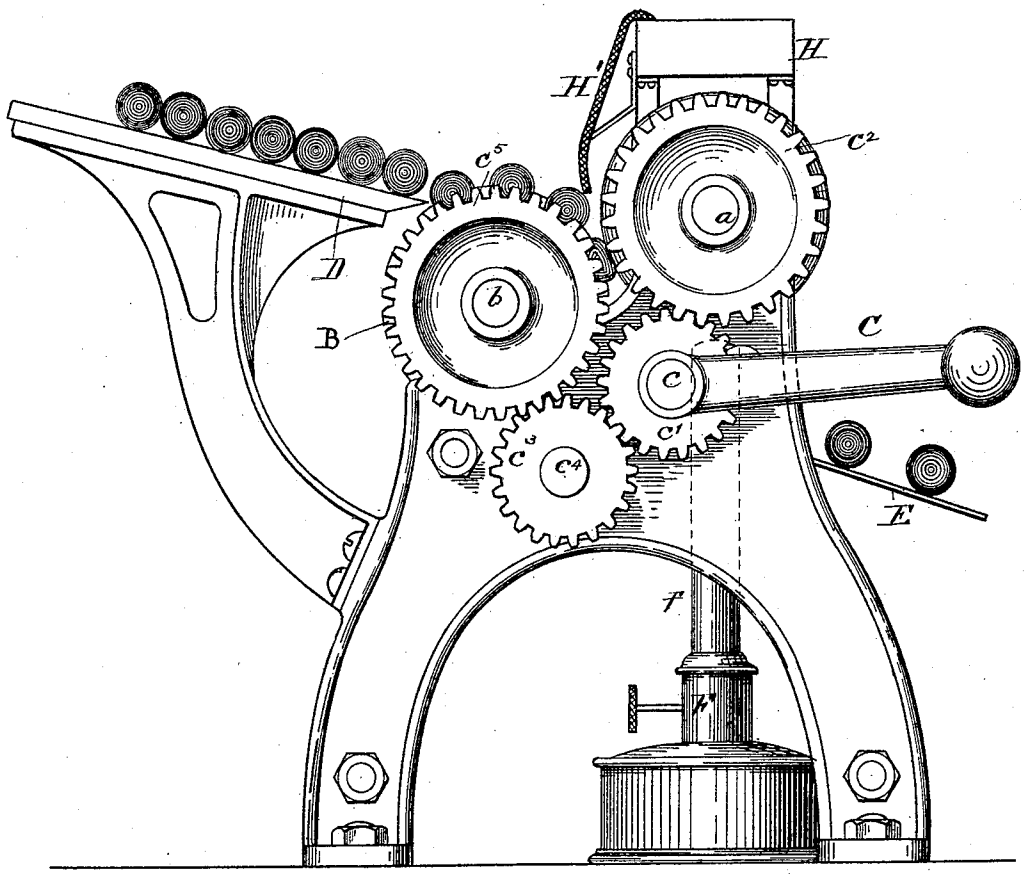

Fig. 1.

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(No Model.) 3 Sheets—Sheet 2.

J. W. & G. F. McINDOE.

CIGAR PRINTING MACHINE.

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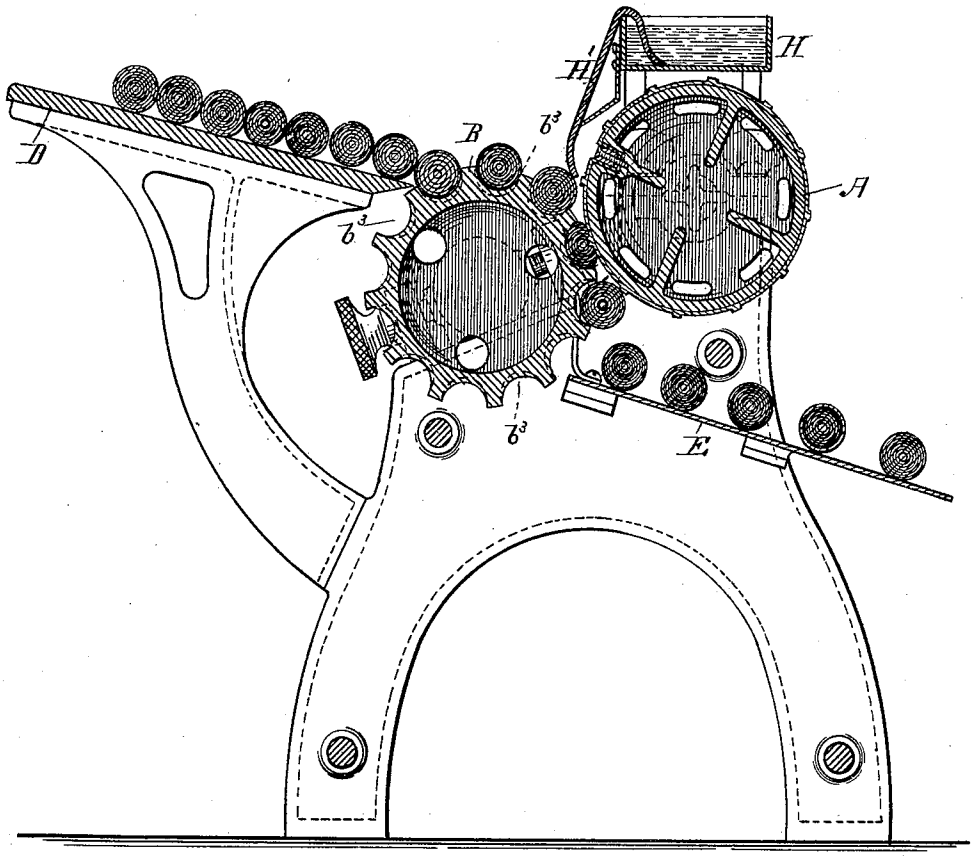

Fig. 2.

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(No Model.) 3 Sheets—Sheet 3.

J. W. & G. F. McINDOE.

CIGAR PRINTING MACHINE.

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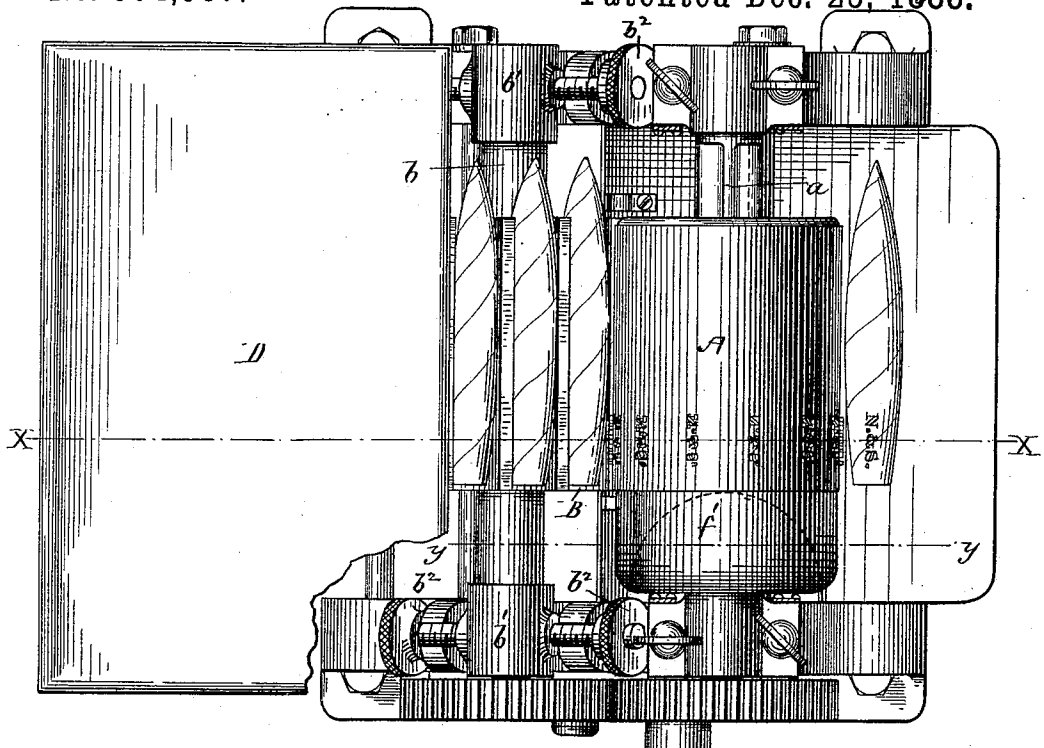

Fig. 3.

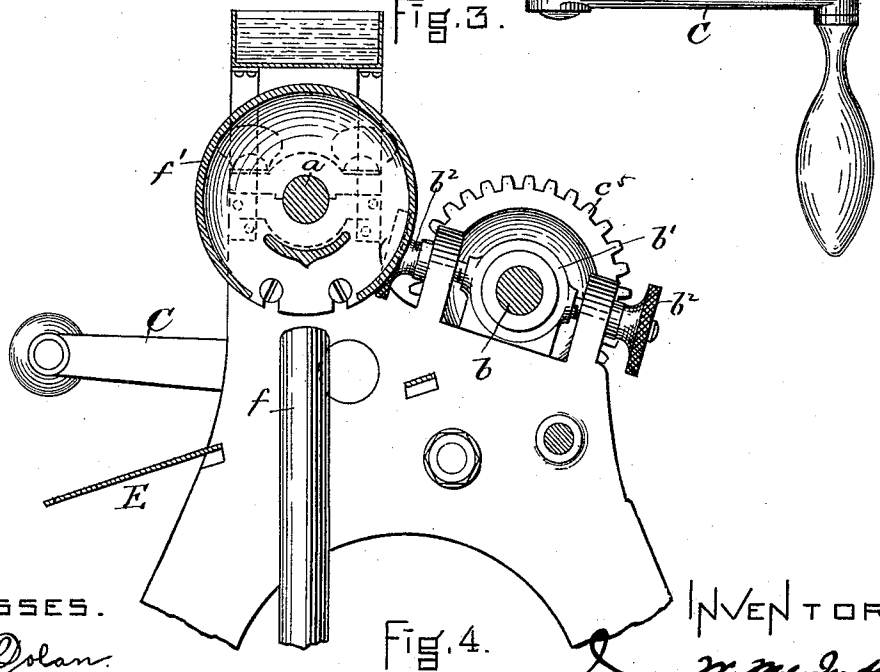

Fig. 4.

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UNITED STATES PATENT OFFICE.

JAMES W. McINDOE AND GEORGE F. McINDOE, OF BOSTON, MASSACHUSETTS.

CIGAR-PRINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 394,987, dated December 25, 1888.

Application filed March 22, 1887. Serial No. 231,914. (No model.)

To all whom it may concern:

Be it known that we, JAMES W. McINDOE and GEORGE F. McINDOE, both of Boston, in the county of Suffolk and State of Massachusetts, both citizens of the United States, have invented a new and useful Improvement in Cigar-Printing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to various details of organization and construction, all of which will be hereinafter described.

In the drawings, Figure 1 is a view in side elevation of our improved machine. Fig. 2 is a vertical central section thereof upon the line *x x* of Fig. 3. Fig. 3 is a plan view of the machine. Fig. 4 is a view in section upon the line *y y* of Fig. 3, looking toward the side upon which the handle is mounted.

Referring to the drawings, A represents the die-cylinder—that is, the cylinder which carries the printing or impression dies. It is mounted upon a horizontal shaft, *a*, which has bearings in the side frames of the machine.

B is the cigar-feeding roll. It is mounted upon a horizontal shaft, *b*, each end of which is supported by a box, *b'*, adjustable by screws b^2 upon the said side frames of the machine, so that the feed-roll may be moved toward and from the die-cylinder. It has formed in its periphery a number of horizontal recesses, b^3, of a size and shape to receive and hold cigars and to properly support them while they are in contact with the impressing or printing dies. The roll is of the same size as the die-cylinder, and has a cigar-holder or a cigar-holding recess for each die upon the surface of the printing-cylinder, and the said cylinder and roll are geared to each other so that their opposing faces are turned or moved in the same direction, which brings each die opposite a holder or recess in the feed-roll as they are rotated.

We have represented the die-cylinder as revolved by means of the handle C, (see Fig. 3,) attached to the shaft *c*, which has bearings in the frame and carries a gear-wheel, *c'*, which meshes with the gear-wheel c^2 on the shaft *a*. The gear-wheel *c'* also meshes with the intermediate gear, c^3, on the shaft c^4, which in turn meshes with the gear c^5 on the shaft *b*. These gears, preferably, are arranged on the outside of the side frame.

To feed the cigars to the feed-roll, we employ an inclined table, D, the edge of which extends closely to the surface of the feed-roll. This table is inclined sufficiently to permit the cigars to be laid thereon side by side in a line and to move by gravity downward into the holding-recesses of the feed-roll, and is so arranged or located in relation thereto that each holding-recess takes but one cigar as it passes the end of the table, so that a constant automatic feeding of the cigar to the feed-roll is obtained. This is one of the results of mounting the feed-roll upon a horizontal rather than upon a vertical shaft.

To receive the cigars after they have been printed or impressed, we have arranged the receiving-table E in a position to receive the cigars from their holding-recesses after they have passed the die-cylinder. The recesses are then turned sufficiently so that the cigars leave them automatically by gravity and roll down the bed or table E into a box placed to receive them. The die-cylinder may be heated by a gas-jet directed upon the dies and roll or extended into the cavity of the cylinder, or it may be heated in any other desired way.

The advantages of the invention arise from the simplicity of the construction and from the means which it affords for automatically and quickly feeding and delivering the cigars to and from the feeding device.

We have represented as a means of heating the impression-dies a stove or lamp, F, (see Fig. 1,) which is provided with a pipe or tube, *f*, by which heat is taken to the end *f'* of the cylinder A, which is made hollow, and which has holes or openings at the other end to provide for the circulation of the heated air in the cylinder. We would say, however, that we do not confine ourselves to this particular means for heating the cylinder, as any other well-known means may be employed for this purpose. We have also shown mounted upon the frame a tray, H, which is adapted to hold water and has connected with said tray a water-conductor, H', arranged to bear against the upper surface of the cigars as they are fed to

the feed-roll B, which is of a porous material, and which absorbs the water from the tank or tray like a sponge and takes and delivers it to the cigars.

By applying moisture to the cigars before they are subjected to the action of the heated impressing-dies we render the wrappers of the cigars sufficiently tough, so that they will not be broken by the dies, and we have discovered that when the moistened wrappers are impressed by the heated dies the dark color due to the moisture is rendered permanent (after the cigars have again become dry) where the faces of the dies strike the wrappers, so that the letters or characters impressed on the moistened cigars by the heated dies are much more distinct than they would be if the cigars were not moistened before being impressed by the dies.

It will be observed that the tank or tray H and the conductor H′ constitute an automatic cigar-moistener, and that the stove of lamp F and the tube or pipe *f* which conveys the heat to the interior of the die-cylinder constitute a die-heater. The inclined feeding-table and the feed-roll B constitute a cigar-feeder, and the said roll B, in connection with the die-cylinder, constitutes a cigar-impressor. Of course it will be understood that any well-known equivalents for these cigar moistening, feeding, or impressing devices, or for the die-heater, may be substituted for the specific devices herein shown without departing from the spirit of our invention.

Having thus fully described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In a cigar-printing machine, the combination, with a horizontal die-cylinder, of a horizontal feed-roll parallel and adjacent to said cylinder and provided with cigar-holding recesses in its periphery, and an inclined feeding-table extending partly over the said feed-roll, and thereby adapted to deliver cigars into the said recesses, substantially as set forth.

2. In a cigar-printing machine, the combination, with a horizontal die-cylinder, of a horizontal feed-roll parallel and adjacent to the said cylinder and provided with cigar-holding recesses in its periphery, an inclined feeding-table to deliver cigars into said recesses, and means, substantially as described, for heating the said die-cylinder, as set forth.

3. In a cigar-printing machine, the combination, with a cigar-impressor and a cigar-feeder, of an automatic cigar-moistener, substantially as set forth.

4. In a cigar-printing machine, the combination, with a cigar-impressor and a cigar-feeder, of a cigar-moistener and a die-heater, substantially as set forth.

5. The combination, with the die-cylinder A and the cigar-feed roll B, of the water-holding tray or tank H and the water-conductor H′, substantially as set forth.

JAMES W. McINDOE.
GEORGE F. McINDOE.

In presence of—
F. F. RAYMOND, 2d,
J. M. DOLAN.