

(No Model.)

N. DU BRUL.
CIGAR COLORING MACHINE.

No. 262,022.

Patented Aug. 1, 1882.

Fig. 1.

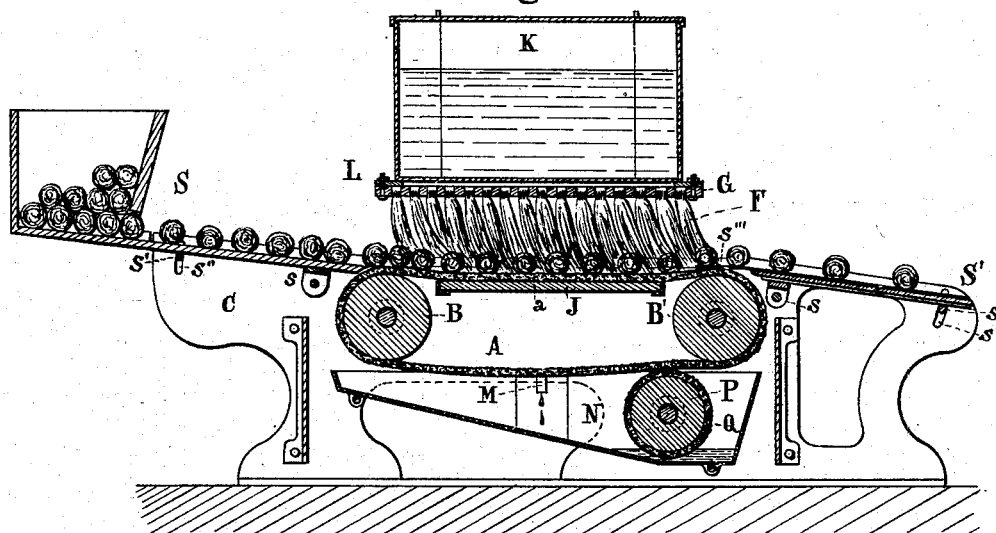


Fig. 2.

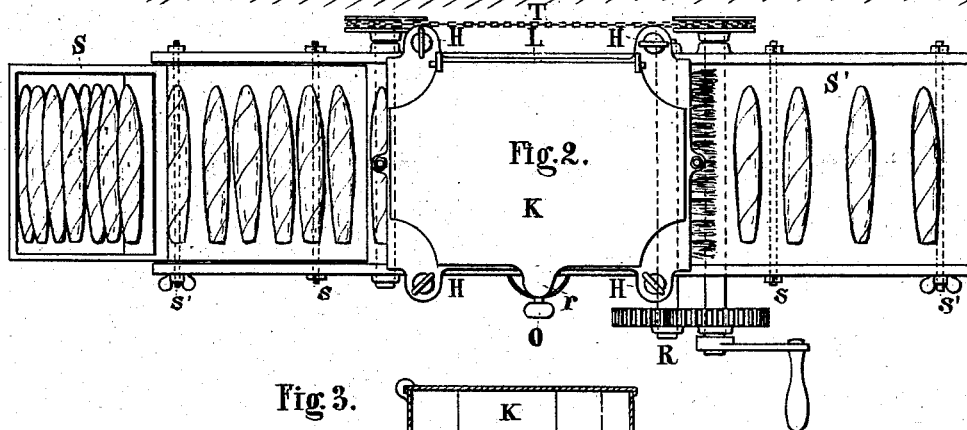


Fig. 3.

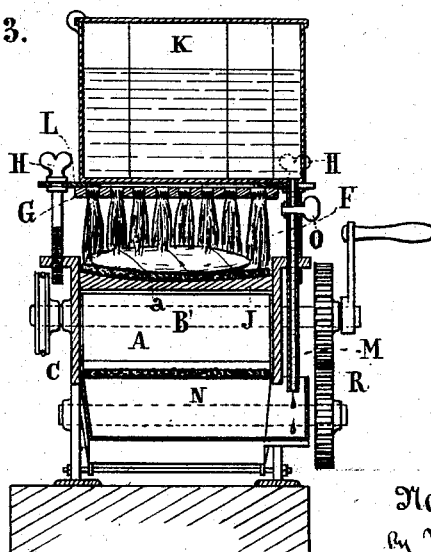
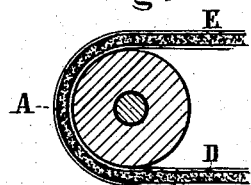


Fig. 4.



Attest:
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UNITED STATES PATENT OFFICE.

NAPOLEON DU BRUL, OF CINCINNATI, OHIO.

CIGAR-COLORING MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,022, dated August 1, 1882.

Application filed March 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, NAPOLEON DU BRUL, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Cigar-Coloring Machines, of which the following is a specification.

My invention relates to improvements in those machines or devices for coloring or for coloring and flavoring cigars in which the coloring-matter is applied by an automatic rolling action of the cigar in contact with a pervious and elastic cushion, which is kept saturated with the material employed in a properly dissolved or liquefied condition.

My present invention is an improvement on the subject-matter of my patent of November 1, 1881, No. 249,029.

In the accompanying drawings, Figure 1 is a longitudinal section of a machine embodying my improvements. Fig. 2 is a top view of the same. Fig. 3 is a transverse section taken at the mid-length of the machine. Fig. 4 represents, to a larger scale, one drum and a portion of the bibulous apron.

My invention comprises a suitable endless belt or apron, A, which imparts the coloring-matter to the cigars, and is stretched around two rollers or drums, B B', which are journaled horizontally in a frame, C, of suitable form and construction. My preferred material for the belt A is the article known in the market as "Sponges-pilini"—a fabric composed of fragments of sponge which are incorporated by felting with wool into a thick, soft, elastic, and bibulous sheet or blanket, and which, to a certain extent, acts like a sponge in absorbing all surplus moisture, and imparting to the cigars only so much of the coloring material as is required. To prevent too much stretching and keep the apron A in smooth and straight condition, I use between it and the drums a belt, D, of cotton or of rubber cloth, or of leather or other suitable material. Finally, in order to prevent the adhesion of the material of the pilini to the cigars, I clothe or cover the apron with a sheet, E, of cotton-muslin or other suitable thin woven fabric.

The member which constitutes the opposing surface to that of the apron A D E consists of

a brush or congeries of brushes, F, composed of bristles secured in a suitable wooden or other back, G.

The brush F G is stationary during use, but is so arranged as to be adjustable in height, and at the same time its parallelism or any desired obliquity maintained with respect to said apron by means of screws H, so as to enable its adaptation to any size of cigar, and to impart more or less pressure, either throughout the journey of the cigar through the machine or relatively at the commencement or termination thereof. This adjustability is very essential for the effective coloration of cigars of different shapes and sizes, and is further useful in the ability thereby afforded to take up for wear of the brush. This mode of attachment also gives ability, by withdrawal of the screws H, to detach the brush and reverse it end for end whenever the bristles acquire a too decided set in one direction. The user is thereby enabled to keep the brush in more trim and effective condition and to make it endure longer than when used only in one direction.

The use of a soft and yielding stationary brush above the cigars, opposed, in the manner described and shown, to a revolving bibulous and elastic cushion below them, is of great importance for the coloring of cigars effectively and uniformly and with the utmost practicable economy of material, because the brush distributes the coloring-matter evenly around the cigar as it is rolled forward between the brush and the revolving apron. Cigars being of a great many different shapes and sizes, some of them being considerably tapered, or even pointed toward one or both ends, it becomes difficult to color them clear to the ends; but I find by experiment that the brush conforms itself to the specific shape of the cigar in every instance and distributes the coloring perfectly.

J is a stationary shelf or table to support in a level condition that portion *a* of the apron on the upper side which is for the time being between the drums. The top of the table J is formed concave transversely, as shown in Fig. 3, in order to conform itself to some extent to the shape of the cigar.

Another very important feature in my present coloring-machine is the automatic and regulating color-feeding mechanism, which consists as follows: A reservoir, K, for the coloring-matter in quantity is placed over the brush for compactness and convenience, being attached to and supported by bars L, from which the brush is suspended. The said reservoir has a projection, *r*, that receives a pipe, M, which leads down to trough N, which is deepest underneath the delivering-drum B', and which shoals up toward and beneath the other or receiving drum in the manner shown.

The pipe M has a suitable cock, O, to enable the attendant to regulate at his discretion the flow of coloring to the said trough. Journaled horizontally in the deepest portion of said trough is a distributing roller or wallower, P, which is clothed with a bibulous jacket, Q, preferably of coarse blanket or serge. The diameter and location of the wallower P are such that at top it presses upward against the returning portion of the apron and at bottom nearly touches the tank-floor. The wallower P receives its motion by geared connection R with the shaft of the delivery-drum.

The trough N extends somewhat beyond the endless apron in every direction in order to catch any superfluous matter that may drip from the said belt or apron.

S represents a hopper, upon which the unfinished cigars are placed, and by which they are fed to the machine.

S' represents the delivery-chute for the finished work, and consists of a piece of sheet metal in a sloping position, and whose receiving end *s'''* extends rearward somewhat beyond the zenith or highest point of the delivery-drum, as shown, in order that the escaping cigar may be protected from actual contact with that portion of the apron from which, in consequence of its being there drawn taut over the drum, the coloring-liquid is liable to be expressed and delivered in excess, and thus to overload the cigar at the point or juncture where it is most undesirable to do so.

Both members S and S' may have a pivotal attachment, *s*, to the frame, and their free ends secured by bolt *s'* in slot *s''*, so as to give said members any desired angle.

The motion of the delivery-drum B' is transmitted to the receiving-drum B by means of endless chain T, in order to insure a positive rotation of the latter independent of the connecting-apron.

By the described arrangement of elevated reservoir with its delivery-pipe controlled by cock, in association with the trough and the distributing-wallower, I enable the regulation of the amount of coloring-matter imparted to the bibulous belt, so as to neither overload nor to too scantily cover the cigar.

The above-described form of my device is susceptible of various modifications. For example, associated with my brush, as aforesaid, may be a bibulous cylinder, in connection with which the brush would perform similar service to what it does with a bibulous belt.

The reservoir may be placed at any part of the machine of sufficient elevation to insure an automatic charging of the trough, and it is not necessary that it should accompany or be affected by the vertical adjustments of the brush. The bibulous covering of the wallower may consist of a revolving brush or may be dispensed with. The delivery-chute may be adjustable in angle.

The comparatively pliant and self-adapting brush F proves to be a great improvement over the platen which constituted the upper member in the cigar-coloring device described in my aforesaid patent, the bristles operating to lap part way around the cigar, so as to apply the coloring with remarkable thoroughness without in the least disturbing the shape of the cigars. The brush, although preferably of bristles, may be of hair or of other suitable material.

While preferring Sponges-pilini, as stated, for the material of my endless belt or apron, I reserve the right to employ any other suitable bibulous material, such as woolen felt.

I claim as new and of my invention—

1. In a cigar-coloring machine, the combination of a rolling and color-imparting member, A, with a suitable stationary brush, F, substantially as set forth.

2. The combination of endless bibulous belt A, having the flat surface *a*, and stationary brush F, substantially as and for the purpose described and set forth.

3. The combination, in a machine to color cigars, of a rolling and color-imparting member, A, and reservoir K, with feeding-pipe M, cock O, trough N, distributing roller or wallower P, and the stationary brush F, substantially as and for the purpose described and set forth.

4. In a machine to color cigars, the automatic feeding device consisting of the reservoir K, pipe M, cock O, trough N, and distributing-roller P, the whole being combined and adapted to operate substantially as and for the purposes set forth.

5. In a machine to color cigars, the combination of bibulous endless belt A, stationary brush F, and the delivering-chute S', having its receiving end projecting rearward beyond the zenith or highest point of the delivery-drum, substantially as described, and for the purpose set forth.

6. In a machine to color cigars, the combination, with a revolving color-imparting member, A B B', of a stationary brush, F, so attached by screws H as to be capacitated for being set parallel and at any fixed distance or

obliquity and of reversal end for end, substantially as and for the purpose described and set forth.

7. In a machine to color cigars, the combination of an adjustable brush, F, with a revolving color-imparting apron, A D E, and stationary concave support J therefor, substantially as and for the purpose described and set forth.

In testimony of which invention I hereunto set my hand.

NAPOLEON DU BRUL.

Attest:

GEO. H. KNIGHT,
SAML. S. CARPENTER.