

(No Model.)

3 Sheets—Sheet 1.

C. SCHWEIZER & J. NÜESCH.
CIGAR OR CIGARETTE MACHINE.

No. 501,629.

Patented July 18, 1893.

FIG. 1.

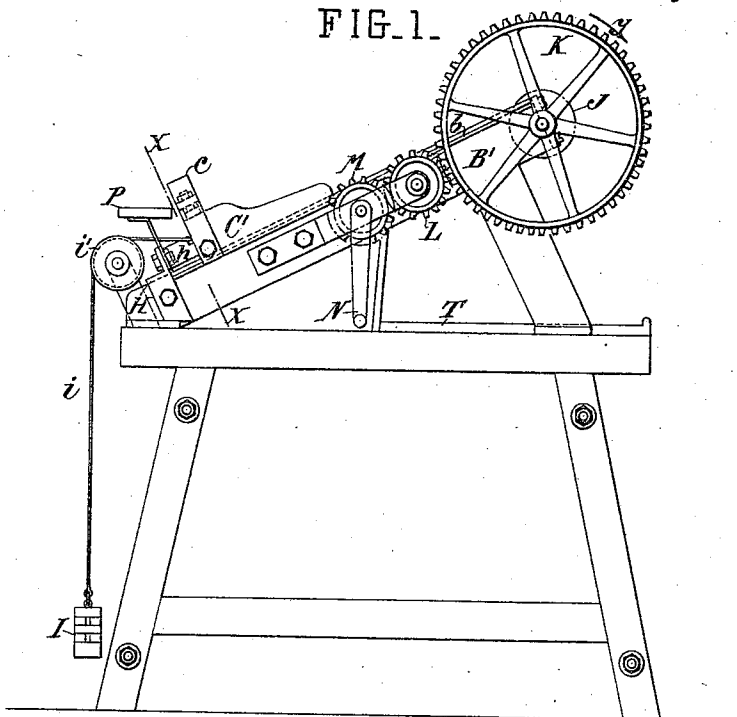


FIG. 5.

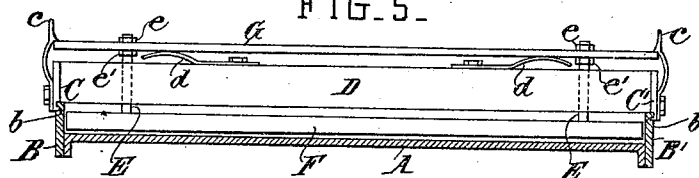


FIG. 6.

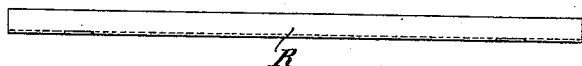
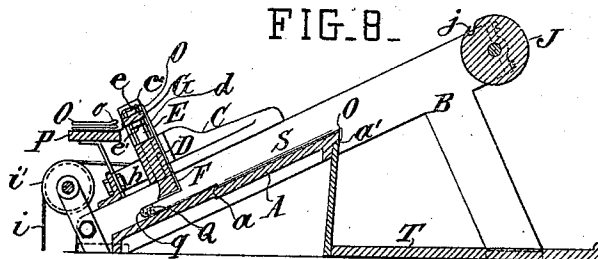


FIG. 7.



FIG. 8.



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FIG. 2.

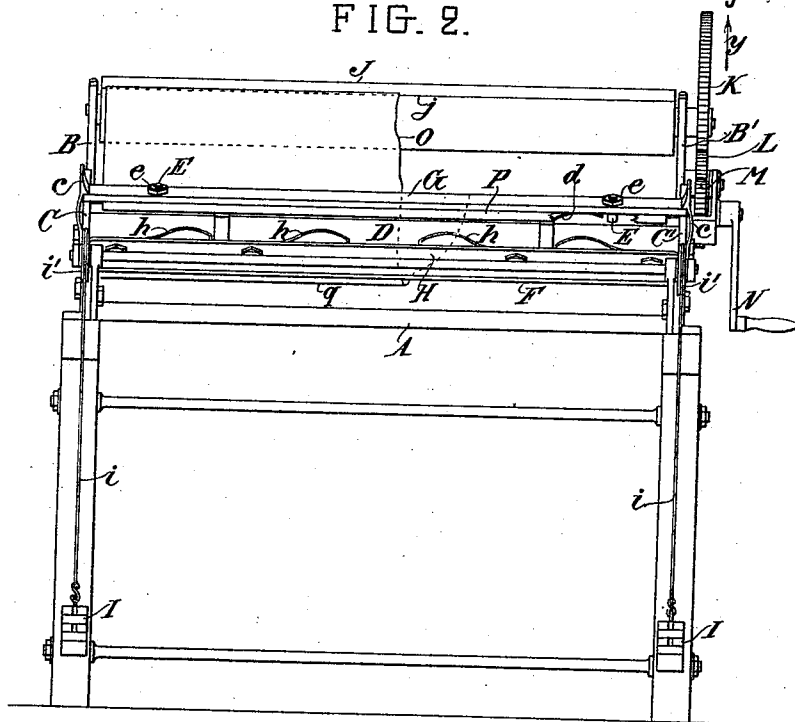
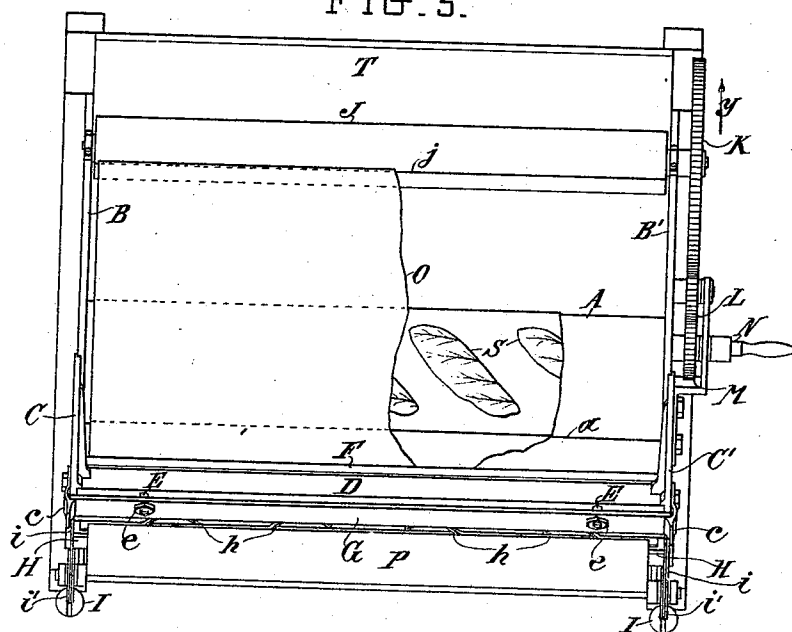


FIG. 3.



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3 Sheets—Sheet 3.

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FIG. 4.

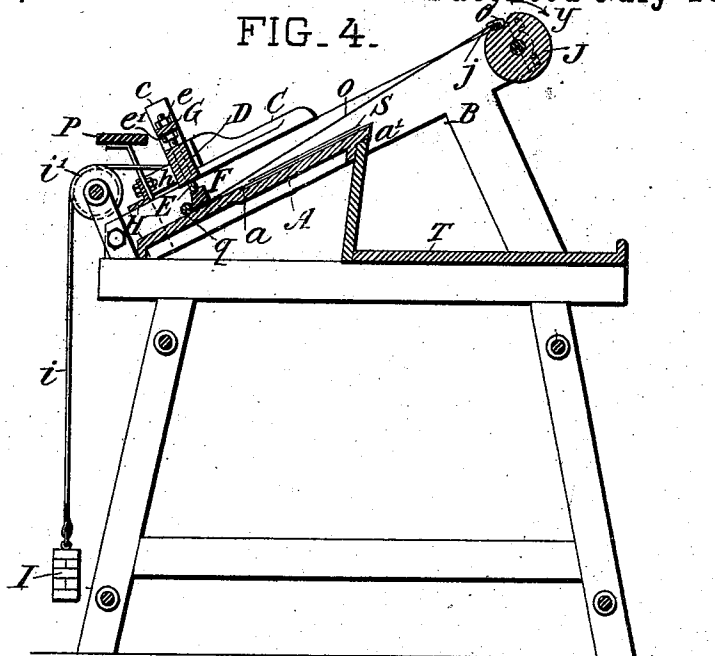


FIG. 9.

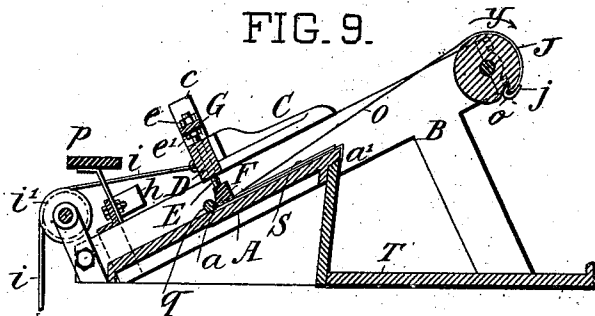
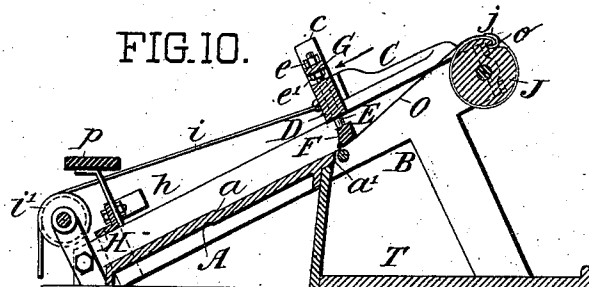


FIG. 10.



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UNITED STATES PATENT OFFICE.

CONRAD SCHWEIZER AND JAKOB NÜESCH, OF SCHAFFHAUSEN, SWITZERLAND; SAID SCHWEIZER ASSIGNOR TO SAID NÜESCH.

CIGAR OR CIGARETTE MACHINE.

SPECIFICATION forming part of Letters Patent No. 501,629, dated July 18, 1893.

Application filed February 8, 1893. Serial No. 461,475. (No model.) Patented in Switzerland November 30, 1891, No. 4,364.

To all whom it may concern:

Be it known that we, CONRAD SCHWEIZER and JAKOB NÜESCH, citizens of the Swiss Republic, residing at Schaffhausen, in the Canton of Schaffhausen, Switzerland, have jointly invented certain new and useful Improvements in Machines for the Manufacture of Cigars and Cigarettes, (which invention has in part been patented in Switzerland by Patent No. 4,364, bearing date November 30, 1891,) of which the following is a specification.

This invention relates to the manufacture of cigars, cigarettes and the like, and aims to provide an improved machine for such manufacture.

The machine embodying our invention consists mainly of a fixed rolling table having a stepped surface to the upper end of which the end of a rolling cloth or cover is fixed which partially covers the table and on which the covering leaves previously coated with cementitious matter, are laid, while the tobacco filling is laid uniformly in a fold of this cloth or flexible cover and is held therein by a movable slide, so that when the free end of the rolling cloth, which is connected to a roller, is rolled up by turning the roller, the tobacco filling will be rolled up in the cloth or cover so as to receive the desired cylindrical form, before it seizes the covering leaves situated above the step of the rolling table, and by the further rolling up of the cloth or cover, rolls them round the tobacco body, the finished cigars being eventually made to fall from the upper end of the rolling table.

The arrangement and mode of working of the said machine will be readily understood on reference to the accompanying drawings, in which—

Figures 1, 2 and 3 show respectively a side view, a front view, and a plan of a machine embodying the preferred form of our invention. Fig. 4 shows a cross section thereof, and Fig. 5 a section thereof on line X—X Fig. 1; and Figs. 6 to 10 are views explaining the action of the machine.

Referring to the drawings, we will now describe the preferred embodiment of our invention.

The table A, provided with a stepped part *a*, is fixed on both sides to the cheeks B and

B'; the latter have on their outer sides, near their upper edge, a longitudinal groove *b*, into which take the side cheeks C C' of the slide, which are fixed together by the cross piece D, so that the slide can be moved along the side cheeks B B' while guided by the grooves *b*. To the lower end of the two bolts E, which pass through corresponding holes of the cross-piece D, is fixed a bar F, while the upper ends of the bolts carry the bar G adjustably between nuts *e e'*. The springs *d*, one end of which is fixed to the cross piece D, while the other free end presses against the bar G, tend to push this bar away from the cross piece D and to press the bar F against the latter, so as to hold the slide in the position shown at Fig. 8, while two spring catches *c*, on the side cheeks of the slide, which catch over the ends of the bar G, hold the slide in the closed position shown at Figs. 1, 2, 3, 4, 9 and 10. The slide generally rests by means of the cross piece D against the springs *h* fixed to a cross rail H of the framing. On each side piece C and C' of the slide are fixed cords *i*, that pass over a roller *i'*, and have a weight I suspended from their free end. At the upper ends of the side cheeks B B' are formed bearings carrying the journals of a roller J provided with a broad metal hook *j* extending along its entire length. On the one journal of the roller is fixed a spur wheel K which is geared to the wheel M by an intermediate wheel L. On the axis of M is fixed a crank handle N, so that by the rotation of the latter the wheel K and consequently the roller J will be rotated.

At the upper end of the rolling table A is fixed, at *a'*, the one end of the rolling cloth or flexible cover O, of oil cloth, caoutchouc, leather or the like. The free end of this cloth O is provided along its whole length with a broad metal hook *o* which can engage with the hook *j* of the roller J. A table P fixed to the framing serves for temporarily placing thereon the rolling cloth O. If now it is desired to make cigars by means of this machine, the slide is opened, that is to say, the two catches *c* are simultaneously withdrawn, so as to leave the rail G free. The latter is then raised by the action of the springs *d*, and consequently also the bar F (Fig. 8). The rolling cloth is then spread out on the table

A and is drawn over the slide and is pushed somewhat between the table and the bar F in order to form a fold *g* (Fig. 8) into which the necessary tobacco filling Q for a cigar is placed in such manner that the tobacco is situated underneath the bar F, and is not jammed between this bar and the rolling table on the depression of the former.

In order to insure a uniform distribution of the tobacco over the whole width of the machine a sheet metal trough R, Figs. 6 and 7, is employed, which is of a length equal to the width of the machine, and in which the tobacco for the filling is previously uniformly distributed, to an extent determined by the desired thickness of the cigars, and from this trough R the tobacco is transferred to the said fold *g* of the cloth. The slide is now closed, that is to say, by a pressure upon the rail G this, as also the bar F, are brought into the position shown at Figs. 4 and 5, in which the catches *c c* hold the rail G down. The covering leaves S (Fig. 3) previously coated on their back surfaces with cementitious matter are then so placed above the step *a*, with their front faces lying upon the rolling cloth spread on the table A, that the ribs of the leaf lie parallel with the upper edge of the rolling table A, the leaves being so near to each other, that on rolling up the cigar, the rear end of a leaf will be slightly overlapped by the front end of the next leaf. The free end of the cloth O is then secured by its hook *o* to the roller J (Fig. 4) and the latter is rotated by means of the crank handle N in the direction of the arrow (Figs. 1, 2, 3, 4 and 9) so as to coil the cloth around it (Fig. 9). The bulge produced by the roll of tobacco in the cloth is then drawn in contact with the underside of the bar F and is consequently made to carry the slide up with it. The tobacco in the bulge of the cloth thus becomes rolled round and round so as to assume the form of a cylinder by the motion of the cloth. In order to facilitate the production of the cylindrical form, the lower side of the bar F is formed with a hollow or groove. As soon as the slide arrives above the step *a* (Fig. 9) the tightly rolled tobacco cylinder will become somewhat loosened by the step and can therefore, in rolling onward, lay hold of the lower ends of the covering leaves S which thus become rolled round the filling. (If it were not for the step *a*, the tightly rolled tobacco cylinder would be liable to push the covering leaves in front of it.) When the slide has arrived at the upper edge of the table (Fig. 10) the finished tobacco cylinder, which may be several yards in length is drawn from under the bar F and falls upon a removable board T placed to receive it, and it can then be dried and cut into the requisite lengths. On the tobacco cylinder and the rolling cloth being drawn from under the bar F the slide becomes free and descends again by gravity and by the action of the weights I into its original position shown at Figs. 1 to 4, the

springs *h* serving to lessen the force of the blow. The weights I can be increased or decreased according to the desired degree of compression for the cigars, or to the amount of moisture in the tobacco.

It will be obvious that the machine may also be applied to the manufacture of cigarettes in which case it is only necessary to replace the covering leaves by paper.

It will be seen that the invention provides an improved machine for manufacturing cigars, cigarettes and the like, which can be variously availed of with advantage, and that it is not limited to the exact details of construction set forth as its preferred form, as these may be modified as circumstances may dictate without departing from the essential features of the invention.

What we claim is—

1. In a machine for manufacturing cigars, cigarettes and similar articles, an inclined rolling table A, having a step *a*, in combination with a rolling cloth O on said table, secured at one end thereto, passing across the step thereof, folded on itself, and carrying at its other end a hook, within the fold of which cloth the filling for the cigar is placed below said step, and on which cloth the covering leaves for the cigar are placed above said step, a presser bar acting on the folded part of said cloth and a roller J engaging the hook end of said cloth and when rotated winding the cloth thereon to draw it across said table, whereby said filling is first rolled into cylindrical form in said cloth and is then rolled thereby in the covering leaves, substantially as and for the purpose set forth.

2. In a machine for manufacturing cigars and like articles, a rolling table A, having a step *a*, and side cheeks B B' fixed relatively to said table, in combination with a rolling cloth O on said table, fixed relatively thereto at one end, passing across the step thereof, folded on itself, and carrying at its other end, within the fold of which cloth the filling for a cigar is placed below said step, and on which cloth the covering for the cigar is placed above the step, a roller J engaging the hook end of said cloth and when rotated winding the latter on itself to draw it across said table, whereby said filling is first rolled into substantially cylindrical form in said cloth and is then rolled by the latter in said covering, a presser bar contacting with the folded portion of said cloth immediately in advance of said filling for maintaining a cylindrical form of the latter, and a movable slide carrying said bar and advancing with the movement of said cloth during the rolling and covering operation, substantially as and for the purpose set forth.

3. In a machine for manufacturing cigars and like articles, a rolling table A, side cheeks B fixed relatively to said table, and a rolling cloth O on said table, fixed relatively thereto at one end, folded on itself over said table and carrying at its other end a hook, on which cloth the filling for a cigar is placed within

the fold, and in advance of said filling the covering for a cigar, in combination with a roller J engaging the hook end of said cloth and when rotated winding the latter up to
5 draw it across said table, whereby said filling is first rolled in said cloth and then thereby rolled in its covering, and a movable slide mounted on said side cheeks movable with
10 said cloth and having an adjustable presser bar F movable toward and from said cloth and contacting with the latter immediately in advance of the part thereof containing
said filling for maintaining the form of the latter, substantially as and for the purpose
15 set forth.

4. In a machine for manufacturing cigars and like articles the combination with a rolling table A, a rolling cloth thereon within which the article is rolled, and cheeks B B'

at the sides of said table, of a movable slide 20 C riding on said cheeks, movable with said cloth, and consisting of a cross bar G, a movable presser bar F carried by said cross bar and movable toward and from said cloth, springs for moving said bar F from said cloth 25 and catches for holding said bar F against said cloth, and weights I engaging said slide for retracting the latter to its initial position, all substantially as and for the purpose set forth.

In witness whereof we have hereunto signed 30 our names in the presence of two subscribing witnesses.

CONRAD SCHWEIZER.
JAKOB NÜESCH.

Witnesses:

GEORGE GIFFORD,
AMAND RITTER.