

UNITED STATES PATENT OFFICE.

JOSEPH DE SUSINI, OF NEW YORK, N. Y.

PROCESS AND MANUFACTURE OF CIGARETTE-WRAPPERS, &c.

SPECIFICATION forming part of Letters Patent No. 328,300, dated October 13, 1885.

Application filed September 10, 1884. Serial No. 142,737. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DE SUSINI, a British-born subject, residing at 221 West Fifteenth street, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in the Process and Manufacture of Cigarette-Wrappers, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference be had to this specification.

This invention relates to certain improvements in wrappers for cigarettes, cigars, and like articles and for similar purposes; and it has for its object to provide a wrapper which will possess none of the deleterious properties of the ordinary paper wrappers, while it will be cheaper, stronger, and more easily manipulated.

The principal objection to the cigarettes—for instance, when constructed in the usual manner, with an ordinary paper wrapper—is that the products of combustion of the burning paper are unhealthy and injurious on account of the material from which the paper is made, and also because of the deleterious chemicals which are employed in the course of the manufacture and left in the product.

By the present invention these objections are completely obviated by forming the wrappers for the cigarettes, cigars, &c., of lamelliform or rolled and lamellated and calendered or glazed tobacco pulp, which may be made from the leaves or stems or stalks of the tobacco-plant, or from the powder or dust of such plant, or from mixtures of such portions of it, and combined, if desired, with sugar-cane pith, called, commonly, "bagasse," or with any other suitable neutral and harmless vegetable matter or fiber, for the purpose of rendering the result uniform, strong, and pliable, so that it can be rolled without breaking, as more fully hereinafter specified.

Having designated the nature and objects of my invention, I will now describe the means for carrying the same into effect.

I first take any desired quantity of quicklime and slake it in a quantity of water sufficient to effect the slaking and form a dense

milky mixture, which will be perfectly smooth and without clods or lumps. To the above-mentioned dense milk I then add pure water in such quantity as to dissolve the whole of the lime. The liquid or solution is then placed in a suitable tank and heated by steam jacket or coil to the boiling-point, when the tobacco, either in the form of leaves, stems, stalks, or powder, or in the form of a mixture of the same, is fed slowly into the tank and thoroughly mixed with the boiling liquid. When a sufficient quantity of the tobacco material has been added, the tank or vessel is tightly covered and active ebullition is kept up for a length of time, varying in accordance with the character and condition of said tobacco material, the usual time being from eight to ten or twelve hours. The steam is then shut off, and the watery portions of the mass are then drained off in any convenient manner from the leaves, stems, stalks, powder, or solid portions of boiled tobacco. After said watery portion of the mass has been drained off the cover of the tank is removed, and the latter is filled with new cold water, which has been previously saturated with tobacco-juice obtained either by a percolation or by a decoction or hot infusion of leaves, stems, stalks, or powder of tobacco, or of a mixture of the same. When said juice has thoroughly permeated the solid portions of boiled tobacco material contained in the tank, it is drawn off, leaving the mass of tobacco matter in the vessel. The mass is then transferred to a beating or pulping engine, where it is subjected to the action of beaters for from eight to ten hours, (more or less,) and it is admixed in the said beating or pulping engine with sugar-cane pith, called commonly "bagasse," or with any suitable vegetable matter or fiber, (with the exception hereinafter stated,) provided it is neutral and harmless, and that it possesses the requisite strength to re-enforce the tobacco pulp and form a scale or sheet of proper strength when finished. During the beating in the pulping-engine fresh water saturated with either of the juices of tobacco herein-above described is constantly admitted and drained off into receptacles, where it is kept momentarily for subsequent immediate use. From the beating-engine the pulp is carried or transferred

to a web-forming machine of the ordinary construction known to paper-makers, and thence to the lamellating or rolling devices, after which it is calendered or glazed or conveniently compressed. During the progress of the pulp on the webbing-machine the former may be dusted or sprinkled on one or both faces by means of any suitable devices with tobacco powder or dust, which is incorporated with the scales or sheets of webbed pulp, forming thereon a thin coating or covering of pure tobacco.

To the said tobacco powder or dust thus applied, or at any other period of the processes, may be added any flavoring-matter, such as killikinick, cascarilla, coffee, or the like, in a state of powder or dust, to give to the wrapper any distinctive or desired flavor and hygienic conditions.

In order to avoid the objectionable reddish and blackish colors that the ash of the usual paper-wrappers assumes when burned, such alkalies as soda, potash, and the like are entirely dispensed with in the treatment of the tobacco in leaves, stems, stalks, or powder, or of their mixtures, and all use of deleterious chemicals is carefully avoided.

For the purpose of insuring the proper color of natural tobacco to the finished wrapper various neutral and harmless coloring-matters may be added in powder or otherwise to the same at any stage of the processes herein described.

Sheets of suitable vegetable matters or fibers above indicated can be, if desired, made and coated or covered on one or both faces with a web of pure tobacco pulp, or with a web of tobacco pulp mixed to the above-indicated suitable vegetable matters or fibers, or with tobacco powder or dust, and the whole thoroughly incorporated by the action of the rollers of the webbing-machine.

The vegetable matters employed in connection with the tobacco pulp, as hereinbefore mentioned, may consist of sugar-cane pith, commonly called "bagasse," or of any other suitable neutral or harmless vegetable matter or fiber, except, nevertheless, any and all the parts of the plant called "*mussa textilis*" of the Philippine Islands, commonly called "abacá" in said country, and known here by the name of "manila," which I am aware has been already tried for the said purpose, but with unsatisfactory results.

The proportions of the suitable vegetable matter or fibers employed with the tobacco material may vary from ten to thirty per cent., (more or less,) according to the quality and especial conditions of said vegetable matter or fibers.

I am aware that cigarette-paper has been made in the usual manner from pulp, and that the pulp has been washed in clear water before its formation into paper; but I am not aware that the pulp for forming tobacco-paper has ever heretofore been washed in the juices of tobacco, whereby said juices are utilized

for enriching the pulp with the tobacco decoction that heretofore has been wasted.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is what follows, viz:

1. The process herein described of preparing tobacco pulp in a tightly-closed vessel for the manufacture of wrappers for cigarettes, cigars, and like articles or for other similar purposes, the same consisting in digesting the leaves, stems, stalks, powder, dust, or other portions of the tobacco-plant, separately or together, with lime-milk, draining off said liquid, and subjecting the tobacco matter thus treated to the action of a beating or pulping engine and to a constant washing with juice of tobacco matter obtained by decoction or hot infusion, or by percolation, substantially as set forth.

2. The process herein described of producing wrappers for cigarettes, cigars, and like articles, or for other similar purposes, consisting of the following steps, to wit: first, slaking a desired quantity of quicklime in a quantity of water sufficient to effect the slaking and form a dense and smooth milky mixture without clods or lumps; second, adding to said milk sufficient pure water to dissolve the whole of the lime; third, digesting the tobacco matter with the above liquid at a boiling-point in a tight closed vessel; fourth, drawing off said liquid; fifth, subjecting the tobacco matter to the action of a beating or pulping engine, with an admixture of suitable neutral and harmless vegetable matter or fiber, such as those herein above described, and sixth, finally, forming the same into lamelliform or rolled, and lamellated, and calendered or glazed, or compressed scales or sheets, substantially as set forth.

3. The process herein described of forming wrappers for cigarettes, cigars, and like articles, or for other similar purposes, by coating or covering the web of tobacco pulp alone or admixed to the suitable vegetable matters or fibers herein-above mentioned while being formed into scales or sheets, with powdered tobacco, and incorporating the same by the action of the rollers of the webbing-machine, substantially as set forth.

4. The process herein described of producing wrappers for cigarettes, cigars, and like articles, and for other similar purposes, consisting in forming scales or sheets of the suitable vegetable matters or fibers herein-above described, and coating or covering them on one or both faces with a web of pure tobacco pulp, or with a web of tobacco pulp mixed to the suitable vegetable matters or fibers above mentioned, or with tobacco powder or dust, substantially as set forth.

5. A wrapper for cigarettes, cigars, and like articles, or for other similar purposes, formed of lamelliform, or rolled and lamellated, and glazed or calendered, or compressed pulp of tobacco matter, either alone or combined with any of the suitable vegetable matters or fibers

above mentioned, and either flavored or artificially colored or not, substantially as set forth.

5 6. A wrapper for cigarettes, cigars, and like articles, or for other similar purposes, formed of lamelliform, or rolled and lamellated, and glazed or calendered, or compressed pulp of tobacco matter, either alone or combined with
10 herein-above described, and coated or covered with tobacco powder or dust on one or both faces, substantially as described and set forth.

15 7. A wrapper for cigarettes, cigars, and like articles, or for other similar purposes of lamelliform, or rolled and lamellated, and glazed or

calendered, or compressed pulp of any of the vegetable matters or fibers herein-above described, coated or covered on one or both faces with a web of pure tobacco pulp, or with a web of tobacco pulp mixed to any of the
20 above suitable vegetable matters or fibers, or with tobacco powder or dust, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two
25 witnesses.

JOSEPH DE SUSINI.

Witnesses:

JEFFERSON PATTEN,
LAWRENCE JIMENES.