J. W. BLOSSER.

CIGARETTE AND PROCESS OF MAKING SAME.

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984,742.

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Fig. 1.

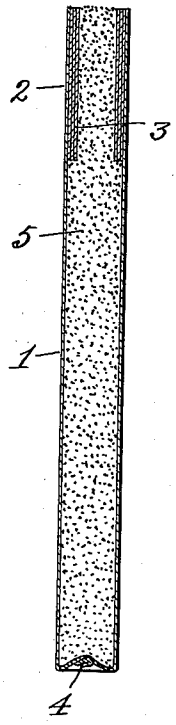


Fig. 2.

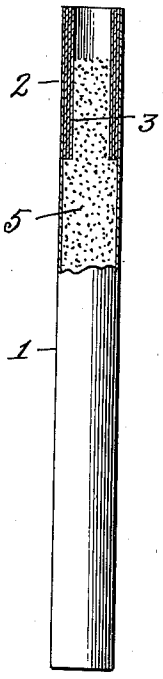


Fig. 3.

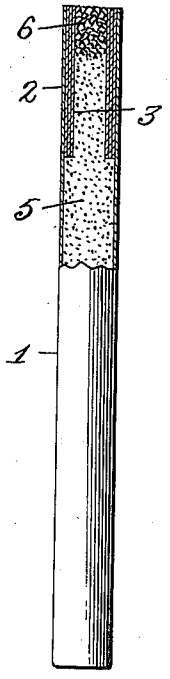


Fig. 4.

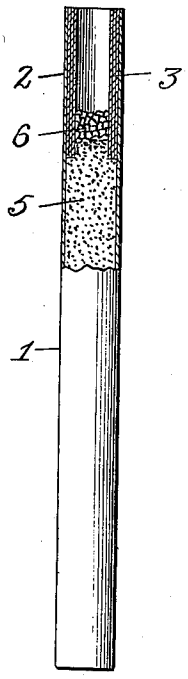


Fig. 5.

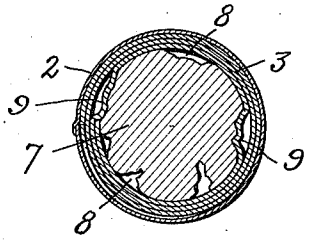
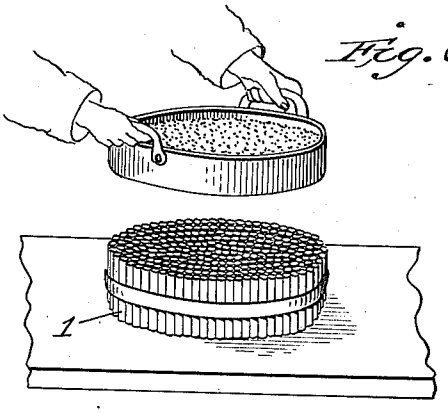


Fig. 6.



Witnesses

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CIGARETTE AND PROCESS OF MAKING SAME.

984,742. Specification of Letters Patent. Patented Feb. 21, 1911.

Application filed March 22, 1909. Serial No. 485,113.

To all whom it may concern:

Be it known that I, JOSEPH W. BLOSSER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Cigarettes and Processes of Making the Same, of which the following is a specification.

This invention relates to cigarettes composed of powdered or granulated material, and its object is to provide an improved plug or stopper for retaining said material in the paper tube.

The invention is applicable to cigarettes made of tobacco, but it is especially adapted for those in which the filling is composed of powdered, coarsely ground or granulated substances having a medicinal nature, and producing when smoked a vapor possessing remedial properties when inhaled or otherwise brought into contact with the inflamed or otherwise diseased mucous membrane of the nose, throat and lungs. As ordinarily made, such cigarettes are composed of a paper tube having one end tucked or folded in, said tube being filled with the powdered or granulated medicinal substance, and a plug of cotton wool being located in the mouth-piece end to keep the filling from running out. This plug or stopper may be a wad rammed into the tube after it is filled; or the cotton may be rolled into the mouth-piece in the process of making the tube, the filling being introduced from the other end, which is then tucked in to retain the filling. Either of these processes is slow and expensive, as each cigarette must be handled separately. Moreover, the cotton plug when rammed through the mouth-piece does not perfectly serve for the purpose of retaining the substance to be smoked, and if the cigarettes are transported to a distance the vibration to which they are subjected is liable to loosen the plug, allowing the powder to escape, and the cigarette thereby becomes worthless. Furthermore, the ramming is liable to produce a clogging of the filling at a point next to the mouth-piece so as to obstruct the free passage of smoke through it. By my invention, however, these difficulties are obviated, and the cigarettes containing powdered or granulated substances can be manufactured at much less expense and far more rapidly than heretofore, and at the same time rendered less liable to be damaged by the wasting of the filling.

The invention consists first in a process of manufacture and second in the cigarette produced by said process.

In carrying out the process, a glutinous substance in the form of paste or granules is introduced into the mouth-piece end of the tube after it is filled, and is then if dry granules are used subjected to moisture or heat or both, preferably, steam, to soften said glutinous substance and cause it to adhere to the walls of the mouth-piece or the tube. If a granulated substance is used, the moist heat will also cause the granules to cohere together. I prefer to use a glutinous substance which on drying or cooling will shrink slightly and draw away from the inner surface of the tube or mouth-piece at various points, so as to form small passages through which the smoke can be drawn. At other points it draws inwardly the inner adhering layer of the mouth-piece, leaving a space between that layer and the next. The substance which I prefer to employ is ground glue.

In the accompanying drawing, Figure 1 is a longitudinal section on an enlarged scale of a cigarette after the filling has been introduced. Fig. 2 shows it at the conclusion of the first jarring operation. Fig. 3 shows it after the granules of glue have been introduced. Fig. 4 shows it after the second jarring ready for the application of the heat or moisture or both. Fig. 5 is a cross section, on a larger scale, through the cooled, dried and shrunk plug, and Fig. 6 shows one mode of introducing the filling and the glue.

The paper tubes 1 are those in ordinary use, and are provided at one end with a mouth-piece 2 consisting of a coiled strip of paper forming thin annular passages 3 through which the smoke may pass. A quantity of such tubes, with the other ends 4 tucked in to close them, are assembled in an upright position with the tucked ends downward. The powdered, coarsely ground or granulated medicinal filling 5 is then introduced into the tubes by sifting it over the assembled group, as shown in Fig. 6, until they are all filled up to the top (Fig. 1).

By gently jarring or jolting the nest of tubes, the filling is caused to settle down in the tubes, leaving an empty space in the upper ends of the mouth-pieces, (Fig. 2). A small quantity of the glutinous substance 6 preferably in the form of a dry powder or granules is then sifted over the upper ends of the tubes, until they are again filled to the top, (Fig. 3). The excess of powder having been brushed off, the tubes are again jolted to pack the granules of glue or other glutinous substance, whose weight assists also in further consolidating the filling. At the conclusion of this operation, the material 6 of which the plug is to be formed stands about at the point shown in Fig. 4. The tubes are then subjected to heat or moisture or both, preferably by subjecting them to steam, in order to soften the granules of glue or the like and cause them to adhere to the walls of the tubes and also to cohere together in a more or less solid plug, as shown at 7 in Fig. 5.

Upon cooling and drying after the heating or moistening step of the process, the glue tends to contract slightly and in so doing it pulls away here and there from the walls of the mouth-piece, thereby forming small passages 8 between itself and the mouth-piece which permits the smoke to pass freely when the cigarette is used. Other passages are formed by the separating of the layers of the mouth piece by reason of the inner layer adhering to the plug and being drawn inwardly at points away from the next layer, as shown at 9. These passages, however, are not large enough to allow the filling to escape.

By means of this process a large quantity of cigarettes can be treated at once, effecting a large saving in labor and greatly increasing the output in a given time. The results secured are uniform, so that the cigarettes will smoke evenly and freely and all alike. They can be transported long distances without any danger of the plugs working loose and the filling coming out. As the cigarette is never smoked beyond the inner end of the mouth-piece, there is no likelihood of the glue producing an unpleasant odor. The plug, being located preferably at or near the inner end of the mouth piece, forms a firm and unyielding portion which affords a good grasp for the fingers of the smoker and prevents the cigarette from being crushed by too tight a hold.

So far as I am aware, no one has heretofore formed a retaining plug for a cigarette *in situ*. The plugs previously used have all been made separately and then pushed into the tube of the cigarette. By the process I have described, this slow and expensive mode of manufacture is avoided, the granules of glutinous material being simply sifted into a plurality of tubes nested together, and then treated in such a manner as to form the plugs simultaneously in all the cigarettes.

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

1. The method of providing a cigarette with a filler-retaining plug, consisting in first introducing within the cigraette the material to be used in forming the plug, and then so treating said material that its form will change and, by the act of changing, automatically form draft openings.

2. The method of providing a cigarette with a filler-retaining plug, consisting in first introducing within the cigarette glutinous material to be used in forming the plug, then softening the glutinous material, and finally allowing the glutinous material to dry and shrink and thereby automatically form draft openings.

3. The method of providing a cigarette with a filler-retaining plug, consisting in first introducing within the cigarette dry, granulated material to be used in forming the plug, then softening or fluxing the granules thereof, and finally allowing the fluxed material to dry and shrink and thereby automatically form draft openings.

4. A cigarette having a filler-retaining plug formed therein provided with draft openings which are automatically formed by the setting of the plug during its formation within the cigarette.

5. A cigarette having a filler-retaining plug formed therein provided with draft openings substantially at the periphery thereof which are automatically formed by the setting of the plug during its formation within the cigarette.

6. A cigarette having a filler-retaining plug composed of fluxed and shrunk granules, of glutinous material formed therein provided with draft openings which are automatically formed by the setting of the plug during its formation within the cigarette.

7. The process of making cigarettes which consists in nesting a plurality of paper tubes, introducing therein a filler of smoking material, agitating said tubes to cause said filler to settle, introducing into said partially filled tubes granules of glutinous material, again agitating the tubes to settle down the filler and the glutinous material aforesaid, and then softening the glutinous material to cause the granules thereof to cohere and adhere to the walls of the cigarette, and finally permitting the glutinous material to dry and shrink to thereby automatically form draft passages through said glutinous material.

8. The process of forming a cigarette, consisting in filling a paper tube with a smoking material, and then agitating the said tube to cause said filler to settle and thereby pro-

vide a measuring receptacle for the subsequent introduction of a plug.

9. The process of forming a cigarette, consisting in filling a paper tube with a smoking material, then agitating the said tube to cause said filler to settle and thereby provide a measuring receptacle for the subsequent introduction of a plug, then introducing in the receptacle thus formed the requisite amount of material for the formation of the plug, again agitating the tube to cause the filler and superposed plug material to settle, and finally setting the plug.

10. The process of forming a cigarette, consisting in filling a paper tube with smoking material, then agitating the said tube to cause said filler to settle and thereby provide a measuring receptacle for the subsequent introduction of a plug, then introducing in said receptacle granules of glutinous material, again agitating the tube to cause the filler and the plug material to settle, and finally first softening the plug material to cause its granules to coalesce, then dry and shrink to thereby set the plug and automatically form draft openings.

11. The process of making a retaining plug for a cigarette, which consists in introducing into the cigarette tube a quantity of filling, then introducing a quantity of granulated glutinous material, heating said material to soften it and render it coherent, and then cooling it to cause the plug to shrink and tear away from the walls of the tube at intervals.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH W. BLOSSER.

Witnesses:

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S. V. BROOKS.