

UNITED STATES PATENT OFFICE.

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PROCESS OF PREPARING ABSORPTIVE WADDING

SPECIFICATION forming part of Letters Patent No. 712,818, dated November 4, 1902.

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To all whom it may concern:

Be it known that I, HEINRICH LINNEKOGEL, a citizen of the Empire of Germany, residing in Stuttgart, Empire of Germany, have invented certain new and useful Improvements in Absorptive Wadding and Processes of Making the Same, of which the following is a specification.

Various attempts have been made to neutralize the poisonous substances which are contained in tobacco and to prevent the deleterious influence of the same, when smoking cigars or cigarettes, on the health of the smoker. These attempts were intended to absorb the poisonous substances either partly or entirely and to retain them by filtration.

It is well known that these substances were formed by the heating of the tobacco and conducted either in liquid form or with the smoke into the mouth of the smoker. The liquid consists of nicotianin and its bases, (methylpyridin bases,) pyridin C_5H_5N , picolin, also called "odorin," C_6H_7N , lutidin C_7H_9N , dimethylpyridin, collidin $C_8H_{11}N$, trimethylpyridin. The ordinary plugs made from vegetable fibers, whether carbonated or uncarbonated, were not satisfactory, partly for the reason that they are quickly charged and then become ineffective and partly because they possess from the very beginning only a small degree of absorptability. The best absorption-plug heretofore known was made from the ramie fiber, but even its effectiveness is intended to be improved by the process herein-
after to be described. Besides this fiber, however, wool, cotton, linen, hemp, moss, and other fibers can be used; and the invention consists of a process of preparing vegetable fibers for absorptive wadding by saturating the fibers with an emulsion of water, maleic acid, and pure vaseline, wringing out the fibers, next treating them with a weak solution of a silver cyanid, again wringing them out, drying them, and forming them into wadding by felting.

The invention consists, further, of the ab-

sorptive wadding and the absorptive plugs made from the same.

For making the improved absorptive wadding the fibers are first submerged for an hour or longer in an emulsion of one thousand grams of water, one hundred grams of maleic acid, and five grams of chemically-pure vaseline, obtained by mixing the vaseline with the heated solution of water and maleic acid. They are then wrung out and again submerged in a weak aqueous solution of a silver cyanid, and then after being again carefully wrung out they are dried. The so prepared and dried fibers are then felted into a wadding of suitable thickness, and from this wadding are punched by suitable dies plugs of various sizes according to the size of the cigars or cigarettes with which they are to be used. These plugs are wrapped into the tips of the cigars or inserted into the tip ends of the cigarettes in such a manner that the smoke is drawn through them in its passage from the tips to the mouth. During the passage of the smoke through the plug the deleterious substances contained therein—such as nicotin vapors, nicotianin, &c.—are absorbed and rendered insoluble by combining with the silver cyanid incorporated in the plug. Plugs prepared as described have the further advantage that they absorb the brownish, poisonous, and bitter-tasting empyreumatic oil contained in tobacco and prevent it from being taken up by the saliva and conducted into the body.

Cigars and cigarettes which are made up with absorptive plugs formed from wadding prepared as described can be smoked without the least injury to the health of the smoker and are rendered so innocuous that even convalescent patients can be permitted the enjoyment of a smoke.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The process herein described of preparing absorptive wadding from animal or vege-

table fibers, which consists in saturating the fibers with an emulsion of water, maleic acid and vaseline, wringing them out, saturating them again with a weak solution of a silver cyanid, again wringing them out, then drying them, and lastly felting the fibers into wadding, substantially as set forth.

2. Absorbent wadding composed of animal or vegetable fibers impregnated with a silver cyanid, substantially as described.

3. An absorbent plug composed of a fibrous wadding impregnated with a silver cyanid substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HEINRICH LINNEKOGEL.

Witnesses:

MAX ULRICH,

ERNST ENTERNARD.